

The InvestiGator Club® Prekindergarten Learning System

Investigation

TEACHER'S EDITION

Integrated Activities for Exploring, Experimenting, and Making Discoveries



Meels and Wings



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PART 3

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Part 3 Boats Afloat

Remind children that they have been learning about different kinds of transportation. Tell children: Cars, vans, trucks, and buses have wheels. Trains have wheels too and travel on tracks. Now we will investigate another type of transportation that does not have wheels—boats! We will investigate different types of boats and what makes them float. We will also use our imaginations to travel to far away places where only boats can take us. So put on your life jacket and let's go boating!

Opening Circle Time

Spanish Vocabulary



carretera train tracks vias del tren water agua

Oral Language: Choose Your Ride

Objectives

- Understand and use language to communicate.
- Use increasingly complex phrases and sentences.

Materials

pictures of various destinations and vehicles

Explain that different kinds of transportation are made for special purposes. Remind children that cars and buses travel on roads and trains travel on tracks. Tell children that boats and ships can take people where wheels cannot go; they travel on water. Display picture cards of various destinations such as mountain, road, desert, railway, river, lake, ocean, city, and farm, and various types of vehicle picture cards such as tractor, ATV, bus, truck, car, motorcyle, freight train, subway train, rowboat, speedboat, ship, and jet ski. Lead a discussion about different types of vehicles and where they can go. Prompt each child to match a vehicle to a destination and explain why he or she chose those two. Guide children to respond in complete sentences. Ask questions such as:

- How do wheels help it move?
- What would happen if a truck drove on a lake?
- Can a ship travel on a river? Why or why not?
- Are there other types of vehicles that can go there?



Depending on your

Rhyme Repair

Objective

• Recognize rhymes.

Materials

 pictures (optional): boat, canoe, schooner, sails, oars, ship, paddle, dory, ferry, mast, yacht

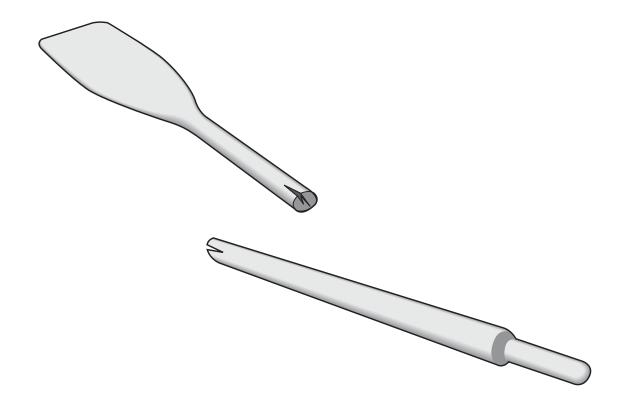
Show children a picture of a boat. Name these words and point out that they rhyme with boat: goat, note, throat. Explain that the boat is broken and it can only be fixed with something that rhymes with boat. Say: Does cup rhyme with boat? (no) No, it does not. A cup will not fix the boat because the words do not rhyme. Listen for words that sound the same. Will a coat fix the boat? (yes) Then ask: What will fix a broken canoe: seat, can, or shoe? (shoe) Continue the game with these word sets:

sails: cloth, sacks, nailsoar: box, can, doorship: clip, desk, car

paddle: scissors, saddle, shoe

dory: water, letter, story
ferry: river, berry, beach
mast: cast, toy, pan

yacht: sail, pot, yarn



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Day 6 5

Spanish Vocabulary

one

uno

two dos

three

tres

four

cuatro

five

cinco

For 3-year-olds

Help 3-year-olds hold up three fingers and count them aloud. Then help them fold down one finger as you say:

One went home. How many are left? Show them how to count the remaining fingers.

Ferry Me Across the Water

Objectives

- Know that letters of the alphabet are a special category of visual graphics.
- Associate the names of letters with their shapes and sounds.

Materials

- Dilly's Alphabet Cards
- wagon

Gather children on one side of the room and display **Dilly's Alphabet Cards**. Tell children to imagine that a treacherous river flows through the middle of the room. Say: **The only way to get to the other side of the river is by ferry. But you have to pay the boatman with a letter from the alphabet.**

Invite each child to step forward and chant:

Ferry me across the water,

Do, boatman, do.

