

Fetal Alcohol  
Spectrum Disorders  
**Education Strategies**

Fetal Alcohol Spectrum Disorders Education Strategies  
Working with Students with a Fetal Alcohol Spectrum Disorder in the Education System

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The printing of this handbook is made possible through funding provided by the South Dakota Department of Education, Office of Educational Services and Supports. Contract No. 2009-L-158

The development of these materials was supported in part by IDEA Part B Grant #HO27A080091A from the U.S. Department of Education, Office of Special Education Programs through the South Dakota Department of Education, Special Education Programs. The views expressed herein do not necessarily reflect the views of the U.S. Department of Education or any other Federal agency and should not be regarded as such. Special Education Programs receives funding from the Office of Special Education Programs, Office of Special Education and Rehabilitative Services, U.S. Department of Education. This information is copyright free. Readers are encouraged to copy and share it, but please credit the Special Education Programs, South Dakota Department of Education.

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# *forward*

Working with students who have a Fetal Alcohol Spectrum Disorder is tough! There are days when you will feel like you get little return for your investment. Remember that progress takes time, determination and a lot of repetition, plus a constant focus on the positive.

The educational strategies presented in this handbook are intended to be helpful to all teachers who work with students who may have a Fetal Alcohol Spectrum Disorder (FASD). If this is your first time teaching a student with an FASD, this guide should be extremely helpful. While many of the strategies are general and are appropriate to use with all students who may share some of the learning needs of students with an FASD, they should be especially helpful to use with students who have been diagnosed with an FASD.

The strategies in this handbook have been arranged by topic to assist you with your planning and organization efforts. Each area contains specific strategies that have been found helpful in the education of students with an FASD. You will want to personalize and adapt the strategies over time in order to get the best results for the students with which you work. I encourage you to try all the strategies but make special note of the ones that you see a particular student respond well to, as these are the ones that you will want to use on a consistent basis.

Judy Struck  
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# How to Use This Handbook

The FASD Education Strategies Handbook is a reference guide to be used with students suspected of having a Fetal Alcohol Spectrum Disorders (FASD) or who have been diagnosed with an FASD. This guide is meant to be used as a reference tool only and is not considered to be all-inclusive. Recommended strategies may work with some individuals and not with others. Some strategies can be used with students of all ages while others are more appropriate for specific age levels.

At the beginning of each category section, a brief description of the category, the signs and symptoms will be listed.

**Description:** A brief description of the category will be included here.

**What to look for:** This will include information regarding students who are having difficulties with this area. A brief description of the different signs and behaviors to look for in a student with an FASD who may be having problems with this will also be included.

Strategies that are specific to a certain age group will be identified as such. Please use the following key with this guide:

*E* Elementary

*M* Middle School

*H* High School

# Overview of FASD

Fetal Alcohol Spectrum Disorders (FASD) is an umbrella term describing the range of effects that can occur in an individual whose mother drank alcohol during pregnancy. These effects may include physical, mental, behavioral and/or learning disabilities with possible lifelong implications. The term FASD is not intended for use as a clinical diagnosis (FASD Terminology Summit Consensus Statement). The diagnoses found under this umbrella include Fetal Alcohol Syndrome (FAS), Partial FAS, Alcohol-Related Birth Defects (ARBD) and Alcohol-Related Neurodevelopmental Disorder (ARND). Exposure to prenatal alcohol use is the most common cause of birth defects and developmental disabilities in the United States. FASD is 100% preventable!

## History of Prenatal Alcohol Use

The connection between prenatal maternal alcohol consumption and the subsequent difficulties encountered by children has seemingly been known throughout history. Through the ages, depictions illustrating the concern that alcohol can harm a developing fetus have appeared in written form, in art and in oral traditions. There are references in the Old Testament of the Bible and quotes from ancient sources such as the Greek philosopher, Aristotle. Despite the historical evidence for FASD, it was not until modern times that the medical profession began to look at the connection between maternal drinking and child development.

In 1973, Dr. David Smith and Dr. Ken Jones, pediatric dysmorphologists at Harborview Hospital in Seattle, Washington, commenced a study into the effects of prenatal alcohol exposure. Since that time, scientists continue to devote their time and energy to understanding the biological and psychological effects of prenatal alcohol exposure. Through their efforts, more information regarding the effects of alcohol on the developing fetus is being understood and we are learning more about the difficulties that individuals with FASD face every day.

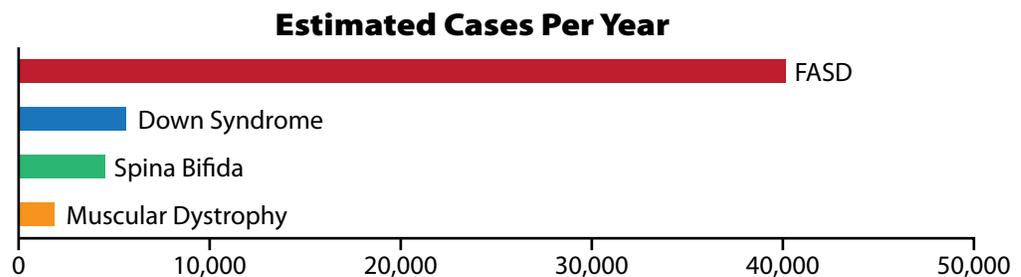
Researchers and experts have used many different labels since 1973 to describe the effects that prenatal alcohol use has on the fetus. Fetal Alcohol Spectrum Disorders (FASD) is a term used to identify the entire spectrum of diagnoses caused by prenatal alcohol exposure. FASD is a spectrum of neurological,

behavioral and cognitive deficits that interfere with growth, learning and socialization caused by maternal consumption of alcohol during pregnancy. The spectrum of alcohol-related birth defects is broad. At one end of the spectrum, the individual may have some cognitive or learning deficits, visual problems or a higher-than-normal pain tolerance. At the severe end, the individual may have mild to severe mental retardation, speech and language delays, facial deformities, heart defects, attention and memory deficits, hyperactivity, extreme impulsiveness, tremors and coordination difficulties and impaired reasoning and judgment.

In recent years, studies have been conducted by researchers throughout the world to look further into the cause and effect of prenatal alcohol exposure. These studies have provided additional information regarding the secondary disabilities associated with FASD and the numerous physical and developmental difficulties that individuals with an FASD struggle with in their daily lives. While data is still being collected in many different FASD arenas, it is evident that the provision of services for these diagnosed individuals is a critical need.

## Prevalence of FASD

Nationally, Fetal Alcohol Spectrum Disorders (FASD) affects 1 in 100 live births or as many as 40,000 infants each year. That is more than Spina Bifida, Down Syndrome and Muscular Dystrophy combined (National Organization on Fetal Alcohol Syndrome, n.d.).



According to recent national prevalence rate estimates, 0.5 to 2 infants out of every 1,000 born are affected by Fetal Alcohol Syndrome (FAS) in the United States (May & Gossage, 2001). The results of a study within the Aberdeen Area Indian Health Service identified a prevalence rate of 8.5 per 1,000 live births affected by FAS in reservation areas (Duimstra et al., 1993). Prevalence rates of other disorders in the spectrum (e.g., FAE, ARND) have been estimated to be 6 to 10 times the rates of FAS (May & Gossage, 2001).

## Economic Impact of FASD

The cost of FASD takes a heavy toll on the families of the individual and the

United States as a whole. Very little research has been done on the cost of FAS alone, while no research has been identified for the other disorders within the spectrum. Many estimates put the cost of FASD between 1 and 5 million dollars per child in their lifetime. Factor in the cost to society, such as lost productivity, burden on families and poor quality of life and the annual cost of a child with an FASD can increase dramatically. The lifetime costs of FASD might include: medical treatment, psychiatric care, foster care costs, orthodontia, respite care, special education, supported employment, social security benefits, home and/or residential care and juvenile justice and/or adult corrections systems and agencies.

## **Characteristics of FASD**

FASD, especially without a confirmed history of prenatal alcohol exposure, is often diagnosed based on the complete set of characteristics present in the individual. As a person with an FASD matures, the effects of the syndrome can be seen in a variety of ways.

The signs and symptoms of FASD can include:

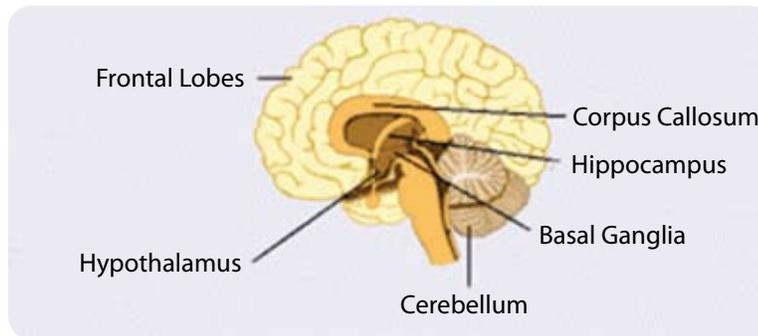
- Distinctive facial features.
- Growth deficits, such as low birth weight.
- Brain damage, such as small skull at birth, structural defects and neurological signs.
- Physical problems, such as heart, lung and kidney defects.
- Behavioral or cognitive deficits – may include cognitive delays, learning disabilities, attention deficits, hyperactivity, poor impulse control, social problems, language deficits and memory problems.
- Several neurocognitive features often associated with FASD are learning disabilities, speech and language delays, problems with reasoning and judgment, impairments in abstract thinking, diminished impulse control, volatile emotions, poor social skills and vulnerability to peer pressure.

In addition to brain injury, individuals with FAS will have characteristic facial features. The facial features are easiest to identify in children between 3 and 14 years of age. As children with FAS grow older, the facial features may change, making FAS more difficult to recognize. Along with brain injury and facial features, children with an FASD may experience stiffness in their joints, gross and fine motor delays and seizures. These students may need additional assistance in the cafeteria, on the playground and in the classroom. Providing an appropriate education is important for all students including children with prenatal alcohol exposure. Children with prenatal alcohol exposure do not always exhibit obvious physical differences from their peers so they are often expected to act and learn as other children do (Garven et al., 2000).

# Brain Development and Prenatal Exposure to Alcohol

Prenatal alcohol exposure damages the brain of the developing fetus. This irreversible brain damage is associated with a number of the primary disabilities in individuals with an FASD. This damage is called static encephalopathy. All areas of the brain can be damaged, depending on the stage of development at the time of exposure to alcohol.

The four regions of the brain most frequently referred to when discussing the effects of prenatal alcohol exposure are the basal ganglia, cerebellum, corpus callosum and hippocampus. Neuroimaging studies show that all four of these brain regions are decreased in size in the brains of individuals who are exposed to alcohol prenatally. In the worst cases, the corpus callosum may be absent.



The impact of this damage to the brain is most readily seen by the various functions that each of these regions controls. It follows that damage to each of these regions would adversely affect the function for which that region or regions is/are responsible.

Areas of the brain which are most often affected are:

- Frontal lobes - executive functions, impulse control, judgment.
- Cerebellum - coordination, movement, behavior, memory.
- Basal Ganglia - processes memory, time perception, setting goals, predicting outcomes.
- Hippocampus - learning and memory.
- Corpus Callosum - processes information between right and left brain.

## Secondary Disabilities

Children with an FASD often grow up with social and emotional problems. They may have mental illness or substance abuse problems, struggle in school or become involved with the corrections system. Streissguth, Barr, Kogan & Bookstein (1996) conducted a study of over 400 individuals with an

FASD between 1992 and 1996 and the impact the disability has had on their lives. This study described a number of secondary disabilities an individual is not born with, but which arises out of the interaction between the person's primary disabilities and their life experiences. These secondary disabilities are potentially preventable with the occurrence of the right protective factors (Streissguth, Barr, Kogan & Bookstein, 1996). It is important to note that not all individuals with an FASD will be affected by all secondary disabilities.

Streissguth et al. (1996) found that the following were the most commonly seen secondary disabilities:

- Mental health problems: 90%
- Disrupted school experience (suspended, expelled or dropped out of school): 60%
- Trouble with the law: 60%
- Confinement (includes inpatient treatment or incarceration): 50%
- Inappropriate sexual behavior: 50%
- Alcohol/drug problems: 30%

The study also found that there are a number of protective factors that can reduce the prevalence of secondary disabilities and lead to more positive outcomes for the individual with an FASD.

- Living in a stable and nurturing home for over 72% of the individual's life.
- Being diagnosed before the age of 6 years.
- Never having experienced violence against oneself.
- Staying in each living situation for more than 2.8 years at a time.
- Experiencing a good quality home from 8 to 12 years of age.
- Having applied for and been found eligible for Developmental Disabilities services.
- Having a diagnosis of Fetal Alcohol Syndrome.
- Having basic needs met for at least 13% of life (Streissguth et al., 1996).

Very little research has been conducted with children who have an FASD. Consequently, teachers and parents struggle with the unusual learning patterns of students with an FASD. Educators and support professionals need to know how to screen for an FASD and what teaching strategies will work effectively with these students. FASD is a lifetime disability. A child does not grow out of it, but early diagnosis along with intensive and appropriate intervention can make an enormous difference in the child's life.



## Section 1: Educating Students with an FASD





## Section 1:

# Educating Students with an FASD

Learning for students with a Fetal Alcohol Spectrum Disorder (FASD) continues throughout his/her lifespan; however, the developmental levels of functioning for students with an FASD are often substantially lower than other students their same age. It may be difficult with some students with an FASD to recognize their limitations or functioning difficulties, but these will become more apparent as the student ages and social demands increase. Student behaviors will vary depending on their age and the social context. When the settings change and the student is put into more complex situations, he/she may have more difficulty coping.

A team approach will help classroom teachers meet the complex needs of students with an FASD. Successful collaboration involves teachers, parents, students and administrators, as well as community service providers from areas of mental health, social services and developmental disabilities. Membership in this collaboration should be flexible and draw on all expertise available in the school and the surrounding community.

School district administration can assist in this process by providing their support and guidance to students with an FASD, their families and the educators working with these students. Administration can let staff know that some of these recommended strategies are contrary to what teachers are taught to do, and reinforce the importance of giving the strategies a try. Administration can ensure parents and teachers of the student with an FASD that they do not have to start from scratch each year. Provide the parents and the teacher with a summary of the student's needs and the approaches that have been found most helpful. This information should be included in the student's school records. A school district can also find or assign one adult in the school to be the student's advocate, someone who will speak up for the student in a positive way and help him/her figure out how to resolve problems. The advocate can be any adult in the school with whom the student has made a connection, and who genuinely likes the student.

The most important thing to remember when teaching a student with an FASD is that the student has the capability to learn. Educators must work hard to find a way to assist the student with an FASD in discovering what helps him/her to learn and to enjoy the learning process. Educators must assist students with an FASD in becoming prepared for living the rest of their lives and working to their potential.

Students with an FASD have many difficulties and challenges in their lives. These students have many strengths and talents as well. Educators can become aware of the students' strengths and can tailor programs and supports to build on these.

There are five keys to working successfully with students with an FASD: structure, consistency, variety, brevity and persistence. It is important to understand that students with an FASD can lack internal structure, so educators and caretakers need to provide external structure as much as possible. Educators should be consistent in their responses and in the daily routine so that the student has a sense that their surroundings are predictable. Students with an FASD have difficulty with maintaining attention so it is important for the educator to be brief in their explanations and directions. Educators should also use a variety of ways to get and keep the student's attention.

The most important thing to remember when working with students with an FASD is to repeat, repeat and then repeat again what it is that we want them to learn.

## **From a Mother's Heart: The ABCs of Back to School with FASD**

By Kari Fletcher

- A- Alcohol. My child was exposed to alcohol before birth.
- B- Brain. Alcohol use during pregnancy can permanently damage the child's brain.
- C- Corpus Callosum. The part of the brain that passes information between the left side (rules) and the right side (impulses). May be damaged or absent with FASD.
- D- DSI- Dysfunction of Sensory Integration. My child is sometimes sensitive to florescent lights, tags on clothing, visual over-stimulation, noises, smells, etc...
- E- Emotional. My child can be very emotional and often has a low frustration tolerance.
- F- Fetal Alcohol Spectrum Disorders (FASD), the "umbrella term" for the damage when alcohol is used during pregnancy.
- G- Give my child praise when he does something well or when he tries hard.
- H- Hyperactivity. My child might have a hard time sitting for long periods of time.
- I- Immaturity. Because of his FASD, my child may often act half his age.
- J- Judgment. My child may exhibit poor judgment. This is from the damage to the frontal lobe of his brain and because of this he needs supervision and lots of reminders.
- K- Kindness and redirection is far more effective than punishment.
- L- Learn. My child CAN learn but he learns differently.
- M- Mental retardation. FASD is the #1 cause of mental retardation in North America but most people with FASD have IQs within the normal range.
- N- National Organization on Fetal Alcohol Syndrome ([www.nofas.org](http://www.nofas.org)) –visit their website as well as those of their state affiliates!
- O- Other drugs. "Of all the substances of abuse, including heroin, cocaine, and

marijuana, alcohol produces by far the most serious neurobehavioral effects in the fetus, resulting in life-long permanent disorders of memory function, impulse control and judgment' (Institute of Medicine 1996 Report to Congress).

- P- Parenting. My child's behaviors may appear, to those who do not understand FASD, to be the result of poor parenting. Please be slow to blame and quick to consult me.
- Q- Quiet time to regroup. My child has problems with self-regulation and may need a quiet time and space to calm down. Providing this will reduce unwanted behaviors.
- R- Repetition. Memory issues are very frustrating for my child, repeat and re-teach often.
- S- Sleep disorders. My child often has trouble sleeping; please understand if he is tired.
- T- Time. Time is an abstract concept and my child does not "feel" it like you and I do.
- U- Understanding. Understanding that my child has a disability rather than trying to change something he cannot will make both his life and yours a lot easier!
- V- Visual. Many people with FASD learn best with visual and hands-on type lessons.
- W- Willful. Behaviors may appear willful...remind yourself often of the brain damage!
- X- X-ample. My child needs examples of good behavior and appropriate role models.
- Y- You will make a difference in my child's life. It is my prayer that it is a positive one.
- Z- Zero alcohol during pregnancy. Please help me spread the word that FASD is 100% preventable!

*Used with permission from Kari Fletcher, Minnesota Organization on Fetal Alcohol Syndrome (MOFAS).*



## Section 2: Functional Assessment





## Section 2:

# Functional Assessment

## Functional Assessment

Many times students with alcohol-related disorders score within normal limits on formal assessments, indicating to most school teams that the student is capable of performing academic, communication and social skills at the same level as their typical peers. Parents and teachers who care for and work with individuals with an FASD know that formal scores do not tell the whole story. Due to the nature of the brain damage incurred from prenatal exposure to alcohol, students may experience significant difficulties which are not reflected on formal assessments and in areas where there is typically little or no direct instruction provided. He/she may have difficulty generalizing information learned in one situation to another, perceiving and understanding similarities and differences in people, places, things and events, or assessing a situation and taking appropriate action in response.

Students with an FASD typically do well in highly-structured lower elementary classrooms where we find teachers directly instructing him/her about everything they need to know in order to function successfully: when he/she can go to the bathroom and how to line up, how to transition from one activity to the next, what homework he/she needs to take home and where to place it when they bring it back, what materials he/she will need in order to complete assignments and independent work, acceptance and guidance through social interactions, routines for lunch and drink breaks and sharpening their pencil. Tasks and activities are typically organized into short segments to accommodate attention and focus.

This structure decreases as students progress through the grade levels. At the same time, the expectation for functioning independently increases and the student may begin to experience significant difficulty. Missed assignments, the inability to manage increasing amounts of information and time, failing socialization within the peer group and difficulty developing or following internal routines begin to surface and are often misconstrued as non-compliance or misbehavior. When the nature of his/her difficulties is not addressed, students may soon begin to experience the debilitating realization of increased failure and less satisfaction in academic classes, more social isolation, low self-esteem and depression. Once the student begins to experience failure within his/her primary support group, secondary disabilities may begin to develop. For instance, data from one survey of students with disabilities showed that they were less likely to graduate and, regardless of the disability, those students who dropped out of school were more likely to have trouble with the law than those who remained in school (Wagner, D'Amico, Marder, Newman, & Blackorby, 1992).

The following functional assessment is designed to assist parents and teachers in

identifying if a skill is present; the student's potential for developing the skill; and what is needed for the student to independently display the skill. It can be used as a checklist to monitor progress and document on-going needs, and may be reviewed and revised at the annual Individualized Education Plan or 504 meeting. Examples of functional and developmental goals and objectives with identified strategies and supports based on the functional assessment are also provided.

This assessment is not intended for use as the sole source of information when determining eligibility, but may be used in combination with formal assessments to assist teams in determining necessary services and supports.

## Functional Assessment

# Functional Assessment for Students with an FASD

Because students with an FASD may score within normal limits on formal assessments but have difficulty using and applying their knowledge, it is important to conduct a functional assessment as part of the evaluation process. In answering the questions below, the team will gain a better understanding of what types of supports the student needs for success in the classroom and school environment.

Functional  
Assessment

**1. What are the strengths and interests of the student?**

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**2. What skill level is the student currently functioning at?**

Cognitive/Developmental \_\_\_\_\_

Adaptive Behavior \_\_\_\_\_

Social/Behavioral \_\_\_\_\_

Other \_\_\_\_\_

Other \_\_\_\_\_

**3. What is the student’s attention span for tasks? How distractible is the student?**

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**4. What is the student’s ability to work independently?** (include organization, organizing tasks, assignments, homework)

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**5. What types of support are needed? How often and in what environments?**

In the classroom \_\_\_\_\_

On the playground \_\_\_\_\_

In the hallway \_\_\_\_\_

In the cafeteria \_\_\_\_\_

On the bus \_\_\_\_\_

During transitions \_\_\_\_\_

**6. What is the student's ability to follow the routine?**

- Follows routine independently; handles changes in routine without assistance
- Follows routine well when it remains constant; needs reminders when routine changes
- Follows routine with minimal verbal reminders
- Follows routine with only peer assistance
  - Follows routine independently when visual cues (visual schedule, task list, planner, etc.) are provided
  - Follows routine with visual cues and reminders to use cues
  - Follows routine with adult assistance

**7. What is the student's ability to communicate?** (Place an 'X' in the appropriate column and explain if needed)

	Independent/ Appropriate	Needs minimal assistance/ reminders	Needs additional supports (visual cues; direct instruction) Explain
Articulation			
Functional (asking for help; making appointments; meeting needs/wants)			
Social environments			
Processing/Organizing thoughts and ideas			
Other:			
Other:			

**8. Describe the student's interactions with peers:**

Structured environments \_\_\_\_\_

Unstructured environments \_\_\_\_\_

## Planning for the Student with an FASD

Based on the information gathered from the functional assessment, indicate the goal, objectives, strategies and resources (supports) needed for attaining that goal. An example is given of a developmental and a functional goal.

<b>Goal: Student will develop math skills to the 2nd grade level.</b>	
<b>Objectives:</b>	<b>Strategies and Supports:</b>
1. Add whole numbers to 100 with regrouping.	<ul style="list-style-type: none"> <li>• Use concrete demonstrations and manipulatives.</li> <li>• Use cue sheet for process of adding with regrouping.</li> <li>• Use touch math strategy.</li> <li>• Use 'student office' to increase attention to task.</li> </ul>
2. Improve money value concepts.	<ul style="list-style-type: none"> <li>• Demonstration.</li> <li>• Provide with money and prices of items to practice 'buying' items.</li> <li>• Purchase items from school store using school bucks earned for completed assignments and appropriate behavior.</li> </ul>
3. Improve concept of time.	<ul style="list-style-type: none"> <li>• Use same phrases when talking about time across environments (thirty minutes after 9; 15 minutes after 12, etc.).</li> <li>• Match daily activities with time of day on horizontal schedule.</li> <li>• Use timer to show passage of time during transitions and free play.</li> </ul>

Functional Assessment

<b>Goal: Student will improve organizational skills.</b>	
<b>Objectives:</b>	<b>Strategies and Supports:</b>
1. Start assignment within one minute.	<ul style="list-style-type: none"> <li>• Cut or chunk assignment into manageable parts; earn break between parts.</li> <li>• Demonstrate instructions; teach the routine.</li> <li>• Complete one problem and raise hand; adult check for accuracy.</li> </ul>
2. Have all necessary materials for each class.	<ul style="list-style-type: none"> <li>• Provide separate bags or tubs for each class including text, assignment folder with paper, writing instruments and additional materials appropriate (calculator, etc.).</li> <li>• Verbal or visual cue to return all materials to correct bag or tub when class is over.</li> </ul>
3. Hand in assignments on time.	<ul style="list-style-type: none"> <li>• Provide with assignment sheet outlining assignment and due date for each class.</li> <li>• Provide labeled tray for completed assignments in each class.</li> <li>• Adult check during each class period to review assignment.</li> <li>• Earn school bucks for each assignment completed on time.</li> </ul>

*Adapted with permission from 2003 presentation by Wendy Kalberg, University of New Mexico and "Teaching Students with Fetal Alcohol Syndrome/Effects", British Columbia Special Programs Branch, 96.*



## Section 3: Environmental Modification





## Section 3:

# Environmental Modification

### Description:

Environment is the combination of external physical conditions that affect and influence the growth, development and survival of any living being.

### What to look for:

A student with an FASD can have difficulty perceiving extreme temperatures, visual/spatial perception and balance. A student with an FASD may be easily distracted by colors, smells, clutter and foreign noise from outside the classroom, the humming sound from the lights or heaters, or any other multitude of environmental occurrences. In addition, students with an FASD may be unorganized, need help following schedules or routines, can become easily frustrated and may have difficulty in making transitions from one activity to the next.

The student has a higher-than-average incidence of other medical concerns that can be negatively enhanced by the environment he/she is in. These medical concerns can include:

- Difficulties with vision or hearing;
- Neurological conditions such as seizure disorders; and/or
- Impaired bone and/or joint development.

Students with an FASD become easily overwhelmed in everyday situations, which may result in unpredictable behaviors. Many times, the disorganized, aggressive or self-abusive behavior the student is presenting stems from an under-aroused or over-aroused central nervous system. Sensory processing deficits can result in poor modulation of arousal and alertness resulting in emotional instability/ability, hyperactivity, behavioral disorganization and learning problems.

The classroom can provide that external structure that students with an FASD cannot provide for themselves.

Environmental  
Modification

## Strategies:

### Reduce Visual and Auditory Distractions

- Use calm colors on the walls and on any bulletin boards in the classroom.
- Reduce the brightness of the lighting in the room. If this is not possible, set up an area of the room where some of the bulbs can be removed and have the student sit in this area.
- Use moderate heating and ventilation for the classroom or have fans available for the student if she/he becomes too chilled or too warm.
- Have pets and plants in the classroom to help the student to relax. Have the student assist with taking care of these living things. It will teach responsibility and help the students to be proud of their accomplishments.
- Seating Arrangements:
  - Arrange desks to minimize distractions, but do not move only the desk of the student with an FASD. Students with an FASD may have an easier time of staying focused if they are in the front of the room facing the front of the classroom. Have the student sit by other students who are able to model acceptable behavior.
  - Arrange the seats of all of the students in a horseshoe pattern. The teacher should stand within the open area of the horseshoe when speaking to the students.
  - Keep the seating assignment consistent all year long.
- Free up the classroom of any unnecessary distractions or stimulations including mobiles or other items hanging from the ceiling.
- Use bulletin boards as teaching tools. Do not to use too many colors or differing fonts for the information being presented. Use soft colors to make the display more calming. Bulletin boards could be covered when not in use.
- To reduce visual distractions, materials not in use should be stored in boxes or cupboards, not on countertops. Make sure you have enough storage space in the classroom.
- Arrange classroom furniture and partitions to create traffic patterns that discourage the students from running and their tendencies to bother each other while working.
- Students with an FASD are not always able to block out other noises.
  - The ticking of the clock can distract students with an FASD.
  - A teacher or aid talking with another student can distract students with an FASD.
  - Put tennis balls or carpet pieces on the ends of the legs of desks or chairs to reduce noise as students move their desks and chairs.
- The effects of noise, temperature and light from windows in the classroom can be

diminished by covering them with blinds or heavy curtains.

- Allow the student with an FASD to use headphones for quiet time so he/she is able to retreat from the noise and the stress they may encounter.
- Provide an area in classroom that is quiet and uncluttered for the student to go if he/she is feeling overwhelmed with their surroundings. Use a study carrel if needed. A portable carrel can be constructed using three sided project board or from a piece of cardboard. Set up a signal that the student can give you when he/she wants to move to this location. Make sure that this area is not used as a punishment but as a way to help the student succeed.
- Tape out an area surrounding the student's desk or put a rug on the floor under and around their desk to define his/her personal space.

## Teach Routines

- Daily activities can be easily adapted into a routine for all students:
  - Restroom breaks can become a distraction for everyone in the class. Create a secret signal to be used by those students with overactive bladders who need to use the restroom. Another idea is to hang a pass key on the wall by the door. Only one student at a time is allowed to be out of the classroom and students do not need to ask to leave when the pass key is available for them to use.
  - Water breaks are also important to students and a routine will help keep the class in order. Allow students to keep water bottles under their desk so they do not even have to leave the room or set up a secret signal for students to request that they need a drink. Students who have good behavior can be rewarded with a trip to the coldest water fountain in the school no matter how far away it is from the classroom. See Appendix 4 for other examples of free or inexpensive rewards.

**E** - Passing students in the hallway can be an overwhelming or enticing situation for younger students. Work with the students to follow this simple routine:

- The students should walk one square away from the wall.
- Keep their hands off the wall at all times.
- Hands should be kept at their sides or in back.
- Have the line of students stop at the corners.
- The teacher should walk in the middle so the group of students can be easily monitored.
- The teacher could make a two-way sign so the students in front and back of him/her can read the directions.

**M** For older students, pencil sharpening during the class period can become very disruptive. Have every student bring a box of pencils at the beginning of the year; let a couple of students sharpen them all at once; and put them in an appropriate container. When a student's pencil breaks, the student puts their

Environmental  
Modification

broken pencil in another container and takes a good one.

- Try to use the same staff consistently when working with students with an FASD. If substitute staff are going to be used, prepare the student in advance or have one consistent staff person with the student to make the change more acceptable.
- Build desk or locker cleaning time into the class schedule. Some students with an FASD will not be able to keep their desks or lockers clean unless time is set aside for this task. For students whose desks or lockers are already clean or who end early, provide enjoyable activities he/she can do while their classmates finish up. Build in spot checks of the students' desks or lockers while praising those who have kept them neat.
- Organize the students' immediate surroundings so they can focus on the task at hand instead of trying to locate the materials they may need. For example, have the student keep all of his/her pens and pencils in a box in their desk or in a pouch in their binder. This will help to reduce the time it takes for him/her to become focused on the task.
- Have extra supplies (pencils, pens, paper, etc.) on hand that the students can borrow. Put these extra supplies in individual containers and have these easily available for students to access. Students are able to be more independent if supplies can be borrowed without asking.

## Environmental Modification

### Visual Cues and Tools

- Use nonverbal cues to reduce the amount of talking in the classroom. For example, when you want to attract the attention of all the students and need for them to be quiet and listen to you, raise your hand in the air. Have all the students also raise their hands in the air when you have their attention.
- Use photographs to show where things belong. Store the classroom supplies and toys in the same place so the student always knows where to look for something that he/she might need.
- Define and organize a space that belongs to the student:

**E** - Have all the students sit on mats on the floor and use masking tape to define an individual area for each student. Do not single out the student with an FASD differently from the other students.

**M** - Have older students sit in desks instead of at tables. Have assigned seating. This will help to define the space that belongs to the student.

- Give students additional space near their desks to organize their belongings. Put plastic tubs for each student on a shelf nearby to be used for unfinished work. When they have free time, they can pull out an unfinished assignment to work on, and they will always have their homework in one place when it is time to pack up at the end of the day.
- Frame the top of the student's desk with colored tape to keep his/her attention focused on their work space.
- Use a pocket chart schedule of the day for the student to help with transitions. As

each subject or activity is completed, flip the page over, point to the next activity and announce what is next.

- Use a consistent area of the board to write the daily homework assignments and the schedule for the class period. Give the student time during the day to copy the information into his/her assignment books and review the schedule frequently.
- Create color-coded calendars for the student to be taped to the inside of his/her locker door. As each day is completed, have the student cross off the day with a large "X".

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Environmental  
Modification

Test  
Today

Ride Bus  
Home

Track  
Meet



Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

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Modification

Environmental  
Modification

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Environmental  
Modification

Environmental  
Modification

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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## Section 4: Communication





## Section 4:

# Communication

### Description:

The act of communicating in the classroom is the exchange of thoughts, messages or information, as by speech, signals, writing or behavior.

### What to look for:

Some students with an FASD are very chatty and love to socialize while others are quiet and tend to keep to themselves. Students with an FASD may learn fewer words and may have difficulty expressing their thoughts and feelings in a logical manner. The student may experience difficulty with distinguishing between talking and effectively communicating, understanding sequential verbal instruction, retrieving words, drawing conclusions, going beyond stereotypic utterance and/or going “off-topic” in conversation and classroom discussion. In addition to the student’s struggles with communicating, he/she can also have difficulty understanding others.

Students with an FASD may frequently miss important information, have difficulty understanding vocabulary used and fail to follow verbal directions. They may take information very literally and not understand jokes, sarcasm or idioms. Students with an FASD can have difficulty putting thoughts and ideas into a written format. They may struggle to transform verbal information into writing, such as taking notes during a lecture. Students may be able to complete written work when asked for specific information on a worksheet while having trouble writing a story, paragraph or report. Students might have difficulty in inferring meaning. He/she may read a story but not be able to generalize from it. The student may confuse meanings of the same word used in different ways. The student will have difficulty in understanding the consequences of his/her actions.

Students with an FASD will be eligible for speech and language services at a very early age, while communication difficulties may not be apparent until well into the school years for others. Social aspects of communication may be very difficult as considering another’s perspective is often a higher-level language skill. Often, students with an FASD may display presumably normal vocabulary, grammar and sentence structure.

A student with an FASD may also have Hyperlexia Syndrome. Students with Hyperlexia have the following characteristics:

- A precocious ability to read words, far above what would be expected at their

Communication

chronological age or an intense fascination with letters or numbers.

- Significant difficulty in understanding verbal language.
- Abnormal social skills, difficulty in socializing and interacting appropriately with people.

## Strategies

### Receptive Language

- Gain the student's full attention before communicating. Speak face-to-face with him/her and use the student's name.
  - One way to gain the student's attention is to use rhythm techniques such as slow rhythmic clapping to focus attention.
  - Use an established cue, such as a hand signal or sign, to get the student's attention when giving directions to the class. This cue will also help to cut down on the competing noise in the classroom.
  - Use eye contact with the student and touch his/her arm when giving directions.
- Once you have his/her attention, you should talk at the student's level and avoid using long sentences or poor articulation. Be concrete in your communication with the student and avoid using figures of speech, euphemisms or sarcasm.
- All adults in that student's life should attempt to use consistent language for targeted behavioral prompts across environments. Examples of this would be the use of "listen to me" when you want to gain the student's attention. "Stop and think" could be used when you see the student's behavior as a concern.
- Monitor the rate of speech when talking to a student with an FASD. Use clear, brief statements so students can attend to the relevant details. Student may "shut down" with too much talking.
- Teach students to notice the changes in intonation (louder tone may indicate important information) and body language.
  -  - Teach students to interpret non-verbal cues such as facial expressions, yawning or looking at the clock. Use graphics of the different facial expressions and talk about what they mean.

### Giving Directions

- When providing instructions to the student, give him/her one step at a time and check for understanding often. Have the student repeat information and reinforce the learning as needed. The student may need to be reminded of the steps frequently.
  -  - Younger students may need to have a picture flow chart to follow. Allow the

student to color the pictures on the chart so there is some ownership to the directions given to him/her. This will make the task more personal.

**M** - Students who are a bit older may be able to have the steps written down. Give the student a small flip chart with each step on a separate page. Include pictures and words if the student needs to have that visual reminder. Once the student finishes a step, he/she can flip the page to go on to the next step.

**M** - For activities that will be replicated often, have the student create a binder for the directions. When the student begins to work on a particular type of a math problem, have him/her pull out the binder and turn to the correct page for the instructions. This binder should be kept in the classroom so it is not misplaced.

**H** - Older students could use electronics to help them remember the steps. These students may benefit from the use of a computer to keep track of different steps or they can also utilize a Personal Digital Assistant (PDA) if available. Once the student completes the step, he/she can mark the step off on the electronic device.

- Use demonstration, pictures or visual cues whenever possible. Show a sample of a completed worksheet or project a blank worksheet on the overhead or white board, read the directions together and do one problem from each section before independent work.

## Be Specific when Teaching New Concepts

- Preview new concepts and vocabulary at the beginning of learning activities and highlight important concepts again at the end.

**M** - Pre-teach vocabulary before giving a lecture or having a discussion on a topic. Provide the student with a list of the words with the definitions so he/she can use this to refer to during discussion.

- Use concrete learning examples. Students with an FASD have a difficult time understanding theoretical ideas and language. Be very clear in your wording and in the idea that you are teaching.
- Provide tactile examples of what you are teaching. Allowing the student with an FASD to touch, see and/or feel something will help him/her to succeed in learning what you are teaching.
- Take pictures or videotape the student performing a correct task or behavior. Use these images to remind the student of what is expected of him/her.
- Use the student's own life when teaching new ideas. This will give the student a reference point for his/her learning.

**E** - For younger students, use a popular cartoon character when teaching about responsibility. There are many excellent resources available with these characters. Or, have the student help create a book by drawing the pictures to go along with the idea you are trying to teach.

**M** - If the student shows a strong interest in sports, use this interest when teaching a new math concept. Draw the concept out using basketballs instead of

numbers.

**H** - This is the time to start using daily living skills when teaching new concepts. Use cooking as a focus in all classes. At the end of certain time period, have the student assist you with making something from the cookbook. The student will be allowed to practice their reading, math and comprehension skills.

- Use art projects to make abstract concepts more concrete.

**M** - Use colored sand to teach the student about volume. Give the student a clear plastic cup or a clean glass jar and allow him/her to fill in the item with different colors of sand.

**H** - Have the student paint or draw a picture representing how a poem made him/her feel after reading it.

- Stress concept development through concrete examples encouraging the student to demonstrate understanding. For example, when teaching the student about temperature, use a blanket as an example of cold and hot. The student will understand that he/she will put on a blanket when they are cold and will take the blanket off when warm.
- Allow the student time to process after asking a question. It will help to count to 10 before prompting again for an answer. The student may also need the question presented in a different format before being able to respond.
- Sign language may be helpful to teach students with an FASD even when they do not have a hearing loss. Sign language is concrete and visible and can be used along with verbal language.

## Communication

### Expressive Language

- Students with an FASD can have problems with finding the appropriate vocabulary and articulation errors are common. Accept communications without correcting the student. Instead of correcting the mistake, model the correct articulation to the student when communicating with them.
- Recognize and honor the student's communicative attempts. Without effective verbal language, students will find other ways to communicate their needs. Facial expressions and body language are recognized means of expression, but behaviors, even challenging ones, also can be attempts to communicate.

**E** • For younger students who are not talking, there are different strategies that can be used to help him/her understand the communication process.

- Begin with simple story books with pictures. Find books that are interesting to that particular student.
- Use real objects (e.g., trees, cars, dogs) and name the object for the student. Ask the student to repeat the word and to point or touch the object.
- Add written labels to objects in the classroom and refer to them often.

**E** • For students who are using single words to communicate, you can help to slowly

expand on his/her use of vocabulary. If the student says “drink,” say to the student, “more drink” to stimulate more words into the student’s vocabulary.

