Instructional Unit Session I: Float Your Boat
Tutor’s Guide

GENERAL FRAMEWORK

References for Unit

SECTION 1

Objectives
The child will:
- Explore STEM concepts: float and sink
- Participate in Read Aloud
- Make and check story predictions with instructor support
- Sequence events in a story with instructor support
- Engage in SERVE and RETURN communications
- Explore questions and “wonderings”

Approximate Time
15 minutes

Materials Needed
Who Sank the Boat by Pamela Allen

Step by Step
1. **Prepare for the Read Aloud**—Before meeting with the child, read through the book *Who Sank the Boat* by Pamela Allen. Observe several examples of a Read Aloud with this book.
   [https://youtu.be/a5uRe0w_RBw](https://youtu.be/a5uRe0w_RBw)
2. **Prepare for SERVE and RETURN interactions**- Prepare to pay attention to what the child is focused on when looking and the pictures and listening to you read and plan to return the child’s interest with encouragement and extension of vocabulary or topic. For example, if a child points to a specific picture, name it. This can be done seamlessly so that the read aloud continues. Here is another example-The child points to an animal in the book. You say, “Look at the mouse,” followed by, “Let’s see what happens next!” or “What is the mouse going to do?” or “Do you think the mouse will sink the boat?” If the Child makes an animal noise, you say, “Yes, that’s what a mouse says!”

3. **Begin by introducing the book and concepts**- When meeting with the child, begin exploring the book.
   a. Show the child the cover of the book and say, “Let’s start our reading adventure. Here’s our book to share.”
   b. Read the title and the author’s name.
   c. Ask the child, “What do you think this book will be about?”
   d. Look at several pictures together.
   e. Ask the child, “What do you think will happen? Why?”

4. **Set a listening focus**- Direct the child to pay particular attention to an important aspect of the book. For example, “When we read this book, let’s noticed and think about why the boat sinks further into the water each time an animal gets in.”

5. **Read and RETURN**-Begin reading the book. Don’t rush, but do keep the flow going. The child will be reading this book again in the expansion activities. Bring the book to life by adding in noises, reading with character voices; and/or using actions. And, when child does the same (SERVE), you RETURN by responding in an appropriate way. Reading time is optimal time for SERVE and RETURN communications. Notice what the child is paying attention to on the pages and return his interest by being responsive and naming the item or commenting on it. The RETURN is key to child engagement.

6. **Pause and Chat**-Periodically pause and chat about the book. You can ask a question and/or encourage the child to ask a question. You can use illustrations to clarify unknown words such as bay, bow, and knit. Illustrations can also be used to generate questions and conversations such as, “Why do you think one end of the boat is sinking and not the other end? “What is happening to the boat? Why is that happening?”

7. **Reflect and Wonder**-After you read, provide an opportunity for the child to reflect on what happen and wonder about it. For example, you can pause and look intently at the book, maybe a specific page to show that you are thinking about it. You can say, “Hmm, that was interesting (funny, unexpected, etc.), what do you think?” Possible prompts for extending thinking and wondering more about the story include, “If the mouse was already in the boat and the cow got in last, do you think the boat would still sink? Why do you think that?” “Do you think that the boat would sink if the little mouse didn’t get in at all? Why do you think that?”
Objectives
The child will:
• Engage in a STEM investigation
• Make and check predictions
• Engage in SERVE and RETURN communications

Approximate Time 30 minutes

Materials Needed
- Aluminum foil
- Plain white paper
- Duct tape
- Scissors
- Pennies (about 25)
- Large container of water
- Crayons

Step by Step
1. Explain the investigation.
   a. Say, “We are going to do an experiment called “Float Your Boat.” In this experiment, we’re going to build a boat that floats.”
   b. Discuss the shape of boats. “Let’s think about it first. How are boats shaped? How is the boat in the book shaped? What shape do you think will work best? Why?”

2. Make a building plan.
   a. Review materials available. “Let’s take a look at the materials we’re going to use to build our boat,” (aluminum foil, paper and/or duct tape). What do you want to try first? How will we make the boat?”
   b. Student will draw boat ideas using the plain white paper and crayons. “Let’s draw our ideas.”

3. Build the boat. Allow student to build the boat. Assist as needed. Remember, the investigation is not about getting it right. The investigation is about inquiry learning, trial and error.

4. Float the empty boat. Try it. “Does your boat float? If not, does it sink immediately or slowly over time? Why do you think this happened?”
5. If the empty boat floats, explore/extend by adding weights to the boat. “Let’s add some weight/pennies to the boat to see if it still floats. How many pennies do you think you can add before the boat sinks? Let’s find out.” Note the number of pennies (or other items) it actually took to sink the boat. Talk about the prediction and actual number of items.

6. If the boat doesn’t float, reflect and revise. “Why do think the boat didn’t float? What can we change to make the boat float? Let’s try a different design.”

7. Explore by making more boats of different shapes. If you have time, make more than one shape boat and repeat the investigation by adding pennies to the boat to sink it. Ask, “Which shape holds the most pennies? Why do you think that happened?”

8. Make comparisons between the book and your investigation. If time permits, go back to the book and discuss it more. For example, you might say, “The first four animals affect the balance of the boat by where they sit. What happens when the cow gets in on one end? Why? Where does the sheep sit to help keep the balance? How was your boat affected by where you placed the pennies?” You may ask the child to move the pennies in the boat to see what happens.

SECTION 3

Objectives
The child will:
• Sing a song
• Act out the song
• Restate the order of song events (working memory)

Approximate Time 10 minutes

Materials Needed
Song: Row, Row, Row Your Boat

Row, row, row your boat,
Gently down the stream,
Merrily, merrily, merrily,
Life is but a dream.
Shake, shake, shake your boat,
Gently down the stream,
Merrily, merrily, merrily,
Life is but a dream.

Bounce, bounce, bounce your boat,
Gently down the stream,
Merrily, merrily, merrily,
Life is but a dream.

Row, row, row your boat,
Gently down the stream,
Merrily, merrily, merrily,
Life is but a dream.

https://youtu.be/I_Tw1V05Jb4 (1.51)

Step by Step
1. Tell the child you are going to finish up with a song, Row Row Your Boat.
2. Show the child the video and/or sing the song for the child.
3. Sing the song together, performing the actions for each verse.

“What did we do first? (row) Next? Next? Next?” What do you think could happen if you shake and bounce around in a boat? Let’s do it again and we’ll take turns rowing, shaking, bouncing, rowing.”

 SECTION 4

Engage Parents

The child will:
- Tell the parent/caretaker about the story read and the activity conducted with the tutor.
- Reread the story with the parent/caretaker.
- Repeat the investigation with the parent/caretaker.

The parent/caretaker will:
- Share similar stories and/or songs, especially those from their home country or language. (Funds of Knowledge)

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