As the "boatman," respond with this verse, asking for a letter of the alphabet:

If you've [an A] in your purse

I'll ferry you.

Children select the correct **Alphabet Card** and pay the boatman. Then invite them for a "boat" ride in the wagon to the other side of the river:

Step into my ferry-boat,

Do, child, do.

And for the [A] in your purse

I'll ferry you.



Spanish Vocabulary

boat
barco
float (v.)
flotar
sink (v.)
hundir

Math: Five Little Boats

Objective

 Associate number concepts, vocabulary, quantities, and written numerals.

Materials

● Magnetic Numbers 1–5

Tell children: **Dilly loves to sit on the beach and count the boats that go sailing by.** Teach children this number rhyme as you prompt them to hold up the correct number of fingers:

Five little boats, sailing offshore.

One turns west, and now there are four.

Four little boats, sailing past me.

One turns east, and now there are three.

Three little boats, sailing past you.

One turns north, and now there are two.

Two little boats, sailing in the sun.

One set anchor, and now there is one.

One little boat, sailing back to shore.

The day is done, and now there are no more.

Display and review **Magnetic Numbers 1** through **5**. Then have each child hold up five fingers in turn. Prompt them to subtract "boats" and tell how many are left. For example, touch their fingers and say: **Two boats sail home. How many are left?** As children give their answers, have them touch the corresponding **Magnetic Number**.



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Literacy:

Read About Boating Adventures

Objectives

- Understand that illustrations carry meaning.
- Identify characters, plot, events, resolution.

Materials

- a storybook about boating adventures
- various items to stock a factory and store

Read a storybook about adventures in boats, such as *Little Bear's Little Boat* by Eve Bunting, *Who Sank the Boat?* by Pamela Allen, and *Row, Row, Row Your Boat* by Iza Trapani. Read the title of the book aloud and call attention to the cover art. Ask: **What do you think this book is about?** Then take a picture walk through the first few pages of the book. Pause on each spread and ask: **What is happening in the picture?** Invite children to ask questions about the meaning of the written words in the book. Guide them to point to a word or sentence and ask, "What does this mean?" Then read aloud the book. Follow up by asking: **Who is the story about? What happens in the beginning of the story? What happens in the end?**



dibujar

draw

write



Gross Motor Skills:

Row, Row, Row Your Boat

Objectives

- Listen to and understand songs.
- Coordinate movements when playing.

Gather children in a circle. Tell them that you learned a fun song and dance from Dilly and JT. Sing the first verse of "Row, Row, Row Your Boat" and teach children the movements. After children have had practice, tell them to listen closely so they will know what to do as you sing the rest of the song.

Row, row, row your boat, (arms row)

Gently down the stream.

Merrily, merrily, merrily, (hold hands and walk in circle)

Life is but a dream. (lay head on hands)

Row, row, row your boat, (arms row)

Gently to the shore.

If you see a large lion, (hand over eyes, looking around)

Don't forget to roar. (hold up "lion paws" and roar)

Row, row, row your boat, (arms row)

Gently down the river.

If you see a polar bear, (hand over eyes, looking around)

Don't forget to shiver. (shiver)

Row, row, row your boat, (arms row)

Gently over the lake.

Don't stand up and rock the boat, (rock side to side)

That's a big mistake! (arms and one foot out, losing balance)

Row, row, row your boat, (arms row)

Gently on the pond.

If you see an alligator, (hand over eyes, looking around)

How will you respond? (shrug and hold up hands, asking question)

Invite children to show or tell what they would do if they saw an alligator in a pond.

Spanish Vocabulary

city ciudad mountain montaña beach playa

Shared Writing: Class Travel Book

Objectives

- Engage in written exploration.
- Progress in ability to write letters.
- Use writing, drawing, and art tools.

Materials

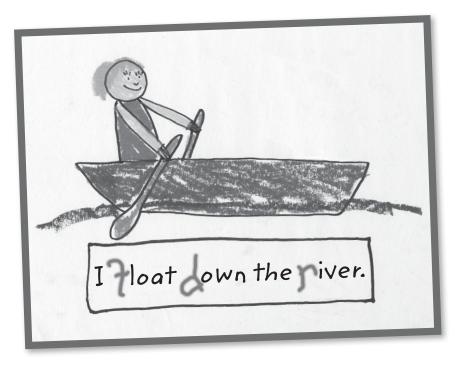
- drawing paper
- crayons, markers, pencils
- construction paper

Show children photographs of travel destinations, including islands, beaches, lakes, and rivers. Tell children they will work together to write a book about the places they would like to go with the InvestiGator Club. Explain that everyone will have a page in the book. When the book is finished, they will read it together.