- Students with an FASD often use a large quantity of speech. Be aware that quantity does not indicate quality. Many times the student does not know the definition of words they use, which may give the listener an inaccurate indication of their communication ability. Listen for the number of words per sentence and the number of new words that the student uses.

**E** • Music activities can help students with an FASD learn vocabulary. The following are some effective songs that can be used throughout the day with all of the students: good morning song, song before students eat, name songs, circle game songs - sit down, stand up, name games.

- Once the student begins to learn more words, have him/her start a file of the words so it can be reviewed frequently.

**E** - Use a picture chart of the learned words. Have the student find pictures in magazines that he/she can paste into the chart or have him/her draw pictures. This will help the student to have concrete examples of the new words.

**M** - Older students can develop a file of the new vocabulary. This file can be created on index cards or in a computer format. Have the student review them often to assist with their memory.

- Develop a peer tutor to work with the student to assist with expanding his/her vocabulary. The peer tutor can assist with reading practice, reviewing lessons, studying for tests, editing procedures and proofreading. Through this process, the student with an FASD will have the potential to learn new words, to expand their communication skills and to socialize with a peer.
- Allow the student to write or talk about his/her own experiences to facilitate organization of thought and to improve vocabulary. Students often enjoy talking about themselves and their families, and this will assist in building up their communication skills.

**E** - Start using a memory wall or hall of fame display for students. Each week, a different student will be responsible for bringing in pictures of themselves, families, friends, etc. to put on the wall. Have the students write or dictate to you information regarding the pictures and post these on the wall for display throughout the week.

**M** - Have the student use a journaling notebook to record the day’s activities. Activities to be noted could include special events, what they had for lunch or what they have going on at home that evening. Schedule a timeslot each day for the students to journal. This journal can be taken home each evening to encourage sequential verbal expression and structure.

**H** - Older students can work on a memory book throughout the semester. Let the student identify different areas of their year or their life that they would like to highlight and have them record this through drawings, pictures and journaling. Ask them to discuss their memory journal frequently, practicing telling about events in logical sequence.

- *Today at School* and *Last Night at Home* are communication tools that the student

prepares in one environment to help him/her communicate more effectively in another environment. Use pictures, written language or other visual forms the student understands. Help the student prepare a visual tool that provides information about something that happened in his/her life. Think about the types of information students like to share in conversation such as “This is what I did. . .”, “This is where I went. . .”, or “This is what I bought at the store”. This process of putting the information in a visual form helps students understand the types of information they can share with others. Then, when the student goes to the other environment, it will be a visual tool for the student to use to communicate that information to someone else.

- Practice visualization paired with verbalization. Have the students picture something then describe it using “wh” statements (What is it? Who is it? Where is it? When is it? What color, shape, size is it?). Start by describing pictures and single words then expand on them. Using the “wh” questions, develop sentences, paragraphs and compositions.
- Encourage an open forum in the classroom by allowing students to ask for help when needed.

## Communication





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Time of day tried: \_\_\_\_\_

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## Communication

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## Communication

## Section 5: Executive Functions





## Section 5:

# Executive Functions

### Description:

Executive functions are described as the directive capacities of the mind routed through the frontal lobe that act in a coordinated way to direct perception, emotion, cognition and motor functions. They work together and can be thought of as co-conductors or a coaching staff and give commands to engage in purposeful, organized, self-regulated, goal-directed behavior. They cue the use of other cognitive abilities such as reasoning, language, visual perception and memory processes. They are involved in the direction of shifting strategies and adapting, inhibition, abstract reasoning, metacognitive capacities and sequencing and organizing processes.

### What to look for:

Individual students can have strengths or weaknesses in one or more of the executive functions at any given time. Students with an FASD may have a well developed executive ability while also having one or more underdeveloped abilities. Underdeveloped executive functions may become apparent through the following ways:

- The student may demonstrate a failure to perceive new information. The student may not appear to hear what is being said, see what is occurring around him/her, know where things are located, or may not realize when physical contact is made or sensations are present. The student or the parents may report the student has difficulty getting out of bed despite adequate sleep.
- The student may be slow to initiate or engage in an activity. You may observe a lack of initiation of social contact by the student. The student may be unable to modulate his/her behavior which may be misconstrued as being lazy, careless, unmotivated or irresponsible. You may observe that the student does not monitor or regulate his/her social behavior and emotional control through self observation and self analysis.
- The student is unaware of her/his emotional states, thoughts or actions. You might observe that the student is acting without thinking, interrupts or blurts out responses, acts wild or out of control or gives excessive responses or reactions in typically normal situations. The student is often out of his/her seat, immediately attempts to get what he/she wants without considering consequences and does

Executive  
Functions

or says things that might embarrass others of the same age.

- There could be an apparent failure to judge or size up tasks or the student approaches tasks in a haphazard way lacking in forethought. The student may seem unaware of what is required to get a task done or completes tasks in unusual, inefficient or ineffective ways. The student may immediately start working before hearing all directions and then frequently has to change the strategy because of mistakes. The student does not think about the future or the end product while completing a task as he/she is absorbed in the immediate moment. The student does not display problem solving efforts or does not realize when problem solving skills are required.
- The student could be slow to flexibly shift from one activity to another or may try the same plan or strategy even when the results are inaccurate. You may observe perseveration or the tendency to repeat the same actions over and over. There might be difficulty in stopping or interrupting an activity or mental process. He/she might maintain a rigid adherence to the routine even when circumstances have changed and it is necessary to develop a new plan. The student may be organizing information and materials so that it is out of sequence, fragmented or incoherent.
- The student may show a lack of focused and selective attention to or inability to consider the information being presented or the task at hand. You might observe that the student's attention may be briefly focused but not maintained for the period of time necessary or the student has a good initial performance followed by a steady decrease in consistency. The student may frequently request repetition of directions, fail to complete all the steps in a multi-step direction or assignment or give vague responses about information that is being held.
- The student may demonstrate difficulties with processing the information presented. Some common concerns can include the lack of focus on a concept when the details are important. The student may be slow in processing the details and producing responses and reactions that are appropriate. The student may not realize when specific routines are required or may not effectively complete routines.
- You may observe that the student has trouble monitoring the passage of time and estimating how long something will take to complete. The student may accomplish little work during a specified period of time, consistently hand in assignments late, show up late for activities or events, need to be reminded to hurry up and require significantly more time to complete work. The student may either work too quickly or too slowly even when aware of time constraints. You may notice careless errors in assignments and tests or that the student does not check his/her work.

## Executive Functions

The following table provides specific executive skills, descriptions and possible signs or symptoms of deficits.

<b>Executive Skill</b>	<b>The ability to...</b>	<b>Possible Signs or Symptoms of Dysfunction</b>
Planning and Sequencing	<ul style="list-style-type: none"> <li>• Develop steps to reach a goal or complete a task, identify materials needed and set a completion date.</li> <li>• Arrange steps in proper order.</li> </ul>	<ul style="list-style-type: none"> <li>• May start project without necessary materials</li> <li>• May not leave enough time to complete</li> <li>• May not make plans for the weekend with peers</li> <li>• May skip steps in multi-step task</li> <li>• May have difficulty relating story chronologically</li> <li>• May “jump the gun” socially</li> </ul>
Organization	<ul style="list-style-type: none"> <li>• Obtain and maintain necessary materials to completing a sequence and achieving goal.</li> </ul>	<ul style="list-style-type: none"> <li>• May lose important papers or possessions</li> <li>• May fail to turn in completed work</li> <li>• May create unrealistic schedule</li> </ul>
Time Management and Prioritization	<ul style="list-style-type: none"> <li>• Estimate how much time one has, how to allocate it, how to stay within timelines and deadlines.</li> <li>• Set and make appointments.</li> <li>• Establish ranking of needs or tasks, deciding what is most important and should be done first.</li> </ul>	<ul style="list-style-type: none"> <li>• May waste time doing small project and fail to do big project</li> <li>• May have difficulty identifying what material to record in note-taking</li> </ul>
Working Memory	<ul style="list-style-type: none"> <li>• Hold information in mind while performing complex tasks.</li> <li>• Draw on past learning or experience to apply to the situation at hand.</li> <li>• Project problem solving strategies into the future.</li> </ul>	<ul style="list-style-type: none"> <li>• May not follow directions</li> <li>• May not write down, complete or hand in assignments or bring appropriate materials</li> <li>• May forget the process for assignments (long division, proper headings)</li> <li>• Remember to perform responsibilities</li> <li>• Lose things</li> </ul>

Executive Functions

## Executive Functions

<b>Executive Skill</b>	<b>The ability to...</b>	<b>Possible Signs or Symptoms of Dysfunction</b>
Metacognition	<ul style="list-style-type: none"> <li>• Understand the big picture of oneself in a situation.</li> <li>• Observe or think about how they solve a problem.</li> <li>• Self monitor and use self evaluation skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Make careless mistakes, fail to check work</li> <li>• May fail to check assignment to make sure rules were followed</li> <li>• Fail to recognize there is problem and fail to ask for help</li> <li>• Fail to evaluate their own performance</li> <li>• Fail to see how their behavior affects the group, an individual or situation</li> </ul>
Inhibition	<ul style="list-style-type: none"> <li>• Stop one from responding to distracters and think before they act.</li> <li>• Resist the urge to say or do something.</li> <li>• Delay gratification in service of more important, long-term goal.</li> </ul>	<ul style="list-style-type: none"> <li>• May appear distractible and/or impulsive</li> <li>• May take others' items, lie or verbally or physically lash out without warning</li> <li>• May pick smaller, immediate reward over larger, delayed reward</li> <li>• Personal safety may be compromised due to inability to consider consequences before acting</li> </ul>
Self Regulation	<ul style="list-style-type: none"> <li>• Manage emotions to achieve goals or control and direct behavior.</li> </ul>	<ul style="list-style-type: none"> <li>• May exhibit inappropriate or over-reactive response to situations</li> </ul>
Initiation	<ul style="list-style-type: none"> <li>• Begin a task without undue procrastination in a timely fashion.</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty getting started on tasks may appear as oppositional behavior</li> </ul>
Flexibility and Ability to Shift Between Tasks	<ul style="list-style-type: none"> <li>• Revise plans in view of mistakes and the adaptability to changing conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• May get stuck on one approach</li> <li>• May not know how to access appropriate resources</li> <li>• May become easily frustrated and throw temper tantrums</li> <li>• May be slow to stop one activity and move on to the next</li> <li>• Tend to continue trying one plan or strategy even when the results are negative</li> <li>• Rigid adherence to the routine regardless of the circumstances</li> <li>• The need to do only one task at a time and unable to shift between different tasks when necessary</li> </ul>

<b>Executive Skill</b>	<b>The ability to...</b>	<b>Possible Signs or Symptoms of Dysfunction</b>
Focusing Attention	<ul style="list-style-type: none"> <li>• Focus attention to the most relevant information in the environment or situation while ignoring less relevant events.</li> </ul>	<ul style="list-style-type: none"> <li>• May lose important information needed to complete assignments accurately</li> <li>• May not realize they need to change their behavior based on the setting</li> </ul>
Sustaining Attention	<ul style="list-style-type: none"> <li>• Maintain attention and effort for a prolonged period of time.</li> </ul>	<ul style="list-style-type: none"> <li>• Attention may be briefly attained or focused but not maintained for the period of time needed to complete a task</li> <li>• May have good initial performance followed by a decrease in consistency as time goes on</li> </ul>
Storing Information	<ul style="list-style-type: none"> <li>• Move information to the present into storage for retrieval at a later time</li> </ul>	<ul style="list-style-type: none"> <li>• Fail tests due to lost information</li> <li>• May struggle to remember day to day events</li> <li>• May be unable to recall information after a delay</li> </ul>
Retrieving Information	<ul style="list-style-type: none"> <li>• Find and retrieve previously stored information</li> </ul>	<ul style="list-style-type: none"> <li>• Inconsistent performance; some days the student can access stored information and some days they cannot</li> <li>• Talks around topics or subjects. Describes the concept instead of just saying the word</li> <li>• May raise hand to answer a question and have forgotten the answer by the time they are called on</li> </ul>

### Assessing Executive Skills:

In order to teach and promote executive skills, it is important to determine which skills are underdeveloped. Assessing executive skills can include:

- A case history through interviews with parents, teachers and student
- Observation of the student in typical settings
- Review of work samples
- Formal assessments when indicated

Examples and ready to use forms of interview questions, intervention planning and a list of formal assessments can be found in Appendix 5.

## Intervention Planning:

After the assessment is complete and the student's difficulties are known, it is possible to teach students with an FASD to develop and use their executive functioning skills within the classroom and at home. Follow these steps in designing a plan to address executive skills excesses or deficits (See the intervention planning worksheet in Appendix 5 to structure the plan):

1. Describe the problem behavior.

Example: Student forgets to bring necessary materials home, do homework or hand in completed homework, resulting in failing grades (working memory deficit).

2. Set a goal.

Example: Student will write assignments and follow the steps on the form each day, as seen by handing in 90% of assignments on time.

3. Create an intervention plan including skills that will be taught, supports and materials to be provided, and how the skill will be taught. Make sure to include incentives.

Example:

- Student and teacher will meet to determine the steps that work best to meet the goal and list them.
- Teacher will provide and explain the planning form to student.
- Teacher will walk the student through the steps.
- Teacher will post assignments in the same place in the classroom for each class period. Teacher will prompt student to use the planning form at the end of each class period and will monitor student while he/she completes the form.
- Teacher will prompt and monitor student in packing all necessary materials in the designated homework bin at the end of each class.
- Teacher will prompt student to pack up all materials from the homework bin at the end of each day.
- Parents will review the planning form with student at home and prompt student to complete the steps on the form, check each homework item off the form as it is completed and re-pack all materials each evening.

4. Discuss incentives with the student and parents, ensuring the incentives are motivating for the student and realistic for the parents and teachers. Write the incentives decided upon into the plan.

Example: Each class period that the student follows the steps of the plan, he/she will earn a point. Student can use points toward free homework passes, time to do a preferred activity and/or extra TV time at home. Points may also be accumulated to earn larger incentives such as purchasing a new movie, video game or sports equipment. Student can earn bonus points at the discretion of his/her teacher and parents for following the plan without being prompted.

5. Supervise the student following the steps, prompting as needed.
6. Evaluate and make changes if necessary. Teacher and student will decide when they will meet to review the goal and plan, starting with a daily meeting and less frequently as appropriate. At this time the teacher will gain a verbal commitment from the student to work toward his/her goal throughout the day. Examples of questions to be asked during the meeting may include:
  - Did you follow the steps of your plan yesterday?
  - What homework do you have today?
  - When are you going to do the homework on your list? Think about other activities you may need to work around.
  - Are there any projects or tests coming up?
  - Thinking about how your plan is going, do you believe you will reach your goal?
7. Reward students for using the plan and fade supervision and prompts until only minimal or no prompts are needed for the student to engage in the steps independently. Students with an FASD may eventually be able to internalize the routine, but some may require continued prompting.

## Strategies

### Planning and Sequencing

- Model, teach and practice the use of planning prior to beginning the task. Prompt verbally by asking what would be the best way to get the task done and what the student thinks will happen if he/she does it that way.
- Start with tasks that require planning only few steps then gradually increase the complexity of the kinds of plans required.
- Prompt the student to think about the task and develop a plan of action rather than starting impulsively without a plan.
- Use scoring rubrics when giving assignments.
- Work with the student to break long term projects into subtasks, sequence the tasks based on priority and attach deadlines to each task.
- Use a template for long-term project planning. See Appendix 5 for a sample planning template.

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### Organization

Take time in the daily schedule to teach organizational skills. It is important to start early on in the year and remind often. If a particular organizational strategy is being utilized in the classroom, make sure to spend extra time going over the concept. Model the organizational skill daily. For example, if the math worksheet is to go in the

red folder, announce this at the end of the lesson and demonstrate it to the entire class. Give the student extra credit when you observe them using the organizational strategy independently.

### Classroom Structure

- It is important to intentionally teach organizational skills to a student with an FASD. One way to do this is to have the student use electronics to provide him/her with reminders or to track assignments and instructions.

**E** - Use an electronic alarm clock to help the student recognize important times throughout the day. Set the alarm for when it is time to clean up or when it is time to get ready for lunch.

**M** - Have the student use a desktop computer with access to a calendar program. The student, along with assistance from the teacher or a peer, can schedule due dates for assignments, the time to take his/her medicine or other important events. Have the student check the calendar often throughout the day or set the calendar up to remind the student when events are to occur.

**H** - Provide a Personal Digital Assistant (PDA) for the student and have the parents or school mentor assist in entering information. The student can use the PDA to track important activities and due dates along with instructions for upcoming assignments.

- Schedule adequate time between activities so the student has time to organize his/her materials and to complete any outstanding tasks. If the student feels scattered because materials are in disarray, he/she will have a difficult time focusing on any new activities.
- Schedule the classroom activities for a week at a time. Post the schedule in the classroom and give the student a copy of the schedule to be kept at the desk or in a notebook. Students should also be allowed to take a schedule home or emailed to their parents.

**E** - Younger students do well in a very structured environment. If there are any deviations to the normal daily routine, spend some extra time with the student preparing him/her for the change. When the routine is back into play, the student may need a little extra time to adjust to the daily schedule.

**M**  
**H** - Class schedules can be confusing to students, especially if they have a number of teachers or leave class for school programs such as music lessons or speech therapy. Try to schedule activities at the same time every week. For example, give science assignments every Tuesday or spelling tests every Friday.

- Provide structure to the daily routine.
  - Utilize daily assignment sheets and fill them in as a group at consistent times.
  - Place the daily schedule on the board. Make sure to use words and pictures for each activity. Review this schedule orally and repeat throughout the day.

Have the student cross off each activity as it is completed.

- Use a small flip chart to provide order to the day for the student. Make sure to use words and pictures for each activity and color code the morning and the afternoon.
- Have a class discussion in which students share their ideas about keeping organized. Students can be creative in coming up with ways of staying on top of school responsibilities. You may find that the student with an FASD is more likely to use strategies that he/she knows other students are using. Record the students' suggestions and post or distribute them to the class.
- If the student has multiple teachers, work with the other teachers to set up a similar class schedule and organizational routines. If the student only has to remember one format instead of five, he/she has a greater potential to succeed.
- Make sure the student practices connecting the time on the clock to the time of activities. This concept can be difficult for students with an FASD; however, knowing how to tell time can assist him/her with organizing daily routines and keeping on schedule.

## Individualized Space

- Assignment Notebooks
  - Have the student use an assignment book and require him/her to keep the book with them at all times. At the beginning of each period, give the student time to copy the daily assignments from the board into his/her assignment book and remind him/her to check it off if the assignment is completed before the end of the class period.
  - Some students will do better using a 3-ring binder for their assignment book. Instead of copying down the assignment, have the assignment typed up and hand it to the student at the beginning of the period so he/she can put it into a binder.
- Create a personal space on a shelf or the wall for the student in each classroom. Once the student enters the classroom, have the student place his/her finished papers in a box or on a giant paper clip on the wall. Helping the student get into this routine will assist him/her with remembering to hand in papers.
- Use color-coded folders with the same color book cover and notebook for different subjects.
- Use color-coded bags that contain everything needed for each subject and have the student hang these in the locker in the order of his/her classes.
- Students should be required to organize their materials and schoolwork within the classroom.
- E** - Younger students should put his/her name on their materials. Each student should have personal space to keep these materials. If an item is left out at the end of the day, it will be easier to identify and return the item to the rightful owner.



Consider requiring students to organize their materials and schoolwork in a three-ring binder with subject dividers, blank notebook paper and a plastic pouch for pens, pencils and erasers. Each section should have a folder for items to bring home (assignments to be completed, notes to parents, papers to bring home and leave home) and another folder for items to bring back to school (completed assignments, notes from parents, signed parent permission slips).

- Pre-punch holes in handouts so students can easily put the papers into their binders.
- Color code papers that are required to go to the student's parents/guardians. The student will have an easier time in finding the color-coded papers in the binder.
- Make sure your students have a container for pencils, pens, erasers and scissors. The container might be a plastic zippered pouch kept in the binder or a box or re-sealable plastic bag kept in the desk.
- Have students use self-stick notes to mark very important papers in their binder.
- Require disorganized students to check with you before going home to make sure they have the proper materials and have correctly recorded assignments.

### Homework

- Prompt the student to determine whether organization is required and what kind of organizational strategy might be the most effective for the situation. Model, teach and practice routines that encourage the student to determine when organization is required.
- If at all possible, avoid sending excess amounts of schoolwork home to be completed outside of the classroom. If the student needs help to understand an assignment, he/she will have a difficult time completing it on time.
- The rule of thumb for students with an FASD is to stick to the 10 minute per grade rule. For example, fourth graders should have no more than 40 minutes of homework per night. Send home only work you know they can do independently.
- Pay attention to how you communicate assignments to your students to ensure that they get the correct information. Be clear about the due date, the page numbers, the format, the expected length and the required materials.
- Instead of making written homework lists, some students may need to have visual cues. For example, when asking a student to read a range of pages in his/her textbook, scan a copy of that page and put the picture on the assignment sheet.
- Give the student the option to come in a few minutes before school starts to finish homework which has not been completed. This allows the student a quiet, distraction-free setting where the teacher can provide structure, encouragement and answers to questions.

- When handing out papers to be completed, include the due date on the papers. Emphasize that you expect assignments to be handed in on time. If the assignment is not handed in on time, let students know they must still complete that assignment, even if it is for a lower grade.
- Have the student start difficult assignments before he/she leaves class in case there are questions. Ask students if they have any questions about the assignment and give the students time to write it down.
- Record your daily assignments on a telephone message system for students to call. Talk with your principal about looking into a program that allows you and other teachers to do this. Once it is implemented, students will not have the excuse that they did not copy down the assignment. In addition, it will allow students who are absent to keep up with schoolwork.
- Many students and parents/guardians now have email accounts. At the beginning of the school year, have each parent/guardian fill out a permission slip to email homework assignments or class news on a daily or weekly basis. Set up a distribution list on your email account and take time each day to send a short email to the list updating everyone on the daily activities.
- It may be just as easy to set up a website for everyone to access. Make sure to include your contact information on the website along with some basic information about yourself and your expectations for the students.
  - Set up a link to other sites that include appropriate information about the subject, along with age-appropriate games to play to give the students extra help.
  - Create a section on the website where you are able to post daily assignments and activities.
  - If possible, upload any worksheets or handouts onto the website. This way, if the student is at home and realizes that he/she forgot or lost a critical piece of the homework assignment, it will be possible for him/her to download the information and print it out.
  - Include a section that highlights organizational expectations and tips.
- It will be important for the use of any technology for communication be available in multiple formats. Understand that your student population comes from varying backgrounds, so they may not have access to a phone, computer and/or email.

## Organizing at Home

- Suggest organizational strategies for parents to use with their student. Parents play a key role in helping to organize their student. Send a letter home early in the school year to describe your classroom and homework policies, as well as the materials required by students. Include in the letter some of the following suggestions or steps parents can take to help their student stay on track:
  - Encourage your student to put his/her school materials in the same place every day.

- Ask your student daily for notes from school, or look in the part of his/her binder or backpack reserved for parent information. It is imperative to have close communication with the school in order to be kept up to date on assignments, tests and out of the ordinary events at school. Ask to have one contact person at the school for when there are questions.
- Establish a “homework-comes-first” policy.
- Set limits on your student’s television watching and/or computer use.
- Tell your student that you expect him/her to write down all assignments.
- Have your student do the more difficult assignments earlier in the evening when he/she is most alert.
- Put up a checklist in a prominent place to remind your student of materials to be brought to school daily.
- Mark on the family calendar tests, projects and important school activities.
- Have your student put all school materials inside his/her backpack before going to bed.

## Prioritization and Pacing

Some students with an FASD may rush through work and make careless mistakes which have a negative impact on their grade. Other students with an FASD will procrastinate or spend too much time on inconsequential details to the point that they do not have enough time to finish. Teaching students to recognize how much time they have, what they should work on first, and how fast they should work is helpful not only on school assignments but as a lifelong skill.

- Teach Time Concepts
  - Students with an FASD often need to have visual clues when learning new concepts. Use items like a kitchen timer, paper chains, an hourglass or a growing plant to show change related to time passage.
  - Use calendars in the classroom to help students recognize that there is a predictable pattern to the week and year.
  - When teaching about a topic that takes place over a length of time, create a large timeline to post in the classroom. This will help the student visualize the event and the activities that lead up to it.
  - Create a visual of a clock and put the student’s scheduled activity in the block of time when it occurs. If the events change throughout the week, create separate blocks of time with the labeled event. Different events can be interchanged when needed.
  - Provide and encourage the use of timing devices such as wrist watches, alarm clocks, stop watches and visual timers to show the student how much time is left for an activity.
- Model and prompt prioritizing tasks to be completed. Prompt students to number

tasks in order of importance.

- Prompt the student to estimate time requirements for various activities, and then time him/her to determine how long the activity actually took. After noting the difference in time, ask the student what he/she learned about estimation skills and how it applies to homework. See Appendix 5 for a sample time estimation form.
- Prompt the student to ask himself time related questions such as, “Do I have enough time to get that done?” “How long will this take?”
- Model, teach and practice the use of mental routines that help the student develop a sense of when pacing is required and how to use cues to maintain a good pace. For instance, tell the students how much time they have to work and ask them what that means about their work pace. Model mental routines such as, “I have 15 minutes to work. If I work steadily without stopping, I should be able to get this assignment done.” Or, “I have plenty of time to finish this assignment so I can check it over before I hand it in.”
- For students who rush through their work and lose points for careless mistakes frequently, teach a routine of checking everything before handing it in. Give bonus points for having zero careless mistakes that could have been caught if the work had been checked.
- If you have a student who rushes through work, do not encourage working fast or competing to see who can get done first. Instead, prompt to slow down and check the quality of work and spontaneously give bonus points or school bucks to students you see working carefully.
- Review timelines ahead of time for an activity by pointing out the time which each step or action will take and prompt students to check the time in order to adjust their pace as needed. For example, say, “Since the first step will take a bit longer than the rest, you can plan on spending about ten minutes on the first step and five minutes on each remaining step. Let’s set the timer for five minutes and check to see if you are on track.”
- Teach the student to think adaptively by having him/her use the following steps when completing a task. These steps can be used with any task or activity and will help him/her with applying similar processes to different projects.
  - Identify the goal to be accomplished (completing the worksheet by class time tomorrow).
  - Identify how long the assignment should take (the teacher said this assignment should take us about 20 minutes).
  - Identify options to accomplish the goal (I could work on it for 10 minutes now and finish it in study hall or at home; or since I do not have enough time to finish it all now, I could do it during study hall or at home).
  - Select the best action plan (starts it now and finish in study hall).
  - Develop a series of steps to accomplish this plan (1. Bring the assignment and other materials to study hall; 2. Finish the assignment in the first 10 minutes of study hall; 3. Put the assignment in my finished folder; 4. Hand assignment in when I get to class tomorrow).

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## Working Memory and Holding Information

Working memory is the ability to temporarily hold information in your head while manipulating that information toward the end goal. For example, think about multiplying two digit numbers in your head; you have to remember the process, keep track of where you are in the process and the results as they accumulate in order to add the final numbers to get the answer. A common complaint is the person's inability to remember what he/she was supposed to do if given too many tasks or steps at one time. This is an executive level thought process that many individuals with an FASD have difficulty with and needs to be recognized and coached and/or adapted for.

- Students with an FASD can have difficulty with remembering assignments or directions. Try shortening directions or providing directions one step at a time. Make sure to write the directions on the board or project them using an overhead or PowerPoint slide as this can be helpful for all students.
- Use storage or cuing mechanisms to help the student store information in memory or to cue the student to retrieve the information at a set time. Storage devices or cuing mechanisms can include:
  - Agenda books or calendars for writing down assignments or appointments
  - A notebook to record tasks to be done
  - Allow the use of calculators for math operations
  - Allow the use of formulas and problem solving steps while completing tasks
  - Electronic devices, such as a PDA
  - Tape recorders with the directions recorded into them
  - Pre-arranged verbal reminders or watch alarms
  - Recurring phrases or behaviors the teacher uses to cue (tap on the desk to signal specific behaviors for particular activities)
- Cue the student that longer statements or multistep directions are going to be given and to listen carefully and hold the information until all directions have been given.
- Teach the student to think about what needs to happen when longer directions are given, such as jotting down one or two words that will remind them in sequential order.

## Metacognition

Metacognition is often simply defined as thinking about thinking. It is traditionally defined as the knowledge and experiences we have about our own cognitive processes (Flavell 1979). Activities such as planning how to approach a given learning task, monitoring comprehension and evaluating progress toward the completion of a task are metacognitive in nature. It is important for students with an FASD to know what they know and when to apply it.

- Ask the student for feedback about helpful learning behaviors and not-so-helpful

learning behaviors. For example, “What can we do to make this work?” and “If this was not helpful, what would be?”

- Practice and allow students to think aloud while performing a task. Make graphic representations (e.g. concept maps, flow charts, semantic webs) of their thoughts and knowledge. See Appendix 2 for examples.
- Embed questions into daily classroom instruction that are designed to have the student reflect back on how he/she made a decision or remembered to do a particular task:
  - How did you solve that problem?
  - Can you think of another way of doing that?
  - What can you do to help yourself remember that information?
- Have the students grade themselves on a particular assignment and explain why they feel they deserve that grade.
- Develop error monitoring checklists and prompt the student to use:
  - What is the problem?
  - What is my plan?
  - Am I following my plan?
  - How did I do?

## Inhibition and Stopping or Interrupting Behavior

Students with an FASD may put themselves into dangerous situations even though they may have been told the rules repeatedly. For example, the student may run out into a street without looking or try to open a car door when the car is in motion. In the classroom, the student may be restless and have a tendency to give up when a situation or environment becomes too frustrating. Common complaints include stealing, lying and displaying inappropriate social interactions.

- Just as important as the transition between activities is teaching students with an FASD how to successfully stop or interrupt a task. Try using environmental prompts, such as turning off the lights or music, to guide the students’ attention toward the end of the activity.
- Cue the student ahead of time when inhibition will be required in a certain situation. Rehearse through role play the desired behavior during the upcoming situation or activity. For example, before the student goes out for recess, stop him/her and ask, “What behaviors are we working on?” “What are you going to do when (a common problem situation) happens?” “Let’s practice before you go” to remind the student to exhibit self control.

-  - Create a picture chart and work through these questions with the student on a regular basis to illustrate the importance of problem solving. Model, teach and practice self-talk that encourage students to stop and think before acting.

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Teach and practice the “FAST” strategy. This strategy helps teach students to consider problems carefully before responding, consider alternatives to a problem and can be used to role play using real life situations.

**F**reeze and think! Have the student identify the problem he/she is encountering.

**A**lternatives? Have the student identify what possible solutions there are to the problem at hand.

**S**olution. Decide which solution would work and would be safe and fair.

**T**ry it. Try the solution you chose and decide if it worked. If not, discuss what they could have done instead.



This age group will begin to encounter a number of new social situations, so problem solving instruction can be beneficial for everyone in the classroom. Identify stories or books that highlight the importance of this and incorporate these into the curriculum. For students with an FASD, make sure to identify alternatives with appropriate reading level if necessary.



High school students have a strong desire to become more independent, and the same is for students with an FASD at this age. Allow for the student to journal his/her thoughts on a particular event. Video journaling can be effective if the technology is available.

### Classroom Rules

- Establish a few simple rules for the student to follow. Make sure to use concrete language with the rules and all people use consistent language. For example: “You hit, you sit.”
- Make posters of the school rules and the consequences. Remember that students with an FASD can be overwhelmed by the information presented, so make your poster clear and without too much decoration. Prominently display the rules in the classroom or place them inside the student’s binder and/or desk.

### Positive Reinforcement

- Although it may or may not result in long term behavior change, students with an FASD benefit from positive reinforcement in order to establish habits of behavior and increase self esteem.
- Work with the student and parents to decide on agreeable incentives. If the incentives do not mean anything to the student, the student will not have the motivation to regulate his/her behavior. Examples include: for the student who likes to read, use free reading time as the incentive or if the student is good with younger children, add an incentive to help in the kindergarten or early childhood classroom (with the appropriate level of supervision).
- Connect incentives to home. The student could earn a later bed time or extra TV

or video time at home if he/she reaches the goal.

- Come up with a creative and lengthy list of incentives. Some students with an FASD lose interest in the agreed upon incentives resulting in loss of motivation to work toward it. Make two or three different incentive lists and rotate as needed.
- Be immediate in your rewards. The student will need to receive positive recognition right after he/she successfully completes the task or follows the rule in daily situations. See Appendix 4 for examples of free or inexpensive rewards.
- Place a chart at the student's desk to track the rewards and to give him/her positive visual feedback.

**E** - Have the student assist you in creating a sticker chart. When the student is observed following a rule correctly, have him/her apply the sticker that was earned to the chart.

**M** Allow students to build up their rewards to earn certain privileges. Students may be allowed to choose from a number of privileges including free time at the library, computer time or reading a magazine during quiet time depending on what incentives you and the student have determined.

**H** For older students who have email accounts within the school system, you could send them an email of recognition, free homework passes or certificates to trade in for rewards for following the rules.

## Consequences

- Remember that consequences may not affect future behavior in students with alcohol related disorders. Brief, immediate, consistent consequences work best. Lecturing and asking the student why he/she misbehaved are typically ineffective for behavior change.
- When the student breaks the rule, make sure to enforce it by using consistent consequences. Implement the consequence immediately following the rule breaking and remind the student what the consequences are for.
- Remember that peer acceptance is difficult for students with an FASD to obtain. Do not single the student out in front others. Take him/her apart from others when you administer any consequence.
- Remind students of the rules and consequences daily to reinforce their learning.
- Do not debate with the student over the classroom rules or the consequences of breaking those rules.
- Students with an FASD may need individualized consequences. Have the consequence fit the issue and make sure to have variations in levels of consequences based upon what the area of concern is. For example, if a student breaks one of the rules consistently he always gets the same consequence for breaking that rule but may have a different consequence for breaking a different rule.

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- Work on teaching empathy by having the student take another person's point of view. When the student is impulsive in a way that affects another student or individual, talk with him/her about how the other person may have felt when the incident happened.

**E** - Younger students can have a difficult time with this process, but there are many picture books available to show how empathy works.

**M** A peer may be effective in teaching empathy to students of this age. Identify a student in the classroom who is someone the student with an FASD may be comfortable with and pair these students up in activities whenever possible. When the student with an FASD has impulsive moments, meet with both of the students and have the peer briefly talk about how his/her actions impacted everyone. It is important to use real-life experiences when reviewing behavior.

**H** Use role playing to illustrate specific examples of when impulsive behavior can have an impact on those around the student. Other students can also model the appropriate behavior.

- Be pro-active! Plan to increase supervision and external control when incentives or consequences do not work.
  - For example if the student may take others' belongings, he/she should not be allowed to be in the classroom without adult supervision and may need to have his/her pockets or book bag checked at the beginning and end of each day.
  - Supervision is important for safety reasons. Do not assume the student with an FASD will remember or generalize lessons or reminders about safety issues. Some students will require supervision well into their teenage or even young adult years.
- Use clear, concrete and direct prompts when it is necessary to stop or interrupt a student's attention on a task. Say, "stop now", or place a hand on the student's hand to stop writing.
- Allow the student to make mistakes. Help the student to see his/her value in terms of what can be learned from these mistakes. Understand that students with an FASD have difficulties with impulsivity and the opportunities for mistakes have the potential to be increased.

## Self Regulation of Emotions

Some students with an FASD may be observed to be overemotional, anxious, dramatic, easily frustrated or hyperactive. They have difficulty monitoring others' emotions; realizing when their emotions are inappropriate for the situation compared to their peer's emotions; and then regulating their emotions to fit the situation. When students' behavior is obviously different than others in the environment, peers and others tend to notice and label them as odd or not somebody they want to be associated with. It is important to attempt to help students regulate their emotions so that they fit in with peers more easily and learn to handle frustrating situations more calmly.

## Hyperactivity

- For students who display hyperactivity, remember this is a physiological response that is, for the most part, out of their control. Research has shown that a combination of medication, learned strategies and accommodations is most effective for managing hyperactivity.
- Make sure to facilitate movement and creativity between seat work assignments.

**E** - Have the student move about the classroom to find items of a certain color or shape. Ask students to run errands for you, such as taking an envelope to the secretary or returning a book to the library.

**M** - Allow the student to get up to speak with classmates when working on some assignments. Make it necessary for the student to collaborate with peers to complete an assignment.

**H** - Allow the student to go to the library to research a topic or set up a time during the class for the student to interview another teacher, student or staff person at the school in order to obtain information regarding an assignment.

- Utilize a quiet-active approach. Split up by periods of quiet activity with periods of activity where the student has an opportunity to work out some energy. Make these changes every 20-30 minutes or more often if necessary.
- Allow the student to have reading time in a rocking chair or to stand by his/her desk when working independently.
- Some students always have something in their hands signaling the need for appropriate tactile stimulation that can help them refocus. Provide the student with textured items to use as needed. Some examples include velvet fabric, sandpaper taped to the bottom of the desk or squishy balls.
- Hyperactive students should sit on a chair rather than the floor. The chair keeps the students from leaning backward, forward and sideways, and it helps keep the student in a specific space.
- Pre-set a timer for the student to complete an assignment. Tell the student he/she has the same amount of time as everyone else but can stop the timer when needed to take a brief break to stand up, walk to the water fountain or use the bathroom. The student will then start the timer again when back to work.

## Frustration and Anxiety

- Some students may have outbursts of behavior due to an inability to effectively communicate. Teach the student how to communicate his/her needs through social stories, role playing and practice in real situations.
- Students with an FASD often experience test anxiety which can greatly affect their grades.
  - Provide students with the questions on the test before hand or tell them generally what will be on the test. Alternate types of assessments such as oral presentations, projects and providing word banks can also be helpful.

- Take the time to teach coping strategies, such as relaxation techniques, for these students and cue them to use these techniques during assessment times in the classroom.
- Work hard at teaching the student to recognize his/her emotions. Give examples to help put the feelings into words. For example, a picture of the color red could mean that the student feels a burning in his/her stomach or head. A picture of a tornado could mean the student is feeling confused with too many thoughts.
- Help the student recognize the most common situations that cause him/her to become frustrated. Once students can recognize their emotions, work with them to develop scripts that can be used before behavior escalates. For example:
  - "I'm getting confused. I need to calm down, take three deep breaths, and try again or ask nicely for help. I don't have to figure this out on my own."
  - "I know this might be hard for me but I'm going to keep trying."
  - "If I get stuck after I have tried hard, I can ask for help."
- Teach the student a signal he/she can give to you when feeling frustrated or overwhelmed. Develop a plan for when this signal is used. The student may need to go to a quiet part of the room or sit in the rocking chair for a bit to calm down. You may use the same signal to let the student know you think he/she should use their planned strategy.
- Break tasks into smaller, manageable steps to avoid frustration.
- Adapt the classroom environment as a way to avoid problem situations.

**E** - If a student becomes anxious that someone will play with the toy he/she wants, limit the number of students in that play area or coordinate with students who do not typically play with that particular toy.

**M** - Pay close attention to how the students interact with each other when seated at their desks. Some students with an FASD have difficulty with personal relationships which may be illustrated in their behavior with others around them. Have the students sit next to others that they get along with in order to avoid some emotional outbursts.

**H** - Moving from one classroom to the next in high school can be very overwhelming for a student with an FASD. This experience can be emotionally charged if the student encounters other students who may try to pick on him/her. If possible, have a teacher or peer walk with the student to avoid these types of encounters.

