Working the Muscles of the Mind: Improving skills in instructional support

Color in your House!

During this session, you will learn more about:

Engaging Interactions and Environments
- Well-organized
- Social Emotional Support
- Instructional Interactions

Today's Session

Overview of Instructional Support
- Fostering Children’s Thinking Skills
- Using the Scientific Method with Young Children
- Providing Feedback that supports Engagement
- Putting it all Together
Fostering Children’s Thinking Skills

What does it look like?
• Interactions that focus on “big ideas” and deepen children’s knowledge of the world around them.
• Toddler’s thinking skills can be fostered through supportive opportunities to explore
• Preschooler’s thinking skills can be fostered during interactions

What does it NOT look like?
• Drilling children on facts or skills.

Fostering children’s thinking skills BY USING THE Scientific METHOD

• Provide tasks where children can observe, predict, and experiment.

For example, these two children are observing a section of grass. Their teacher supports their observation by asking them to predict what they will see before they go outside, providing them with a magnifying glass, and asking questions about what they observed later.
Fostering children's thinking skills

BY problem solving

• Create opportunities for children to **brainstorm, plan and solve problems**.

For example, this teacher asks children to brainstorm ideas about the book they are reading. Many children respond and contribute to the conversation about the book.

Fostering children's thinking skills

BY APPLYING KNOWLEDGE

• Build on children's natural curiosity by **linking the new to the familiar and connecting what they are doing to what they already know**.

For example, this teacher talks with children about the book they read about plants, and their experiences with growing plants, while they work in the garden together.

Fostering children's thinking skills can support development in each of the WAKids Early Learning and Development Guidelines and the Head Start Child Development and Learning Framework

When teachers foster children's thinking skills, children can make gains in many areas of learning:

• About me and my family and culture
  • Approaches to Learning
    • Social Studies Knowledge and Skills
  • Communicating
    • Language, Communication and Literacy
  • Learning about my world
    • Cognition and General knowledge
    • Logic & Reasoning
    • Mathematics
    • Science
    • Creative Arts Expression
In this clip, the teacher asked children to predict and connect ideas

- Asked children to predict what types of plants they might see on their nature walk
- Connect ideas about nature with the book the class read the previous day

Supports children’s cognitive skills

In this clip, the teacher asked children to...

- Brainstorm about fiction vs. information books
- Draw upon their experiences when talking about pets being allowed inside.

Supports children’s literacy and language skills

In this clip, the teacher asked children to...

- Predict what type of bone they were looking at
- Link new to the familiar of what they learned before about bones

Supports children’s logic and reasoning
In this clip, the teacher asked children to...

- Experiment with the paint.
- Observe how the paint feels.
- Supports children’s creative arts.

When Can I foster children’s thinking skills?

Children’s understanding can be promoted throughout the day in many activities. Some examples are:

- Small or large group
- Outside time

Activity

In small groups of 4-5 people, consider an area or an activity in the classroom and brainstorm the ways you can foster children’s thinking skills in that area.

- 15 minutes
- Write ideas on your poster
Summary

• Teachers can foster children’s thinking skills by:
  • Focusing interactions on “big ideas” and deepen children’s knowledge of the world around them.
  • Fostering infants and toddlers thinking skills through supportive opportunities to explore
  • Fostering preschoolers thinking skills through interactions which use prediction, observations, and problem-solving

Stretch break

Engaging interactions: using the Scientific method
Objectives

- **Provide a definition** for scientific method.
- **Give examples and strategies** for using the scientific method in early childhood classrooms.
- **Connect** to WaKIDS.
- **Provide suggestions** for improving teachers’ abilities to incorporate the scientific method.

Scientific method

The scientific method is a series of steps that help children understand their world.

Teachers use the scientific method when they:
- Help children **question**.
- Ask children to **observe** the world around them.
- Encourage children to **predict** during activities.
- Create opportunities for children to **experiment**.
- Allow children to **discuss** the results of their experiment.

Question

Help children form their own **questions** related to their world.

A child is playing outside and exclaims: “Oh no! The plant! What happened?”
Ask children to use their senses and closely observe the world around them.

“Let’s look at some of the plants that are growing around our school. What do you notice about places where they are growing? How does the soil feel around them?”

(Encourage children to think about water.)

Encourage children to predict, or guess, the answer to the initial question.

“What do you think plants need to grow? What do you think would happen if we gave water to some plants but not others?”