Ask each child to think of one place he or she would like to go. Provide paper and crayons, markers, or pencils. Have children draw a picture and write about it. Remind children to write their name on the page. Walk around the room as children draw their pictures. Encourage them to write. Offer help. For example, say:

- I see that you are floating down a river. The word river begins with the lettter r. Show me how to make a letter r in the air. Can you write the letter r on your paper?
- You drew two people on a big cruise ship. Who is it? Where are you going? Tell me what you want to say and we will write it together.
- You wrote something here. Can you read it for me? Shall I write what you say under your writing?

Compile children's pages into a class book. Have the class brainstorm titles for the book as you write their suggestions. When the book is complete, invite each child to come forward and read his or her page to the class.





Daily Check Up

While you present each lesson, note the following:

- Opening Circle Time: Do children clearly communicate the reasons for their choices?
 Do they speak in complete sentences?
- Phonological Awareness: Do children correctly identify each rhyming word?
- Alphabet Knowledge: Do children identify the letter asked for?
- **Small Group:** Do children count on their fingers and understand the concept of taking away (subtracting)?
- Whole Group 1: Can children describe what is happening in the pictures? Can children identify the characters and events in the story?
- Whole Group 2: Do children understand the song and respond appropriately? Can they control their movements?
- Closing Circle Time: Do children attempt to write? Are they able to write letters?

Record your observations as anecdotal notes.



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Oral Language: River Rafting

Objectives

- Listen to and understand poems.
- Participate in dramatic play activities.
- Use complete sentences with more than one phrase.

Explain to children that not all boat rides are the same. Some rides are bumpy. Some are smooth. Some boats are very small. Other boats are huge. Tell children to imagine they are in a small river raft with you, paddling down a creek. Say: **Put on your helmets and life jackets and hold on. It's going to be a bumpy ride!** Invite them to act out motions with you as you say:

Swoosh, swish, Paddling down a creek. Splish! Splash! Whump! A fish jumps on me.

Woosh and sploosh, Down the rapids, whoa! Bump! Boing! 'Round the rocks we go.

Errrr, ummm,
A waterfall in the creek?
It is! Aaaagh!
We plummet! Eeeek!

Blorp, blurp, blubble, We're goin' in! Gurgle and gulp, Up we come again.

Woooh, phew!
The water is calm.
Dribble, drip, drift,
The adventure is done.



Invite children to describe what happened in the poem. Guide them to use complete sentences that include more than one phrase. Model for them: **We went down a creek and around the rocks. Then what happened?** If necessary, read the poem again.

Phonological Awareness

The Boat Is Sinking!

Objectives

- Show awareness of beginning sounds.
- Listen for different purposes.

Review beginning sounds in words. Name two or three children and tell the beginning sounds in each of their names. Then introduce the game by telling children: Imagine that we are all in a rowboat enjoying a lovely afternoon on the lake. But, oh! I see a hole in the bottom of the boat! Tell children to listen carefully and follow your instructions. Say: If your name begins with the /t/ sound, start rowing the boat to the

shore. Show children how to do the action by moving your arms in a circle. Then say: If your name begins with the /b/ sound, bail water out of the boat.

Demonstrate the action. Continue calling out different sounds until all children are performing one of the actions. Other actions are wave for help and swim to safety.

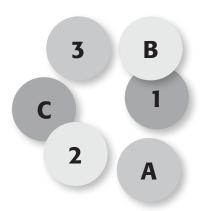


Alphabet Knowledge

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Differentiation

Advanced Have children give their islands a name that begins with the letter printed on each circle.



Alphabet Islands

Objectives

- Differentiate between letters and numbers
- Identify at least ten letters of the alphabet.

Materials

- construction paper, marker, scissors
- small beanbag

In advance, create "islands" using the construction paper; make large circles and write a letter of the alphabet or a numeral on it. Have children stand in a large circle. Place the alphabet and number islands in the "sea" on the floor in the center of the circle. Have children take turns trying to land the "boat" on an island by tossing a beanbag onto one of the circles.