- Use books and characters from literature to help the students understand how their feelings affect them. See children's literature list in the resource section for appropriate books.
- Let the student know there is a protocol for loss of control. Taking the student's hand and holding it a short time will give the student a signal that the teacher thinks the student is losing control.
- It will be important to know the student well before implementing any external control over their behavior. Some strategies that 'sound good' or work for other

students may actually escalate the behavior instead. It is always better to be pro-active and prevent behavior rather than be forced to implement external control once it is escalated.

- Talk to the student, telling him/her that you are helping to control the behavior.
- "I am going to hold onto you until you are calm."
- "Are you feeling better?"
- "Let me know when you are ready for me to let go."

### **Meeting Physical Needs and Avoiding Over-stimulation:**

- Remember that students with an FASD may become over- or under-stimulated due to sensory integration dysfunction. In combination with teaching students to regulate for themselves, teachers can observe to determine environmental or physical needs and set up opportunities to meet those needs. It is important for teachers and parents to be aware that negative behavior may be a symptom of unmet needs. Some students may be tired or hungry while others may have medical concerns that will need to be addressed.
- If the teacher or parents believe their student is having difficulty modulating or processing his/her environment, they can request an evaluation for sensory integration dysfunction so that a professional occupational therapist can provide appropriate strategies.
- Students may need several rest breaks throughout the day and some students may need to take a nap. When you know this is the case, schedule these breaks into the student's day so he/she is aware of when the break will take place.
- Students may need snacks during the day. Have healthy food available for the student when he/she is hungry during a break time.
- Observe the student for any health problems, including physical and mental health.
  - The student may have an ear infection if you see him/her pulling at his/her ears. Ask the student to "Show me where you hurt."
  - Observe the student's interactions with other students to see if they are positive. Some behavior problems may come from the student being depressed or being bullied by his/her peers.
  - Older students with an FASD may have problems with drug and/or alcohol abuse. Watch for the signs or symptoms of such abuse.
  - Look for behaviors which may signify visual problems such as abnormal head posturing, squinting, holding paper close to face or obvious errors made when working from the board.
- Keep the noise level to a minimum when possible. When the student's behavior escalates, keep a normal or softer voice at a slower pace.

- Some students are calmed by background music or the sound of a fan. If this is disturbing to other students in the classroom, allow the student to use headphones with the volume turned down very low when he/she is reading or doing individual work.
- Create borders around the student with an FASD. Try using arm rests, foot rests and beanbag chairs. This helps the student feel more secure and will have a calming effect.
- Have pets and plants in the classroom to help the student to relax.

## Initiate, Execute and then Modulate

Some students with an FASD have difficulty starting tasks and understanding the amount of effort and energy required to engage in a task. Many times this is because the task seems overwhelming because there is too much print or it looks too long. Sometimes it is because they do not understand what they are supposed to do and cannot form questions to ask for help. It is important for teachers to observe and take note of the times or tasks involved when the student fails to start or engage effort. This will help determine what strategies to try.

- Use daily routines that help to form habits of initiation. Try writing the date on the student's paper when doing an assignment. Another example is to scan the section in the book for the main ideas in bold. Cue the habits verbally for the student. For example, "Just like always when we start a math assignment..."

**E** - When students enter the classroom after recess, set a routine that the students will take off their outside gear and return to their seats right away for a couple minutes of quiet time.

**M** - As students start to move from one classroom to another in middle school, there can be difficulty with establishing daily routines. For students with an FASD, work together with all of the teachers to ensure that the same routine is used when the student enters the classroom. A routine could include putting his/her books on the desk, sharpening pencil and sitting in seat before bell rings to start the period.

**H** - Routines continue to be important as the students get older. Start to work in life skill routines that can be used throughout the student's day. For example, at the end of the day they write a to-do list for tomorrow's tasks.

- Allow alternative response modes. Try allowing the student to type up his/her work on the computer. Some students may benefit from giving oral responses in person or through a tape recorder. Other students could benefit from a hands on approach such as creating a map, a collage or a science demonstration. Students may find that the option for different output styles is more interesting than always writing their answers and they may be more willing to complete the work.
- Alter assignment difficulty level. Give advanced level assignments for an 'A' or lower the level of difficulty for a 'B' and so on. Allow the student to choose the level of difficulty to be attempted.
- Use the One Minute Drill to get the student started on the task. Give points to

the class when everyone has started work within one minute. Once the class has cumulatively earned a predetermined number of points for getting started, they earn a reward:

- Put paper on desk
  - Open book to assignment
  - Write name on paper
  - Begin work
- Break tasks down into segments if needed. Give only directions for those specific segments so the student is not overwhelmed by the steps. Provide a reward for completion of certain steps in a task and not only at the end of the entire task. See Appendix 4 for other examples of free or inexpensive rewards.
  - Change the task, the environment in which the task is done, or the reinforcement for task initiation instead of punishing a refusal to work on a task. Remember that the student's non-compliance might be triggered by incomprehension of the instructions or the difficulty of the assignment. By changing the way that the task is presented, the student may be able to complete the work.
  - Together with the student, make a list of steps for starting an assignment and cue the student to follow it.
  - Make steps more explicit for the student. Provide the student with a cheat sheet, mnemonic or template of the steps for solving word problems.
  - Make tasks closed-ended. Use fill-in-the-blank or true-false tests rather than essays. Allow the student to practice spelling words using cut out letters instead of writing them in a sentence.
  - Provide external prompts such as additional explanation, a visual cue or light physical touch to let the student know it is time to start an activity.
  - Guide students through the first step of an assignment or routine by telling the whole class to do the first few problems then wait, check to make sure everyone is on track and do the next group of problems.
  - Group students in pairs or small groups. Make sure the student with an FASD is paired with a student who displays good initiation skills.
  - Allow additional time for engagement to occur. Have the student specify when he/she will begin the task and cue him/her when the scheduled time arrives. The student should decide on the cue to be used.

## **Flexibility and Shifting Tasks or Attention**

- Offer the student options for alternative activities as a form of built in flexibility throughout the day.
- Announce schedule changes in advance so students have more time to adjust. Make sure to change the written schedule or highlight the change visually.

- Flexible problem solving can be difficult to learn. Spend time with the student modeling, teaching and encouraging the use of flexibility. For example, when a task does not go as planned, tell the student, “Well that strategy didn’t work out; we’ll have to change something.”
- Provide close contact at transition times.
- Reduce the demands for flexibility by avoiding the use of novelty within the curriculum. Familiarize the student in advance with places, schedules or activities using rehearsal of the activity. Pre-teach or give the student the opportunity to review the material before it is presented.
- Teach students that people are allowed to make mistakes and offer examples through stories, movies and real life situations.
- It is important to reduce the speed, volume or complexity of information that is being presented to a student with an FASD. One way to do this is to adapt open ended tasks to make them close ended. Show the student how a problem can be solved.
- Offer a high frequency of reassurance for students with an FASD. This can be provided by step by step assistance, physical proximity and cuing the student to use coping skills such as scripts when needed. Provide advance warning of transitions and review what needs to be done when the shift occurs.
- The student with an FASD may need to be taught how to divide or shift his/her attention between activities. The following activity can assist with this learning process: Have the student begin by playing a game which has both a timing and attention component (Simon, Bop-It or Perfection). As the student starts the game, ask him/her for other information (teacher names an animal and the student has to make the animal sound, give two numbers and the student has to give the sum, ask the student to describe the classroom). Although this may seem overwhelming at first, setting small goals will help the student strengthen his/her ability to shift attention from one task to another.
- Set up practice of shifting attention by deliberately interrupting a task. When the student is engaged in a task, ask him/her to put a finger on the problem he/she is working and listen to a new direction, a reminder, or a tip for finding an answer, then go back to the problem they were working on.
- Try this activity: Provide the student with a task or assignment and add small distractions while prompting the student to stay on task. Set a goal with the student to determine an appropriate period of time he/she will be able to handle this. As the student is able to handle small distractions, increase the distractions. Provide a reward or privilege when the student meets his/her goal.

## Focus Attention

Students with an FASD may have difficulty attending to what is important within the classroom, a lesson or directions. Focused attention is the ability to attend to one thing to the exclusion of everything else and requires a high degree of mental energy. Students with attention difficulties avoid it when they can and may require assistance to focus attention when needed.

- It is important to eliminate as many distractions as possible so the student can more easily focus her/his attention where needed. Provide study carrels or a folder to set on the desk to reduce distractions and help student understand where his/her attention should be.
- Minimize the clutter on handouts. Students can be distracted not only by the clutter in their desks and around the classroom but also by the clutter on their papers. For some students, even a pencil smudge on the paper can be a distraction when they are trying to do their work.
- Simplify the visual presentation of the papers you hand out by limiting the amount of information you put on a page, or by having the student fold the paper to allow him/her to concentrate on one part or problem at a time.
- Create a tool by cutting windows the size of one line of text or one problem on a worksheet out of heavy paper and lay it over the page or worksheet to help the student focus only on the line he/she is reading or the problem being worked on and blocking out all extraneous information.
- When giving a test of more than one page, consider giving the student one page at a time. Direct his/her attention to key information through highlighting or underlining on the exam.
- Use red or pink highlighters, not yellow. These colors will help to draw the students' attention to the important information.
- When giving an oral presentation or a lecture, have the student sit close to the speaker. The student will be able to focus his/her attention on the person presenting instead of the surroundings. Make sure that the area behind the presenter is clear of distractions including any doors or windows.
- As frequently as possible, work one-on-one or in small groups with students who have difficulty focusing attention to allow for more immediate feedback, increase engaged learning time and decrease teacher frustration.
- Use focus words to gain attention. For example, "Listen to me," "Do it now." Do not muddy up your language by using a lot of adjectives or adverbs. The student may get lost in your words and not understand the true meaning of your request.
- When presenting information orally, vary your speech tempo by talking faster and slower at different intervals. Also try and vary the loudness, inflection and the quality of your voice to keep the student tuned in to what you are saying.
- Utilize frequent prompting during a task to help maintain a consistent level of focused attention.
  - Point to the portion of the material being discussed, telling students the information is important.
  - Instruct the student to be ready for a question from you in the near future.
- Students with an FASD need to have a structured and predictable classroom routine. This routine can allow the student to anticipate where their attention is likely to be needed.
- The use of verbal rehearsal to support repetitious activities can be helpful for

students with an FASD. Have the student verbally repeat the steps of the routine when working on a project to keep him/her focused on the sequence and each step.

- Be alert to the time of day and have students do difficult tasks when they are most alert.
- Introduce a lecture or laboratory with a short outline or summary. Have students fill in one or two details under each main idea as the class progresses to help them stay focused throughout the lesson.
- Increase curiosity by starting with a controversy, challenge, case or example (the “hook” or “lead”).
  - Use an image or video to capture attention.
  - Start with a personal story or struggle to personalize and capture attention.
  - Use humor. The concept to be understood should be the focus of the joke.
  - Ask for predictions or “guessing” prior to introducing information.
- Use pre-surveys or pre-tests and instruct students to check their answers as you deliver information.
- Focus specific attention on important concepts. Strategies to accomplish this include underlining important ideas, writing them on the chalkboard, flashing them on the computer screen, saying them more slowly or loudly.

## Sustain Attention

Sustained attention is the ability to direct attention to a task or lesson through to completion. Some students with an FASD have difficulty persisting with a task until it is done and may give up halfway through. Research has shown that the longer their attention is required, the less attentive they become. It is also thought that visual attention is stronger than auditory attention for students with an FASD.

- Teach students to self-monitor their attention. Audio cues are typically tape recorded tones at predetermined intervals and are used to remind students to self monitor their attention, behavior or amount of work accomplished. When the tone sounds, the students should ask themselves if they are exhibiting the target behavior, i.e. “Have I been paying attention?” Other audio cues can include messages to the student such as, “work carefully,” “work slowly” or “check work.” See self monitoring form in Appendix 5.
- Provide frequent prompting and external motivators during a task to help maintain a consistent level of attention. For example, every few minutes call out the names of a few students and say, “give yourself a point if you are paying attention.” Accumulated points can be handed in for free homework passes.
- Reduce the length of time sustained attention or engagement is required. Break long sessions into multiple shorter sessions with brief movement breaks between sessions. Movement breaks can include going to the water fountain or delivering a message to the office.

- Set specific time limits on activities so that the student has a sense of how long his/her attention is required.
- Write start and stop times on the assigned task to help the student persist with tasks long enough to complete them.

**E** - Set up the schedule by using visual aids, such as nesting cups or pictures. Set out 6 nesting cups to show the student that 6 activities need to be completed before taking a break.

**M** You can also use visual cues for the older student. Create a flip chart that the student can use as he/she completes each task. When finished with the predetermined number of tasks, the student will flip the chart to the break card.

- Make tasks interesting by incorporating interaction or action. Try turning the task into a game or challenge.
- Help the student become aware of his/her attention span and provide encouragement to increase concentration:

**E** - Determine how long the student is able to work on a given activity before taking a break. Once you have determined the attention span for an activity, expand it by one more try and reinforce the student. If the student is drawing circles on a paper and decides to quit, have the student draw "one more" circle. You should never make them do the activity more than once if you said "draw one more circle."

**M** Use the following activity to improve sustained attention:

- Use a stopwatch while the student completes a small task or assignment and take note when the student loses attention by starting to play with an item or looking around.
- Stop the time when attention is lost.
- Then give the student a goal to try to focus for a longer period of time (i.e. 15 seconds longer than they sustained attention during the timer session).
- Provide external motivation for the student to increase sustained attention.
- Continue adding more time to the goals until the student can repeatedly sustain attention for 5 minutes at a time.
- You can award points or give free homework passes for completed work or work completed in a specified time period.
- Rhythmic activities such as choral reading, spelling and math chants are effective in holding attention.
- Use games to over-learn rote material. It is important that these games are not competitive in nature.
- Have the student use computers to make the learning process more exciting. The use of technology has the potential to lengthen some student's attention span. The use of the computer in the classroom can provide a method of repeating

lessons, such as math problems, which may be helpful.

- Determine what activity the student can attend to longest and what provides him/her with the interest needed to complete that activity. Generalize these features into other activities whenever possible. For example, if the student enjoys drawing, use this concept when teaching math.
- If it is not always possible to make the task or activity fun and interesting for the student, then alternate between high and low interest tasks. Have the student complete the less preferred task first and then more interesting task last.
- Use a tape recorder and earphones for when the student needs to listen to an oral presentation. While the speaker is talking, tape their presentation. Allow the student to listen to this tape during class or at home so he/she can have another chance to gather the information that was presented.
- Novelty is an excellent attention getter!

**E** - Have a fun prop that is related to the topic you are teaching. For example, have the students use stuffed animals when they are learning counting or bring in apples when you are teaching them about Johnny Appleseed.

**M** - Have the students create a newscast with information from a book they read for class. Allow the students to create the props, write the script and videotape themselves. Invite parents and community members in to view the newscast.

**H** - At the beginning of class, share an interesting article from the newspaper with the students. Allow the students to bring in articles that they find interesting or funny.

## Store Information

Long term memory is the result of permanently storing, managing and retrieving information at a later time to solve problems. Meaningfulness, or connecting new information to information already stored in long term memory, is key to facilitating storage. One concept or piece of information is more meaningful if the learner can make a number of connections between that piece of information and other information already in long-term memory. There are many types of strategies that can be used to enhance the storage of information.

- The Number/Rhyme technique works by helping you to build up pictures in your mind, in which you represent numbers by things that rhyme with the number. You can then link these pictures to images of the things to be remembered. For instance, the number one is always associated with a picture of a bun so if the first word on the list is milk, you could visualize a bun dipped in milk. The usual rhyming scheme for numbers 1 through 10 is:

1	=	Bun	6	=	Sticks
2	=	Shoe	7	=	Heaven
3	=	Tree	8	=	Gate
4	=	Door	9	=	Line
5	=	Hive	10	=	Hen

- To assist students in remembering the information they need to commit to long-term memory, have them make up a story that connects the items or facts they need to remember, thus making them easier to recall. The idea here is that it is easier to remember more information when one fact or item connects to another. While making up the story, have students create a strong mental image of what is happening either mentally or by drawing pictures as they go.
- Teach students the difference between understanding and remembering. Listening and reading are typically not enough for them to perform well on tests. Engaging in activity will help them remember what they understand.
- Activate prior knowledge by asking questions. “What do you know about...?” “What do you want to know about...?” At the end of the activity, ask “What did you learn?”
- Have the student use visual representations such as concept maps, webs or other visual organizers of diagrams or flow charts and if needed convert that information into outlines for review. See Appendix 2 for examples.
- Using mnemonics is a popular strategy for remembering. Many students learn “Please Excuse My Dear Aunt Sally” to remember the order of math operations (parentheses, exponents, multiply, divide, add, subtract), or HOMES for remembering the great lakes (Huron, Ontario, Michigan, Erie, Superior). A list of sample mnemonics can be found in Appendix 1.
  - Model and teach students to make up their own mnemonics using “FIRST”:
    - F**orm a word that incorporates important parts of the skill. For example, HOMES is a mnemonic for the names of each Great Lake.
    - I**nsert extra letters to form a mnemonic word if needed. BrACE is a mnemonic for remembering scientific objects that have never been seen (black holes, antimatter, cosmic rays and earth’s core).
    - R**earrange letters to form a mnemonic word when order is not important.
    - S**hape a sentence to form a mnemonic.
    - T**ry combinations of first four steps to create a mnemonic.
- Preview new concepts and vocabulary at the beginning of learning activities to activate prior knowledge and personal experience.
- Model, teach and practice using mind mapping for taking notes. Mind maps can be used during lectures, content reading or research. Mind maps show not only facts, but also the overall structure of a subject and the relative importance of individual parts of it. These tools help to associate ideas and make connections that might not otherwise be made.
  - Write the title of the subject you are exploring in the center of the page and draw a circle around it.
  - As you come across important facts that relate to the subject, draw lines out from this circle. Label these lines with these facts.

- As a deeper level of information is taught related to the facts, draw these as lines linked to the fact lines.
- Finally, for individual facts or ideas, draw lines out from the appropriate heading line and label them.
- As you come across new information, link it in to the mind map appropriately.
- Use multiple varied activities such as projects, group work and field trips as active learning experiences which enhance memory.
- Engage in activities to teach students to understand how their memory works. Ask students how they remember and collect the strategies they use. When it comes time to remember new information, review the memory strategies.
- Use colored highlighters or shapes for specific themes, details or concepts when reviewing material for a test.
- Have the student study with a friend. The students should share their ideas with each other and then critique what they think is right or wrong about the concepts.
- Use multiple sensory and format instruction.
  - Seeing: Use visual representations such as concept maps, webs, diagrams or flow charts.
  - Hearing: Use music in the classroom to help cue different activities.
  - Touching: Use movement to represent a certain concept. For example, use students standing up and sitting down to illustrate subtracting a number from another.
  - Smelling: Try having students close their eyes when you read a poem to them. Have the students describe what type of smell they connect with what they heard.
  - Tasting: When teaching about geography, try bringing in regional foods for the students to try.
- Use consistent teaching strategies and teach the student the method you will be using.
  - Introduce subject.
  - Introduce topic.
  - Describe the lesson objectives.
  - Provide student with outline and cue him/her when to add notes or details.
  - Repeat as necessary.
- Use as much sensory stimulation as possible to teach each concept.
  - Teaching the color "orange."
    - Wear orange clothes.
    - Paint with orange paint.



- Use orange construction paper for projects.
- Serve oranges for a snack.

**M** - Use basketball as a theme in multiple lessons.

- Write a poem about the sport.
- Shoot hoops to learn about a math concept.
- Use pictures of basketball on all papers that week.

**H** - Use music during certain lessons.

- Listen to a song and have the student journal what she/he believes the song is about.
- Use the song lyrics during a poetry lesson.
- Have the student create an album cover for the song using different shapes and colors.

- Use objects as much as possible to teach concepts.

**E** - Teaching the student about circles.

- Laminate polka dot fabric.
- Use a cookie cutter to cut circle sandwiches.
- Cut circles from construction paper and glue cheerios to the paper.

**M** - Teaching the student about division.

- Create flash cards.
- Use beans or small candies to demonstrate the concept.

**H** - Teaching the American Revolution.

- Put up the American flag.
- Have the student bring in something he/she is proud to own and describe how that ownership feels.

- While teaching a unit, have students write down the main idea of each section on a sticky note and stick it to the last page of the section they are summarizing. Once students have completed that unit, review that material at a later time by going back and reading the main ideas on the sticky note. Use the information often as review questions on tests or by integrating it into other lessons.
- Utilize noncompetitive games to review previously learned materials. Here is an example of review basketball game:
  - Have each student write five questions found in the literature.
  - Divide the class into 2 groups.
  - Teams will take turns asking the opposing team questions that they have written. Textbooks or other resources can be used if appropriate.

- A team that answers correctly receives one point and an opportunity to “shoot” for an additional point. The “shooting” can involve throwing a soft ball into a container or you can have the students draw a point card out of a container. Point cards can include different amounts (0 points, 1 point, etc.).
  - If the team asking the question stumps the other team, they do not automatically receive a point, but they do have the opportunity to shoot for a point.
  - Points can also be deducted for inappropriate behavior.
  - The team that is ahead at the end of the pre-established time frame is the winner.
  - Consider using several of the questions for the exam. The activity gives the students a chance to work as a team when learning the material.
- Move into new areas of academic instruction gradually, always reviewing past material so students can experience success.
  - Work with the student on no more than one or two concepts within one week. Repeat and review these concepts often throughout the week and take steps to carry these concepts through into future lessons. It is important to assess the student’s learning more frequently than you might for other students.
  - When the student appears to have learned a rote skill, have the student continue to practice the skill with the aim for over-learning.

## Retrieve Information

Retrieval is a process of accessing stored memories. For instance when taking an exam, students need to be able to retrieve learned information from their memory in order to answer the test questions. Research has shown that long-term memory is enhanced when students engage in retrieval practice.

- It can be very helpful for students to take practice tests. When reviewing information prior to tests and exams, ask the students questions or have the students make up questions for everyone to answer rather than just retelling students the to-be-learned information. If students are required or encouraged to make up their own tests and take them, it will give their parents and/or teachers information about whether they know the most important information or are instead focused on details that are less important.
- Provide hints or clues that help lead the student to the information needed. For example, reminder of the first letter in the word, how many letters in the word, how many words in the phrase or steps in the sequence or if the answer is a detail or big picture concept.
- Provide multiple options and formats for demonstrating knowledge of stored information based on the student’s areas of interest and strength.
  - Have the student make up a poem, song, rhyme or mnemonic and produce their knowledge verbally or through an action project.

- Ask the student to create a poster, concept map, timeline, character map or episodic organizer (beginning, middle, end) representation of the material learned.
- Have students hand in a memory map the day before a test explaining their plan for learning and remembering the material.
- Prepare an outline as a study guide for the student.
-  - Use a picture study guide for younger students. Use pictures that are relevant to the information or are of interest to that particular student. Have the student color the pictures in the study guide so she/he can feel some ownership to the materials.
- Prompt the student to go beyond rote memorization and help him/her move toward meaningful rather than rote recall of information:
  - Ask questions during class that require the application rather than recitation of principles. The responses from the student may take longer as she/he is being asked to complete a more complex task.
  - Allow students to use concept maps, diagrams, outlines or other notes when taking tests.
  - Avoid asking any trivial questions that can easily be answered by memorization.
  - Give credit for incorrect answers that are accompanied by truly plausible explanations.
  - Use recognition questions rather than open-ended ones on tests.

## Problem Solving

Problem solving is at the foundation for improving all executive skills. Awareness of the problem and making a plan to solve it should be the objective of all plans. The basic parts of problem solving include:

- Identify the problem.
- Brainstorm solutions.
- Choose a solution and try it.
- Evaluate.
- Choose a new solution if needed.

Students with an FASD may not be aware of the problem and will need guidance recognizing when to use the steps and apply them to their individual situations.

- Using mnemonics can be very helpful when teaching students to remember the steps or routines of problem solving strategies. See Appendix 1 for more examples of mnemonics. Use the following letter strategies for problem solving.
  - SODA

- S**ituation (what's the situation?)
- O**ptions (brainstorm solutions)
- D**ecide (which solution makes most sense?)
- A**nalyze (how did it work?)

- STAR

- S**earch the word problem.
- T**ranslate the words into an equation in picture form.
- A**nswer the problem.
- R**eview the solution.

- FAST

- F**reeze and think! Have the student identify the problem he/she is encountering.
- A**lternatives? Have the student identify what possible solutions there are to the problem at hand.
- S**olution evaluation. Decide upon the solution that would be safe, fair and effective.
- T**ry it! Have the student try the solution slowly and carefully. Then have the student ask "Did it work? Is there anything I could have done differently?"

- SQRQCQ: This strategy is an approach to solve word problems by finding important elements and determining how it should be solved. This questioning encourages students to find and correct their own mistakes.

- S**urvey the problem: Read the problem to get a general idea of its nature.
- Q**uestions: Ask yourself questions about the problem: Reflect on the reading to determine what the problem is asking you to do. Is the question asking you to estimate, calculate area, multiply or other operation?
- R**ead the Problem: Read the question again. This time, focus on the specific details of the problem. Should the answer be in inches, miles, liters, time units or some other form?
- Q**uestion yourself about the operations involved: Reflect again. This time, determine the specific math operations the problem is asking you to perform and list the operations on paper in the order to be performed.
- C**alculate the problems: Perform each operation in the order you listed it. Check off each step as finished.
- Q**uestion yourself about the steps you took: Review each step you took. Determine if your answer seems reasonable. If possible, check your answer against the book's answers or have a teacher look at your work to determine if you are on the right track. Check your answers at each step of the operation. Were they correct? If not, make those corrections.

- Model, teach and practice the use of a problem solving strategy and prompt the use of it. Eventually teach the student to monitor the situation to determine when thinking or problem solving is required.

## Monitor and Modulate

The use of monitoring can cue appropriate routines for checking the accuracy of registration, manipulation, storage and retrieval of information or the performance of, or final product of, a motor routine. Difficulties with monitoring often result in careless errors due to a lack of adequate checking of thoughts, emotions or work products. Correcting cues appropriate routines for correcting errors or altering performance based on feedback from other modules. Difficulties with correcting result in failure to correct errors or alter performance.

- When implementing self monitoring or classroom monitoring, remember to:
  - Define behaviors in terms that students can understand.
  - Teach the self-monitoring procedure before implementing the plan.
  - Provide students with the support they need.
  - See examples of self monitoring forms in Appendix 5.
- Provide guided practices for monitoring routines by actively assisting students to perform the motor movements necessary to complete the monitoring routine.
  - If possible, use self-correcting materials or make a game out of checking the completed work.
  - Do a preliminary check of work and send back for editing before grading occurs.
  - Have the student complete the first few items of an assignment, then check to make sure he/she understands the task.
- Provide information to the student about the amount of effort that will be needed to perform a task. For example, "The first part of this section is going to be difficult so you'll need to work hard for a few minutes at the beginning."
  - Provide a demonstration of the entire task or assignment, explaining that some portions of the task may be very easy while some will require much more effort.
  - For some students, you will need to clearly break up the sections of the task and only describe the amount of effort as you move forward with each step.
- Show the student examples of his/her performance to help gain awareness. For example, point out how well the student did on tasks where good effort was exhibited and how poorly the student did on tasks where poor effort was exhibited. Examples help students understand the connection between their level of effort and the results that can be achieved.
- Provide a checklist of instructions for the student to follow. Use visual cues with each item and allow the student to check off the items as they are completed.

Remind the student of written instructions when he/she is questioning what to do next. It is important that the student first try to figure it out on his/her own.

**E** - For younger students, create a picture list. Once an activity is completed, have the student check it off by putting a picture of a checkmark on top of the item. The student can help you create this picture list.

**M** Older students can use a paper checklist. Make sure that the checklist is not too busy and does not have multiple colors on it. The checklist should be very specific in the different tasks needed to complete an activity. Follow up with the student often throughout the activity to make sure that he/she is marking off completed items.

- Involve the students in selecting the skills they want and need to learn. The student may have skills that he/she is very interested in learning and this will help to excite him/her into learning new concepts or ideas. It will also provide the student motivation in putting forth a best effort in the task.





Strategy tried: \_\_\_\_\_

\_\_\_\_\_

Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Strategy tried: \_\_\_\_\_

\_\_\_\_\_

Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

\_\_\_\_\_

Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Executive  
Functions

Strategy tried: \_\_\_\_\_

\_\_\_\_\_

Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Executive Functions

Strategy tried: \_\_\_\_\_

\_\_\_\_\_

Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Executive  
Functions

Strategy tried: \_\_\_\_\_

\_\_\_\_\_

Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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**Executive  
Functions**

## Section 6: Brain-based Teaching Methods

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## Section 6:

# Brain-based Teaching Methods

### Description:

Damage from prenatal alcohol exposure is seen to affect particular areas of the brain. Those regions and their functions are:

- Cerebrum, specifically the frontal lobes - Controls the executive functions such as judgment, attention, cognitive flexibility, planning and impulses.
- Cerebellum - plays an important role in the integration of sensory perception and motor control.
- Corpus Callosum - A bundle of fibers that helps the left and right hemispheres of the brain to communicate with each other.
- Basal Ganglia - Plays a role in controlling cognition, emotion, motor activity and executive functions.
- Hippocampus - controls memory functions, the connection between memory and emotion, and it is sometimes called the gateway to memory. It prepares information for long term storage, connecting memories with other memories and giving the memories meaning. The hippocampus also plays a role in controlling aggression.

### What to look for:

Students with an FASD may have average or above average ability in one academic area while having significant difficulty with another. They may process and respond slower than average or may have trouble talking and listening to others. Students with an FASD may have difficulty with reading and writing, planning or understanding the order in which events happen (sequencing). They may have difficulty forming even basic concepts of math and language due to trouble with encoding visual and auditory information.

Students with an FASD often have difficulty with mathematics, especially arithmetic. Deficits in math are seen to be more pronounced than in other academic and cognitive areas and the cause for these deficits could be in the student's difficulty with working memory. Older students with an FASD may have additional problems with math concepts that involve math terms, formulas, sequences and other number

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patterns. Early intervention can be critical in teaching math skills to students with an FASD.

Reading, speaking and writing are the three language processing skills necessary for language development. Working memory plays a significant role in learning to read as knowledge of the world, vocabulary, sentence construction and the ability to comprehend the written and spoken words are all linked to working memory capacity. Students with an FASD may have trouble connecting sounds to symbols (decoding/phonics), or they may be able to decode words without comprehending what they read.

## Strategies

Multisensory teaching is the integration of visual, auditory and kinesthetic-tactile senses to enhance memory and learning. Links are consistently made between what we see, what we hear and what we feel in the process of learning and remembering. Teachers may have students with each of the different learning styles summarized in the next sections. Teaching to the student's learning styles means helping a student to learn through more than one of the senses.

In addition to the specific strategies listed below, try utilizing these exercises as a way to help the student with an FASD focus on the work you are providing to him/her. These exercises and others can be found through the Brain Gym® website: [www.braingym.com](http://www.braingym.com).\*

- **Brain Buttons:** This exercise helps improve blood flow to the brain to “switch on” the entire brain before a lesson begins. The increased blood flow helps improve concentration skills required for many tasks.
  - Put one hand so that there is as wide a space as possible between the thumb and index finger.
  - Place your index and thumb into the slight indentations below the collar bone on each side of the sternum. Press lightly in a pulsing manner.
  - At the same time put the other hand over the navel area of the stomach. Gently press on these points for about 2 minutes.
- **Cross Crawl:** This exercise helps coordinate right and left brain by exercising the information flow between the two hemispheres. It is useful for spelling, writing, listening, reading and comprehension.
  - Stand or sit. Put the right hand across the body to the left knee as you raise it, and then do the same thing for the left hand on the right knee just as if you were marching.
  - Just do this either sitting or standing for about 2 minutes.
- **Hook Ups:** This works well for nerves before a test or special event such as making a speech. Any situation which will cause nervousness calls for a few “hook ups” to calm the mind and improve concentration.
  - Stand or sit. Cross the right leg over the left at the ankles.

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\*Brain Gym® is a registered trademark of Brain Gym® International/Educational Kinesiology Foundation.

- Take your right wrist and cross it over the left wrist and link up the fingers so that the right wrist is on top.
- Bend the elbows out and gently turn the fingers in towards the body until they rest on the sternum (breast bone) in the center of the chest. Stay in this position for several moments.

## Visual (Spatial) Learners

The sense of sight and the ability to create images in their head allows visual/spatial learners to 'see' and remember an object or idea. The students rely on their sense of sight and ability to visualize an object. Visual learners take in information by taking notes and making lists to read later, reading information to be learned, learning from books, videotapes, filmstrips and printouts and/or seeing a demonstration.

Teachers can pair visual and verbal instruction by using demonstration, presentations and copies or overheads of an outline of the lecture. It is just as important to allow students to demonstrate knowledge through color, drawings and building projects such as tables, charts and graphs. Visual learners often take in information through:

- Underlining
- Different colors
- Highlighting
- Symbols
- Flow charts and timelines
- Charts and graphs
- Pictures, videos, posters, slides
- Different spatial arrangements on the page
- Flashcards
- Textbooks with diagrams and pictures
- Lecturers who use gestures and descriptive language

Provide students visual cues of strategies in the classroom. The strategy can be posted on classroom walls or on a bulletin board. Strategies can also be written on individual cue sheets. Students can then keep the written strategies at their desk or in a folder. Some students may also benefit from keeping a folder or notebook that contains all of the strategies that student needs. This folder or notebook could be used by the student as a resource when he/she is working independently.

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## Reading and Language

- Use visual language such as: "I see what you're saying" or "That looks right".
- Teach the student to visualize spelling words, lists and concepts by using the

multisensory methods, VAKT, described below in the Kinesthetic Learners section.

- All students with an FASD can benefit from the use of illustrations. Choose reading materials with some illustrations that are appropriate to the age level and simple. Small detailing marks in a picture can distract the student. It is better to have the illustrations on one page with the script on its own page.

**M** Separate the class into peer groups and have one student in each group summarize the information by telling the other student what he/she understood. Have the second student continue the process by filling in any blank spots or by describing how he/she felt about the material that was presented or read.

**H** Older students can journal their thoughts about the material. Have the student use a separate notebook for this journal. Allow the student to draw pictures or write a poem to summarize ideas. Before reading any new sections in a book, have the student review the entry from the previous section.

- Use regular note-taking systems like outlining the material read to help the student better understand the developing concept of the information he/she is reading.
- One method of teaching spelling is to write the word in large, colored print. Have the student close his/her eyes and visualize a picture of the word, spell the word out loud and then write it once. Making visualizations connecting letters, blends and words to pictures helps trigger memory for the student.
- Some students may have difficulty focusing their eyes on the left side of the page and moving their eyes to the right:
  - Use a plain piece of paper to put under each line of reading material to assist the student with her/his reading or try using a see-through reading aid. Some of these aids include magnification which could help with students who also have vision difficulties.
  - Use green marker at the left side changing to red at the right side for written work.
  - Use colored arrows to signal starting points and direction from right to left.
  - Put your finger under the word you are reading, so that the student can see the connection between the written word and the word you are saying. Have the student do the same when appropriate.
- Borrow or buy extra large books with very large print. These were developed for classroom use with large groups, but they are fun for beginning readers as well. Large print text and text surrounded by increased white space helps visual learners cope with large amounts of text rather than becoming frustrated and giving up.
- Promote awareness of printed words by pointing them out on signs or other tangible items. Use language to describe the objects so that the student can have a more vivid image to remember.
- Allow the students to create books with photographs of their favorite people

and pets, with the name written under each picture.

- Borrow books without words from the children’s section of the library or make up your own. Have students tell the story from the pictures. Record the student’s stories on the tape recorder, then dictate and print the stories on the computer in large print to add to the pictures.
- Create a picture dictionary for difficult words that the student may encounter in his/her reading materials. Allow the student to add to this dictionary as new difficult words come up.

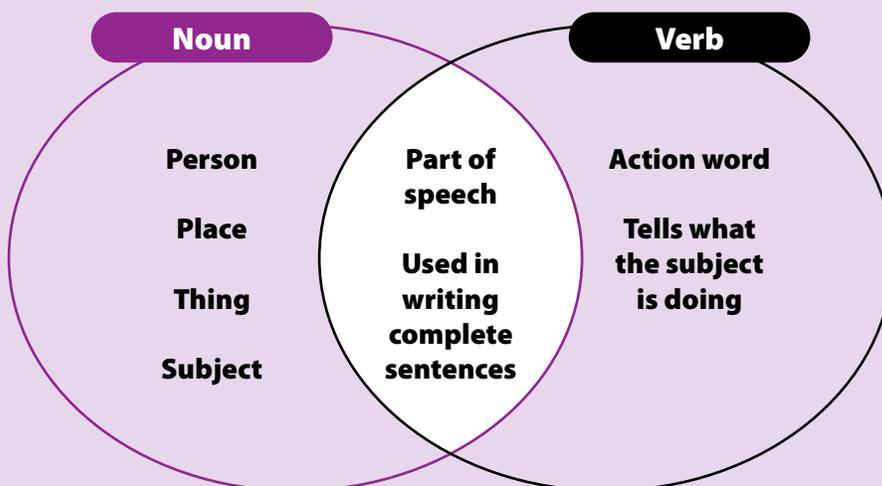
**M** Have older students use word processing and look up images on the internet to match their words.

- Teach the student to translate what he/she hears into images and record those images using webbing, mind-mapping techniques or pictorial notes. For example: a data collection process would include classifying and organizing the data into tables.
- Videotape students reading or acting out their creative writing or readings you have chosen. The videotape can be reviewed often to help the student increase his/her confidence in doing things correctly.

## Graphic Organizers

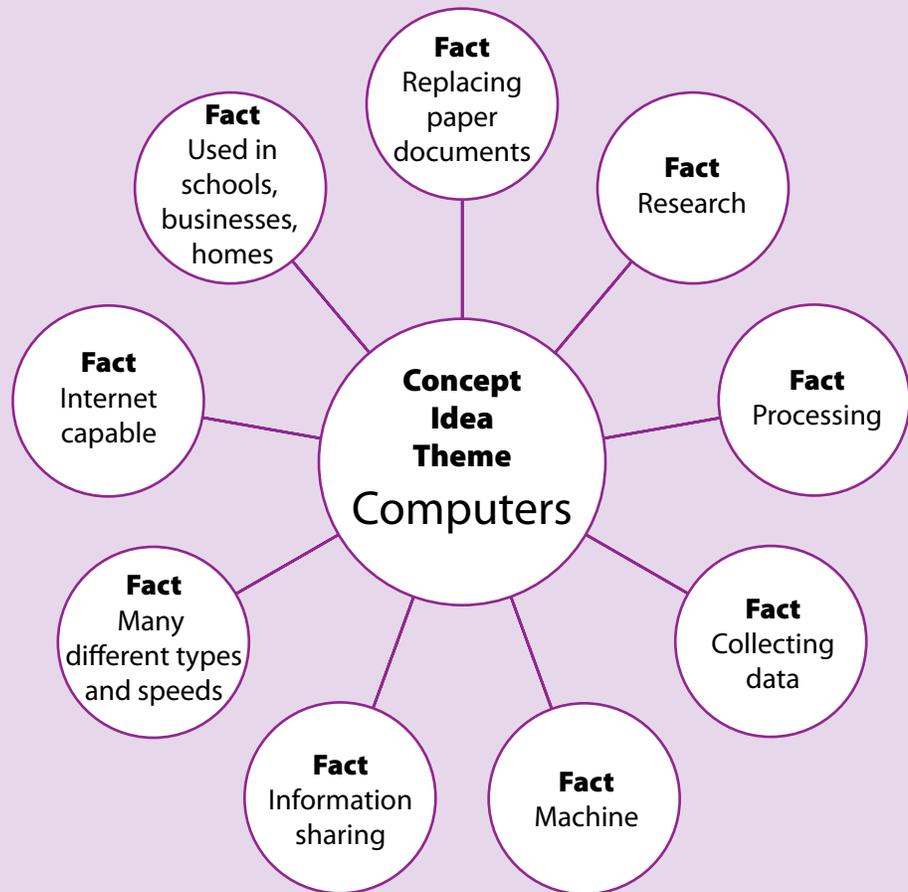
Graphic organizers can be used to help students understand and remember concepts, content, stories and sequence of events. There are many types of graphic organizers. For more information on graphic organizers, see the resource section of this book.