Provide opportunities for children to experiment and test their predictions.
Discuss

Allow children to **discuss** the results of their experiment.

“Let’s look at our two plants. Remember we treated each plant differently? The first plant got water and the second plant did not get water. What happened to the plants in our experiment? Which plant grew the most?... What do plants need to grow?”

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**THE HEAD START CHILD DEVELOPMENT AND EARLY LEARNING FRAMEWORK**

The scientific method can be incorporated within many areas of the framework and WaKIDS.

Some examples are:
- Science Knowledge & Skills
- Logic & Reasoning Skills
- Language Development & Skills
- Approaches to Learning

Source: The Center for Advanced Study of Teaching and Learning (CASTL)
IN THIS CLIP, THE TEACHER USES THE SCIENTIFIC METHOD

Children question if eco-bottles with worms are different from ones without.

The children observe worms with magnifying glasses.

The children predict what the worms will do in the bottle.

The children experiment by placing worms in only one of the eco bottles.

Later in the week, the children discuss the differences between bottles.

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When Can I use the scientific method?

Teachers can use the scientific method throughout the day in many activities.

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engaging interactions:

PROVIDING FEEDBACK
Objectives

- Provide a definition of providing feedback that supports engagement and learning.
- Give examples and strategies for how teachers can provide feedback to children.
- Connect:providing feedback that supports engagement and learning to the Head Start Child Development and Early Learning Framework
- Provide suggestions for teachers on how to improve their ability to provide feedback to children.

PROVIDING FEEDBACK THAT SUPPORTS ENGAGEMENT AND LEARNING

What does it look like?

Teachers:
- Engaging in back-and-forth exchanges with children that expand their understanding.
- Asking children to explain their thinking.
- Encouraging children’s efforts.

What does it NOT look like?

- Teachers providing children with simple yes/no or wrong/ right responses.

BACK-AND-FORTH EXCHANGES

Engage in back-and-forth exchanges that expand and elaborate on children’s learning.

For example:
Teacher: I can see you are all enjoying playing with bears. Who can tell me something special about bears?
Child: They sleep for a long time!
Teacher: That’s right, they hibernate! When do they hibernate?
Child: In the winter time.
Teacher: Yes, during the winter season! Who knows where they go to hibernate?

Exchanges continue...
EXPLAIN THINKING

Ask children to explain their thought processes.

For example:
Teacher: How do you think the boy feels in this picture?
Child: I think he's sad.
Teacher: Why do you think that?
Child: Because his friends are in the water having fun and he can't swim.
Teacher: Yes, he might feel a little frustrated.

ENCOURAGE EFFORTS

Encourage children’s efforts and help them stick with challenging activities.

For example:
Teacher: I can see how hard you are working to put that pattern together. Keep going, you almost have it!
Child: I'm done!
Teacher: You did it! Friends, look at Maria's pattern. She worked so hard to complete it.

THE HEAD START CHILD DEVELOPMENT AND EARLY LEARNING FRAMEWORK/WaKIDS

Providing feedback that supports engagement and learning is important across many areas of the framework and WaKIDS.

Some examples are:
- Logic & Reasoning
- Literacy Knowledge & Skills
- Mathematical Knowledge & Skills
- Social & Emotional Development
- Science Knowledge & Skills
IN THIS CLIP, THE TEACHER...

- Asks children to explain why they think the book says hair.
- Encourages their efforts and recognizes children’s effort when they read along with the book.
- Supports children’s literacy knowledge & skills.
IN THIS CLIP, THE TEACHER...

Engages in back-and-forth exchanges so that children understand why spiders need webs. Supports children’s Science Knowledge & Skills

WHEN CAN I PROVIDE FEEDBACK THAT SUPPORTS ENGAGEMENT & LEARNING?

Teachers may provide feedback throughout the day in all activities. Small group and one-on-one is an optimal opportunity for focused back-and-forth exchanges.

Activity

View video and think of all the ways the teacher is providing feedback and encouragement.
SUMMARY

Teachers can provide feedback that supports engagement and learning by:

- Engaging in back-and-forth exchanges
- Asking children to explain their thought processes
- Encouraging children’s efforts.

Teachers may provide feedback throughout the day.

Teachers can improve the quality and frequency of the feedback they provide to children.

Improving practice

- Video record and review your own teaching.
- Practice with a peer.
- Watch a “master teacher” in action.
Putting it all together