- If a child's boat lands on an alphabet island, he or she calls out the letter and claims the island by picking it up.
- If a child's boat lands on a numeral, he or she calls out the number and tries again to land on an alphabet island.
- If a child's boat does not land on an island, he or she calls out, "Lost at sea!" and his or her turn ends.

Continue until all children have claimed an alphabet island.

Whole Group

pirate pirata treasure tesoro gold oro

Math. Pirate's Hidden Treasure

Objectives

- Use numbers and counting to solve problems and determine quantity.
- Use knowledge to solve problems.

Materials

- sand table
- rocks and pebbles of various sizes
- gold spray paint
- shovels
- colanders or other sifting tools

Before the activity, spray rocks and pebbles with gold spray paint. Allow time to dry. Then hide them in the sand table. Tell children to imagine that they have landed on an island where pirates have hidden their treasure on the beach. Have them search for the pirates' gold in the sand. Provide them with digging and sifting tools and allow time for them to collect all the gold. Then ask questions such as:

How much gold did each of you find? Who has more? How can we find out? Guide children to count and weigh their gold. Then challenge them to use the scales to divide the treasure evenly.

Literacy: Different Kinds of Boats

Objectives

- Ask questions and comment on book information and events.
- Contribute personal experiences and prior knowledge during storybook reading.

Materials

 nonfiction book about different kinds of boats

Ask children if they have ever been on a boat ride or seen a real boat. Invite them to share what they know about boats. Ask: What are the different purposes for boats? What do people use them for? (for fun, fishing, transportation, carrying goods, rescue) Then share a nonfiction book about different kinds of boats, such as Boats by Anne Rockwell, Harbor by Donald Crews, *Big Boats* by Catherine Ipcizade, and *Boats Afloat* by Shelley Rotner. During reading, prompt children to compare and contrast the different types of boats. Ask: How is this boat different from that one?



Use a black marker to draw simple pictures on paper plates. Have 3-year-olds paint them.

Art: Porthole Paintings

Objectives

- Identify types of lines.
- Plan and complete art projects.
- Use writing, drawing, and art tools.

Materials

pictures of porthole views

15

- round paper plates
- paint, brushes
- pencils, markers
- chart paper

Display various pictures of porthole views. Say: Ships and large boats have portholes, or round windows. If you get on a boat and look through a porthole, you will probably see water. If your window is above the water, you might see the sky, other boats, or nearby land. If your window is underwater, you might see fish, sharks, and dolphins swimming by your window. Tell children that they will create porthole paintings. Explain that different kinds of lines can be used to draw their picture: curved, straight, spiral, zigzag, and wavy. Draw different types of lines and invite children to describe them. Then guide children through these steps to complete their porthole paintings:

- Say: Think of one or two things you might see through a porthole.
- Have children draw a simple design on a paper plate, using a pencil to create different types of lines.
- Have them trace the final design using a black marker and then paint the picture.

After the porthole paintings are complete, invite children to share them with the class. If possible, display their porthole paintings on a wall, with abovewater paintings on the "upper deck," and below-water paintings on the "lower deck."



dance bailar

Music and Movement: Rosalita's Boat Ballet

Objectives

- Move and dance to music.
- Show proficiency, control, and balance when moving.

Materials

- scarves
- crepe paper streamers

Review the different types of boats children have learned about so far. Show pictures and prompt children to name them. Talk about how each boat moves. Then tell children: Rosalita Sausalita likes sailboats the best. When she visits Dilly, they watch the sailboats together. One day Rosalita noticed how the smaller boats float up and down as they move with the waves on the water. So she made up a dance!

Teach children the following song sung to the tune of "Frère Jacques":

Boats go sailing. Boats go sailing.

On the sea. On the sea.

Floating up and down, as graceful as can be.

Just like you. Just like me.

Provide scarves or crepe paper streamers and have children stand in place. Demonstrate what the word *graceful* means. Have them move the scarves or streamers gracefully in the air. Then sing the song together as children gracefully move around the room dancing with the scarves and streamers.