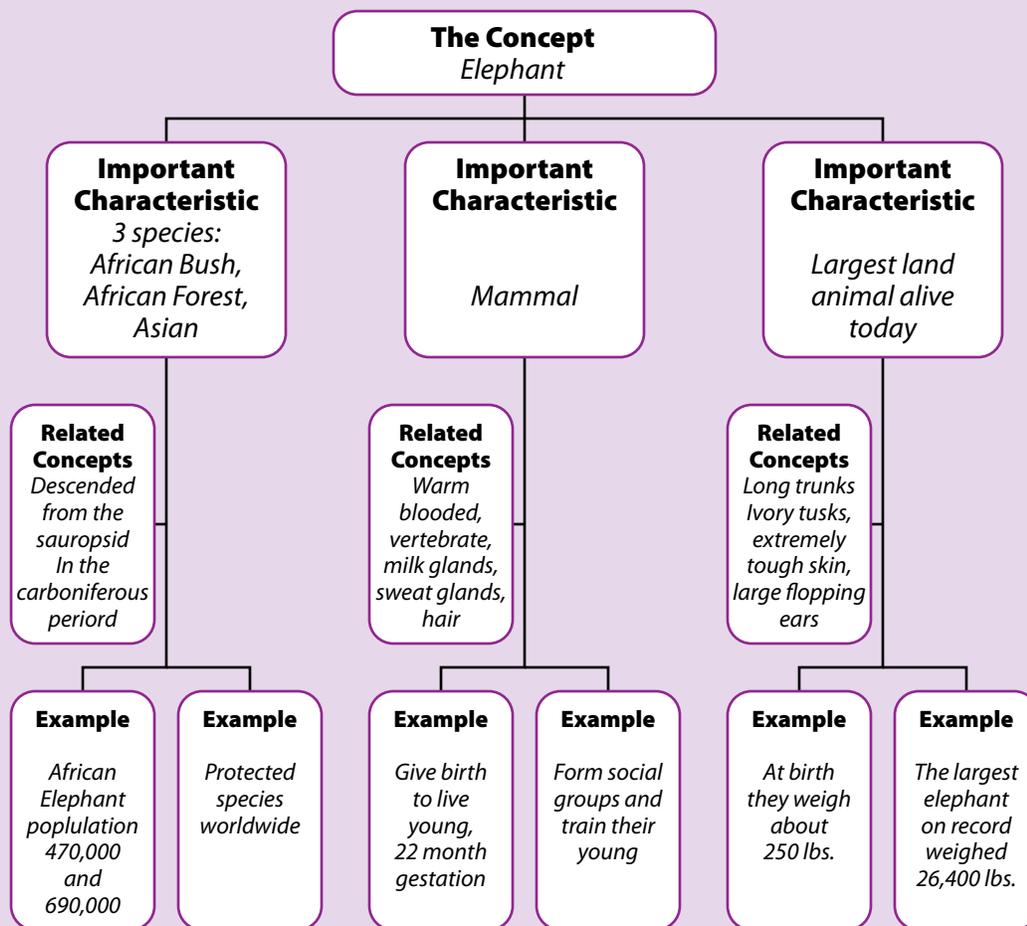
- Venn Diagrams: This type of graphic organizer can be used with students to describe the similarities and differences between two ideas. The students can compare and contrast two ideas by titling each of the two large circles with the two ideas to compare. The students can list individual characteristics of each in the large portions of the circles and the similar characteristics in the middle. A blank Venn Diagram to use in the classroom can be found in Appendix 2.



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- **Concept Maps and Webs:** Concept maps and webs visually illustrate relationships between information. In a concept map, two or more concepts are linked by words that describe their relationship. These organizers link major and minor concepts and help organize characteristics in a visual manner through examples. Examples of a completed web diagram and concept chart are shown below. As you can see, many more circles extending from the primary ones will enhance understanding and help fully develop a concept. Maps and webs are easily drawn on the board and may be copied for studying. A blank concept web is included in Appendix 2.

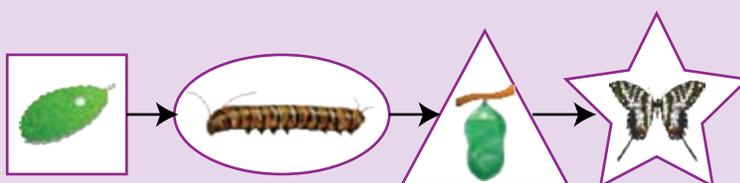
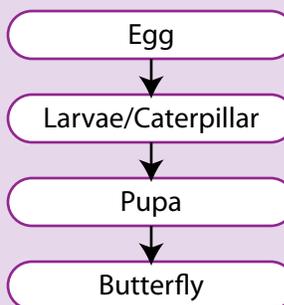




- Time Lines: Time lines can be organized to include events or data between the two end points on the chart. These organizers may be horizontal or vertical. Shown below is the general format of linear flow charts. For example: Use a time line to visualize the life stage of the butterfly, starting with the egg, moving to the larvae (caterpillar), the pupa and finally the butterfly.

Life stages of the butterfly

1. Egg
2. Larvae/Caterpillar
3. Pupa
4. Butterfly



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## Color in the Classroom

- Instruct the student to use color to review notes after class. Use one highlighter color for the major topics and highlight all the most important details to each topic using the same color. Another option is to use one color to highlight the main topics and another for the supporting details.
- Students can write flash cards on different colored cards by category or major topic.
- Use color to organize study materials and school supplies. Buy notebooks, binders and folders of different colors and coordinate so that all materials are the same color for each class.
- The use of colored pens in class is a great way to help students learn tenses in language. Use color coding for the various tenses students learn to associate that color with the tense.

## Math

- When designing worksheets for the student, limit it to three or four problems per page with a large amount of white space for the student to use when working through the problem.
- When creating worksheets or using print materials for examples, make the operation symbols extra large, bolded or color coded. This will draw the student's attention to the important information.
- Make sure to put similar problems on the same sheet of paper or the same line so the student can easily practice the concept. The student may become confused or may distort his/her knowledge of the different concepts.
- Use tables and charts to organize information in a visual format.

## Teaching Time

- To teach time, pair a visual representation of a clock with the activity on the class schedule. The following example illustrates the use of this strategy:

Time	Activity	Done
		
		
		

## Auditory (Verbal/Linguistic) Learners

Verbal/linguistic learners relate to words and language, both written and spoken. These learners learn by saying, hearing and seeing words. They can easily memorize names, dates, places and trivia. Verbal/linguistic learners are good at creating imaginary worlds from things they see and hear and often enjoy discussions and debates. These types of learners are tuned in to all the sounds in the environment and often benefit when trying to concentrate with soft music playing in the background. Auditory learners frequently need to “say it to themselves” or move their lips when reading to process the material in the most efficient way. Auditory learners take in information by:

- Attending lectures
- Attending tutorials
- Discussing topics with other students or lecturers
- Explaining new ideas to other people
- Adding rhymes or tunes when studying
- Using a tape recorder
- Remembering the interesting examples, stories, jokes
- Describing the overheads, pictures and other visuals to someone who was not there
- Speeches
- Debates

### Sounds in the Classroom

- To help auditory learners, use descriptive language whenever possible in the instruction.
- Use varying words, tones and volumes when speaking and describing something. Vary between a whisper to using a loud voice or using high pitch and then low pitch.
- Use words that have a sound meaning to them whenever possible. Some examples include:
  - “When that heater starts, it sounds like a jackhammer.”
  - “That rings a bell.”
- Play games and sing songs that use repetitive phrases as a way to enhance auditory memory. Songs that use memory include: “There Was an Old Lady Who Swallowed a Fly,” “Old McDonald Had a Farm” and “The Twelve Days of Christmas”. Examples of repetitive stories include “Brown Bear Brown Bear” by Bill Martin and “Chicken Soup with Rice” by Maurice Sendak.
- Play auditory memory word games to make the learning fun and to help

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auditory learners with their memory.

- I'm Going on a Picnic Game: The first person says, "I'm going on a picnic and I'm going to bring an \_\_\_\_\_" (e.g. orange, etc.). The second person repeats what the first person says and adds something else to the list (e.g., "I'm going on a picnic, and I'm going to bring an orange and a banana.") The next person repeats what the second person has said and adds something new. The game continues until no one can remember all of the previous items. Use beginning letters of the alphabet in order or other categories such as animals.

## Music

- Music can be a critical tool for students who are auditory learners. Examples of music for teaching include:
  - Grammar: musical patterns such as Mozart, Bach, Handel, Vivaldi
  - Imagination exercises: Ravel, Debussy, Satie
  - News in the world: Rap, ethnic music from the country discussed
  - Making future plans: fun, upbeat, jazz
  - Serious issues: Beethoven, Brahms, Mahler
- There are a variety of high quality academic recordings available for purchase.
  - Reading
    - Learn to Read Sing-Along Series Pre K to second grade (songs on cassette that accompany student books and big book series) available at [www.creativeteaching.com](http://www.creativeteaching.com)
    - Rockin' Readers K-3 (12 student books plus CD with narrative reading and song lyrics) available at [www.musicK8.com](http://www.musicK8.com)
    - Schoolhouse Rock: Grammar Rock (catchy tunes for each part of speech)
    - Leapfrog DVD's
  - Math
    - Addition/Subtraction/Multiplication Rap & Hip Hop Booklet and tape series available at [www.twinsisters.com](http://www.twinsisters.com)
    - Multiplication/Addition/Subtraction Unplugged Recordings by Sara Jordan Publications
    - Math in Motion: Wiggle, Gallop, and Leap with Numbers Book by Betsy Franco and Denise Dauler. Basic math skills such as counting, add/subtract, time/money and patterns are paired with movement games. Available at [www.creativeteaching.com](http://www.creativeteaching.com).
    - Schoolhouse Rock: Multiplication Rock
  - History, Science and Social Studies

- Schoolhouse Rock: Science Rock, America Rock
- Rap of the States, Rap of the Presidents, Rap of the Solar System: booklet available at [www.musick8.com](http://www.musick8.com).
- Weather, Oceans, Chemistry, Space, Celebrate America, States & Capitals available at [www.twinsisters.com](http://www.twinsisters.com).

## Reading

- Have the student verbally paraphrase material just read in order to ensure understanding. For longer materials, have the student read with a partner and paraphrase the information every couple of pages.
- Read to your students of all ages and as often as possible! Read anything and everything, not just children's books.
- Encourage the student to memorize stories or books, especially those with repetitious phrases. "Green Eggs and Ham" and other Dr. Seuss books are good examples.
- Use rhythmic, rhyming books with tapes in the classroom. Have the student follow along in the book while listening to the tape.
- Tape record stories so the student can listen and read along. Many school and public libraries now have a wide array of recorded books. Keep this in mind when selecting reading materials for the class as an option for students who may need this extra help. Taped texts for readers with reading disorders have long proven to be successful. Students are able to hear the spoken word and conceptualize understanding rather than struggle with difficult words and lose all facets of comprehension.

**E** - Younger students who are just learning to read can record themselves reading out loud. Students can utilize these tapings to read along with the stories.

**M** There may be peers in the classroom who are willing to assist in recording novels and/or textbooks for students to listen along with. In addition, many companies sell audio recordings of their materials that can be purchased along with the textbook.

- Tell stories throughout the day by utilizing Round Robin or String a Story techniques. These techniques allow you to start the story with an idea, sentence or title and each student continues adding sentences until you have created an original (and sometimes silly) story.
- Some students may benefit from computer-based programs when reading. Text-to-speech converters are software programs that read text aloud, often while highlighting the text on the computer screen as the story or chapter progresses. A free text to speech program can be downloaded from [www.naturalreaders.com](http://www.naturalreaders.com).
- Use scripting to teach subjects and increase generalization skills. Short, easy to read teacher plays can be used for social skills and specific situations.

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- Subvocalization has long proven successful for students who need to hear print spoken in order to comprehend meaning. Subvocalization is the internal speech made when reading a word, allowing the reader to imagine the sound of the word as it is read. Sticking fingers in their ears and whispering the words is helpful for auditory learners.
- Provide uninterrupted silent reading periods on a regular basis. Provide the student with books that follow his/her interest and independent reading level. Independent reading level means the student can read 90% of the words in the book without assistance. Reading materials should be culturally appropriate when possible.
- Incorporate popular magazines, newspapers, the school paper or other unconventional reading materials into a reading program.
- Emphasize to the student that reading is a means to communication. Work with the student's family and friends to have them write notes or letters to the student. Have the student read the written words out loud to you. The same concept can be used with email if that is available in the classroom.

## Math

- Use listening centers for math. Record or purchase CDs with verbal instructions which correspond to a math lesson. While students listen to the CD they complete the activities. CDs would cover skill-building activities (adding & subtracting with money, solving word problems, measurement) one step at a time.
- Teach students to talk their way through the steps of a problem. Write the steps on a cue card and use the card to work practice problems.
- Mnemonics are a great way to help auditory learners with math. Examples include:
  - Minus times minus is plus, the reason for this we need not discuss.
  - Even times even is even, even times odd is even, but odd times odd is always odd.
  - Celsius: 30 is hot, 20 is nice, 10 is cold, 0 is ice.
  - Other mnemonics can be found in Appendix 1.
- There are a number of assistive technology devices, including talking scientific calculators, which will assist the auditory learner. A lot of the calculators are perfect for students of junior high school algebra to college calculus and is permitted for use on college board tests. Some scientific and graphing calculators allow the student to use self-voiced sounds, print options and tactile graphics.

## Kinesthetic Learners

Kinesthetic learning is the style in which learning and remembering take place through motion. Students with this learning style need to touch, smell, hear and experience concepts to process them. Students do best with hands-on activities, such as sports, dancing, acting and crafts, as this type of active learning helps make connections to real life experiences. Kinesthetic learners take in information by using:

- All senses (sight, touch, taste, smell, hearing)
- Laboratories
- Fields trips
- Examples and demonstrations
- Exhibits, samples, photographs
- Lecturers who give real-life examples and engage in role play and drama
- Applications
- Hands-on approaches (computing)
- Trial and error
- Projects such as posters, panorama and shadow boxes

### Environmental Adjustments

- It is important to allow kinesthetic learners many opportunities to incorporate movement into their learning process. Students with an FASD can become overwhelmed, though, if they are not provided with a quiet period between the more active learning activities.
- If there is room in the classroom, provide the student with more than one option for seated work. Allow the student to move between two desks or areas of the classroom when he/she feels the need to. Another option is to allow the student to stand to do work.
- Provide student with an inflatable cushion for their chair to provide movement opportunities while he/she sits in the chair.
- Use experimental learning opportunities such as lab and studio courses, as opposed to straight lecture classes.
  - Role play
  - Field trips or trips in and around the school
  - Body demonstrations where a motion means a concept
  - Make colored strips of paper that represent different concepts and link those papers together.

- Some hands-on learning tools to try in the classroom include:
  - Abacus
  - Modeling clay
  - Sidewalk chalk
  - Geoboards
  - Calculators
  - Shapes and pattern blocks
  - Number lines
  - Models
  - Sandpaper, wood and carpet to trace letters, shapes and numbers
  - Drawing materials
  - Puppets
  - Puzzles
  - Water brushes on chalkboard
  - Globes and maps
  - Blocks and cubes
  - Felt boards
  - Computers
- Provide a tactile center in the classroom that is large enough to allow for the students to move within it. This area can include a variety of tactile items including sand, water, rice, flour, beans, counters, abacus and magnetic numbers on magnetic board. Squeeze balls or elastic bands for relaxation or creativity can also be housed here. This spot can be designated as the place where highly kinesthetic students or those with mild behavior issues can pace, do relaxation poses or be active.
- Technology is a great interactive tool to use while studying. Games and simulators allow the learner to be physically involved in the learning process by practicing the subject in a variety of scenarios and situations.

### Reading and Language

- When speaking to kinesthetic learners, use phrases that have a feeling connotation to them. Examples include: "That feels right," "That hit the nail on the head."



- Try having younger students use different movement and tactile options when learning letters or spelling.

- Write letters and words in finger paint or shaving cream.
  - Writing the letter or word in the air.
  - Make letters with paper and have the student glue other objects to the letter. Match the objects being glued to the letter.
  - Cut a letter out of sandpaper and have the student follow the sandpaper letter with his/her finger.
  - Draw the letter or spelling word really large on the carpet, tile, in the sand or with a clear water paintbrush on the chalkboard or desk.
  - Make dots on a paper in the shape of the letter and have the student connect the dots to make the letter, gradually decreasing the number of dots to connect to make the letter.
  - Create letters out of jiggler jello and allow the student to play with the letters by putting them in the correct order.
- Clap, step or tap out syllables on a drum when practicing new vocabulary. Example: Jump or skip each syllable of “ex-pla-na-tion”.
  - Students may draw pictures to go along with the words as visual reminders.
  - Use rhymes and mnemonics that correspond with important spelling rules or grammar techniques. The following are some examples for students:
    - “I before E except after C”
    - CLIPS (C - Capitalize, L - Leave space between words, I - Ideas are complete, P- Punctuation, S – Spelling)
    - Other mnemonics can be found in Appendix 1.
  - A multisensory method like the VAKT (Visual-Auditory-Kinesthetic-Tactile) can be used to help students remember words. Select words needed to be learned and write these words on cards using a crayon so that the letters or words have texture. Using VAKT, the teacher models and the student repeats for each word:
    - Say the word, trace the word with two fingers while saying each part of the word, say the word again;
    - Write the word without looking at the word card and then compare what was written to the word card; and
    - Repeat the first step until the word is written correctly three consecutive times without looking at the prompt card.
  - Another highly recommended multi-sensory teaching resource is the Orton-Gillingham Literacy Program from The Institute for Multi-Sensory Education. This is a curriculum which offers phonetic, sequential and success-oriented programs for teachers and parents to use to enhance student skills in reading, spelling and writing. This method primarily addresses how letters or words look, sound and feel.

## Math

- Try the Touch Math program. Touch Math emphasizes the involvement of all major learning styles. Students see, say, hear and touch the numerals and problems without directing their attention away from the paper and use large print, plentiful workspaces and a manageable number of problems on each page. The program lessons range from Pre K to upper grade lessons which include time, money and fractions ([www.touchmath.com](http://www.touchmath.com)).
- Utilize physical objects when teaching the concept and have the student manipulate the object.

**E**

- Have the student cut the numbers out of paper and glue oatmeal, rice or glitter to the number. The student can see, feel and hear the number.

**M**

- Have the student bounce a ball when he/she is counting. This will help focus his/her mind on the task at hand and will provide the student with a reference to keep in mind for future math activities.

**H**

- An older student could use play money to count when learning how to balance a checkbook. Have the student write out the check and then take the amount of money for the check out of the stack of money. This will help the student to understand the concept of the checking process and how it uses real money.

- Use math and computer games which are motivating and fun for the student. These games can be used to learn new concepts or to practice concepts that were previously learned.
- Adapt task materials for the student's frustration tolerance. Observe the student closely to determine what processes lead to frustration and ultimately shut down in learning.
- Teach the strategy instead of teaching to memorize answers. If the student memorizes how to count to ten, this does not ensure that he/she understands the numbers or the concept behind the process.

**E**

- Use movement to teach number concepts. Teach the student to learn what the number "one" means before any more numbers are taught. "Give me one crayon." "Put one napkin on the table."

- Pair songs with corresponding visual material or written text that relates to the content. Provide the students with a verbal quiz or related worksheet after the song to review the information that was covered. Implement other fading techniques of the music such as moving from sung addition facts, to chanted addition facts, to spoken addition facts.
- When teaching money concepts, use real money and actual purchases to estimate cost and check for correct change. Have students work in the school store to practice counting change or use a cash register. Teach to estimate how much items cost and determine if they have enough money to purchase it in everyday situations.
- Teach the student to use his/her hands to remember 9's multiplication facts.
  - Spread hands out.

- Label fingers from 1-10 starting with left pinkie finger.
- Hold down the number of the finger that is the multiplicand of nine.
- Count the fingers to the left of that finger as tens and the fingers to the right of it as ones.
- For example:  $9 \times 3 = 27$ : Spread hands out, hold down the number 3 finger, you will have 2 fingers to the left = 20, and 7 fingers to the right = 27.
- Construct graphs and tables using poster board and pictures cut from magazines. For example, collect “Me Data” about the students. Create picture graphs of physical features such as eyes and hair color.
- Measurements can be difficult for students with an FASD to understand.
  - To teach the kinesthetic learner how to identify and describe the attribute of length, measure body parts such as arm length, head circumference or height to compare lengths.
  - Try using informal units to estimate and measure length. Use blocks to measure distance travelled by rolling a toy down an incline.
  - When comparing two or more objects according to mass, make shot-puts from socks filled with sand. Compare the mass of the shot-put against the distance that it could be thrown.
- Practice multiplication facts incorporating action words. Some examples include:
  - $2 \times 2 = 4$ : Two shoes kicked the door, two times two equals four.
  - $3 \times 8 = 24$ : A tree on skates fell on the floor, three times eight is twenty-four.
  - $5 \times 5 = 25$ : Two fives jump off the high dive; five times five is twenty-five.
  - $6 \times 8 = 48$ : Six asked eight for a date, six times eight is forty-eight.
  - $8 \times 8 = 64$ : He ate and ate and sticks in the door, eight times eight is sixty-four.
  - $9 \times 9 = 81$ : He stood in line and ate a ton; nine times nine is eighty-one.
- Math games can be used to reinforce facts. Be careful not to use too many games requiring quick processing speed or are too competitive where one or two students always win.
  - “Buzz” game is a review of a specific fact family. Choose a number between 2 and 9. The first person in the group says 1, the next player says 2, and so on. When someone comes to a multiple of the number chosen, the player says “buzz” instead of the number. If a player forgets to say buzz or says it at the wrong time, he or she is out. Play continues until the group reaches the last multiple of the number times 9.
  - “What’s Your Number” is a game that includes repetition of multiplication, subtraction, addition or division facts. On a name tag write a problem (e.g.  $4 \times 5$ ). The answer to the student’s fact becomes his/her name for the day.

When the student speaks to someone else, they call them by the answer to their name tag fact (20).

- "War Review" game allows students to review multiplication facts. Write on the board: Ace = 1, J = 0, Q = 11 and K = 12. Pair the students up and give each pair a deck of cards. Deal all the cards in two stacks, one stack in front of each student. Students turn over their top card at the same time. They multiply the 2 cards and shout the answer. The winner puts the cards in his/her winning pile. If a tie occurs, keep turning cards until someone wins the pile. When the whole stack is played, have the students count their winnings. The winner can earn a point if keeping score.
- "Flashcard Password" game is a fun way to have students enter back into the classroom after an activity. Use a set of flashcards with facts you want to review. As students re-enter the room, flash them a problem. The correct answer is their password. They have to give you the password to enter the classroom. If a student misses the problem, he/she must step to the side and work it out before coming into the room. You will want to choose flashcards according to individual student's ability as needed.

### Generalization Tips

- Help the student to recognize when and how to apply and generalize a skill to a new situation by employing something that has been learned over time.

**H** - If the lesson is about balancing a checkbook, work with the student to understand what it means financially to purchase his/her favorite snack. Before going to the store, have the student review his/her current checkbook balance. When returning from the store, have the student figure out his/her current balance after purchasing the snack.

- Present new concepts to the student in a way that he/she is familiar with and illustrate or demonstrate the concept in the context in which the skill will be used.

**E** - Students who have recently learned the alphabet can be shown often about the use of letters in everyday activities. As you walk by posters or signs with the student, stop and have the student tell you what letters are represented.

**M** When learning about fractions, students can have a difficult time understanding the basic concepts. Plan the lesson time around lunch or snack time. Have the student separate out a portion of the food in half and work with the student to explain how he/she figured it out.

**H** Older students should be taught speaking skills so they can become more comfortable with presenting information in front of an audience. Work with the student to prepare a speech giving directions to do something that he/she is very familiar with. Have the student present the speech in front of a small group of peers or family members.





Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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## Brain-based Teaching Methods

## Section 7: Social Skills and Behavior





## Section 7:

# Social Skills and Behavior

### Description:

Relating to all the verbal, written, gestural and behavioral skills that allow an individual to participate in a community or group.

### What to look for:

Students with an FASD typically like to socialize and have fun. They may be talkative, athletic and creative in music, arts and drama. You may see that they are also cooperative, sensitive, energetic, enthusiastic and want to be accepted and involved. Some people with an FASD may be quiet and more reserved. Teachers tend to report that these students have no social or behavior problems because they do not act out in the classroom, tattle or become too loud when in fact the student may be suffering from general confusion or mental health concerns which prevent him/her from participating.

Students with an FASD can have difficulty choosing, making and keeping friends. They may have a difficult time understanding personal boundaries and often annoy others by going too far in a situation. They are usually seen as being immature in comparison to their peers and will often play with younger children because they share the same interests. You may observe that the student will have trouble identifying his/her own and other's emotions.

Students with an FASD tend to be overly friendly and may not understand when they are in a dangerous situation or when they may need help in a social setting. Paired with their difficulties in judgment and impulsivity, these difficulties can lead to significant safety issues. Students with an FASD may also have sudden changes in mood and experience anxiety and depression which can affect their self image and ability to succeed in social situations. The most important thing to remember in the context of socialization for students with an FASD at all ages is that they require greater supervision and social guidance than their peers.

### Strategies

#### Address Feelings and Safety

- Establish a classroom where individual differences are acknowledged and

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accepted. Treat all students as valuable, worthwhile human beings with gifts to share and expect the same from students. All students see teachers and other school personnel as role models and will follow the examples they set.

- Establish classroom rules for interaction at the beginning of the year. Allow the students to voice their opinions on what these rules should be and revisit the rules often. Rules could include specific direction on when it is appropriate to talk in class, respecting each other's opinions or the importance of taking turns. Post these rules in the classroom for all to see.
- Teach disability awareness or have a guest speaker give a talk about disabilities. Sometimes students in the classroom will volunteer to speak about their own disability.
- Do not allow name calling or bullying and have an established procedure for dealing with this each time it happens.
- Encourage students to listen to others. Use a talking stick or a similar object and pass it around when discussing a topic. Establish the rule that a person can only speak when he/she holds the talking stick. Encourage students to politely agree and disagree and give reasons why. This strategy can help cue students to plan instead of quickly reacting.

- E** • Schedule one-on-one play sessions for the students. During the one-on-one sessions deliberately facilitate sharing toys and turn taking.
- Intentionally model and reinforce emotional literacy every day. You can do this by identifying feelings in natural situations; labeling your own feelings; noticing and labeling other people's feelings; and reinforcing students who use the names of feelings throughout the school day. Use planned activities to teach emotional literacy:

- E** - Read books that focus on feelings, are relevant to the student's needs and can be used to teach social emotional skills. See the resource section for book lists used for teaching social and emotional skills by age.

- E** - Students can practice by closing their eyes and listening to the teacher make statements using varying tones (e.g., "UH! I can't get my coat zipped!"), then guess how the teacher is feeling.

- M** - Play charades to help students identify feelings on faces and in body language.

- M** - Make or purchase 'feeling charts' to display in the classroom. Teach and practice the feelings on the chart while reading books, singing songs and noticing student's feelings throughout the day.

- M** - In a small group setting, practice with students the meaning of words using different vocal intonations. This will help students recognize the differences in meaning caused by vocal changes.

- H** - Show clips of movies or TV with the sound off and ask students to identify the character's feelings through their facial expressions and body gestures. Teachers can model detecting how someone is feeling by verbally studying the eyebrows, eyes and mouth.

- H** - Blindfold students while listening to clips of movies or TV so the students

cannot see facial expressions and body language. Ask students to listen carefully to the character's tone of voice to help to detect what they are feeling.

- Assist the student in expressing her/his feelings during emotionally charged social situations. When the student feels angry, acknowledge it. Get the story when the student has calmed down and brainstorm a solution.

## Create a Positive Classroom Climate

- Play classroom games that teach social skills and allow students to get to know each other.
  - The Line-Up Game: The goal of this activity is for students to line themselves up in order according to pre-determined criteria. For example: shortest to tallest, alphabetically by last name, chronologically in order of birth date, etc. Start with the easiest ones first to help alleviate any hesitancy to participate and to give students a sense of success. This game provides students with the chance to utilize communication, cooperation and problem-solving skills. For a real challenge, have students perform tasks without verbal communication.
  - Step Forward, Step Back: Students line up along the back of the room while the group leader stands in the front. The leader calls out a series of descriptors. If the statement is true, students take a step forward. If it is not true, students take a step back. This is a low-threat way to get to know something about classmates without much direct interaction and would be especially appropriate for a first activity with a group of students who do not know each other at all. Find a way to make certain that students steps are of relatively equal size to ensure fairness. When a student reaches the front of the room, he/she can become the leader for the next round.
  - Four Square: Ahead of time, make up four by four grids with four letters of the alphabet across the top and four categories down the side. Subjects can be school related (school supplies, something you find in school, etc.), general (TV show, lunch food, girls' name, etc.) or by subject (math terms, famous authors, etc.).
    - Divide students into groups of four or five and give each group a copy of the same grid. The groups' task is to fill in each of the sixteen blocks with one answer that fits the category and also begins with the proper letter. For example, if the category is "things you find in the grocery store and the letters are D, L, T and S students could write dog food, lettuce, tangerines and strawberries.
    - Groups score points only for having answers that no other group came up with, which encourages groups to work more quietly and problem solve.
    - This activity forces students to think, practice group decision-making and to work together.



Consider purchasing board games that are specific to social skills. The Ungame ([www.educationallearninggames.com](http://www.educationallearninggames.com)) helps students learn to listen and exchange information. The Social Skills Game ([www.creativetherapystore.com](http://www.creativetherapystore.com)).

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com) teaches cognitive-behavioral skills and includes topics of making friends, responding positively to peers, cooperating with peers and communicating needs.

## Reduce Stress

- All students, including those with an FASD, learn better when they are not under stress. Students with an FASD can experience greater levels of stress which diminishes learning potential. It is important to teach relaxation strategies so the student has a way to cope with the stress and improve his/her learning capability.
- Have the students try using a two minute stress buster:
  - Stand up and shake your whole body, especially your arms and legs.
  - Stand with your legs shoulder-width apart and knees loose (not locked). Gently breathe through your nose as you roll your shoulders up and then breathe out through your mouth as you roll your shoulders back and down. Do this 3 or 4 times.
  - Bend over slowly and stretch your hands out toward the floor (to a level that is comfortable). Do not lock your knees. Just let your body hang loosely. As you slowly come back up, tuck in so you do not strain your lower back.
  - Repeat steps 2 and 3 again.
  - Repeat step 1 again.
- Another stress reducer is to use diaphragmatic breathing.
  - Breathe in through your nose and out through your mouth, or take a deep breath. You should feel your stomach rise as you breathe in, and fall as you breathe out.
  - To help, lie on your back or on your stomach so you will be more aware of your breathing pattern.
  - Count very slowly to yourself from ten down to zero, one number for each breath (with the first diaphragmatic breath, you say “ten” to yourself, with the next breath, you say “nine”, etc.).
  - Repeat as many times as you like until you feel relaxed and comfortable.
- When students have more time, try using these different techniques:
  - Progressive muscle relaxation. In this technique, have the student focus on slowly tensing and then relaxing each muscle group. This will help the student focus on the difference between muscle tension and relaxation and become more aware of physical sensations. The student can start by tensing and relaxing the muscles in their toes and progressively working their way up to their neck and head. Tense the muscles for at least five seconds, relax for 30 seconds and repeat.
  - Visualization. In this technique, have the student form mental images to take a visual journey to a peaceful, calming place or situation. The student should

try to use as many senses as he/she can, including smells, sights, sounds and textures. If the student imagines relaxing at the ocean, for instance, think about the warmth of the sun, the sound of crashing waves, the feel of the grains of sand and the smell of salt water.

## Direct Teaching of Social Skills

Most students with an FASD will require direct individualized or small group instruction to apply social skills to real life situations. In the school setting, implementing a social skills group run by an interested paraprofessional or the school counselor may be beneficial for several students. The suggestions below are based on teaching students to gain control over their own skills by providing them with methods to successfully control their own behavior. Observations, discussions with the student and formal evaluations can be used to determine the specific skills the student has difficulty with. The identified skills can be used to write the social goals in the student's plan.

Help students to generalize skills to different situations. This can be accomplished by focusing on valued skills and using authentic contexts, role playing and teaching skills in a variety of contexts including home, school and the community. Teaching social skills in isolation is not an effective practice for students with an FASD.

- Cognitive-behavioral interventions are the suggested approach for teachers to address more significant social and behavioral difficulties for students with an FASD because they provide students with the tools to control their own behavior. Cognitive behavioral interventions are used through behavior therapy (e.g., modeling, feedback, reinforcement) and cognitive mediation (e.g., think-aloud) to learn cognitive routines or scripts which give students a new way of cognitively interfering with no routines or routines that have not worked for them in the past.
- Adult modeling is done by the teacher thinking out loud as he/she talks about how to handle the anger he/she is feeling or the situation that has occurred. The teacher should talk about how he/she might evaluate the outcome and subsequently learn from experience.
- The steps to teaching social skills are similar to teaching academic subjects except that play and group activities and discussion plays a stronger role.
  - Identify the skill that needs to be learned.
  - Introduce the skill through discussion and modeling of the desired response.
  - Develop scripts or social stories by writing out specifically how to recognize when the skill is necessary and what to say and do when using the skill.
  - Provide practice of the skill through modeling, games, puppet and role playing.
  - Reinforce the new skill during practice and provide feedback. Videotaping practice sessions is a great way to do this.
  - Teach the student to reinforce using self talk. For example, have the student say, "I'm following the steps," when he/she is doing it correctly.

- Provide opportunities for generalization and reinforcement of the skill in real life situations.
- Use social stories and scripts. Social stories are written to describe social situations that are difficult or confusing for students. Each story identifies and describes relevant social cues and desired responses to a target situation. The stories are written at a level that considers students' abilities and learning styles. Pictures and comic strips can be used to help make the stories easier for students to understand. Using social stories and scripts works because it gives the student a sense of what to expect and a way to practice the skills. Social stories are also written to recognize and affirm a person's strengths or talents.

**E** - Younger students may need more direction in creating a social story and this is a project that could benefit all students in the classroom. Instead of creating their own story, write the story for the students and have them illustrate the story. Read the story out loud and have the students share their pictures and explain what they mean to them.

**M** - Have the student create a social script with illustrations. For example, create a cartoon strip to describe how to get a person's attention. The steps to be included would be: 1) Stand quietly nearby; 2) Look at person; 3) Touch arm one time; and 4) Wait for my turn.

**H** - Students can act out a social story which can be recorded and viewed by others. Students can model social situations such as meeting someone new, going somewhere for the first time, ignoring bullies, walking away from a dangerous situation, giving compliments and good sportsmanship. Videotape students carrying out daily activities and prompt discussions about the social interactions identified.

- Develop social skills classes or groups to help students learn to share feelings, stand up for themselves and develop effective ways of coping with conflict. Some of the skills that can be taught and reinforced in group settings are taking turns, listening to others, inhibiting behaviors that threaten others, following directions, sharing uncomfortable feelings, stopping sarcasm and egging others on. Some of the higher level skills are resolving conflict, listening with empathy when pain and hurt are described, giving support and encouragement and creative problem solving.
  - "The Strong Kids Curriculum" teaches social emotional concepts and coping skills including self-regulation. It is designed for small group or whole class instruction and includes curriculum for a variety of ages. Find reference to this curriculum in the resources section.
- Use a social skill autopsy technique to review the particulars of a social interaction gone bad.
  - Ask the student to explain what happened. It is important not to interrupt or be judgmental as you will want the student to provide his/her clear recollections.
  - Ask the student to identify the mistake that was made. This is an important and interesting part of the process. You may find that the student will be unable to determine when and where the error occurred or that his/her interpretation is inaccurate.

- Discuss the error and alternate social responses. Make sure to offer suggestions of what the student could have done differently.
- Create a brief social story that has the same basic moral or goal as the social mistake. The scenario should have the same basic solution as the incident. Require the student to generate a response to the fabricated situation that demonstrates his/her ability to generalize and apply the target skill.
- Ensure the mastery and application of the target skill. This step requires the student to use the skill in another setting and report back when this had been done.
- Teach the student to use problem solving by using talk-aloud steps for dealing with anger.
  - Recognizing there is a problem. This step includes identifying personal feelings that there is something wrong.
  - Calm down to prevent escalation and engage the student's cognition to interrupt the process of reaction (i.e., "Calm down and think." or "This really makes me mad. I need to stay calm until I can think through it.").
  - Think about possible solutions. Students realize there is more than one possible solution to most problems.
  - Try one of the solutions. Ask students to think about what would happen if they implemented each choice they came up with. Have the student identify what would be the best, worst and mostly likely consequences of each.
  - Ask students to evaluate whether their choice was a good one for solving the problem. If it was, they can congratulate themselves on good problem solving. If it was not, they can try to determine whether they did not carry out their decision well enough or whether their choice was not a good one.

## Using Cues

- Design a signal system that you can use when you see the student in a social situation, such as the lunch room or during recess. For example, if the student tends to talk a lot about a particular topic that is not of much interest to others, set up a signal to scratch your nose so she/he knows that it is time to change the subject.
- Make transitions easier for the student, especially in situations or activities that he/she really enjoys. Give the student a warning signal several minutes prior to the end of the activity. As each minute passes, inform the student of how much time remains before the activity will conclude. Use a visual clock, paper chains or a sand timer to help students visualize the passage of time.

## Transitioning between Activities

- Be consistent with routines in the classroom. While it may be tempting to change the daily schedule as a way to keep the interest of students, this continual change

in activities is difficult for students with an FASD. Instead, keep the schedule uniform as much as possible and prepare the student for any changes in advance.

- Give the student reminders for ending and beginning activities. Use tactile signals, such as a touch on the shoulder or reminding the student that the bell will ring in five minutes and he/she will need to finish up. Use opening and closing rituals with all activities.
- Prepare the student for changes in routine (e.g., assemblies, substitute teachers, field trips) through discussion and modeling expectations. Avoid catching students off-guard. Maintain a visual schedule that is reviewed and referred to frequently. When changes are to occur in the schedule, point them out in advance and use some type of symbol to remind the student on the physical schedule that a change has occurred. Take some time to review with the student to explain what his/her responsibilities will be during this transition period.
- Give specific instructions about how students are to switch to the next activity. Be sure to clearly teach, model and have students practice and rehearse all procedures that will occur in changes of activities.

**E** - For younger students who are switching from desk to carpet activities or vice versa, show them how to move quickly and quietly from one area to the other. Give students a quiet cue for the transition, such as blinking the lights, so they understand that this transition is a quiet one.

**M** Time between activities can be seen as a time to socialize with peers. To keep the transition process easy for all students, including those with an FASD, set up a routine for students to move from their desks in an organized way. For example, have students leave the classroom by rows so students are not rushing out the door.

**H** Older students do well with using a Personal Data Assistant (PDA) to signal transition times. Set up a reminder on the calendar of the PDA to cue the student when a transition is to occur. In addition to the timer, have a message pop up telling the student what the transition is to and what types of materials he/she will need for the next class.

- Give the student a job to do which helps him/her move from the end of one activity to the beginning of a new one. The student can collect assignments, hand out papers or equipment for new activity or carry materials to the next location.
- Do sponge activities while the class is waiting to make a transition. This helps keep the student's time structured and squeezes extra minutes out of the day to review skills. These are short, fun activities usually reviewing skills the class has learned or is learning. See Appendix 3 for a list of sponge activities to use in the classroom.
- Reward smooth transitions. Use individual points or table points to reward students or rows/table clusters of students who are ready for the next activity. See Appendix 4 for other examples of free or inexpensive rewards.

## Out of the Classroom Transitions

- It is important to have school-wide rules and behavioral expectations so that all teachers calmly and consistently enforce through positive and negative consequences. Students should be made aware of these consequences in advance and frequently reminded of the rules.
- For students moving from one classroom to another, it may be helpful to assign a buddy or peer helper to assist in making sure that the student with an FASD makes it to the next classroom on time. This peer helper can also assist the student with getting the right equipment from his/her locker for the next class period.
- For downtime on the playground, in the library or the lunchroom, there may need to be special contracts or some type of individualized behavior plan with incentives for appropriate behavior. Sometimes expectations for behavior can be different in these environments and the student with an FASD can have difficulty in this transition. Remind the student of the expectations before transitioning into these settings and provide him/her with physical cues if inappropriate behaviors are being exhibited.
- During downtime from the classroom, allow the student to participate in an activity that he/she enjoys. Allow the student to spend some time on the computer or reading quietly in the library rather than waiting at the table to be dismissed.
- During passing periods, it is important that supervision of students with an FASD is increased. These time periods can be overwhelming for some students and that extra supervision will help them to be successful in their behaviors and can help keep everyone safe.

## Transitioning Back to the Classroom

- As students come back to the classroom after lunch, recess or other classes, meet the students outside of the classroom and walk them quietly into the room.
- Use relaxation and imagery activities or exercises for calming after out-of-classroom activities. Playing music, singing and/or reading to students at these times is also often effective.
- Set a goal for the class. For example, everyone enters class after lunch/recess and is quiet and ready to work by a certain time. On successful days of meeting that goal, the class is rewarded by a move on a behavior chart.

## Interactions with Peers

Students with an FASD may have difficulties understanding the subtle nuances conveyed during conversations. They may have difficulty maintaining the thread of the conversation because of problems with encoding and speed of processing. Some students may overlook the message that is presented through speech and gestures. Try using some of the following strategies to help offset some of these concerns.

Social Skills  
and Behavior

- Teach empathy by encouraging the student to be more understanding of the feelings of others. Use role playing to help him/her “walk in another’s shoes.”
- Give the student direct feedback about unacceptable behavior. Explain to him/her how the behavior is affecting others and themselves.
- Capitalize on academic strengths of the student with an FASD by pairing him/her up with another student that needs assistance in the subject that the student with an FASD excels at.
- Set up situations for the student in which he/she has the opportunity to socialize with other students.

**E** - Encourage the student to lead in play time on a regular basis or pair the student with a classmate for lunch.

**M** - Allow students with an FASD to help other students by collecting completed assignments or handing out papers.

**H** - Older students can be paired with their peers in group assignments. Group assignments that occur during classroom time will allow you to oversee the interactions and to assist the student with an FASD if problems occur.

- Assign all students a classroom buddy to assist each other with organizational or learning problems when you are unavailable. Tell the students to first see their buddy if they need help before coming to you. A variation of this is to group students at tables, with group members expected to assist others in their group who need help.
- Teach the student how to be a good friend to others and how to recognize when someone wants to be a good friend to him/her.

**E** - Use puppets or dolls to show how friends do and do not interact with one another. Allow the student to use the puppets to show ways that he/she sees that a friend should act and let this drive the discussions on appropriate social interactions with friends.

**M** - Safety is a concern with students with an FASD and it will be important to observe interactions with other students. Talk to the student about what are and are not appropriate interactions with others and how to recognize if someone is taking advantage of them.

- Set up situations where the student is able to try out new social skills.

**E** - Illustrate to younger students how to share by using a timer when students are playing with a more popular toy.

**M** - Work with other students to role-play different scenarios where they have to apologize or be considerate to one another.

**H** - Use peer tutoring whenever possible. Work with the peer tutor to understand what types of social issues may arise and have this peer report this information back to you.





Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Social Skills  
and Behavior

Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

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Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Social Skills  
and Behavior

Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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Strategy tried: \_\_\_\_\_

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Time of day tried: \_\_\_\_\_

Reaction from student: \_\_\_\_\_

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# Appendix

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Note: Information included in the appendix are suggestions only and are not necessarily endorsed by the Center for Disabilities

# Appendix 1:

## Mnemonics

**FIRST** (Mercer & Mercer, 1998) - steps for developing a mnemonic device:

- F**orm a word that incorporates important parts of skill. HOMES is a mnemonic for the names of each Great Lake.
- I**nsert extra letters to form a mnemonic word if needed. BrACE is a mnemonic for remembering scientific objects that have never been seen (black holes, antimatter, cosmic rays and earth's core).
- R**earrange letters to form a mnemonic word when order is not important.
- S**hape a sentence to form a mnemonic.
- T**ry combinations of first four steps to create a mnemonic.

### Left and Right

- Hold up both hands, palms pointing away from body and thumbs pointing out to the side.
- The hand that makes an L shape is the left hand.
- To remember your right side, remember that your right hand is the hand you write with (obviously this only works for right handed people).

### Science:

**Daylight and Standard Time clock adjustments:** "Spring ahead, Fall back"

**Coral snake and the king snake** (both have the color bands of black, red and yellow)

- Red on yellow kill a fellow
- Red on black friend of Jack

## Appendix 1: Mnemonics

**Poison Ivy:** “Leaves of three let it be; berries white, take flight!”

**Celsius:** 30 is hot, 20 is nice, 10 is cold, 0 is ice

**Colors of the Spectrum:** Roy G. Biv (red, orange, yellow, green, blue, indigo, violet)

**Order of Planets from the Sun:** My Very Educated Mother Just Sent Us Nine Pizzas (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Neptune, Pluto)

### **Government:**

**United States Departments:** See The Happy Dog Jump In A Circle. Let Her Have The Excellent Enchilada (State, Treasury, Homeland Security, Defense, Justice, Interior, Agriculture, Commerce, Labor, Health and Human Services, Housing and Urban Development, Transportation, Energy, Education)

### **Reading and Writing:**

**Friend:** A FRIEND is always there when the end comes.

**“I” before “E”** except after “C”, and when saying “A” as in neighbor or weigh, and weird is just weird.

**Dessert:** When you eat “dessert”, you always want to come back for the second “s”.

### **RIDER**

**R** ead the first sentence.

**I** dentify relevant information; make a picture in your mind.

**D** escribe the picture you see.

**E** valuate (think) about the picture. Does it make sense with what you have already read?

**R** ead more if the picture makes sense. If it doesn’t make sense, try again.

## **Punctuation**

- Periods are like stop signs, they stop the sentence.
- Commas are like yield signs, they make you slow down.

## **Writing a Paper - POWER**

- P**lan the paper.
- O**rganize the ideas and elaborations.
- W**rite the draft.
- E**dit the draft: look for errors.
- R**evise the paper and enhance.

## **Editing:**

- CLIPS (Capitalize, Leave space between words, Ideas are complete, Punctuation, Spelling)
- COPS (Capitalization, Organization, Punctuation, Spelling)
- C-SOOP (Capitalization, Sentence structure, Organization, Overall format, Punctuation)
- STOPS (Sentence structure, Tenses, Organization, Punctuation, Spelling)

## **Math:**

**Order of Math Operations:** Please Excuse My Dear Aunt Sally (parentheses, exponents, multiply, divide and subtract).

**Division:** Does McDonald's Sell Cheese Burgers Rare (Divide, Multiply, Subtract, Check, Bring down and Repeat)

## **Multiplication facts using 9's**

- Spread hands out.
- Label fingers from 1-10 starting with left pinkie finger.
- Hold down the number of the finger that is the multiplicand of nine.

- Count the fingers to the left of that finger as tens and the fingers to the right of it as ones.
- $9 \times 3 = 27$ : Spread hands out, hold down the number 3 finger, you will have 2 fingers to the left (tens); 20, and 7 fingers to the right (ones);  $7 = 27$ .

### Days of the Month

- Make a fist with both hands.
- Count knuckles and in between knuckles as months, starting with little finger on left hand for January.
- Each month on a knuckle has 31 days.

### Roman Numerals

- I Vant XRays: I = 1, V = 5, X = 10
- Lucy Can't Drink Milk: L = 50, C = 100, D = 500, M = 100

**Check for Multiplication:** Even times even is even, even times odd is even, but odd times odd is always odd.

### Basic Computations

- DRAW (Mercer & Mercer, 1998)
  - D**iscover the sign: student finds, circles and says name of computation sign.
  - R**ead the problem: student reads equation.
  - A**nswer, or draw tallies and/or circles and check your answer: see draw examples for each operation below.
  - W**rite the answer: student writes answer to problem.
    - Addition Example:  $7 + 4 = 11$ 
      - Write tally marks for the number  
I I I I I I I I I I I I
      - Count them for the total
    - Subtraction Example:  $7 - 4 = 3$ 
      - Write tally marks for the largest number  
I I I I I I I I
      - Cross off tallies for the smaller number

III +III

- Multiplication Example:  $4 \times 5 = 20$  (four groups of five)

- Draw groups with circles



- Write tally marks for objects within the circles



- Total the tallies and writes the answer.

- Division Example:  $24 \div 4 = 6$

- Write tally marks to represent dividend ("24")

|||||

- Circle the tally marks by the value of the divisor ("4").



- Count the number of circles that represent the quotient ("6").

- Count UP

- Used to solve basic addition problems.
- Student places finger on the number of greatest value, or "biggest" number and counts up.
- Example:  $5 + 4 = 9$  (FIVE, six, seven, eight, nine)

- Count BACK

- Used to solve basic subtraction problems.
- Student places finger on the number of greatest value, or "biggest" number, and counts back.

## Geography

**Directions of the Compass:** Sweep your arm around starting above your head, sweep to the right, down and left while saying Never (North) Eat (East) Shredded (South) Wheat (West)

### **The Great Lakes**

- HOMES = Huron, Ontario, Michigan, Erie, Superior
- In order from west to east: Sam's Horse Must Eat Oats (Superior, Huron, Michigan, Erie, Ontario)

### **Central American Countries from North to South**

- My Great-Big Elephants Have No ChRonic Problems (Mexico, Guatemala, Belize, El Salvador, Honduras, Nicaragua, Costa Rica, Panama)

### **Continents**

- Eat AN ASpirin AFter A Nighttime SnAck (Europe, Antarctica, Asia, Africa, Australia, North America, South America)

### **Oceans**

- I Am A Person (Indian, Arctic, Atlantic, Pacific)

# Appendix 2: **Graphic Organizers**

Appendix 2:  
Graphic Organizers

**Horizontal Timeline**

**Concept Map**

**Venn Diagram**

**Cause and Effect Organizer**

**Character Description Organizer**

**Cyclical Flowchart**

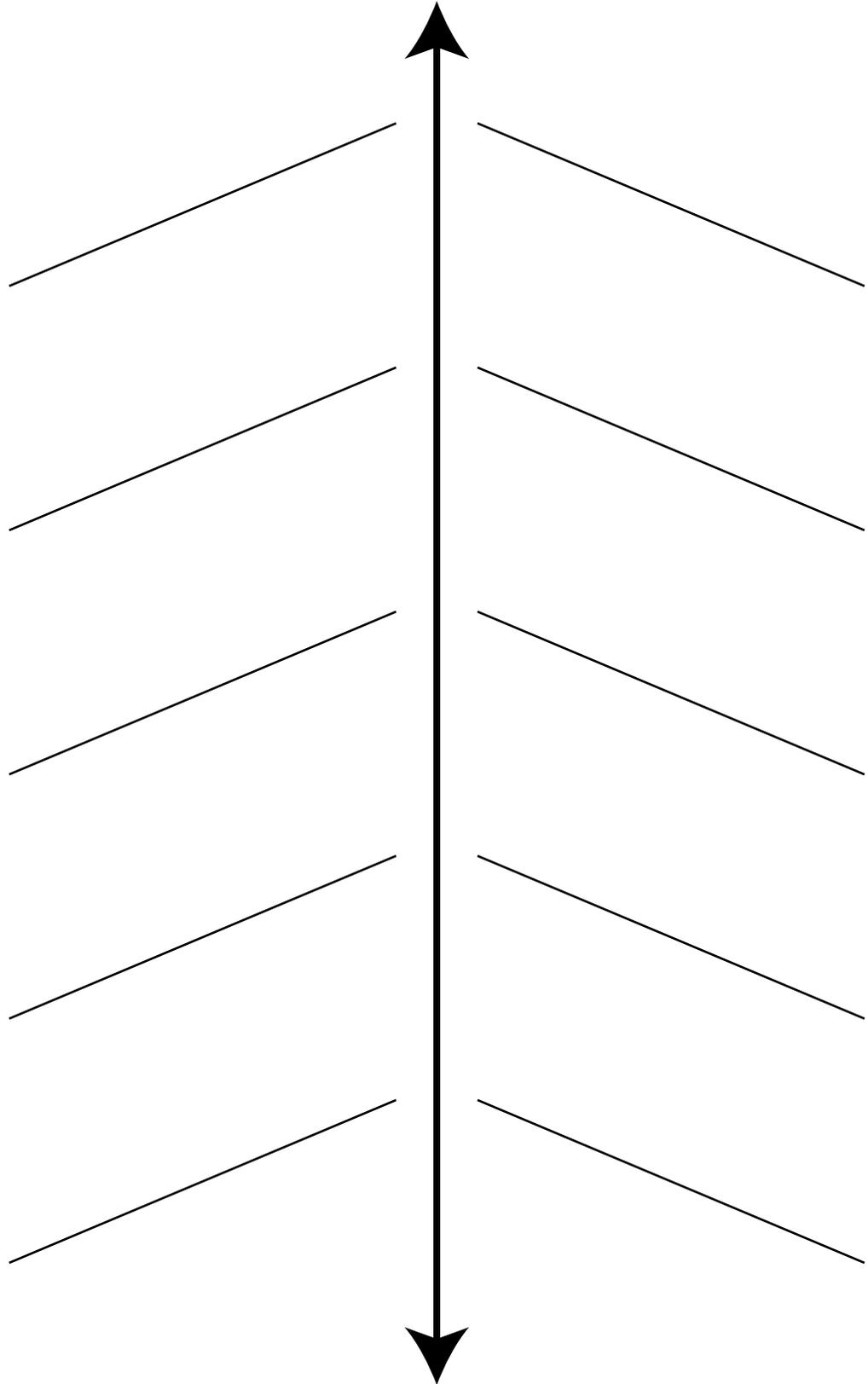
**Story Web**

**Linear Flowchart 1**

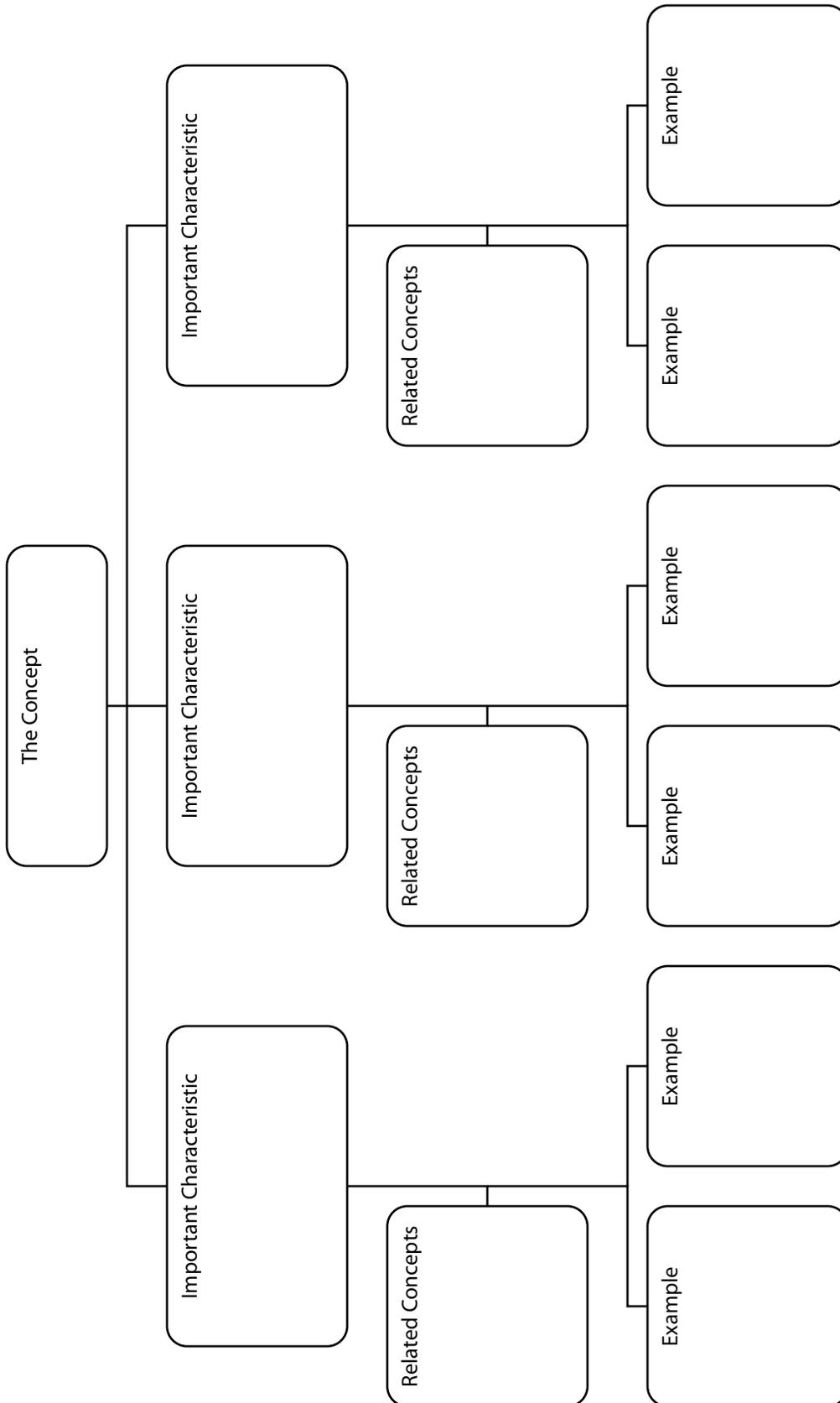
**Linear Flowchart 2**

**Problem Solving Flowchart**

## Horizontal Timeline



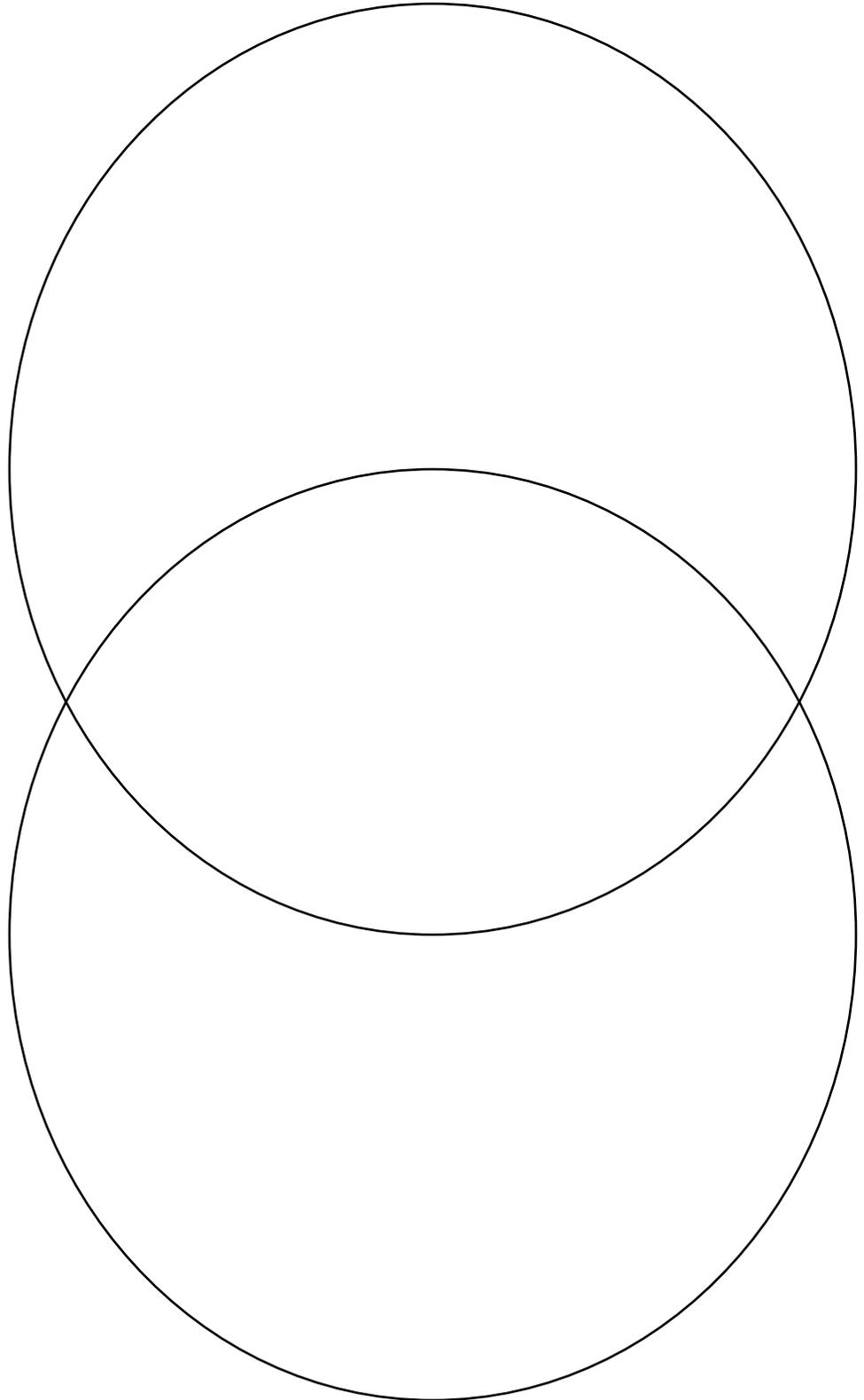
# Concept Map



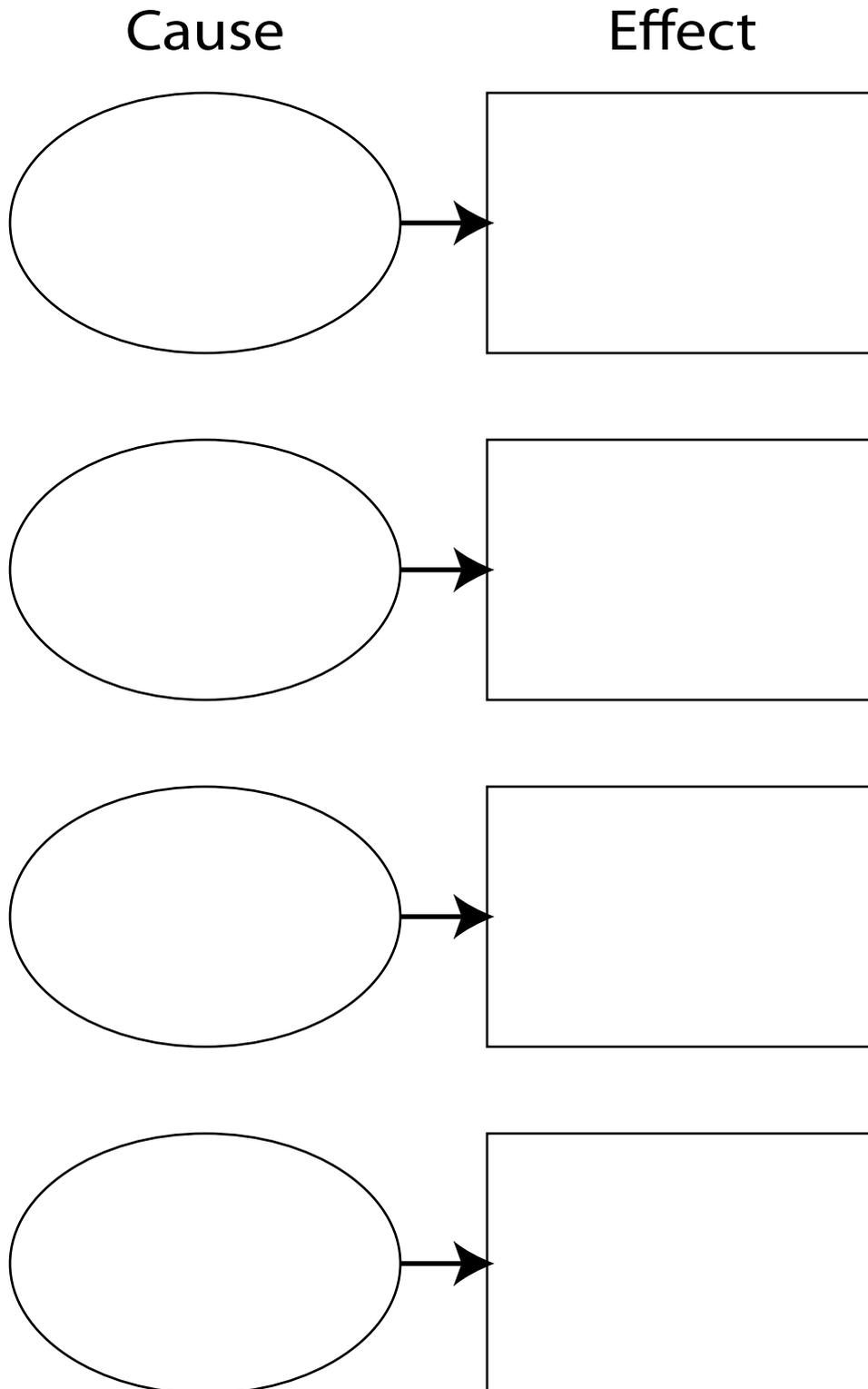
## Appendix 2: Graphic Organizers

## Venn Diagram

Appendix 2:  
Graphic Organizers



## Cause and Effect Organizer



Appendix 2:  
Graphic Organizers

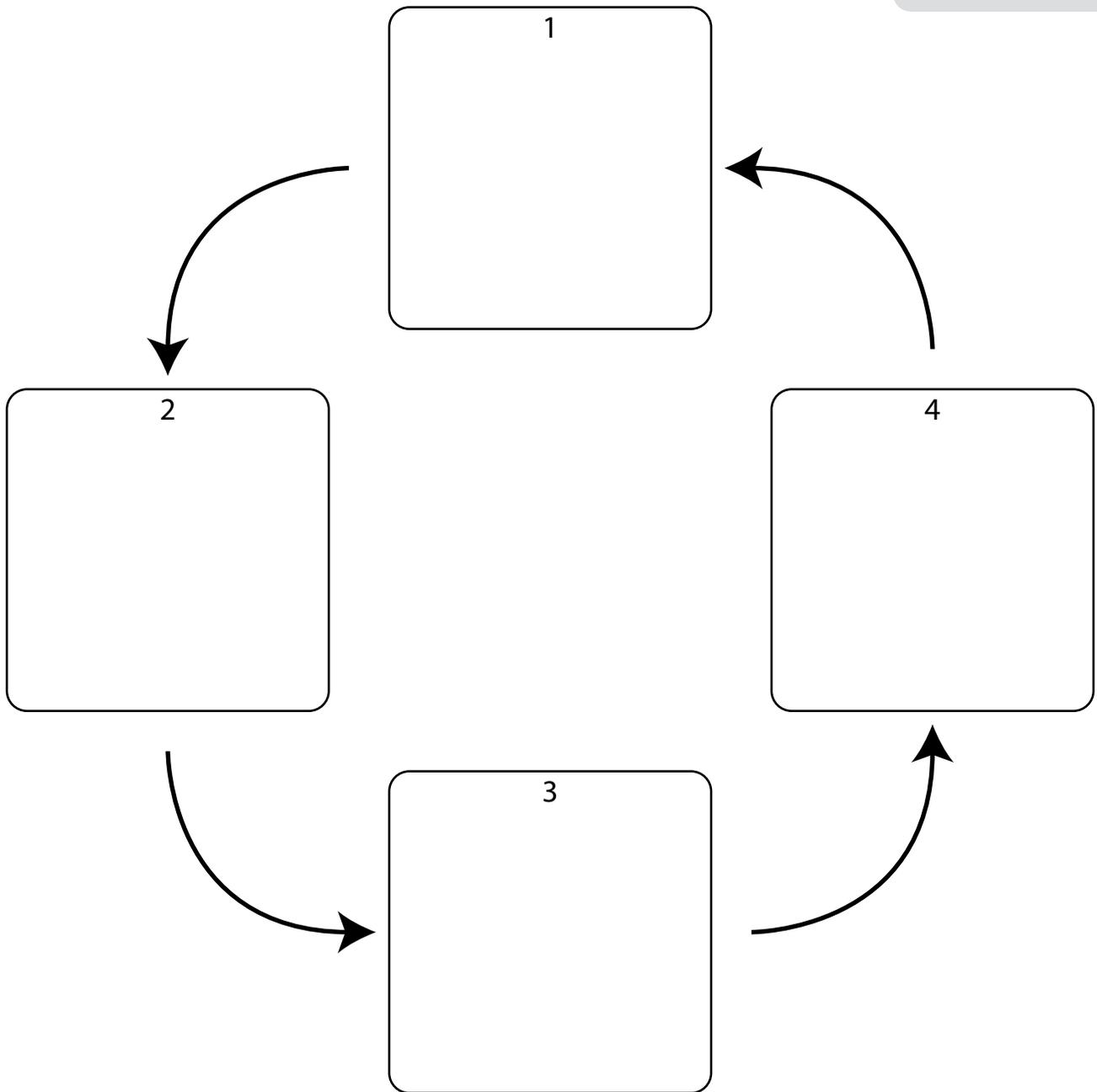
## Character Description Organizer

Appendix 2:  
Graphic Organizers

A graphic organizer for character description. It features a central rounded rectangular box and six surrounding circles. The circles are arranged in two columns of three, with the top circle of each column positioned above the central box. The central box is intended for the character's name, and each circle is intended for a descriptive word.

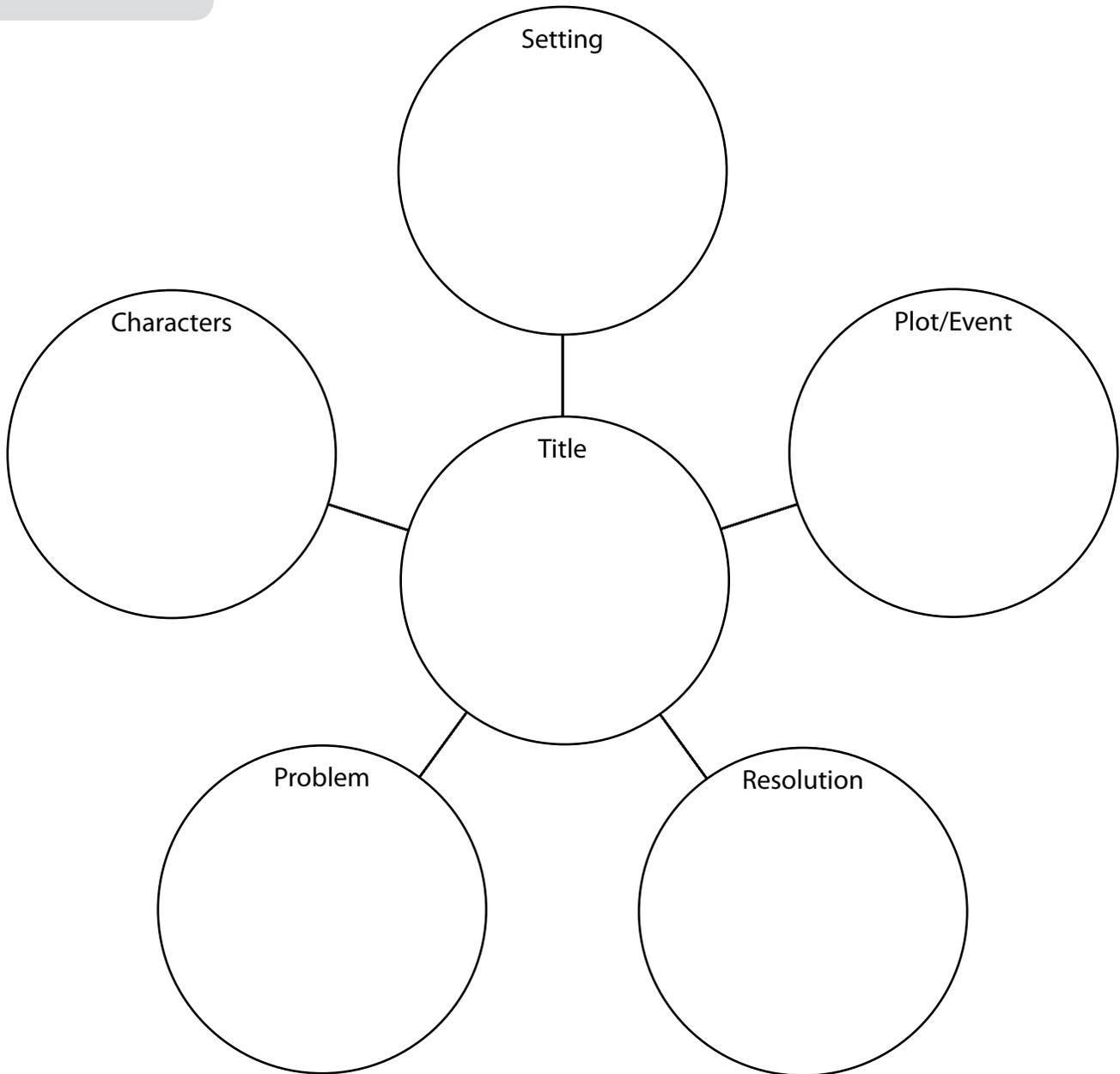
Write the character's name in the center box.  
Write one word that describes the character in each of the circles.