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Daily Check Up

While you present each lesson, note the following:

- **Opening Circle Time:** Do children respond with appropriate actions and expressions?
- **Phonological Awareness:** Do children recognize the beginning sound in their own names?
- **Alphabet Knowledge:** Do children distinguish between letters and numbers? Do they correctly identify the letters?
- **Small Group:** Do children use their knowledge of number, size, and weight to determine quantities?
- Whole Group 1: Do children share prior knowledge of boats? Do they compare different types of boats?
- Whole Group 2: Do children explore the use of lines in their art? Do they plan and complete the project?
- Closing Circle Time: Do children attempt to move gracefully in time to the music?

Record your observations as anecdotal notes.

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Spanish Vocabulary

river
rio
sea
mar
shore
costa

Oral Language: Where Go the Boats?

Objectives

- Listen to and understand poems.
- Use increasingly complex and varied spoken vocabulary.

Materials

- map of waterways such as the Mississippi River
- toy boats

Display a variety of toy boats. Explain that children all over the world enjoy playing with toy boats. Then display a map that includes waterways of rivers. Use your finger to trace the flow of water as you describe how streams lead into small rivers, and small rivers flow to larger rivers that eventually lead into the sea. Say: Listen to this poem about toy boats that get released in a river. Picture in your mind where they go and what each passes along the way.

"Where Go the Boats?" by Robert Louis Stevenson

Dark brown is the river,
Golden is the sand.
It flows along for ever,
With trees on either hand.

Green leaves a-floating,
Castles of the foam,
Boats of mine a-boating—
Where will all come home?
On goes the river
And out past the mill,
Away down the valley,
Away down the hill.

Away down the river,
A hundred miles or more,
Other little children
Shall bring my boats ashore.



Encourage children to use their imagination and describe additional things the boats might pass in their journey down the river. Encourage children to use complete sentences as they describe the boats' journey. Guide them to use the same sentence structures as in the poem, such as plurals with present tense verbs. For example: **The boats go past a tall, tall tree. The boats flow past a little house by the river.**

Inclusion If a child

has difficulty thinking

The Boat Floats By

Objective

Show awareness of beginning sounds.

Materials

toy boat

Have children sit in a circle and pass around a toy boat. Say: **The boat floats by boys. What sound does boys begin with? Listen: /b/ oys.** After children identify the beginning sound, ask them to think of something else that begins with **/b/**. Pass the boat to the first child who identifies a **/b/** word and have him or her repeat the sentence with the word. (The boat floats by **bears**.) The child then passes the boat to the next child, who repeats the sentence and names something else that begins with the sound. Continue until several children have had a turn. Then begin again with a new beginning sound.

Alphabet Knowledge

B Is for Boat

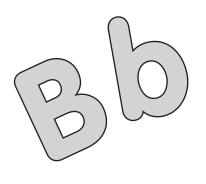
Objectives

- Know that letters of the alphabet are a special category of visual graphics.
- Notice beginning letters in familiar words.

Materials

chart paper

Write Bruno's name and read it aloud. Tell children: **Bruno Buzzbee noticed something special about his name: both** *Bruno* **and** *Buzzbee* **begin with the letter** *B.* Point out each capital *B* in Bruno's name. Write *B* and *b* slowly to show how the letters are formed. Have children practice writing the letters in the air. Say: *Boat* is another word that starts with *b*. Write the following sentence on chart paper: *Bruno Buzzbee bought a big boat*. Read the sentence aloud as you track the print. Have children repeat. Guide children to identify each *B* and *b* in the written sentence.





job

Social Studies: Floating Jobs

Objectives

- Develop awareness of jobs.
- Understand complex and varied vocabulary.
- Identify objects in the environment.

Materials

- photos of people who work on boats
- tools and equipment used by boat workers

Display photographs of different people who work on boats, such as sailors, fishers, boat captains, cooks, mechanics, nature guides, and hospitality workers. Include photos of small tools and equipment that these workers might use, such as fishing lures (with hooks removed), fishing poles, sunglasses, a sailor's hat, a two-way radio, cooking utensils, wrench, binoculars, pen and clipboard, and so on. Discuss the types of boats that each of these people work on and describe the nature of the job. Prompt children with questions such as:

- Why is this person's job important? What if there was no one to do that job?
- How long do you think they stay on the boat? How often do they get to go home?
- What kinds of skills would you need to do that job?
- Which of these items do you think that person needs to do the job?

Encourage children to respond in complete sentences that include more than one idea and plenty of detail, such as: I think they stay on the boat for a very long time and don't get to go home very much.