## Cyclical Flowchart



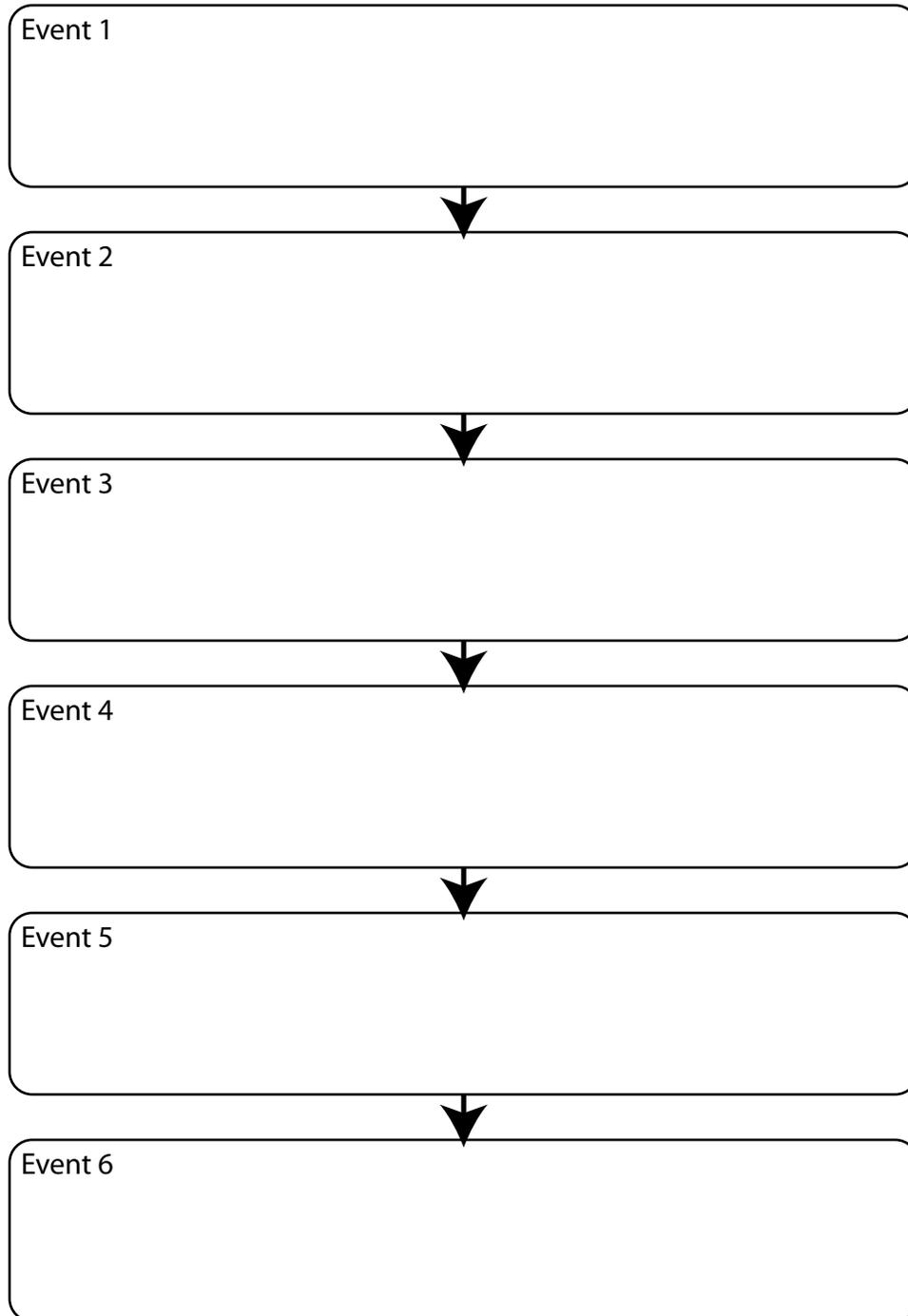
## Story Web

### Appendix 2: Graphic Organizers



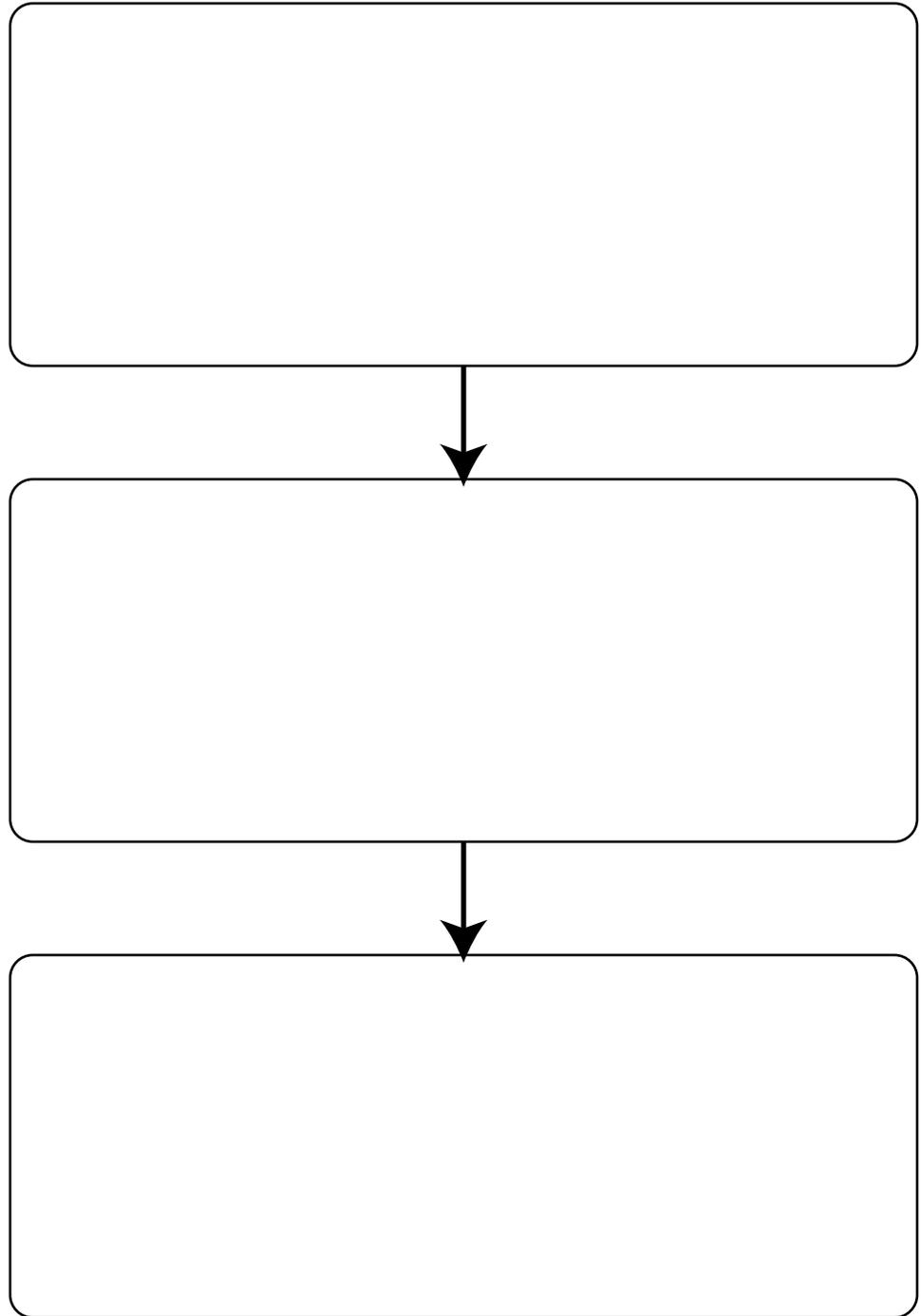
## Linear Flowchart 1

### Initiating Event

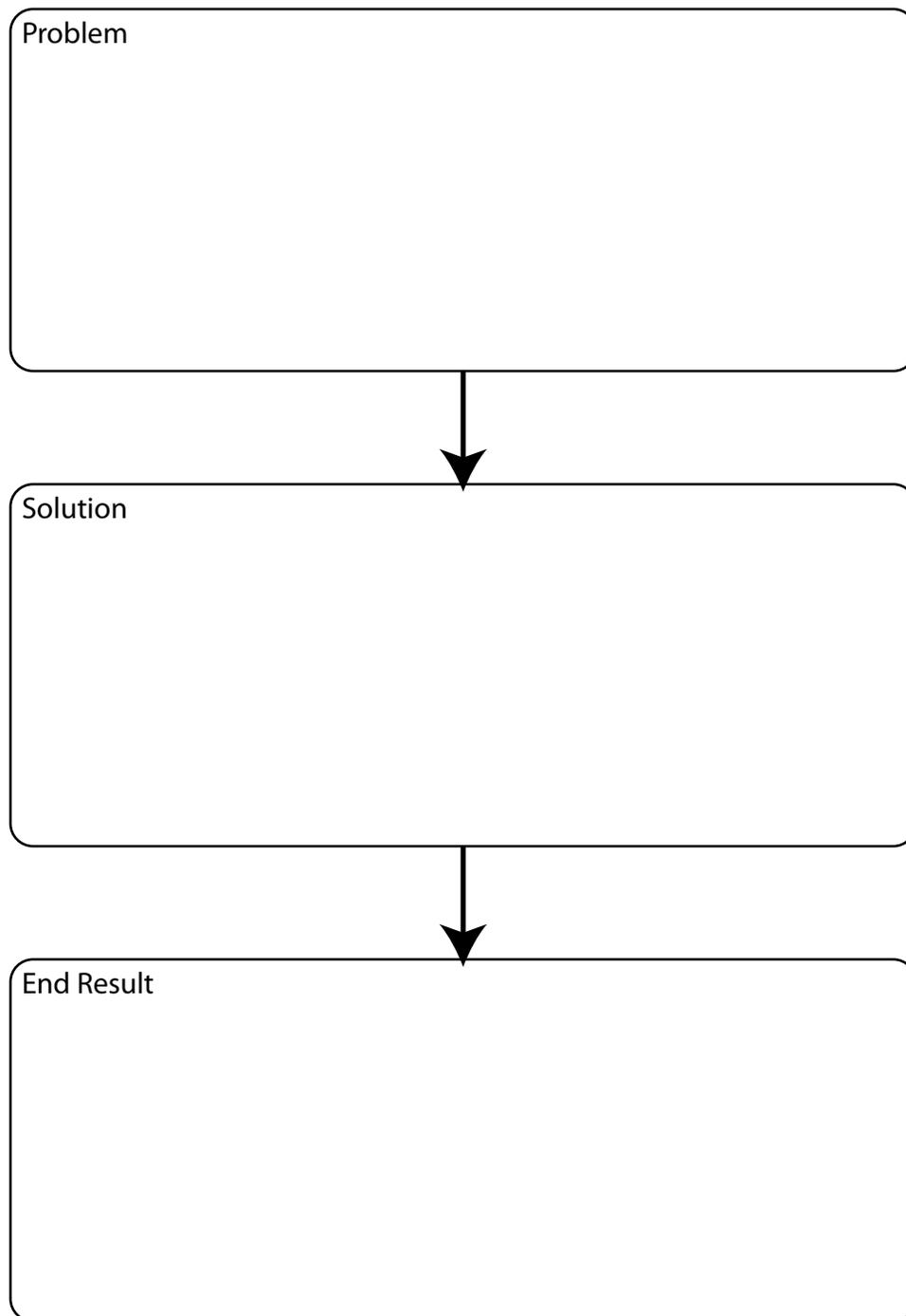


Final Outcome

## Linear Flowchart 2



## Problem Solving Flowchart



# Appendix 3:

## Sponge Activities

### Appendix 3: Sponge Activities

### Elementary

#### Card Name Game

Have all of the student's names written on a playing card. While seated at the carpet, distribute one card to each student (making sure no one has their own name). When their name is called, they have to say something positive about the person on the card. This will help them to learn about respect and treating others how they want to be treated.

#### Baseball

Use this game to practice math facts or to review facts in science or social studies. Divide the class into two teams. Decide with the class where the batter will stand and where the bases will be. Call team 1 up to the front of the room. The batter gets a question or math fact to answer. If he/she gets it right, he moves to 1st base. If the student misses it, that is an out. Students chalk up their runs on the board as they come in. The other team sits in their seats and holds up fingers to show the number of outs.

#### Drop the Clothespin/Eraser Basketball

Divide into smaller teams for this game, either by rows, reading groups, etc. Call up one team. Each time a student gets the right answer he/she gets to drop a clothespin into a jar, or throw an eraser into a wastebasket placed several feet away. Let one of your students give out the spelling words or math facts and another keep score.

#### Around the World

This game is for practicing math facts. Start at the front of the room with the first 2 students. They stand. Hold up a flash card. The first one to say the answer gets to move on and challenge the next student. The student who answers incorrectly sits down wherever he/she is. Allow the students one chance to answer. If one student says the wrong answer, the other one gets a chance. If they both miss, they both sit, and go on to the next two students. The winner is the first one to get back to his/her seat.

#### Musical Transitions

When it is time to transition from one activity to another, play music to motivate the students to clean up quickly. Try to pick music that is upbeat and very catchy. After the students are done cleaning up the activity at hand, allow the music to play a little bit longer so the students can dance out any extra activity they may. This way, their attention is focused once they settle back down at the tables for another activity.

**Sparkle**

This is a spelling practice game and requires students to be good listeners. Divide into smaller teams of 6-8. Call up the first group. Pronounce the word that is to be spelled. The first student says the first letter. The second student says the second letter. The third student says the third letter, etc. If they miss, they sit down on the floor and the game continues. Do NOT repeat the word and do not repeat the letters that have already been called out. After the last letter of the word has been given, the next person must say "Sparkle." The person after the sparkle person has to sit down. Pronounce the next word. The last person left standing is the winner. Then go on to the next group.

**Greater Than, Less Than**

Play this game with a few students at a time, waiting in line for lunch, the bus, etc. You say, "I am thinking of a number between 1 and 25." Give each student a guess and after each guess, tell them if the answer is higher or lower than his/her guess. Let them keep guessing until someone gets it right. Keep using more difficult numbers as the students' skill level increases.

**Heads Up, 7up**

Select 7 players to come up front. Call out, "Heads down, all around." Each student taps someone and then goes back up front. Call out, "Heads up, 7 up", and the ones who were tapped stand up. Give each student a math flash card fact or review question to answer. If he/she gets it right, the one who tapped him/her must sit down and the new player goes up front. If the student is wrong, he/she sits back down and the one who tapped him/her gets to stay up front.

**Shorten Transition Times**

On a big green poster board, draw a football field and indicate that the 0 yard line is in the center and the two 50 yard lines are at each end. In the beginning of the school year, introduce the football chart. Place a small football on the 0 yard line. Tell the class that every time they change from one subject to another, they were going to be timed for 1 minute. If everyone is ready within the time, they score 10 yards. If not, the teacher scores. At the end of the quarter, if the teacher wins, the students have to write a comprehensive report. If the students win, they get a whole day of fun educational activities and snacks.

**Transition Time**

To make transition time faster and easier, cut out five shapes five times using the same sequence of different colored construction paper. Example: green, red, yellow, blue, orange bunnies, frogs, crayons, etc. Label each colored shape with a number and laminate one to each student's space at their tables. When it is time to line up or move anywhere in the room, call a shape, color or number and those students line up first.

**Transition Back into Classroom**

Once the students have left for recess, set out a bucket on each table. The buckets contain materials the students can use independently at their tables. When the students come in from recess, they know there are activities at their tables and they settle in to them quickly. Each table gets the bucket for a day and you can rotate activities every week or two.

**Tic Tac Toe Bingo**

This works well with any kind of math facts, letter or sight word recognition for

younger students. For each round, the students draw a tic tac toe grid on paper. They write in 9 answers, putting them anywhere they want. That way, everyone's grid is different. The teacher calls out problems, words or letters. The first one to get three in a row, just like tic tac toe, is the winner.

Examples:

- Times tables of 6. Write the answers to the tables on the board: 6, 12, 18, 24, 30, 36, 42, 48 and 54. Students write these numbers on their grids. Then say the problems or line flash cards without the answers up on the chalk rail. If you hold up 6x6, they would circle the 36.
- Kindergartners can write 9 letters and first graders could write in 9 sight words. Have the students make a new grid for each new game. For sight words, give clues instead of saying the word. For stop, say, "It rhymes with hop and it means to quit." Walk around and make sure they have written in the answers before the game begins.

### **Math Wars**

This is a great game for reviewing difficult math calculation and story problems. Call a small group of students up to the chalkboard and provide them with a difficult math problem. The first one to solve it correctly is asked to return to his/her seat. Call up another student to take his/her place. Continue till everyone has a chance to come to the board and win. This game also works great for story problems. As a shorter variation, call up one row at a time. After someone wins, have the whole row go back to their seats and call up the next row.

### **Silent Math**

During the times your entire class is lined up and waiting, have one student start by using fingers and hand signals to give math problems. For example: hold up one finger (1), then make a plus sign (+), then two fingers (1+2). Lastly, put one hand above the other facing in opposite directions for the equal sign (=). If a student wants to answer, he/she must raise a hand to be called on. They must give the answer using fingers and hand signals.

## **Middle and High School**

### **Closing Activity**

As students walk in the door for class, give random students scrap pieces of paper. The students know that if they get a piece of paper they have to write a comment about the class topic that day or a question they have. These papers are handed back at the end of class and can be used as future discussion topics and/or test questions.

### **Hangman**

The teacher comes up with a vocabulary word the class has been studying and draws blank spaces for the number of letters in the word. Students guess letters until they can figure out the word. For each incorrect letter guessed, the teacher draws body parts of the hangman (ten body parts: head, body, 2 legs, 2 arms, 2 feet, eyes and mouth).

**Scattergories**

Decide on several topics (person, place, thing, adjective) and write them on the board. Give students a certain amount of time to fill in their charts with words that all start with a given letter.

**Find a Word**

Students are given a word and then try to find as many words as they can using the letters of the given word.

**20 Questions**

Teacher chooses a person, place or thing and students ask yes or no questions to determine the chosen subject.

**The Answer is \_\_\_\_\_! What is the Question?**

Groups or individual students brainstorm to think of as many questions as they can that will have the answer given. Example: The answer is eight. Questions: How many legs does a spider have? What is 16 divided by 2?

**Quote of the Day**

Start off each class by going over a "Quote of the Day." Have it written on the board and students write this quote in their book used to record their daily homework. Students volunteer to explain what this quote means to them. This not only encourages students to think beyond the books but also allows the teacher to have a part in their character education. This activity takes less than 5 minutes is a great use of class time.

**Current Events on the Map**

Discuss a current event with the class. Use a map to locate the area where the event is taking place.

**Current Events from Online Newspapers around the World**

Give students a country and have them look up the local newspaper on the internet and be able to describe one current event in that country. A great website for this is: [www.ecola.com](http://www.ecola.com).

**String a Sentence**

Divide the class into two teams. Write "the" on both sides of the board. Students take turns going up to the board to write the next word of the sentence. Read the sentences when finished and determine if they make sense.

**Two Truths and a Lie**

Have students write three statements about themselves, two true and one lie. The class tries to determine which statement is false.

**Acronym Antics**

The object is to come up with a coherent sentence as an acronym for a four-letter word. Write a list of words with four letters on the board. Choose a word (NOSE) and have the first person think of a noun beginning with the first letter (n-nurses), the next person thinks of a verb beginning with the second letter (o – open), the next person thinks of an adjective for the third letter (s – sunny) and the next person thinks of a noun starting with the last letter (e – envelopes), therefore the acronym becomes the sentence 'nurses open sunny envelopes'.

**Free time and transition activities:**

Have one of the following activities written on slips of paper and draw one out when your class has free time or during transitions.

- Make a list of all the states, in alphabetical order. Beside each state name, list something about it (e.g. California, beaches).
- Invent a new ice cream flavor. Develop a marketing campaign for it. Where will you introduce it? Why this particular flavor? What will you call it?
- Write a tongue twister, choosing one letter and beginning most of your nouns, adjectives and verbs with that letter.
- Invent a holiday just for teens or children. What will be celebrated? How will you celebrate? When will it be? What is the holiday called?
- Create new colors of paint and give them names--not just blue, but Babbling Blueberry Blue. Not just pink, but Summer Melon Pink.
- Develop a secret code for a message. Be sure to have a consistent method and to include a decoder.
- Design your dream car. Write a paragraph to accompany the description.
- Write 20 ways to spend your summer, then prioritize them.
- Write 20 careers you would like to try, then put them in order of preference.
- Create a new neighborhood for your town, along with a map. Include all the services and recreation amenities; parks, swimming pool, tennis court.
- Plan a meal for 10 of your best friends and their families. Then write a shopping list for all of the items you would need.
- Identify a problem in your community. What would you do to solve it if you could?
- There is a competition for a new sandwich for your local deli. Design your ideal sandwich, give it a name and write instructions on how to make it.
- List as many American Presidents as you can in order from the very first one.
- You are a travel agent and you are designing the perfect vacation. You also have to design the brochure. Where will it be? What can people do there?
- You're famous! And someone from People magazine wants to come and interview you. What are you famous for? Make up an interview.
- Design a fish. Where does it live? What does it eat? Is it a bottom feeder or top feeder? Does it have any special abilities?
- Name as many countries as you can in the northern half of the world.
- Everyone knows some trivia. As quickly as you can, write as many trivia questions you can think of in five minutes to contribute to a classroom trivia game.

# Appendix 4:

## Free or Inexpensive Rewards

### Appendix 4: Free or Inexpensive Rewards

**Extra Recess Pajama Day** - Wear pajamas, bring pillows and all learning takes place on the floor with the desks pushed out of the way.

**Teacher Day** - Divide the class into teams and each team is responsible for teaching one section of the day. This takes planning but gives students an appreciation of how hard it is to prepare for a lesson from the teacher's viewpoint.

**National Silence Day** - No one in the room is allowed to use spoken words. They must use sign language, drawings, written notes, pantomimes or other creative ways to convey their thoughts. This means the teacher too.

**Home baked cookies** - Surprise the class by bringing in home baked cookies telling them it is because they have been so (whatever behavioral expectation you have been working on).

**Music Day** - Play approved music while the students are working at their desks for a reward.

**Picnic Lunch** - All students bring a sack lunch from home (or ask the cafeteria to provide). Bring large blankets and go out on the school lawn. If the weather is bad, move back the desks and tables to have the picnic in the middle of the classroom.

**DEAR Day "Drop Everything and Read"** - When students are working well and meeting the expectations you outlined for them, provide them with this opportunity throughout the day. Interrupt the students' activities by writing "DEAR" on the board. The students get 15 minutes to read leisure materials.

**DEAD Day "Drop Everything and Draw"** - When students are working well and meeting the expectations you outlined for them, provide them with this opportunity throughout the day. Interrupt the students' activities by writing "DEAD" on the board. The students get 15 minutes to draw.

**Popcorn during reading time** - Popcorn is a cheap treat and if you really want to make it special you can drizzle butter over it with cinnamon sugar.

**Popcorn on a blanket** - Have the students form a large circle away from the center. Put a popcorn popper in the center of the circle without the lid. The students

Appendix 4:  
Free or Inexpensive  
Rewards

can watch the popcorn pop out of the popper all over the blanket. Once the popper is off they can eat.

**Soda Pop Day** - Send home a note the night before and tell the parents that their child has earned a reward and tomorrow they can bring a soda pop from home to drink after lunch.

# Appendix 5: **Executive Functions Tools**

Appendix 5:  
Executive Function  
Tools

**Teacher/Parent Interview**

**Student Interview**

**Formal Assessments List**

**Intervention Planning Worksheet**

**Individual Self Monitoring Sample Form**

**Sample Daily Goal Card**

**Long Term Planning Project Form**

**Time Estimation Form**

## Teacher/Parent Interview

Student: \_\_\_\_\_

Respondent: \_\_\_\_\_  Teacher  Parent

Date of Interview: \_\_\_\_\_

### Which of the following skills does the student have difficulty with?

<b>Skill: Metacognition</b>	<b>Comments</b>
Understanding task directions	
Following directions carefully	
Asking for help when needed	
Making careless mistakes or failing to check work	
Recognizing he/she has a problem	
Trying to solve problems on his/her own	
Evaluating to determine whether the problem was solved successfully	
<b>Skill: Task Initiation</b>	<b>Comments</b>
Getting started on his/her own	
Waiting until the last minute to complete work	
<b>Skill: Sustained Attention/Goal-Directed Persistence</b>	<b>Comments</b>
Able to keep working despite distractions, fatigue or boredom	
Sticking with something long enough to complete it	

## Teacher/Parent Interview (continued)

Finishing projects by the set deadline	
<b>Skill: Time Management/ Prioritize/ Pace</b>	<b>Comments</b>
Finishing homework or chores on time	
Following a timeline for large projects	
Estimating how long it will take to finish	
Establishing ranking of tasks	
<b>Skill: Working Memory</b>	<b>Comments</b>
Remembering to hand in homework	
Following directions carefully	
Writing down assignments or making a to-do list	
Bringing home necessary materials such as books, workbooks, assignment notebook, worksheets, permission slips, etc...	
Bringing necessary materials to school	
Remembering instructional or problem solving sequences ( i.e. long division, paper headings, etc...)	
Remembering to do chores or homework assignments	
Losing things at home, school, on the bus, in the locker room, etc...	
Remembering to follow classroom routines and procedures	

## Appendix 5: Executive Function Tools

## Teacher/Parent Interview (continued)

<b>Skill: Organize</b>	<b>Comments</b>
Keeping papers and notebooks organized	
Keeping desk clean	
Keeping items in the proper location	
Keeping track of books, papers, pencils, etc...	
Keeping book bag organized	
<b>Skill: Plan</b>	<b>Comments</b>
Deciding on a topic for long-term projects	
Breaking long-term assignments into manageable pieces	
Developing a timeline for each piece of a long-term project	
<b>Skill: Flexibility</b>	<b>Comments</b>
Being able to revise plans or strategies in view of mistakes	
Able to adapt to changes in conditions or routines	
Accessing resources to help solve a problem	
<b>Skill: Response Inhibition, Stop/Interrupt</b>	<b>Comments</b>
Acting verbally or physically impulsive (blurting out, taking others' belongings, hitting, kicking, shoving)	
Interrupting	



## Student Interview

Student Name: \_\_\_\_\_

Date of Interview: \_\_\_\_\_

Tell the student you are going to ask him/her some questions about situations in which they have to use planning and organization skills in school, at home, in activities, any job situations they have been in, and how they spend their leisure time. Tell them you will be asking them questions about the kinds of problems kids sometimes have trouble with and if they think these are problems for them. Ask the student to give examples of these problems.

<b>Skill: Metacognition</b>	<b>Comments/Examples</b>
When doing long-term projects like research papers, do you ever have trouble choosing a topic?	
Do you ever have trouble following directions like forgetting to do part of the assignment resulting in losing points?	
Do you proofread or check your work before handing it in? Do you lose points for making careless mistakes?	
When studying for tests, do you know what to study?	
Do you have trouble deciding how to study effectively?	
Do you have any trouble understanding the material you are studying?	
When doing chores, do you ever get into trouble for doing a sloppy job?	
<b>Skill: Task Initiation</b>	<b>Comments/Examples</b>
Is getting started on homework or chores ever a problem for you? What makes it hard? When is the best time to do your homework or chores?	

## Student Interview (continued)

Do you ever find it hard to sit down and get started studying?	
Do you have trouble starting your chores when you are supposed to?	
<b>Skill: Sustained Attention/Goal-directed Persistence</b>	<b>Comments/Examples</b>
When working on homework or chores, do you have difficulty sticking with it long enough to get it done? Which subjects are hardest for you to get started on? What do you say to yourself when thinking of giving up? Sticking with it? Does the length of the assignment or chore make a difference?	
Do you have trouble when becoming distracted while doing your homework or chores? What things distract you? Are there places you study that don't have as many distractions? How do you handle distractions when they come up?	
Do you think there are more important things in your life than doing homework?	
When studying, do you ever take breaks that are too long?	
Do you find yourself becoming tired before you're done?	
<b>Skill: Time Management/Prioritize/ Pace</b>	<b>Comments/Examples</b>
Is it hard for you to stick with a timeline?	

## Appendix 5: Executive Function Tools

**Student Interview (continued)**

Are you able to estimate how long it will take you to finish something?	
Do you find yourself putting off studying or not study at all?	
Do you think you spend too much time at a job or doing extracurricular activities?	
Is wasting time a problem for you? Examples: hanging out, playing video games, talking on the phone, surfing the web, watching TV	
<b>Skill: Working Memory</b>	<b>Comments/Examples</b>
Do you have trouble remembering to do assignments or chores or writing them down? Do you bring home necessary materials and hand assignments in on time? Do you lose materials necessary for the assignment or task?	
When studying for tests, do you ever have difficulty memorizing the material?	
<b>Skill: Planning</b>	<b>Comments/Examples</b>
When doing long term projects, do you have difficulty breaking the assignment into smaller pieces?	
Do you have trouble developing a timeline to complete large projects?	
<b>Skill: Flexibility</b>	<b>Comments/Examples</b>

## Student Interview (continued)

Do you get stuck on one problem solving strategy even when it results in incorrect answers?	
Do you ever become upset by unexpected schedule changes or changes in plans?	
<b>Skill: Response Inhibition/Stop/Interrupt</b>	<b>Comments/Examples</b>
Is hanging out with kids who get into trouble a problem for you?	
Is not getting enough sleep a problem for you?	
Do you spend money as soon as you get it?	
Do you get into trouble for talking out in class or interrupting others?	
Do you say things without thinking?	
<b>Skill: Organization</b>	<b>Comments/Examples</b>
Is keeping your bedroom neat a problem for you?	
Is it difficult for you to keep your notebooks organized for classes?	
Do you have trouble keeping your desk or locker clean?	
Do you ever leave your stuff all over the house? Other places like school, work or a friend's house?	
Do you ever lose or misplace things?	

## Appendix 5: Executive Function Tools

## Formal Assessments of Executive Functioning

### **Behavior Rating Inventory of Executive Functions (BRIEF) (Ages 5-18):**

Checklists for the parent, teacher and student based on a three point scale to determine how often the student performs the behavior (never, sometimes, always), divided into two indexes: Behavior Regulation and Meta-cognition. Assesses specific skills of inhibit, shift, emotional control, initiate, working memory, organize and monitor.

**Brown ADD Scale (High School):** Available from PsychCorp; a structured interview designed to assess attention deficit disorders. Includes 40 items and addresses areas of activation, attention, effort, affect and memory.

**Comprehensive Behavior Rating Scale for Children (Ages 6-14):** Available from Psych Corp. Assesses attention, organization, hyperactivity, working memory, inhibition and organization.

**Child Behavior Checklist (Achenbach):** A broad measure of social emotional functioning. Some items tap executive skills, particularly attention problems.

**NEPSY II (Korkman, Kirk, Kemp) (Ages 3-12):** Harcourt assessments; an individually administered intelligence test including subtests to assess planning, cognitive flexibility, impulsivity, vigilance, auditory attention, monitoring, self regulation and problem solving. The second edition was published in 2007.

**Matching Familiar Figures Test (Kagan):** A visual matching task involving rapid comparing and stimulus pictures with one of six similar figures. Latency, errors, reflectivity and impulsivity are measured.

**Wisconsin Card Sorting Test:** A computerized or manual assessment which assesses the ability to establish and shift mental sets, perseveration, cognitive flexibility and problem solving.

**Conners Continuous Performance Test II (Conners):** A computerized attention test. Letters flash on the screen and the student is instructed to press the space bar for every letter except a target letter. Assesses sustained attention and inhibition to response.

**Delis-Kaplan Executive Function Scale (Delis, Kaplan, and Kramer) (6-adult):** An individual battery of nine tests designed to assess executive skills in children and adults including planning, cognitive flexibility, impulsivity and problem solving.

**Cognitive Assessment System (Naglieri and Das):** Six individually administered subtests to assess planning and attention, problem solving strategies, sustained attention and inhibition.

# Intervention Planning Worksheet

## Step 1: Complete one worksheet for each skill identified.

### Example:

Assessments Used: Summarize the results of assessments, including interviews, observations, case history, work samples and formal assessments.

Results: Student has difficulty across environments with working memory. Student forgets the directions of assignments frequently resulting in missed points and failing grades. Student frequently forgets to hand in homework assignments and has trouble remembering the steps to solving math problems of multiplying double digits and long division. At home he can follow only one step directions at a time.

## Step 2: Using the results and specific skill deficits, develop an intervention plan for each target behavior.

### Example:

Target Behavior: Working Memory

Behavioral Objective: Student will write all assignments in his planner each class period and hand in 85% of daily assignments.

Supports and Modifications: Assignments will be posted in the same place in the classroom for each period and students will be cued to copy the assignment into planners at the beginning of the period while the teacher monitors. Parents will cue homework start time, preferably at the same time each day.

Method: Student's teacher and parents will teach the skill.

1. Student, teacher and parent will meet to explain the objective and plan to student.
2. Decide what time student and teacher will meet each day.
3. Student, teacher and parents will follow the plan.
4. Student and teacher will make a list of homework assignments for the day and beside each assignment will estimate how long it will take to complete each assignment.

## Intervention Planning Worksheet

Student's Name: \_\_\_\_\_

Assessments Used: \_\_\_\_\_

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Results (specific skill deficit and category): \_\_\_\_\_

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Target Behavior: \_\_\_\_\_

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Behavioral Objective: \_\_\_\_\_

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## Individual Self Monitoring Form

My Checklist

Student: \_\_\_\_\_

Date: \_\_\_\_\_

**Instructions:** Check (√) if yes, (O) if no. If my marks match my teacher's marks, I earn a point.

My goals:

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

Class	Goal 1	Goal 2	Goal 3	Points and Teacher Initial

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Goal Chart

Daily Goal Card

Student: \_\_\_\_\_

Date: \_\_\_\_\_

Appendix 5:  
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Tools

<b>Task</b>	<b>Points Earned (0, 1)</b>
Wrote down all my homework assignments.	
Got all my books to go with the assignments and put them in my backpack.	
Got all handouts or worksheets for the assignments and put them in my folder.	
Packed my notebook in my backpack.	
Packed my folder in my backpack.	
<b>Points Earned for Day</b>	

## Long Term Planning Project Form

Student: \_\_\_\_\_

Date: \_\_\_\_\_

This document can be used for any type of long term project (research papers, long term goals, etc.)

<b>Project Name:</b>			
<b>Steps</b>	<b>Materials</b>	<b>Date Due:</b>	<b>Done?</b>
Step 1:			
Step 2:			
Step 3:			
Step 4:			
Step 5:			
Step 6:			
Step 7:			
Step 8:			
Step 9:			
Step 10:			

## Time Estimation Form

Student: \_\_\_\_\_

Date: \_\_\_\_\_

Directions:

1. Write down your assignments and estimate how long it will take you to complete each one. Time yourself and write down how long each one really took.
2. Answer the question at the bottom of the page.

Assignment	How long will it take?	How long did it actually take?	Difference

What do I know about how I estimate time and how it could affect my homework? \_\_\_\_

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# Resources

Books	185
Audiovisual Materials	206
Websites	210





# Resources:

## Books

### General Resource Books

- Abel, E. L. (1998). *Fetal Alcohol Abuse Syndrome*: Springer. 978-0306456664
- Brooks, C. S., & Rice, K. F. (1997). *Families in Recovery: Coming Full Circle*: Paul H. Brookes Publishing Company. 978-1557662644
- Clayton, L., & Morrison, J. (1999). *Coping with a Learning Disability*: Rosen Publishing Group. 978-0823928873
- Cook, P. S. (1990). *Alcohol, Tobacco, and Other Drugs May Harm the Unborn*: Diane Pub Co. 978-1568065489
- Costa, A. L., & Kallick, B. (Eds.). (2000). *Discovering and Exploring Habits of Mind*: Association for Supervision & Curriculum Deve. 978-0871203687
- Cozolino, L. (2006). *Neuroscience of Human Relationships: Attachment and the Developing Social Brain*: W. W. Norton. 978-0393704549
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- Falkner, L. J. (2002). *I Would Be Loved*: Virtualbookworm.com Publishing. 978-1589391642
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- Gerrold, D. (2007). *The Martian Child: A Novel About A Single Father Adopting A Son*: Tor Books. 978-0765320032
- Golden, J. (2005). *Message in a Bottle: The Making of Fetal Alcohol Syndrome*: Harvard University Press. 978-0674014855
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Resources:  
Books

## Resources: Books

- Hallowell, E. M., & Ratey, J. J. (2005). *Delivered from Distraction: Getting the Most out of Life with Attention Deficit Disorder*: Ballantine Books. 978-0345442314
- Harry, B., Kalyanpur, M., & Day, M. (1999). *Building Cultural Reciprocity With Families: Case Studies in Special Education*: Paul H Brookes Publishing. 978-1557663771
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- Kleinfeld, J., Morse, B., & Wecott, S. (Eds.). (2000). *Fantastic Antone Grows Up: Adolescents and Adults with Fetal Alcohol Syndrome*: University of Alaska Press. 978-1889963112
- Kulp, L., & Kulp, J. (2000). *The Best I Can Be: Living with Fetal Alcohol Syndrome-Effects: Better Endings New Beginnings*. 978-0963707239
- LaFever, L. (2000). *Cheers! Here's to the Baby!*: Andover Printing and Graphics. 0976327805
- Latzko, M. B. (1996). *I Can Do It!: A Micropedia of Living on Your Own*: Microlife. 978-0965182607
- Lewis, K. D. (1995). *Infants and Children with Prenatal Alcohol and Drug Exposure: A Guide to Identification and Intervention*: Sunrise River Press. 978-0962481420
- Malbin, D. (1993). *Fetal Alcohol Syndrome, Fetal Alcohol Effects: Strategies for Professionals*: Hazelden Publishing & Educational Services. 978-0894869518
- McCreight, B. (1997). *Recognizing and Managing Children With Fetal Alcohol Syndrome/Fetal Alcohol Effects: A Guidebook*: CWLA Press. 978-0878686070
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- Workshop, W. Y. W. (1994). *Kids Explore The Gifts of Children With Special Needs*: Avalon Travel Publishing. 978-1562611569

## Resources: Books

## Teaching Resource Books

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- Barkley, R. A. (2000). *Taking Charge of ADHD: The Complete, Authoritative Guide for Parents*: The Guilford Press. 978-1572305601
- Barkley, R. A. (2005a). *ADHD and the Nature of Self-Control*: The Guilford Press. 978-1593852313
- Barkley, R. A. (2005b). *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment (3rd ed.)*: The Guilford Press. 978-1593852108
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- Barkley, R. A., & Robin, A. L. (2008). *Your Defiant Teen: 10 Steps to Resolve Conflict and Rebuild Your Relationship*: The Guilford Press. 978-1593855833

## Resources: Books

- Bear, D. R., Invernizzi, M., Templeton, S. R., & Johnston, F. (2007). *Words Their Way: Word Study for Phonics, Vocabulary, and Spelling Instruction* (4th Edition) (Words Their Way Series) (4th ed.): Prentice Hall. 978-0132239684
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- Dorn, L. J., & Soffos, C. (2001). *Shaping Literate Minds Developing Self-Regulated Learners*: Stenhouse Publishers. 978-1571103383

- Doyle, M. B. (2008). *The Paraprofessional's Guide to the Inclusive Classroom: Working As a Team* (3rd ed.): Paul H Brookes Pub Co. 978-1557669247
- Fountas, I. C., & Pinnell, G. S. (2001). *The Guiding Readers and Writers*: Heinemann. 978-0325003108
- Franco, B., & Dauler, D. (2000). *Math in Motion: Wiggle, Gallop, and Leap with Numbers*: Creative Teaching Press. 978-1574717198
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- Gibb, G. S., & Dyches, T. T. (1999). *Guide to Writing Quality Individualized Education Programs: What's Best for Students with Disabilities?* : Allyn & Bacon. 978-0205316922
- Hall, K. L. (1996). *Reading Stories for Comprehension Success: Primary Level, Grades 1-3*: Jossey-Bass. 978-0787966904
- Hall, K. L. (1997). *Reading Stories for Comprehension Success: Intermediate Level, Grades 4-6*: Jossey-Bass. 978-0787967055
- Hall, K. L. (1999). *Reading Stories for Comprehension Success: Junior High Level, Reading Levels 7-9*: Jossey-Bass. 978-0787966867
- Hall, K. L. (2004). *Reading Stories for Comprehension Success: Senior High Level, Reading Levels 10-12*: Jossey-Bass. 978-0787975548
- Hammeken, P. A. (2000). *Inclusion: 450 Strategies for Success: A Practical Guide for All Educators Who Teach Students With Disabilities*: Corwin Press. 978-1890455255
- Heacox, D. (2001). *Differentiating Instruction in the Regular Classroom: How to Reach and Teach All Learners, Grades 3-12*: Free Spirit Publishing. 978-1575421056
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- Hoover, J. J., & Patton, J. R. (1997). *Curriculum Adaptations for Students With Learning and Behavior Problems: Principles and Practices* (2nd ed.): Pro-Ed. 978-0890796863
- Huebner, D., & Matthews, B. (2007). *What to Do When Your Brain Gets Stuck: A Kid's Guide to Overcoming OCD (What-to-Do Guides for Kids)*: Magination Press. 978-1591478058
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## Resources: Books

## Resources: Books

- Kempton, W. (1998). *Socialization and sexuality: A comprehensive training guide for professionals helping people with disabilities that hinder learning* (4th ed.): McGowan Pub.
- Klass, P., & Costello, E. (2004). *Quirky Kids: Understanding and Helping Your Child Who Doesn't Fit In- When to Worry and When Not to Worry*: Ballantine Books. 978-0345451439
- Kleinfeld, J. (1993). *Fantastic Antone Succeeds: Experiences in Educating Children with Fetal Alcohol Syndrome*: University of Alaska Press. 978-0912006659
- Kulp, J. (2004). *Our FAScinating Journey: Keys to Brain Potential Along the Path of Prenatal Brain Injury: Better Endings New Beginnings*. 978-0963707253
- Levine, M. (2002). *A Mind at a Time*: Simon & Schuster. 0743202236
- Lloyd, J. W., Kame'enui, E. J., & Chard, D. J. (Eds.). (1997). *Issues in Educating Students With Disabilities (The Lea Series on Special Education and Disability)*: Lawrence Erlbaum. 978-0805822021
- Martin, C., Dawson, P., & Guare, R. (2007). *Smarts: Are We Hardwired for Success? : AMACOM*. 978-0814409060
- Martinez, B. J. S. d. (Ed.). (1995). *Teaching Children Affected By Prenatal Drug Exposure, Center for Evaluation, Development, Research*: Phi Delta Kappa. 978-9996271731
- Mastropieri, M. A., & Scruggs, T. E. (2005). *Effective Instruction for Special Education* (3rd ed.): Allyn & Bacon. 978-0890798829
- McLoughlin, J. A., & Lewis, R. B. (2007). *Assessing Students with Special Needs*: Prentice Hall. 978-0131961913
- Merrell, K. W., Carrizales, D., Feuerborn, L., & Gueldner, B. (2007). *Strong Kids, Grades 6-8: A Social and Emotional Learning Curriculum*: Brookes Publishing Company. 978-1557669315
- Merrell, K. W., Carrizales, D., Feuerborn, L., Gueldner, B., & Tran, O. K. (2007a). *Strong Kids, Grades 3-5: A Social and Emotional Learning Curriculum*: Brookes Publishing Company. 978-1557669308
- Merrell, K. W., Carrizales, D., Feuerborn, L., Gueldner, B., & Tran, O. K. (2007b). *Strong Teens, Grades 9-12: A Social & Emotional Learning Curriculum*: Brookes Publishing Company. 978-1557669322
- Merrell, K. W., Parisi, D. M., & Whitcomb, S. A. (2007). *Strong Start: A Social & Emotional Learning Curriculum, Grades K-2*: Brookes Publishing Company. 978-1557669292
- Michalko, M. (2006). *Thinkertoys: A Handbook of Creative-Thinking Techniques* (2nd ed.): Ten Speed Press. 978-1580087735