Whole Group

Spanish Vocabulary

book libro title título page página read leer

Literacy: Read About Toy Boats

Objectives

- Understand how to read or view a book.
- Listen to and discuss books and poetry.

Materials

• a book about a toy boat

Read a story about what happens after a toy boat is released in the water. Possible titles include *Toy Boat* by Randall de Sève, *Why Are You Fighting, Davy?* by Brigitte Weninger, *Beneath the Bridge* by Hazel Hutchins, and *Sail Away, Little Boat* by Janet Buell. Before reading the story, hold the book upside down and ask questions about how to read the book. For example: Where can I find the title of the book? Where do I start reading: on the first page or in the middle of the book? (on the first page) Let a volunteer show you how to hold the book and where to start reading. Then read the story. Pause to ask questions such as: What happens to the boat? What do you think will happen next?

After reading, set out a collection of fiction and nonfiction books about boats. Throughout the Investigation, encourage children to select books they would like to read independently or have read to them. Make sure they understand that they can ask an adult to read to them during certain times of the day.



Gross Motor Skills: Motorboat

Objectives

- Explore moving in space.
- Coordinate movements when playing.
- Participate in games, outdoor play, and exercise.

Materials

- photo of motorboat
- traffic cones or other items for obstacle course

Display a photo of a motorboat. Point out the motor and explain that motors run on gas and make the boat move through the water. Explain: When a motorboat first leaves the dock, it goes very slowly because there are so many other boats around. Once it gets away from other boats, the driver can make it go faster and faster.

Teach children the traditional game "Motorboat." Have children hold hands and walk in a circle, going slowly at first and then fast. As they move, have them chant the words slowly at first and then faster:

Motorboat, motorboat, go so slow.

Motorboat, motorboat, go so fast.

Motorboat, motorboat, step on the gas!

Then pair children up for motorboat races. Set up an obstacle course using traffic cones so "motorboats" can weave in and out of the cones as they race to the finish line.

After children finish, have them sit down to rest. Say: Hello, tired motorboats! Now listen as I say the word motorboat. I can hear two different words in this one word: motor and boat. Can you think of other words that include boat? Guide children to identify other compound words with boat, such as rowboat, sailboat, houseboat, speedboat, boathouse, lifeboat, and so on. Encourage them to listen carefully as you say each word and identify the two different words in each.



Dramatic Play: Drifting Down the River

Objectives

- Participate in dramatic play activities.
- Cooperate with others in an activity.

Teach children this fun game that incorporates dramatic play. Have children form "river banks" by standing in two lines facing one another. One child starts by pretending to be a boat floating down the "river." As the child moves through the space between the two lines, the other children call out:

Little boat, little boat,

Where can you be?

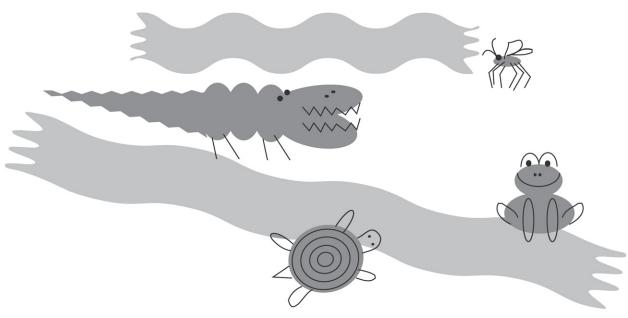
And the "boat" answers:

Drifting down the river,

And this is what I see!

Then the child playing the boat acts out something he or she might see while floating down a river. The others try to figure out what it is. The one who calls out the correct answer becomes the little boat drifting down the river. If no one guesses, the boat selects someone who has not yet had a turn.





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Daily Check Up

While you present each lesson, note the following:

- Opening Circle Time: Do children use a variety of words to describe things on the boat's imaginary journey?
- Phonological Awareness: Do children name other words that begin with the target sound?
- Alphabet Knowledge: Do children identify and recognize the shape and sound of Bb?
- **Small Group:** Do children understand the concept of jobs? Do they contribute appropriately to the coversation?
- Whole Group 1: Do children demonstrate an awareness of how to read a book? Do they respond to the story and answer questions as it is read?
- Whole Group 2: Do children control the speed of their movements?
- Closing Circle Time: Do children contribute appropriately to the game and act out their chosen words?

Record your observations as anecdotal notes.

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