- Patterson, J. W. (1999). *Grammar Works: Equipping Students With Tools to Master the English Language*: GCB Publishing Group. 978-1888306439
- Patterson, J. W. (2002). *Reading Works: Gleanings From My Journey Along the Writing Road to Reading: Grammar Works*. 0964957418
- Petreshene, S. S. (1985). *Mind Joggers!: 5- to 15-Minute Activities That Make Kids Think*: Jossey-Bass. 978-0876285831
- Pierangelo, R., & Giuliani, G. A. (2008). *Assessment In Special Education: A Practical Approach (3rd ed.)*: Allyn & Bacon. 978-0205608355
- Plaford, G. R. (2006). *Bullying and the Brain: Using Cognitive and Emotional Intelligence to Help Kids Cope*: Rowman & Littlefield Education. 978-1578863969
- Plummer, D., & Harper, A. (2007). *Helping Children to Build Self-esteem: A Photocopiable Activities Book (2nd ed.)*: Jessica Kingsley Publishers. 978-1843104889
- Rainforth, B., & York-Barr, J. (1997). *Collaborative Teams for Students With Severe Disabilities: Integrating Therapy and Educational Services (2nd ed.)*: Brookes Publishing Company. 978-1557662910
- Sousa, D. A. (2007a). *Brain-Compatible Activities, Grades 3-5*: Corwin Press. 978-1412952729
- Sousa, D. A. (2007b). *Brain-Compatible Activities, Grades 6-8*: Corwin Press. 978-1412952736
- Sousa, D. A. (2007c). *Brain-Compatible Activities, Grades K-2*: Corwin Press. 978-1412952712
- Spalding, R. B., & North, M. E. (2003). *Writing Road to Reading: The Spalding Method for Teaching Speech, Spelling, Writing, and Reading (5th revised ed.)*: Collins. 978-0060520106
- Sprenger, M. (1999). *Learning and Memory: The Brain in Action*: Association for Supervision & Curriculum Deve. 978-0871203502
- Sprenger, M. (2005). *How To Teach So Students Remember*: Association for Supervision & Curriculum Deve. 978-1416601524
- Sprenger, M. (2008). *Differentiation Through Learning Styles and Memory (2nd ed.)*: Corwin Press. 978-1412955454
- Sprenger, M. B. (2006). *Becoming a Wiz at Brain-Based Teaching: How to Make Every Year Your Best Year (2nd ed.)*: Corwin Press. 978-1412927956
- Taylor, G. R. (2000). *Parental Involvement: A Practical Guide for Collaboration and Teamwork for Students with Disabilities*: C.C. Thomas. 978-0398070724
- Tomlinson, C. A. (2003). *Fulfilling the Promise of the Differentiated Classroom*:

## Resources: Books

Strategies and Tools for Responsive Teaching: Association for Supervision & Curriculum Deve. 978-0871208125

Trelease, J. (1992). Hey! Listen to This: Stories to Read Aloud: Penguin. 978-0140146530

Trelease, J. (2006). The Read-Aloud Handbook (6th ed.): Penguin. 978-0143037392

Vallecorsa, A. L., deBettencourt, L. U., & Zigmond, N. (1999). Students with Mild Disabilities in General Education Settings: A Guide for Special Educators: Prentice Hall. 978-0024223715

Walker, A., & Murillo, J. (2000). Memorize In Minutes: The Times Tables: Krimsten Pub. 978-0965176965

Westwood, P. (2002). Commonsense Methods for Children with Special Needs: Strategies for the Regular Classroom (4th ed.): RoutledgeFalmer. 978-0415298483

Wilkins, J. (2000). Group Activities to Include Students With Special Needs: Developing Social Interactive Skills: Corwin Press. 978-0761977261

Woodward, J., & Stroh, M. (2003). Understanding Algebraic Expressions: Sopris West Educational Services. 9781593182328

Woodward, J., & Stroh, M. (2004). Transitional Mathematics Developing Number Sense: Sopris West Educational Services. 9781570359606

Woodward, J., & Stroh, M. (2005). Making Sense of Rational Numbers: Sopris West. 978-1593180775

Zimmermann, S., & Keene, E. O. (1997). Mosaic of Thought: Teaching Comprehension in a Reader's Workshop: Heinemann. 978-0435072377

## **Social Emotional Books for Children**

Adams, L. K. (1999). Dealing With Hurt Feelings: Hazelden Publishing & Educational Services. 978-1568382685

*Ideas about what to do when your feelings get hurt or when you hurt someone else's feelings.*

Adoff, A. (2004). Black Is Brown Is Tan: Amistad. 978-0064436441

*Describes in poetic form a family with a brown-skinned mother, light-skinned father, two children, and their various relatives.*

Alexander, M. (1989). Move Over, Twerp: Dial. 978-0803761391

*Jeffrey shows his classmates that being younger and smaller doesn't mean he can be pushed around.*

Aliki. (1986). Feelings: HarperTrophy. 978-0688065188

*Children's book featuring feeling faces and words.*

### Resources: Books

- Austin, M. (1999). *A Friend for Growl Bear*: HarperCollins. 978-0060278021  
*None of the animals in the forest will play with a little bear because they misinterpret his growls for aggression.*
- Baker, K. (1994). *Who is the Beast?* : Voyager Books. 978-0152001223  
*When a tiger suspects he is the beast the jungle animals are fleeing from, he returns to them and points out their similarities.*
- Bang, M. G. (2004). *When Sophie Gets Angry - Really, Really Angry...*: Scholastic Paperbacks. 978-0439598453  
*Children's book featuring feeling faces and words.*
- Beaumont, K. (2002). *Being Friends*: Dial. 978-0803725294  
*Two very different girls find that the job of being friends enables them to share their various likes and dislikes.*
- Bernhard, E. (1996). *A Ride on Mother's Back: A Day of Baby Carrying Around the World*: Gulliver Books. 978-0152008703  
*Explores the ways in which people from a variety of cultures carry their young ones, and describes what children see and learn as they are carried.*
- Bogacki, T. (1996). *Cat and Mouse*: Farrar, Straus and Giroux. 978-0374312251  
*An unusual friendship results when one little cat and one little mouse fail to pay attention while their mothers teach their children about the world.*
- Bottner, B. (1997). *Bootsie Barker Bites*: Putnam Juvenile. 978-0698114272  
*Bootsie Barker only wants to play games in which she bites, until one day her friend comes up with a better game.*
- Carle, E. (1996). *The Grouchy Ladybug*: HarperTrophy. 978-0064434508  
*A grouchy ladybug who is looking for a fight challenges everyone she meets regardless of their size or strength.*
- Cohn, J. (1994). *Why Did It Happen?: Helping Children Cope In A Violent World*: William Morrow & Co. 978-0688123123  
*A young boy discusses his feelings about violence when a neighborhood grocery store is robbed.*
- Cosby, B. (1997). *The Meanest Thing To Say*: Cartwheel. 978-0590956161  
*When a new boy in class tries to get other students to play a game that involves saying mean things possible to one another, Little Bill shows him a better way to make friends.*
- Crary, E. (1992a). *I'm Frustrated (Dealing With Feelings)*: Parenting Pr. 978-0943990644  
*Children's book featuring feeling faces and words.*
- Crary, E. (1992b). *I'm Mad (Dealing With Feelings)*: Parenting Pr. 978-0943990620  
*Children's book featuring feeling faces and words.*
- Dr. Seuss. (1996). *My Many Colored Days*: Knopf Books for Young Readers. 978-0679875970

## Resources: Books

*Children's book featuring feeling faces and words.*

Dr. Suess. (1961). *The Sneetches and Other Stories*: Random House Books for Young Readers. 978-0394800899

*The Sneetches are ostrich-like creatures who live on the beaches. Some have stars on their bellies and think they're superior to their star-less cousins, until a stranger turns the Sneetch community topsy-turvy and makes everyone truly equal.*

Fierstein, H. (2005). *The Sissy Duckling*: Aladdin. 978-1416903130

*Elmer the duck is teased because he is different, but he proves himself by not only surviving the winter, but also saving his Papa.*

Fox, M. (2006). *Whoever You Are*: Voyager Books. 978-0152060305

*Despite the differences between people around the world, there are similarities that join us together, such as pain, joy, and love.*

Guback, G. (1994). *Luka's Quilt*: Greenwillow. 978-0688121549

*When Luka's grandmother makes a Hawaiian quilt for her, she and Luka disagree over the colors it should include.*

Hall, B. E. (2004). *Henry and the Kite Dragon*: Philomel. 978-0399237270

*In New York City in the 1920s, the children from Chinatown go after the children from Little Italy for throwing rocks at the beautiful kites Grandfather Chin makes, not realizing that they have a reason for doing so.*

Hamanaka, S. (2003). *Grandparents Song*: HarperCollins. 978-0688178529

*A rhyming celebration of ancestry and of the diversity that flourishes in this country.*

Harper, J. (2000). *I'm Not Going To Chase The Cat Today*: HarperCollins. 978-0688176365

*One day the dog decides not to chase the cat, the cat decides not to chase the mouse, the mouse decides not to chase the lady, and they all have a party.*

Henkes, K. (1995a). *Lilly's Purple Plastic Purse*: Greenwillow. 978-0688128975

*Lilly loves everything about school, especially her teacher, but when he asks her to wait a while before showing her new purse, she does something for which she is very sorry later.*

Henkes, K. (1995b). *Weekend With Wendell*: HarperTrophy. 978-0688140243

*Sophie does not enjoy energetic, assertive Wendell's weekend visit until she learns to assert herself and finds out Wendell can be fun to play with after all.*

Hoberman, M. A. (1999). *And to Think That We Thought That We'd Never Be Friends*: Crown Books for Young Readers. 978-0517800683

*A brother and sister learn that friendship is better than fighting and they soon spread their message all over the world.*

Hoffman, M. (2007). *Amazing Grace*: Frances Lincoln Childrens Books. 978-1845077495

*Although a classmate says that she cannot play Peter Pan in the school play because she is black, Grace discovers that she can do anything she sets her mind to do.*

Hooks, B. (2004). *Skin Again*: Hyperion Book CH. 978-0786808250

## Resources: Books

*Stresses through brief text and colorful pictures that the skin you're in is just a covering and cannot tell your whole story.*

Hutchins, P. (1991). *The Surprise Party: Aladdin*. 978-0689715433  
*Rabbit tells owl that he is planning a party, but as the message is passed from animal to animal it gets more and more confused.*

Ichikawa, S. (2006). *My Father's Shop*: Kane/Miller Book Pub. 978-1929132997  
*Come visit Mustafa in his favorite place in all of Morocco - his father's shop. Here amongst the beautiful rugs, is an entire world of colors, textiles, and languages. Sometimes though, an entire world can be too much for one little boy, and a stroll through the marketplace seems much more appealing. It's the perfect place to meet friends and visitors, and to learn how to welcome tourists, shoppers, and barnyard denizens in their native languages.*

Jackson, E. (2003). *It's Back to School We Go: First Day Stories From Around the World*: Millbrook Press. 978-0761319481  
*In easy-to-read text, describes what the first day of school might be like for a child in Kenya, Kazakhstan, Canada, Australia, Japan, China, Peru, Germany, India, Russia, and the United States.*

Johnston, M. (1997). *Dealing with Insults*: PowerKids Press. 978-0823923281  
*Explains why some people use words that hurt others, how one can avoid insulting others, and how to productively respond to insults.*

Jones, R. C. (1995). *Matthew and Tilly*: Puffin. 978-0140556407  
*Like all good friends Matthew and Tilly have an occasional tiff, but their friendship prevails.*

Kachenmeister, C. (2001). *On Monday When It Rained*: Houghton Mifflin. 978-0618111244  
*Children's book featuring feeling faces and words.*

Kasza, K. (2007). *The Rat And The Tiger*: Puffin. 978-0142409008  
*In his friendship with Rat, Tiger takes advantage because of his greater size, but one day Rat stands up for his rights.*

Katz, K. (2006). *Can You Say Peace?* : Henry Holt and Co. 978-0805078930  
*Every September 21 on the International Day of Peace, children around the world wish in many different languages for peace.*

Katz, K. (2007). *The Colors of Us*: Henry Holt and Co. BYR Paperbacks. 978-0805081183  
*Seven-year-old Lena and her mother observe the variations in the color of their friends' skin, viewed in terms of foods and things found in nature.*

Kent, S. (2000). *Let's Talk About Being A Good Friend*: PowerKids Press. 978-0823954193  
*Describes the qualities of a good friend and discusses activities and communication problems involved in friendship.*

Kivel, P. (2001). *I Can Make My World A Safer Place: A Kid's Book About Stopping Violence*: Hunter House. 978-0897932912  
*Explains public and private dangers and helps to promote safety, violence prevention and peace.*

## Resources: Books

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- Kressley, C. (2005). *You're Different and That's Super*: Simon & Schuster Children's Publishing. 978-1416900702  
*As the only one in the stable with one horn, Trumpet always felt different from everyone else, but when a fire breaks out and he must use his horn to lift the barn door and save all his horse friends, Trumpet's uniqueness is soon celebrated by all!*
- Langreuter, J. (1998). *Little Bear and the Big Fight*: Millbrook Press. 978-0761303756  
*When his friend won't share at school, Little Bear bites him, and even though he is sorry, he wonders if they will ever be friends again.*
- Lester, H. (1997). *Listen, Buddy*: Houghton Mifflin/Walter Lorraine Books. 978-0395854020  
*A rabbit named Buddy finds himself in trouble with the Scruffy Varmint because he never listens.*
- Lester, H. (2001). *Princess Penelope's Parrot*: Houghton Mifflin/Walter Lorraine Books. 978-0618138456  
*An arrogant princess's chances with a handsome prince are ruined when her parrot repeats all the rude comments she has made.*
- Lester, J. (2005). *Let's Talk About Race*: Amistad. 0060285966  
*The author introduces the concept of race as only one component in an individual's or nation's "story."*
- Lewin, T. (1996). *Market!*: HarperCollins. 978-0688121617  
*Describes, in simple text and illustrations, the special characteristics of different types of markets throughout the world, from the Fulton Fish market in New York to Durbar Square, Patan, where temples rise like pagodas behind the flute sellers.*
- Lorbiecki, M. (2006). *Jackie's Bat*: Simon & Schuster Children's Publishing. 978-0689841026  
*Joey, the batboy for the Brooklyn Dodgers in 1947, learns a hard lesson about respect for people of different races after Jackie Robinson joins the team.*
- Lucas, E. (1991). *Peace on the Playground: Non-Violent Ways of Problem Solving*: Franklin Watts. 978-0531200476  
*Introduces the concept of nonviolent resolution of conflicts. Includes tips, activities, and appropriate role models for guidance.*
- Luthardt, K. (2005). *You're Weird!*: Dial. 978-0803729865  
*Rabbit and Turtle each make fun of the other's particularities, but they turn out to have some things in common after all.*
- Mahy, M. (1991). *The Pumpkin Man and the Crafty Creeper*: Lothrop Lee & Shepard. 978-0688103477  
*A bossy plant insists on going home with Mr. Parkin, who usually only tends quiet pumpkins, and from that moment his peaceful existence is changed.*
- McBratney, S. (2006). *I'm Sorry*: HarperTrophy. 978-0060799274  
*When one best friend shouts at the other, both are sad and hope the other will apologize.*

Michelson, R., & Lewis, E. B. (2006). *Across the Alley*: Putnam Juvenile. 978-0399239700  
*Jewish Abe's grandfather wants him to be a violinist while African-American Willie's father plans for him to be a great baseball pitcher, but it turns out that the two boys are more talented when they switch hobbies.*

Miranda, A. (1997). *Glad Monster, Sad Monster: A Book About Feelings*: L,B Kids. 978-0316573955

*Children's book featuring feeling faces and words.*

Mitchell, L. (2001). *Different Just Like Me*: Charlesbridge Publishing. 978-1570914904  
*While preparing for a visit to her grandmother, a young girl notices that, like the flowers in Grammie's garden, people who are different from one another also share similarities and it's okay to like them all the same.*

Mobin-Uddin, A. (2005). *My Name is Bilal*: Boyds Mills Press. 978-1590781753  
*When Bilal and his sister transfer to a school where they are the only Muslims, they must learn how to fit in while staying true to their beliefs and heritage.*

Munson, D. (2000). *Enemy Pie*: Chronicle Books. 978-0811827782  
*Hoping that an "enemy pie" will help him get rid of his enemy, a boy finds that instead it helps make a new friend.*

Naylor, P. R. (1994). *King of the Playground*: Aladdin. 978-0689718021  
*Kevin learns to deal with a bossy contemporary at the neighborhood playground.*

Nettleton, P. H., & Muehlenhardt, A. B. (2004). *Let's Get Along!: Kids Talk About Tolerance*: Picture Window Books. 978-1404806221  
*Frank B. Wize responds to kids' letters on how to handle certain situations that involve cultural differences.*

Otey-Little, M. (1996). *Yoshiko and the Foreigner*: Farrar, Straus and Giroux. 978-0374324483  
*In spite of her upbringing, a young Japanese woman begins seeing an American soldier and finds that he is not like the foreigners her parents have taught her to avoid.*

Parr, T. (2004). *It's Okay To Be Different*: Little, Brown Young Readers. 978-0316155625  
*Illustrations and brief text describe all kinds of differences that are "okay," such as "It's Okay to be a different color," "It's Okay to need some help."*

Pinkney, A. D. (2003). *Fishing Day*: Hyperion Book CH. 978-0786807666  
*When Reenie and her mother, who are African Americans, go fishing, Reenie decides to share the secret of their success with their needy white neighbors.*

Polland, B. K. (2001). *We Can Work It Out: Conflict Resolution for Children*: Tricycle Press. 978-1582460314  
*Designed to create opportunities for children to talk about their experiences of conflict and the varieties of ways to resolve them.*

Powell, J. (1999). *Talking About Bullying*: Raintree. 978-0817255350  
*Explains how, why, when, and where people get bullied as well as who does the bullying and what can be done about it.*

## Resources: Books

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- Recorvits, H., & Swiatkowska, G. (2003). *My Name Is Yoon*: Farrar, Straus and Giroux. 978-0374351144  
*Disliking her name as written in English, Korean-born Yoon, or "shining wisdom," refers to herself as "cat," "bird," and "cupcake," as a way to feel more comfortable in her new school and new country.*
- Reynold, J. (2006). *Celebrate! Connections Among Cultures*: Lee & Low Books. 978-1584302537  
*Photo-essay that explores the similarities among celebration rituals in several indigenous cultures around the world and compares them with celebrations in the United States. Includes a map and an author's note.*
- Rosa-Casanova, S. (2001). *Mama Provi and the Pot of Rice*: Aladdin. 978-0689842498  
*Mama Provi takes chicken and rice to her sick granddaughter Lucy who lives upstairs.*
- Rosen, M. (2005). *This Is Our House*: Candlewick. 978-0763628161  
*George won't let any of the other children into his cardboard box house, but when the tables are turned, he finds out how it feels to be excluded.*
- Scott, E. (2000). *Friends!*: Simon & Schuster Children's Publishing. 9780689821059  
*Introduces some friends and provides discussion of how friends can help each other and solve their disagreements.*
- Simon, F. (1999). *Hugo and the Bullyfrogs*: Sterling Publishing. 9781862330931  
*A shy frog, the victim of bullies, learns to be more assertive.*
- Sis, P. (2000). *Madlenka*: Farrar, Straus and Giroux (BYR). 978-0439233132  
*Madlenka, whose New York City neighbors include the French baker, the Indian news vendor, the Italian ice-cream man, the South American grocer, and the Chinese shopkeeper, goes around the block to show her friends her loose tooth and finds that it is like taking a trip around the world.*
- Slater, T. (2003). *N-O Spells No!*: Mariposa. 978-0439054027  
*A mother patiently finds a way to get her contrary daughter to agree with her.*
- Spelman, C. M. (2004). *When I Feel Angry*: Albert Whitman & Company. 978-0807588970  
*Children's book featuring feeling faces and words.*
- Steig, W. (1989). *Spinky Sulks*: Farrar, Straus & Giroux.  
*Spinky feels that his family doesn't love him or understand him, and nothing they can say or do will cure his case of the sulks.*
- Tabor, N. (1997). *We Are a Rainbow*: Charlesbridge Publishing. 978-0881064179  
*Simple text and illustrations explore some of the similarities and differences that a child recognizes after moving to the United States from a Spanish-speaking country.*
- Tyler, M. (2005). *The Skin You Live In*: Chicago Children's Museum. 978-0975958001  
*Describes how lucky you are to be in the skin you're in and how it holds the special "you" that's within.*
- Udry, J. M. (1988). *Let's Be Enemies*: HarperTrophy. 978-0064431880

*John and James argue when John gets tired of James' bossy ways. Once they agree to be enemies, they become friends again.*

Vyner, T. (2002). *World Team*: Roaring Brook Press. 978-0761314974  
*All over the world, children in places as different as Germany, Kenya, Japan, Australia, and India are practicing and playing soccer, all dreaming of winning the World Cup.*

Wells, R. (1998). *Yoko*: Hyperion Book. 978-0786803958  
*When Yoko brings sushi to school for lunch, her classmates make fun of what she eats - until one of them tries it for himself.*

Wells, R. (2000). *Noisy Nora*: Puffin. 978-0140567281  
*Feeling neglected, Nora makes more and more noise to attract her parents' attention.*

Woodson, J. (2001). *The Other Side*: Putnam Juvenile. 978-0399231162  
*Two girls, one white and one black, gradually get to know each other as they sit on the fence that divides their town.*

Yezerki, T. F. (1998). *Together in Pinecone Patch*: Farrar, Straus and Giroux. 978-0374376475  
*A girl from Ireland and a boy from Poland overcome the prejudices held by the residents of the small American town to which they have emigrated.*

Zolotow, C. (1982). *The Quarreling Book*: HarperTrophy. 978-0064430340  
*A family's chain reaction of anger is offset by their lovable dog.*

Zolotow, C. (1989). *The Hating Book*: HarperTrophy. 978-0064431972  
*A girl feels her friend hates her but doesn't know why until she gets up courage to ask.*

## **Social Emotional Books for Young Adults**

Adams, L. K. (1998). *Dealing With Arguments*: PowerKids Press. 978-0823950737  
*Discusses what arguments are, how they begin, and ways to solve disagreements without fighting.*

Adams, L. K. (1999). *Dealing With Someone Who Won't Listen*: Hazelden Publishing & Educational Services. 978-1568382678  
*Discusses the nature of listening, the problem of dealing with someone who will not listen, and what to do about it.*

Binchy, M. (2007). *A Circle of Friends*: Dell. 978-0385341738  
*At the center of an unforgettable circle of friends were two intelligent and unusual young Irish women. Fiercely loyal to one another, Benny was an only child smothered with love from her parents, and Eve was an orphan who was abandoned and raised by Catholic nuns. From their small village milieu to university life in Dublin, these two worlds of Benny and Eve collided in intrigue and mystery, and their fates were touched by the truth about death and loss, desire and real caring.*

Bunting, E. (2001). *The Blue and the Gray*: Scholastic Paperbacks. 978-0590602006  
*As a black boy and his white friend watch the construction of a house which will make*

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*them neighbors on the site of a Civil War battlefield, they agree that their homes are monuments to that war.*

Byrnie, F. H. (2007). *101 Questions Your Brain Has Asked Itself But Couldn't Answer... Until Now: Twenty-First Century Books*. 978-0822567950  
*In the last ten years, scientists have learned more about the brain than in all the years of research that came before. This is thanks, in part, to new technologies, which allow researchers to see the living brain at work. We can now look at MRI or PET images and see precisely which parts of the brain go to work when a person lifts a finger, sings a song, writes a poem. While this new information has answered some old questions, it has also raised lots of new ones. Author Faith Brynie polled hundreds of students to find out which questions interested them most. 101 of the best questions are included in this book, along with clearly written and lively answers which sometimes surprise, sometimes entertain, but always remind the reader that the brain is still a frontier that continues to be explored.*

Cart, M., Aronson, M., & Carus, M. (Eds.). (2002). *911: The Book of Help: Cricket Books/Marcato*. 978-0812626766  
*An impressive cast of more than 20 children's book authors donated work to this highly personal, often affecting roundup of essays, short stories and poems inspired by the events of September 11th. Organized into four sections from "Healing" to "Reacting and Recovering," the pieces range from related events triggered by the New York tragedy to writers' evocations of the horrific images they viewed that morning.*

Carter, A. R. (1999). *Between a Rock and a Hard Place: Scholastic Inc.* 978-0590374866  
*While canoeing, fifteen-year-old Randy and his cousin Mark are stranded and lose their supplies. Together they work to survive and get help to the diabetic Randy.*

Childress, A. (2000). *A Hero Ain't Nothin' But a Sandwich: Putnam Juvenile*. 978-0698118546  
*The main character, Benjie Johnson, is a thirteen-year-old heroin addict. The chapters are told in alternating points of view by Benjie and those close to him, including friends, a drug dealer, his mother, his stepfather, his grandmother, and teachers. It was the first young adult novel to tackle the issue of heroin addiction.*

Coy, J. (2005). *Around the World: Lee & Low Books*. 978-1584302445

Crutcher, C. (2003). *Staying Fat for Sarah Byrnes: HarperTeen*. 978-0060094898  
*When Sarah Byrnes was a child, her condition became synonymous with her name. Her face was badly burned in a mysterious accident and her father refused to provide reconstructive surgery. She created a defensive personality to protect herself against the taunts of an adolescent world. Eric Calhoun, an intelligent, highly sensitive and overweight child, appreciated their personal situations and became Sarah's only friend. When Eric participated in high school swimming, he shed layers of weight. Fearing the loss of the one friendship he valued, he gorged himself to "stay fat for Sarah Byrnes." The truth of Sarah's childhood burns was revealed, she became catatonic, and when she was hospitalized, Eric began his mission of helping his friend deal with her pain.*

Draper, S. M. (2003). *Double Dutch: Aladdin*. 978-0689842313  
*Delia has a secret - she can't read - but a proficiency test may bring her secret out and*

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*prevent her from participating in the jump rope competition.*

Flake, S. G. (2007). *Bang!*: Hyperion Book. 978-0786849550

*A teenage boy must face the harsh realities of inner city life, a disintegrating family, and destructive temptations as he struggles to find his identity as a young man.*

Fleischman, P. (2005). *Breakout*: Simon Pulse. 978-0689871894

*A young woman presents a play based on her life as a seventeen-year-old runaway. She escapes from her foster home in Los Angeles, and explores her identity and feelings in an all-day traffic jam.*

Fraustino, L. R. (1995). *Ash: A Novel*: Orchard Books. 978-0531068892

*An emerging schizophrenic, eighteen-year-old Ash's change of behavior and its disruptive effects on his family are recounted by his fifteen-year-old younger brother, Wes.*

Galloway, G. (2006). *As Simple as Snow*: Berkley Trade. 978-0425207802

*The narrator, a teen-aged boy, searches for his missing girlfriend who disappeared a week before Valentine's Day. Anna Cayne, girl who liked puzzles and riddles, may have left clues, which the protagonist tries to understand.*

Glenn, M. (1991). *Class Dismissed!: High School Poems*: Clarion Books. 978-0395581117

*Seventy poems about the emotional lives of contemporary high school students.*

Going, K. L. (2003). *Fat Kid Rules the World*: Puffin. 978-0142402085

*Seventeen-year-old Troy Billings, a hefty New York teen, is considering suicide under a subway train when Curt stops him. Curt befriends Troy and enlists him as the drummer in a new band he is planning.*

Green, J. (2008). *An Abundance of Katherines*: Puffin. 978-0142412022

*After being dumped for the 19th time by a girl named Katherine, recent high school graduate and former child prodigy Colin sets off on a road trip to try to find a new direction in life and to create a mathematical formula to explain his relationships.*

Guy, R. (1995). *The Friends*: Laurel Leaf. 978-0440226673

*Phyllisia's problems as a teenager were overwhelming her. Having moved from the West Indies to her neighborhood in New York, she faced the daily insults and mockeries of classmates who did not appreciate her giftedness. Edith, an impoverished young woman facing great adversity in her family life, befriended Phyllisia and supported her through difficult times. The author painted a vivid portrait of an intelligent urban teenager surviving periods of ambivalence, resentment and emotional turmoil. The author described a story that explored young women's friendships and the situation of female as giver.*

Hill, E. (2005). *A Life for a Life*: Simon & Schuster. 978-0743281607

*A searing and unsparing story of the unlikely bond between an African-American father and the teenager who killed his son, a tale of violent self-destruction reclaimed by the inexhaustible power of love and forgiveness.*

Hooper, M. (2002). *Amy*: Bloomsbury USA Children's Books. 978-1582347936

*A cautionary tale of a smart girl and Internet predators.*

Hurwin, D. W. (1997). *A Time for Dancing*: Puffin. 978-0140386189

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*Samantha and Julie aren't just best friends; they're soul mates. They've been having sleepovers and dancing ballet together since they were little. So when Julie gets cancer, it feels like it's happening to Samantha, too.*

Jenkins, A. M. (2000). *Breaking Boxes*: Laurel Leaf. 978-0440227175

*Charlie Calmont is a teenage loner. His parents are gone, he lives with his older brother, and he doesn't need anyone, especially friends. When he gets suspended because of a school fight, he meets Brandon Chase, and his attitude changes. Privileged Brandon associates with the affluent crowd in school, but Charlie discovers that there's a real person under Brandon's phony rich kid exterior. Charlie and Brandon become best friends, and when Charlie reveals a secret about his older brother, Brandon is forced to test the authenticity of their friendship.*

Jenkins, A. M. (2003). *Damage*: HarperTeen. 978-0064472555

*Seventeen-year-old football Austin, trying to understand the inexplicable depression that has drained his interest in life, thinks that he has found relief in a girl who seems very special.*

Johnson, H. M. (2006). *Accidents of Nature*: Henry Holt and Co. 978-0805076349

*Seventeen-year-old Jean has cerebral palsy. She attends a summer camp for children with disabilities and wonders about blending in with non-disabled people.*

Johnson, J. (2007). *Bullies And Gangs*: Stargazer Books. 978-1596040007

*Discusses why people bully others, who they pick, and how to cope with the problems of being bullied.*

Johnston, J. (2003). *Adam and Eve and Pinch-Me*: Tundra Books. 978-0887766480

*Fifteen-year-old Sara Moore, abandoned at birth and shunted from one foster home to another, finds that she cannot remain aloof from her latest family.*

Knowles, J. (2003). *A Separate Peace*: Scribner. 978-0743253970

*Finny, the handsome school athlete, and Gene, the quiet intellectual, became unlikely friends at New Hampshire's Devon School during World War II. From the beginning of the story, we witnessed Finny's unique ability to charm Gene and the other boys. For Gene, balancing his relationship with his carefree, less scholarly friend created a number of internal battles. Against the backdrop of a world war and the struggles of their emerging adult selves, the boys of Devon School strived for their own "separate peace."*

Larochelle, D. (2005). *Absolutely Positively Not*: Arthur A. Levine Books. 978-0439591096

*Sixteen-year-old Steven DeNarski doesn't know if he'll pass his driver's test or if he'll ever understand his parents, but there's one thing he's sure of: he's absolutely, positively NOT gay. He sets out to prove it by collecting photos of girls in bikinis, sitting at the jock table at school, and dating like crazy. "Absolutely" takes a humorous look at the life of a regular boy who's finding out what it takes to be a real man.*

McCormick, P. (2002). *Cut: Push*. 978-0439324595

*While confined to a mental hospital, thirteen-year-old Callie slowly comes to understand some of the reasons behind her self-mutilation, and gradually starts to get better.*

McGhee, A. (2007). *All Rivers Flow to the Sea*: Candlewick. 978-0763633721

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*After a car accident in the Adirondacks leaves her older sister Ivy brain dead, seventeen-year-old Rose struggles with her grief and guilt as she slowly learns to let her sister go.*

Mercado, N. E. (2005). *Every Man for Himself: Ten Short Stories About being a Guy*: Puffin. 978-0142408131

*An anthology of ten original short stories about such things as family problems, sexuality, and courage, written by well-known authors of children's books.*

Murdock, C. G. (2007). *Dairy Queen*: Graphia. 978-0618863358

*Sixteen-year-old D.J. decides to try out for her high school's football team.*

Murray, J. (2003). *Bottled Up: A Novel*: Dial. 978-0803728974

*A high school boy comes to terms with his drug addiction, life with an alcoholic father, and a younger brother who looks up to him.*

Myers, W. D. (2001). *145th Street: Short Stories*: Laurel Leaf. 978-0440229162

*A salty, wrenchingly honest collection of stories set on one block of 145th Street. We get to know the oldest resident; the cop on the beat; fine Peaches and her girl, Squeezie; Monkeyman; and Benny, a fighter on the way to a knockout. We meet Angela, who starts having prophetic dreams after her father is killed; Kitty, whose love for Mack pulls him back from the brink; and Big Joe, who wants a bang-up funeral while he's still around to enjoy it. Some of these stories are private, and some are the ones behind the headlines. In each one, characters jump off the page and pull readers right into the mix on 1-4-5.*

Na, A. (2003). *A Step from Heaven*: Puffin. 978-0142500279

*A young Korean girl and her family find it difficult to learn English and adjust to life in America.*

Nelson, M. (2005). *A Wreath for Emmett Till*: Houghton Mifflin. 978-0618397525

*In 1955, people all over the United States knew that Emmett Louis Till was a fourteen-year-old African American boy lynched for supposedly whistling at a white woman in Mississippi. The brutality of his murder, the open-casket funeral, and the acquittal of the men tried for the crime drew wide media attention.*

Nye, N. S. (2005). *A Maze Me: Poems for Girls*: HarperTeen. 978-0060581893

*First love, friendships, family, hopes, and dreams are among the topics addressed in the 72 original poems written exclusively for this collection, accompanied by five full-color prints.*

O'Neal, Z. (1990). *A Formal Feeling*: Puffin. 978-0140345391

*Sixteen-year-old Anne, home from boarding school for the holidays, has difficulty accepting her new stepmother's presence in the house that holds so many memories of her dead mother.*

Pearson, M. E. (2008). *A Room on Lorelei Street*: Square Fish. 978-0312380199

*A room is not much... It is not arms holding you. Not a kiss on the forehead. Not a packed lunch or a remembered birthday. Just a room. But for seventeen-year-old Zoe, struggling to shed the suffocating responsibility of her alcoholic mother and the controlling guilt of her grandmother, a rented room on Lorelei Street is a fierce grab for control of her own future.*

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Peck, R. (1986). *Remembering the Good Times*: Laurel Leaf. 978-0440973393  
*Three high school freshmen, Buck, Trav, and Kate knew each other since middle school. Though they came from different backgrounds, their friendships were deep. It was Trav, the intense, gifted young man, who was troubled by a number of issues in his crisis-filled world. However, their closeness to Trav blinded Kate and Buck to his danger signs of suicide. When the tragedy occurred, Buck and Kate learned from their friend about experiencing life intensely, supported each other through their grief and continued on with their lives with a deeper understanding of the human condition.*

Peters, J. A. (2003). *Define "Normal"*: Little, Brown Young Readers. 978-0316734899  
*Antonia never dreams that her peer counselor, Jasmine, with the black lipstick and pierced eyebrow, will end up helping her deal with the serious problems she faces at home and become a good friend.*

Quarles, H. (2000). *A Door Near Here*: Laurel Leaf. 978-0440227618  
*Without even noticing, 15-year-old Katherine has become the head of her household. She hasn't had time to notice. Her single mother, an out-of-work alcoholic, has been in bed for weeks, leaving Katherine and her three younger siblings to band together and fend for themselves. But it has gotten harder and harder to maintain any sort of stability. There's no time for housework, food and money are running out, and the kids' teachers are starting to get suspicious. Worst of all, Katherine's youngest sister, Alisa, seems to be losing her grip on reality; she is obsessed with finding a door to the imaginary land of Narnia. And the longer they all struggle to maintain their pretense of normality, the more they have to fear--and to lose.*

Rennison, L. (2001). *Angus, Thongs, and Full Frontal Snogging: Confessions of Georgia Nicolson*: HarperTeen. 978-0064472272  
*The humorous musings of a high-spirited English girl, fourteen-year-old Georgia Nicolson, as she considers kissing, an older boy, her parents and little sister, and her psychotic cat.*

Southgate, M. (1998). *Another Way to Dance*: Laurel Leaf. 978-0440219682  
*Fourteen-year-old Vicki, an African-American ballet dancer, feels uncomfortable in the all-white world of the School of American Ballet in New York. She tries to be color-blind but is faced with racism.*

Voight, C. (1987). *Tell Me if the Lovers are Losers*: Fawcett. 978-0449702352  
*Cynthia Voight poignantly described the relationship that evolved as three intelligent young women entered their first year of college together. Ann, the sensible and predictable female, and Niki, a brash, intimidating, and competitive young woman, became roommates to Hildy, a plain, religious young woman who exuded a mature serenity. These three unique characters grew to appreciate their differences and became close friends until Hildy was lost in a tragic accident. With the loss of Hildy, the young women learned to cherish her memory and supported each other through their grieving.*

Werlin, N. (2007). *Are You Alone on Purpose?*: Puffin. 978-0142407776  
*Fourteen-year-old Alison was quiet, sensitive, unassuming, and highly intelligent. When her autistic twin brother Adam began preparing for his bar mitzvah through tutorial sessions with their rabbi, Alison had to deal with Harry, the rabbi's son. For years,*

*Harry had taunted Alison in school about being Queen Nerd, but when Harry was injured in a diving accident and had to learn to cope with life from a wheelchair, his relationship with Alison slowly evolved into a meaningful friendship. All of her life, Alison's parents had focused on Adam and his needs, while Alison had always believed she had to be perfect. Through her special friendship with Harry, she realized her mistakes.*

Wynne-Jones, T. (2008). *A Thief in the House of Memory*: Farrar, Straus and Giroux. 978-0374400194  
*Family secrets, forgotten memories, and the transforming power of truth.*

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## Audiovisual Materials

### Resources: Audiovisual Materials

The Broken Cord [videorecording]. (1994). Princeton, NJ: Films for the Humanities.  
Summary: Bill Moyers interviews writers Louise Erdrich and Michael Dorris who talk about their work, their American Indian heritage, fetal alcohol syndrome, and parenthood.

Dying High: Teens in the ER [videorecording]. (2003). Mount Kisco, NY: Human Relations Media.

Summary: This hard-hitting, reality-based video gives viewers a chance to see what goes on inside the nation's emergency rooms as doctors treat teens for some of the most common types of injuries among young people; drug overdoses, alcohol poisoning, car wreck traumas and more.

Early Decisions: Addressing Alcohol & Its Effects on the Unborn Child [compact disc]. (2004). Rural Alaska Community Action Program, Inc.

Summary: A curriculum for middle and high school students. The goal is to educate students about the potential harm alcohol has on the developing fetus, as well as to teach students their roles in preventing it.

Educational Strategies for Individuals with Fetal Alcohol Syndrome: Fetal Alcohol Effects and Prenatal Drug Exposure [slide]. (1997). Laramie, WY: Creative Consultants.

Summary: 79 color slides + guide.

The Fabulous F.A.S. Quiz Show [videorecording]. (1993). Seattle, WA: March of Dimes/Washington Department of Health.

Summary: A video and activities for middle school students to understand fetal alcohol syndrome and fetal alcohol effects.

Faces Yet to Come [videorecording]. (1997). Norman, OK: American Indian Institute.

Summary: Designed for American Indian students in the 6th through 8th grades. The program focuses on the prevention of fetal alcohol syndrome (FAS) and fetal alcohol effects (FAE). It refers to "7th Generation", a theme common to all nations of Indian people, in the program.

FAS: Everybody's Baby [videorecording]. Tucson, AZ: Fasstar Enterprises.

Summary: A docudrama video about Fetal Alcohol Syndrome. This exciting video focuses on a professionally written play about alcohol's effects on a group of high school students, including a boy whose mother drank alcohol during pregnancy. This 35-minute video is perfect for presentation in the classroom.

and is enjoyable and educational viewing for adults as well as students of all ages.

FAS Multimedia Guide [compact disc]. (2005). The Academic Edge Inc.

Summary: Learn about FAS, characteristics, the diagnostic process and overview of resources. Includes a quiz on FAS and case studies of children diagnosed with an FAS.

F.A.S. Series: The Early Years [videorecording]. (1997). Evanston, IL: Altschul Group.

Summary: Focuses on the challenges of caring for a child with F.A.S./F.A.E. Viewers spend a day with the family and learn what life is like for them. An expert explains why children with F.A.S./F.A.E. behave in certain ways and offers advice on the best way to handle a typical situation. It also stresses that children with F.A.S./F.A.E. require constant attention due to their short attention span.

Fetal Alcohol and Other Drug Effects: A Four-Part Training Series for Parents and Professionals [videorecording]. (2003). FASCETS: Fetal Alcohol Syndrome Consultation, Education and Training Service, Inc.

Summary: Presents diagnostic criteria and describes common learning and behavioral characteristics of FAS. Provides information and training to help parents, families, and professionals for FAS program development.

Fetal Alcohol Spectrum Disorders: An Overview [videorecording]. Washington, DC: NOFAS.

Summary: This 10-minute education video includes information from experts in the field as well as personal stories from families living with the issue.

Fetal Alcohol Spectrum Disorders Education and Prevention Curriculum [compact disc]. (2006). NOFAS.

Summary: Designed to raise awareness about FASD for students, divided into three program grades (3-5) (6-8) and (9-12). Provides accurate information about the dangers of alcohol use and informs students about healthy decisions.

Fetal Alcohol Syndrome and the Criminal Justice System: Understanding the Offender with FAS - Video 1 of 3 Talking with Victor [videorecording]. (2002). British Columbia: The Asante Center for Fetal Alcohol Syndrome. Summary: This video focuses on the life of a young adult offender, Victor, who has FAS. The video provides insight into Victor's life and his experience with the criminal justice system. It contains interviews with Victor, his probation officer and advocate, and his experience in court.

Fetal Alcohol Syndrome and the Criminal Justice System: Understanding the Offender with FAS - Video 2 of 3 A Judge's Perspective with Judge Cunliffe Barnett [videorecording]. (2004). British Columbia: The Asante Center for Fetal Alcohol Syndrome.

Summary: this video focuses on Judge Cunliffe Barnett's account of people with FAS in the legal system and how their disability is often unrecognized and misunderstood by judges, lawyers, social workers, and others.

Fetal Alcohol Syndrome and the Criminal Justice System: Understanding the Offender with FAS - Video 3 of 3 Mistakes I have made with lawyer David Boulding [videorecording]. (2004). British Columbia: The Asante Center for Fetal Alcohol

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Syndrome.

Summary: This video focuses on the implications of FASD in the Canadian Charter of Rights and Freedoms. Other topics of discussion include: the concept of “Not Criminally Responsible by Reason of a Mental Disorder,” and the importance of an FASD assessment.

Fetal Alcohol Syndrome: Prevention, Diagnosis, Treatment: A Clinical Guide for Obstetric and Pediatric Providers [computer disc]. (2000). Cambridge, MA: Vida Health Communications.

Last Call: The Sobering Truth About F.A.S., F.A.E. [videorecording]. (2001). Advantage Source.

Summary: This video describes the devastating effects of fetal alcohol syndrome. It includes viewpoints from medical professionals and social workers, mothers who have abused alcohol, and both adults and children who suffer from fetal alcohol syndrome.

No Safe Amount: Women, Alcohol & FAS [videorecording]. (2008). Human Relations Media.

Summary: Focuses on particular damage that alcohol can do to young women’s bodies and lives. Explains the unique dangers of alcohol and educates viewers about the realities of FAS. Interviews with physicians and parents of children with an FASD provide insight into the lifelong physical and emotional effects of exposing an unborn baby to alcohol. Teacher’s Guide and Student Activities included.

Painting a Future: A Young Adult Succeeding with FAE [videorecording]. (1999). University of Alaska Press.

Summary: Features a teacher with FAE helping middle school students learn about art. Also includes an interview where the teacher talks about having the courage to overcome obstacles.

Parents’ Perspective: Living with a Child who has FAS [videorecording]. (1996). Pierre, SD: South Dakota Department of Health.

Summary: This video was part of a fetal alcohol training workshop which included reports from parents whose children have Fetal Alcohol Syndrome.

Recovering Hope [videorecording]. (2004). Substance Abuse and Mental Health Services Administration.

Summary: A video about the mothers and families of children who are affected by FASD. Created for viewing by women in recovery. Eight women tell poignant, memorable stories about how alcohol use during pregnancy affected their children, how they are learning new ways to parent and how they are recovering hope for the future.

Sacred Trust: Protect Your Baby Against Fetal Alcohol Syndrome [videorecording]. (1995). Rockville, MD: NCADI.

Summary: This video which was produced by USDA, Food and Consumer Services for use in the WIC program addresses Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE). Individuals of various Nations present messages that encourage women to say “NO” to alcohol.

The School Years [videorecording]. (1997). United Learning by Discovery Education.  
Summary: Focuses on meeting the needs of children with FASD in the classroom and at the school and district levels.

Sebastian: An Extraordinary Life [videorecording]. (1993). Northbrook, IL: Film Ideas.  
Summary: Shows the day-to-day medical care provided by the foster parents of a young boy born with fetal alcohol syndrome.

Students Like Me: Teaching Children with FAS [videorecording]. (2000). Cambridge, MA: Vida Health Communications.  
Summary: Created for teachers who work with children with fetal alcohol syndrome (FAS). Explains how FAS affects children and what teachers can do to help students with FAS reach their fullest potential in the classroom.

Worth the Trip: Raising and Teaching Children with Fetal Alcohol Syndrome [videorecording]. (1996). Cambridge, MA: Vida Health Communications.  
Summary: A clear, hopeful and practical outline of suggestion for assisting children affected by alcohol.

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# Resources:

## General Resources Websites

### Resources: Websites

A Chance to Grow  
<http://www.actg.org/>

About.com: Babies & Toddlers (search Fetal Alcohol Spectrum)  
<http://www.babyparenting.about.com>

Alaska Program on Fetal Alcohol Syndrome  
<http://www.hss.state.ak.us/fas/>

Alberta's Alcohol and Drug Abuse Commission  
<http://www.aadac.com/>

Alcohol and Alcohol Problems Science Database  
<http://etoh.niaaa.nih.gov/>

Alcohol Screening Instrument: Self-Assessment for Faculty, Staff & Students, University of Iowa  
<http://www.uiowa.edu/hr/fss/testing.shtml>

American Association on Intellectual and Developmental Disabilities (AAIDD)  
<http://www.aamr.org>

The ARBI (Alcohol Related Birth Injury) Community; Canadian FAS/E Resource Site  
<http://www.arbi.org/community/fas>

The Arc of the United States  
<http://www.thearc.org>

Arium  
<http://arium.org/links/faslinks.html>

The Asante Centre for Fetal Alcohol Syndrome  
<http://www.asantecentre.org/>

Behavioral Medicine Associates, Inc.: Cognitive Therapy, Biofeedback and Cognitive/Perceptual Training: Learn to Make Positive Change With Skills Instead of Drugs  
<http://www.qeeg.com>

Brief Overview of FAS and Effects  
<http://members.aol.com/creaconinc/fas.html>

Canadian FAS Resource Site  
<http://www.arbi.org>

Centers for Disease Control and Prevention (CDC)  
[www.cdc.gov](http://www.cdc.gov)

Center for Substance Abuse Prevention (CSAP)  
[www.prevention.samhsa.gov](http://www.prevention.samhsa.gov)

The Central Nervous System & Brain Disorders Network  
<http://www.brainnet.org>

Colorado FAS/ATOD Prevention Program  
<http://www.uchsc.edu/ahec/fas/>

CMA Policy Summary: Fetal Alcohol Syndrome  
<http://www.worldprofit.com/fafas.htm>

The Difficult Child  
<http://difficultchild.com/>

Discussion List for Parents Homeschooling Children with an FASD  
<http://groups.yahoo.com/group/FASHomEd/>

Fact Sheet: Fetal Alcohol Syndrome, Booze News  
<http://www.cspinet.org/booze/fas.htm>

Family Village – A Global Community of Disability-Related Resources  
<http://www.familyvillage.wisc.edu/>

FAS/E Information Home Page  
<http://www.kumc.edu/gec/support/fetalalc.html>

FAS Alaska, Fetal Alcohol Syndrome, Fetal Alcohol Effects, and Alcohol Related Birth Defects  
<http://www.fasalaska.com/>

FAS Community Resource Center  
<http://www.come-over.to/FASCRC/>

FAS Family Resource Institute  
<http://www.fetalalcoholsyndrome.org>

FAS sites Better Endings  
<http://www.betterendings.org/>

FAS Stars: Photographs and Stories of Children and Adults with FAS and FAE  
<http://www.fasstar.com/InternetGuide.htm>

FAS World  
<http://www.fasworld.com/>

## Resources: Websites

FASCETS (Fetal Alcohol Syndrome Consultation, Education and Training Services)  
<http://www.fascets.org/>

FASD Center of Excellence, SAMHSA  
<http://www.fasdcenter.samhsa.gov>

FASD Connections  
<http://www.fasdconnections.ca/>

FASForum  
<http://health.groups.yahoo.com/group/fasforum/>

FASlink - Canadian Fetal Alcohol Spectrum Disorders Internet resources  
<http://www.acbr.com/>

FASResource: Fetal Alcohol Syndrome Resources  
<http://health.groups.yahoo.com/group/FASResource/>

Fetal Alcohol and Drug Unit at the University of Washington, Seattle  
<http://depts.washington.edu/fadu/>

Fetal Alcohol Spectrum Disorders Resource List  
<http://www.adoptmed.org/storage/FAS%20Resource%20List.pdf>

Fetal Alcohol Syndrome Diagnosis & Prevention Network at the University of  
Washington, Seattle  
<http://depts.washington.edu/fasdpn/>

Fetal Alcohol Syndrome Resource and Materials Guide The Arc  
<http://thearc.org/NetCommunity/Page.aspx?&pid=1400&srcid=411>

Fetal Alcohol Syndrome/Effects (FAS/FAE), Internet Resources for Special Children  
(IRSC)  
<http://www.irsc.org/fas.htm>

Fetal Alcohol Syndrome: Lasts a Lifetime, Oklahoma Department of Mental Health/  
Substance Abuse  
<http://w3.ouhsc.edu/fas>

Fetal Alcohol Syndrome Movie, Weber University, Department of Child and Family  
Studies  
<http://catsis.weber.edu/chfam/html/fas.html>

International FAS DAY  
<http://www.acbr.com/fas/fasday.htm>

KidsHealth.org  
<http://kidshealth.org/parent/medical/brain/fas.html>

March of Dimes  
<http://www.marchofdimes.com/>

## Resources: Websites

Minnesota Organization on Fetal Alcohol Syndrome  
<http://www.mofas.org>

National Clearinghouse for Alcohol and Drug Information  
<http://ncadi.samhsa.gov/>

National Institute on Alcohol Abuse & Alcoholism  
<http://www.niaaa.nih.gov/>

National Institute on Drug Abuse: The Science of Drug Abuse & Addiction  
<http://www.drugabuse.gov/>

National Organization on Fetal Alcohol Syndrome  
<http://www.nofas.org>

New Visions - Information on Feeding, Swallowing, Gastrointestinal Reflux and Oral  
Motor Dyspha  
<http://www.new-vis.com/>

North Dakota FAS Center  
<http://www.online-clinic.com>

SAMHSA (Substance Abuse and Mental Health Services)  
<http://www.samhsa.gov/>

Society for Neuroscience: Advancing the Understanding of the Brain and Nervous  
System  
<http://www.sfn.org/>

Traumatic Brain Injury Resource Guide: Centre for Neuro Skills  
<http://www.neuroskills.com/>

Yoga for the Special Child: The Sonia Sumar Method  
<http://www.specialyoga.com/>

## Teaching Websites

The 2Learn.ca Education Society  
<http://www.2learn.ca/construct/graphicorg/venn/>

42eXplore Thematic Pathfinders for All Ages  
<http://www.42explore.com/>

A to Z Teacher Stuff  
<http://atozteacherstuff.com/Themes>

The ABC's of FAS/FAE, Teacher's Guide and Resource Booklet  
<http://www.lcsc.edu/education/fas/>

abcteach: a place for kids, parents, student teachers and teachers  
<http://www.abcteach.com/>

Resources:  
Websites

Ablenet: State Standard Educational Content Specifically Designed for Students with Disabilities

<http://www.ablenetinc.com/about.aspx>

Academic Therapy Publications

<http://www.academictherapy.com/>

Addition / Subtraction / Multiplication Rap & Hip Hop Booklet and Tape Series, Twin Sisters Productions

<http://www.twinsisters.com>

Advanced Brain Technologies, LLC

<http://www.advancedbrain.com/>

All Kinds of Minds

<http://www.allkindsofminds.org/>

Academic Therapy Publications

<http://www.academictherapy.com/>

All The Touch Typing Tutors

[http://www.mousetrial.com/free\\_stuff.html](http://www.mousetrial.com/free_stuff.html)

Antelope Publishing: The Turtle and the Paintbox

<http://www.antelope-ebooks.com/CHILDPIX/turtle/PAGE01.HTM>

Arcytech: Improving Education through Technology

<http://www.arcytech.org/arcytech.html>

Attention Deficit Disorder Association

<http://www.add.org/>

ATTO: Assistive Technology Basics

<http://atto.buffalo.edu/registered/ATBasics.php>

Books On Tape (A Division of Random House, Inc.)

<http://www.booksontape.com/>

Book Reader: Microsoft Reader for Desktop and Laptop PC

<http://www.microsoft.com/reader/downloads/pc.mspx>

Book Reader: My Reward Board

[http://www.myrewardboard.com/feature\\_customizable.html](http://www.myrewardboard.com/feature_customizable.html)

The Brain and Mind Fitness Destination

<http://www.brain.com>

Brain Gym (Edu-Kinesthetics, Inc.)

[www.braingym.com](http://www.braingym.com)

Brain Connection®

[www.brainconnection.com](http://www.brainconnection.com)

## Resources: Websites

Brain Metrix: Train the Brain  
<http://www.brainmetrix.com/>

Celebrate America: Patriotic Songs Every American Student Should Know! CD format  
<http://www.twinsisters.com/>

CENGAGE Learning™ (formerly Thomson Learning)  
<http://permission.cengage.com/permissions/action/start>

Center on the Social Emotional Foundations for Early Learning  
<http://www.vanderbilt.edu/csefel/>

Chemistry: Songs That Teach About Atoms, Compounds, Mixtures and More. CD format.  
<http://www.twinsisters.com/>

Choices, Choices (K-5): Teach Young Students to Make Smart Decisions  
<http://www.tomsnyder.com/products/product.asp?SKU=CHOCHO>

Classroom Suite Activity Exchange  
<http://aex.intellitools.com/>

Children and Adults with Attention Deficit / Hyperactivity Disorder  
[www.chadd.org](http://www.chadd.org)

Core Knowledge® Series by E.D. Hirsch, Jr.  
<http://coreknowledge.org/CK/index.htm>

Council for Exceptional Children - Teaching LD  
<http://www.teachingld.org/>

Counting Money Worksheets and Lessons  
<http://www.moneyinstructor.com/money.asp>

Creative Learning Store: A Division of Western Psychological Services  
<http://www.creativetherapystore.com>

Crick Software Learning Grids  
<http://www.learninggrids.com/WelcomePage.aspx?siteId=2>

Developmental Cognitive Disabilities (DCD) Project GIG: General Instructional Guidelines  
[http://www.int287.k12.mn.us/index.php?submenu=RecreationLeisure&src=gendocs&ink=GIG\\_RecreationAndLeisure\\_skillsinventory&category=specialEd\\_GIG](http://www.int287.k12.mn.us/index.php?submenu=RecreationLeisure&src=gendocs&ink=GIG_RecreationAndLeisure_skillsinventory&category=specialEd_GIG)

Developmental Delay Resources (DDR)  
<http://www.devdelay.org/>

Discovery Education  
<http://community.discoveryeducation.com/resources/mathematics>

## Resources: Websites

## Resources: Websites

Discovery School  
<http://school.discoveryeducation.com/students/>

DLTK's Site: Growing Together. Crafts for kids  
<http://www.dltk-kids.com/>

Do2learn: Educational Resources for Special Needs  
<http://www.do2learn.com>

Double ARC  
<http://www.doublearc.org/>

Dover Publications  
<http://store.doverpublications.com/>

Edhelper  
<http://www.edhelper.com/>

Edmark Reading Series  
<http://www.learningcompany.com>

Edu-Kinesthetics, Inc.: Brain Gym  
<http://www.braingym.com>

Education Planet: Quality Web Resources for Students & Teachers  
<http://www.educationplanet.com/>

Education Strategies - general, Emory University School of Medicine  
<http://www.psychiatry.emory.edu/PROGRAMS/GADrug/Edfas.htm>

Education World™ The Educator's Best Friend™  
<http://www.educationworld.com/>

Education World™ - Search Engine to Search Only Educational Sites  
<http://www.education-world.com/>

Educational Learning Games: The Fun Way to Learn!  
<http://educationallearninggames.com/>

EduScapes: A Site for Life-long Learners of All Ages - Teaching and Learning Resources  
from Federal Agencies  
<http://www.eduscapes.com/>

Everyday Spelling (Pearson Education, Inc.)  
<http://www.everydayspelling.com/index.html>

Facial Expressions Game  
<http://www.do2learn.com/games/facialexpressions/index.htm>

Feelings Game  
<http://www.do2learn.com/games/feelingsgame/index.htm>

Fetal Alcohol Spectrum Disorder: Resources For Teachers  
<http://education.gov.ab.ca/fasd/>

Fieldtrips: North Carolina Museum of History  
<http://ncmuseumofhistory.org/edu/DistLearn.html>

Fieldtrips: Teacher Tap: Digital and Virtual Field Trips  
<http://eduscapes.com/tap/topic35.htm>

Fieldtrips: Thinkport  
<http://www.thinkport.org/FamilyCommunity/oftrips.tp>

First-School: Preschool Activities and Crafts  
<http://www.first-school.ws/>

FREE: Federal Resources for Educational Excellence  
<http://www.free.ed.gov/>

Free Spirit Publishing®  
<http://www.freespirit.com/>

Free Stuff for Canadian Teachers  
<http://www.thecanadianteacher.com/>

Fun Socialization and Learning Activities for Kids and Teens: Group and Classroom Activities  
[http://youth-activities.suite101.com/article.cfm/group\\_and\\_classroom\\_games](http://youth-activities.suite101.com/article.cfm/group_and_classroom_games)

Fun with Feelings (K-5)  
<http://www.autismcoach.com/Fun%20With%20Feelings.htm>

Get Ready To Read!  
<http://www.getreadytoread.org/>

The Gray Center for Social Learning and Understanding  
<http://www.thegraycenter.org/>

GreatSchools™ The Parent's Guide to K-12 Success  
<http://www.schwablearning.org/>

GreatTeacher  
<http://www.greatteacher.net/>

Handwriting for Kids  
<http://www.handwritingforkids.com/handwrite/>

Handwriting Without Tears  
<http://www.hwtears.com/>

Hotchalk's™ LessonPlansPage.com  
<http://www.lessonplanspage.com/>

Resources:  
Websites

Intellectual Property Program  
<http://www.bcsolutions.gov.bc.ca/ipp/>

International Multisensory Structured Language Education Council  
<http://www.imslec.org/>

International Reading Association  
<http://www.reading.org>

Internet4Classrooms: Helping Teachers Use The Internet Effectively  
<http://www.internet4classrooms.com/k12links.htm>

Jiggerbug Audiobooks  
<http://www.jiggerbug.com/>

Key Curriculum Press  
<http://www.keycurriculum.com/>

Kids Can Learn: Children's Academy for Neurodevelopment & Learning  
<http://www.kidscanlearn.net/>

Kids Freeware: Internet Freebies Just For kidz  
<http://www.kidsfreeware.com/index.html>

Kidsreads.com  
<http://www.kidsreads.com/>

KONOS: Learning Made Fun!  
<http://www.konos.com/index.html>

Lakeshore® Products Designed with Learning in Mind™  
<http://www.lakeshorelearning.com/home/home.jsp>

Latitudes ACNT: Behavior Modification Charts for Home and School  
[http://www.latitudes.org/behavioral\\_charts.html](http://www.latitudes.org/behavioral_charts.html)

Laureate Learning Systems®  
<http://www.laureatelearning.net/professionals602/>

LD OnLine: Website on Learning Disabilities and ADHD for Parents, Teachers and Other Professionals  
<http://www.ldonline.org/>

Leapfrog Factory DVDs  
<http://www.leapfrog.com>

Learn to Read Sing-Along Series PreK-2  
<http://www.creativeteaching.com/>

Learning In Motion: Publisher of Innovative Educational Software  
<http://www.corelearning.com/>

## Resources: Websites

The Learning Page  
<http://www.learningpage.com/>

Lesson PlanZ  
<http://www.lessonplanz.com/>

LindaMood-Bell Learning Processes  
<http://www.lindamoodbell.com/>

Little Giant Steps: Neurodevelopmental Innovations  
<http://www.littlegiantsteps.com/>

Luke's Life List  
<http://www.teach4mastery.com/luke.html>

The Mailbox  
<http://www.theeducationcenter.com/cgi-bin/tec/guest.jsp>

Making Math Real: An Introduction to the Overview on DVD  
<http://www.makingmathreal.org/>

Math Cats  
<http://www.mathcats.com/grownupcats.html#ideabank>

Math-U-See  
<http://www.mathusee.com/>

Mayer-Johnson: The Building Blocks for Learning and Human Expression  
<http://www.mayer-johnson.com/>

Mind Reading: The Interactive Guide to Emotions (K-12+)  
<http://www.jkp.com/mindreading/>

Misunderstood Minds  
<http://www.pbs.org/wgbh/misunderstoodminds/>

Mrs. Cannon's Computer Lab  
<http://www.computerlabkids.com>

MoneyInstructor  
<http://www.moneyinstructor.com>

Multiplication/ Addition/ Subtraction Unplugged: Recordings by Sara Jordan  
Publications  
<http://www.amazon.com>

Music K-8 Resources  
<http://www.musick8.com/>

- Rockin' Readers K-3
- Rap of the Presidents - with booklet
- Rap of the Solar System - with booklet
- Rap of the States - with booklet

## Resources: Websites

Muskingum College Center for Advancement of Learning – Learning Strategies Database

<http://www.muskingum.edu/~cal/database/>

My Moondrops: Learn to Write...free tracing paper

<http://www.mymoondrops.com/info/spelling.html>

My School Day

<http://www.socialskillbuilder.com/myschoolday.htm>

National Center for Learning Disabilities

<http://www.nclld.org/>

News2You

<http://www.news-2-you.com/index.aspx>

North Central Regional Educational Laboratory: Learning Point Associates

<http://www.learningpt.org/page.php?pageID=243>

Oceans: CD of songs to learn about the oceans, ages 4-9

<http://www.twinsisters.com/>

Orton-Gillingham Institute for Multi-Sensory Education

<http://www.ortongillingham.com/>

PBS Teachers

<http://www.pbs.org/teachers/>

Phonological Awareness Literacy Screening

<http://www.pals.virginia.edu/>

Positive Behavioral Interventions & Supports

<http://www.pbis.org/schoolwide.htm>

Practical Money Skills for Life™

<http://www.practicalmoneyskills.com/english/index.php>

Pro Ed: An International Publisher

<http://www.proedinc.com>

Project Participate

<http://projectparticipate.org/>

Reach to Teach: Downloadable Teacher's Guide About FASD

[http://www.fascenter.samhsa.gov/documents/Reach\\_To\\_Teach\\_Final\\_011107.pdf](http://www.fascenter.samhsa.gov/documents/Reach_To_Teach_Final_011107.pdf)

Reading for the Blind and Dyslexic

<http://www.RFBD.org>

ReadWriteThink

<http://www.readwritethink.org/>

## Resources: Websites

Reading Is Fundamental

<http://www.rif.org/>

Reading Lady

<http://www.readinglady.com/>

Reading Rockets

<http://www.readingrockets.org/>

Readinga-z: Reading Resource Center

<http://www.readinga-z.com/>

The Really Useful List of Fill-in-the-Blank Web Tools for Teachers and Students

<http://drwilliammartin.tripod.com/reallyusefullist.htm>

Relaxation Techniques: Learn Ways to Calm Your Stress

<http://www.mayoclinic.com/health/relaxation-technique/sr00007>

Research Institute for Learning and Development: Pathways to Success for All Learners

<http://www.researchchild.org>

Right Choices: A Multimedia Social Skills Training Program for Adolescents (6-12)

<http://store.cambiumlearning.com/ProductPage.aspx?parentId=019000986&functionID=009000008&site=sw>

Sandbox Learning Education Tools: Customized Tools That Connect™

<http://www.sandbox-learning.com/>

School Tips for Success with FAS/FAE

<http://www.come-over.to/FAS/schooltips.htm>

Schoolhouse Rock

<http://www.school-house-rock.com/>

Signing Time!

<http://www.handwritingforkids.com/handwrite/manuscript/alphabets/index.htm>

Social Skills at Work Software

<http://www.autismcoach.com/My%20School%20Day.htm>

Solve It! Curriculum

<http://www.exinn.net/>

Songs For Teaching: Using Music to Promote Learning

<http://www.songsforteaching.com/grammarspelling.htm>

Songs That Teach

<http://www.twinsisters.com/onlinecatalog/songsthatteach.htm>

Space: Songs That Teach About Space Exploration, Astronauts, Gravity, Satellites and More

<http://www.twinsisters.com/>

Resources:  
Websites

Special Connections: Connecting Teachers to Strategies That Help Students With Special Needs Successfully Access The General Education Curriculum  
<http://www.specialconnections.ku.edu/cgi-bin/cgiwrap/speconn/index.php>

States and Capitols  
<http://www.twinsisters.com/>

Stevenson Learning Skills  
<http://www.stevensonsemple.com/>

Stress Reliever Activities  
<http://www.stressmanagingtips.com/>

StudyDog Learning  
<http://www.studydog.com>

SuperKids: Education for the Future  
<http://www.superkids.com/>

Symphony Learning® Elementary Math Software  
<http://www.symphonylearning.com/>

TEACCH: Tasks Developed During TEACCH Training  
<http://www.preschoolfun.com/pages/teacch%20work%20jobs%20other.htm>

Teach4Mastery  
<http://www.teach4mastery.com/>

Teaching Students with Fetal Alcohol Syndrome  
<http://www.bced.gov.bc.ca/specialed/fas/guides.htm>

The Teacher's Corner - Teacher Resources and Lesson Plans  
<http://www.theteacherscorner.net/>

TeacherVision® Lesson Plans, Printables and More  
<http://www.teachervision.fen.com/graphic-organizers/printable/6293.html>

Teaching Students with FASD  
<http://education.alberta.ca/admin/special.aspx>

Teachnet  
<http://www.teachnet.com/>

TinSnips: A Special Education Resource  
<http://www.tinsnips.org/index.html>

TouchMath: A Multisensory Teaching Approach That Bridges Manipulation and Memorization  
<http://www.touchmath.com/>

Use Visual Strategies - For Improving Communication, Solving Behavior Problems  
<http://www.usevisualstrategies.com/>

## Resources: Websites

Weather: Songs that teach about meteorology, the water cycle, storms, and more.  
<http://www.twinsisters.com/>

Widgit Software: Software Solutions for Inclusion  
<http://www.widgit.com/symbols/publications/publications/index.htm>

## **Visual Systems / Picture Boards**

ABA Educational Resources Ltd.  
<http://www.abaresources.com/free.htm>

Benetech Bookshare.org  
<http://www.bookshare.org/web/Welcome.html>

Boston Public Schools Access Technology Center  
<http://boston.k12.ma.us/teach/technology/emmanuel/ATAdaptBks.pdf>

Circle of Inclusion: Accommodating All Children in the Early Childhood Classroom  
<http://circleofinclusion.org/english/accommodating/index.html>

Fairfax County Public Schools, Special Services, Integrated Technology Services  
<http://www.fcps.edu/ss/its/howtos/board/bdact.htm#expect>

Functional Behavior Assessment Forms  
<http://www.1edweb.com/fba%20forms.htm>

Imagine Symbols  
<http://imaginesymbols.com/home.htm>

Little Friends, Inc.  
<http://www.littlefriendsinc.org/shop.asp>

Mayer-Johnson: Downloads  
<http://www.mayer-johnson.com/Downloads.aspx>

Project Participate  
<http://projectparticipate.org/>

SET: Special Education Technology - British Columbia  
[http://www.setbc.org/setbc/communication/communication\\_bmaker\\_resources.html](http://www.setbc.org/setbc/communication/communication_bmaker_resources.html)

Talking My Way Object Communication System  
[http://www.adaptivation.com/talking\\_my\\_way\\_object\\_communicat.htm](http://www.adaptivation.com/talking_my_way_object_communicat.htm)

Teacher Created Resources  
<http://www.montgomeryschoolsmd.org/curriculum/pep/teachercreate.html>

Teaching to Diversity  
<http://bctf.ca/diversity/BC-projects/boardmaker.pdf>

Resources:  
Websites

Tinsnips "What's Cooking" picture recipes  
<http://www.tinsnips.org/Pages/cooking.html>

Trainland  
<http://trainland.tripod.com/pecs.htm>

Resources:  
Websites

# Glossary





# Glossary

**abstract** - 1. An idea or an image of a situation, symbol, or object that can be selected from any specific attributes in an environment. 2. Sometimes used to refer to complex ideas, generally of symbolic origin, that tend to be difficult to understand.

**aberrant** - Wander or deviating from the usual or normal course.

**acetaldehyde** - A compound formed by the action of enzyme systems on ethanol when it is metabolized by the body. It is further metabolized to acetic acid.

**anomalies** - Marked deviations from the normal standard especially as a result of congenital or hereditary deficits.

**assessment** - 1. A collecting and bringing together of information about a child's learning needs, which may include social, psychological, and educational evaluations used to determine assignment to special programs or services; a process using observation, testing, and test analysis to determine an individual's strengths and weaknesses to plan, for example, his or her educational services. Also referred to in some instances as "evaluation". 2. As related to early childhood programs, assessment is the ongoing observations and monitoring of progress by qualified personnel throughout the period of a child's eligibility to identify the child's unique needs; the family's strengths and needs related to development of the child; and, the nature and extent of early intervention services that are needed by the child and the child's family to meet the needs of the child.

**assessment team** - A team of people from different areas of expertise who observe and test a child to determine his or her strengths and weaknesses.

**apnea** - Cessation of breathing.

**Attention Deficit (Hyperactivity) Disorder (ADD, ADHD)** - The classification of the DSMIII-R System; inattention, and impulsivity are present before age 7. Attention Deficit Hyperactivity Disorder is the same as Attention Deficit Disorder except emphasis is placed on the hyperactivity. Either ADD or ADHD is acceptable language.

**Attention Deficit Hyperactivity Disorder (ADHD)** - A condition in which a child

exhibits signs of developmentally inappropriate hyperactivity, impulsivity, and inattention. These characteristics are usually present before the age of 7. ADHD is similar to “Attention Deficit Disorder”, except emphasis is placed on the hyperactivity.

**Attention Deficit Disorder (ADD)** - A condition characterized by when a person is easily distracted and has difficulty staying focused on an individual activity for any period of time. ADD affects 3-5% of all students, and is not recognized as a separate category of disability under federal educational legislation (IDEA). See also “Attention Deficit Hyperactivity Disorder” as these terms are often used interchangeably.

**basal ganglia** - A group of structures deep inside the brain that are involved in movement and cognition.

**camptodactyly** - One or more fingers constantly flexed at one or more joints. Permanent bending of fingers and toes.

**caregivers** - Any persons who have input into the care of the child: babysitter, extended family, day care workers, hospital workers (nurses, aides, etc.).

**central nervous system (CNS)** - The brain and spinal cord.

**cerebellum** - The largest portion of the brain; involved in controlling consciousness, voluntary processes, and cognition.

**clinodactyly** - Abnormal bending of fingers and toes. Permanent bending either medial or lateral, of one or more fingers and toes.

**cognitive** - A term that describes the process people use for remembering, reasoning, understanding, problem solving, evaluating, and using judgment. Cognition more simply, is what a person or child knows and understands, or the process of knowing.

**cognitive development** - The development of skills necessary for understanding and organizing the world, including such perceptual and conceptual skills as discrimination, memory, sequencing, concept formation, generalization, reasoning, and problem solving.

**cognitive functioning** - Refers to the level of proficiency in thinking, processing information, and knowledge.

**concrete** - Describes an idea or an image of a situation, symbol or object that can be perceived by the senses and derives from an experience that makes it familiar.

**concrete mode** - A person’s learning or cognitive style characterized as learning most efficiently by use of objects and tangible items.

**corpus callosum** - The central tract inside the brain that connects the right and left

halves, or hemispheres, of the brain.

**cyanosis** - A bluish discoloration of skin and mucus membranes due to excessive concentration of reduced hemoglobin in the blood.

**congenital** - Existing at, or dating from, birth.

**development** - Growing both physically and mentally.

**developmental** - Having to do with the steps or stages in growth and development before the age of 18.

**diagnosis** - 1. Naming the cause of a disorder by looking at its symptoms. 2. The process of identifying specific mental or physical disorders. Some use the term more broadly to refer to a comprehensive evaluation not limited to the identification of specific disorders.

**dysmorphology** - The study of birth defects or malformation in a species.

**dysmorphologist** - One who is knowledgeable about deviations from the physical patterns of development in humans.

**early intervention programs or services** - Programs or services designed to meet the developmental needs of each eligible infant or toddler and their family under Part H and also to meet the needs of the family as they relate to enhancing the child's development. Such services are designed to (A) identify, assess, and treat developmental disabilities at the earliest possible time to prevent more serious disability; (B) ensure the maximum growth and development of the child; and to (C) assist families in raising a child with a developmental disability.

**embryo** - The fertilized ovum that eventually becomes the offspring during the period of most rapid development. In humans this period is from two weeks after fertilization until the end of the 7th or 8th week, after which time the offspring is known as a fetus.

**epicanthal folds** - A vertical fold of skin on either side of the nose, sometimes covering the inner corner of the eye. It is present as a normal characteristic in persons of certain races and sometimes occurs as a congenital anomaly in others.

**epidemiology** - The study of the occurrence of a disease in a population and factors which influence it, in order to find ways to prevent the disease.

**ethanol** - Alcohol; a transparent, colorless, mobile, volatile liquid,  $C_2H_5OH$ , obtained by the fermentation of carbohydrates with yeast.

**evaluation** - 1. As applies to educational settings: A way of collecting information (includes testing, observations, and parental input) about a student's learning needs, strengths, and interests. The evaluation is part of the process of determining whether a student qualifies for special education programs and services. 2. A process conducted by mental

health professionals that results in an opinion about a child's mental or emotional capacity, and may include recommendations about treatment or placement. See "assessment".

**facies** - The term used in anatomical nomenclature to designate (a) the face; and (b) a specific surface of a body structure, part, or organ.

**failure to thrive (FTT)** - A chronic disorder of infancy and childhood characterized by growth failure, malnutrition and variable degrees of the delay in motor and social development. Possible causes of FTT are varied; illness, oral-motor feeding and swallowing disorders, inadequate food resources and problems with parent-child interaction.

**fetus** - The unborn offspring in the postembryonic period, after major structures have been outlined in humans, from the 7th or 8th week after fertilization until birth.

**free appropriate public education (FAPE)** - A key requirement of the federal legislation, Public Law 94-142, which requires that special education and related services are provided to all eligible children, and meet the following requires: (a) Are provided at public expense, under public supervision and direction, and without charge; (b) Meet the standards of the state board of education and the laws pertaining thereto; (c) Include preschool, kindergarten, elementary school, and secondary school education; and (d) Are provided in conformity with an individualized educational program (IEP).

**gestation** - The period of development from the time of fertilization of the ovum until birth.

**hirsutism** - Abnormal hairiness, especially in women.

**hyperactivity** - Constant and excessive movement and motor activity.

**hypoplastic** - Having incomplete development of an organ so that it fails to reach adult size.

**hypovolemia** - Diminished blood supply.

**IEP goals and objectives** - The long and short-term behaviors that are the targets of special education or therapeutic intervention. IEP objectives are almost always written in behavioral terms.

**IFSP outcomes** - Statements of the changes families want to see for their children or themselves.

**impulsivity** - Acting or speaking too quickly (upon impulse) without first thinking of the consequences.

**incidence** - The number of new cases of a condition that have been identified within a specific period of time (e.g., one year).

**Individualized Educational Program (IEP)** - A written education plan for a school-aged child with disabilities developed by a team of professionals (teachers, therapists, etc.) and the child's parents. IEP's are based on a multidisciplinary evaluation of the child, describes how the child is presently doing, what the child's learning needs are, and what services the child will need. They are reviewed and updated yearly. IEP's are required under Public Law 94-142, the Individuals with Disabilities Education Act (IDEA). For children ages birth through 2 years, an IFSP is written.

**Individualized Family Service Plan (IFSP)** - A plan of intervention for an eligible child (age birth through 2) and his/her family, similar in content to the IEP, which has been developed by a team of people who have worked with the child and family. IFSP's must contain: statements regarding the child's present development level, strengths, and needs; the family's strengths and needs; major outcomes of the plan, a description of the specific interventions and delivery systems to accomplish outcomes, statement of natural environments, name of service coordinator, dates of initiation and duration of services, dates for evaluation of the plan, and a transition plan.

**Individuals with Disabilities Education Act (IDEA)** - Mandates that states and local divisions provide special education for children with disabilities.

**intelligence quotient (IQ)** - A score obtained from an intelligence test that provides a measure of mental ability in relation to age.

**interdisciplinary team** - A team whose members come from multiple disciplines, who interact and rely on the others for information and suggestions.

**interdisciplinary** - Involving 2 or more academic, scientific or artistic disciplines.

**intervention** - Action taken to correct, remediate, or prevent identified or potential medical or developmental problems.

**maxillary hypoplasia** - Incomplete development of the bone of the upper jaw.

**microcephaly** - Abnormal smallness of the head, usually associated with mental retardation.

**microphthalmos** - Abnormal smallness of the eyes.

**motility** - The ability to move spontaneously.

**multidisciplinary evaluation/assessment (MDE)** - An evaluation of a child's strengths and weaknesses from a variety of professional vantage points using a number of different sources of information, and involving the child's parents. Typically, the child's present levels of physical, neurological, cognitive, speech and language, psychosocial development, and self-help skills are assessed.

**multidisciplinary** - Refers to 2 or more professionals (like educators, psychologists, and others) working together and sharing information in the evaluation, assessment, and development of an IFSP or IEP.

**neonatal** - The first four weeks after a child's birth.

**neonate** - A newborn under 28 days of age.

**palmar crease** - Any of the normal grooves across the palm which accommodates flexion of the hand. In certain congenital anomalies there is only a single transverse crease.

**palpebral fissure** - The longitudinal opening between the eyelids.

**parity** - The number of live births that a woman had delivered.

**pathogen** - A specific causative agent of the disease.

**perinatal** - The period shortly before and after birth, generally considered to begin with completion of 28 weeks of gestations and ending 1 to 4 weeks after birth.

**phenotype** - The environmentally and genetically determined observable appearance of an individual - especially when considered against all other possible genetic possibilities.

**philtrum** - The vertical groove in the middle of the upper lip.

**placenta** - An organ surrounding the fetus during pregnancy which joins the mother and offspring and supports growth and development during gestation.

**postnatal** - Occurring after birth.

**prenatal** - The time before birth, while a baby is developing during pregnancy. The period of time between the conception and birth of an infant.

**prevalence** - The number of persons in any given population who exhibit a condition or problem at a specific point in time.

**ptosis** - Drooping of the upper eyelids.

**strabismus** - Deviation of the eye which the patient cannot overcome without treatment. The inability of both eyes to focus on one object.

**syndactyly** - Fingers or toes joined together. A fusion of two or more toes or fingers.

**syndrome** - A group of symptoms that characterize a disease or pathological entity.

**tachycardia** - Accelerated pulse. Abnormal rapidity of heart action.

**teratogen** - An agent or factor that causes physical defects in the developing embryo.

**toxemia** - A metabolic disturbance in pregnancy characterized by hypertension, albuminuria, and edema.

**trimester** - The three terms or periods of three months each into which the nine months of pregnancy can be divided.

**Vermillion** - A bright red pigment.



# References





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