

# Discovering Shells

Integration Cards, or *iCards*, may be used as enrichment activities by the teacher, teacher's aide or volunteer, in any sequence, to integrate Language & Literacy, Math and Creative Arts into the science content presented in this unit.

## **Language & Literacy**

- L1. Fingerplay
- L2. Sing Along Song
- L3. Picture Walks
- L4. Read Aloud

## **Math**

- M1. Shell Counting
- M2. Shell Patterns
- M3. Shell Lotto
- M4. Arranging Shells in Sequence

## **Creative Arts**

- C1. Seashell Painting
- C2. Sand-sational Ocean Art
- C3. Shell Tracings
- C4. Seashell Imprints

## Fingerplay

### Guidelines

1. Introduce the fingerplay words and hand motions one line at a time. Tell the children: **Say it after me.**
2. Use rhythm and hand motions to engage the children.
3. As the children recite the fingerplay chant, ask them to use soft voices, then loud voices.

### *I Went to the Beach*

I went to the beach, and what did I see?	<i>(make binoculars with hands)</i>
A bird on the sand, looking at me!	<i>(make beak with fingers over nose)</i>
I went to the beach, and what did I see?	<i>(make binoculars with hands)</i>
A fish in the water, splashing at me!	<i>(wiggle one hand to imitate fish swimming)</i>
I went to the beach, and what did I see?	<i>(make binoculars with hands)</i>
A shell in the sand, sparkling at me!	<i>(raise hands and wiggle fingers to imitate "sparkle")</i>
I went to the beach, and what did I see?	<i>(make binoculars with hands)</i>
A crab in its shell, waving at me!	<i>(form a "C" with hands to imitate claws and wave from side to side)</i>



# Sing Along Song

#### Guidelines

1. Introduce the song and motions one line at a time. Tell the children: **Sing after me. Do what I do.**
2. Next, have the whole group sing the song.
3. When you get to the line, *"To hear the ocean roar"*, ask children to cup their hand to their ear and pretend to hear the sound of the ocean.

### *I Went Swimming in the Ocean*

*Sung to the tune of "I've Been Working on the Railroad"*

I went swimming in the ocean  
On a summer day.

*("swim" with hands)*

I went swimming in the ocean,  
And kicked, and splashed and played.

*("swim" with hands)  
("splash" with hands)*

After lunch we looked for seashells.  
I found three or four.

*(show searching with hands)  
(hold up 3, 4 fingers)*

With a shell you can imagine  
To hear the ocean roar.

*(cup hand to ear)  
(continue to cup hand to ear)*

Hear the ocean roar!  
Hear the ocean roar!

You can hear the ocean *roar, roar, roar!*

Hear the ocean roar!  
Hear the ocean roar!

You can hear the ocean roar, once more!



# Picture Walk

## Guidelines

### 1. Choose a book.

Select a book from the *Discovering Shells Picture Walk Books* list. If these books are not available, find another content-related book filled with rich, detailed pictures.

### 2. Get to know the book.

Read the story to yourself before sharing the book with the children. Notice how the illustrations tell the story.

### 3. Enjoy reading time!

Make sure everyone is comfortable and able to see the book. If needed, establish rules for good behavior.

Taking a picture walk through a book is one of the earliest stages of reading. It enables children to “read” books by looking at the pictures. Ideal Picture Walk books have rich illustrations. When a book has too much text to hold children’s attention, use it to show just the pictures. Wordless books are also a great choice for Picture Walks.

#### 1. Before conducting the picture walk:

Let the children know you are going to read this book by looking at the pictures.

- Show the cover of the book.
- Read the title, the author’s name, and the illustrator’s name.
- Ask children to predict what they think the story will be about based on the cover and the title.

#### 2. While conducting the picture walk:

- Slowly go through the book, page by page.
- Ask a few questions about each picture. For example:

**What do you see in this picture?**

**Have you ever seen \_\_\_\_\_? Tell me something about it.** (Substitute with a word related to the book; character, animal or place)

**Where is this part of the story taking place?**

**Where do you think they are going?**

**What do you think will happen next?**

#### 3. Share the book again and again.

When children like a book, they want to “read” it over and over.

#### 4. Leave the book in the science or book area for the children to enjoy.

# Picture Walk Books

## ***Lesson 1: Waves in a Bottle***

*Sand* by Ellen J. Prager

What is sand? How is it formed? Where does sand come from? How does it get to the beach? Why is it different colors?

## ***Lesson 2: Shells Protect***

*A House for Hermit Crab* by Eric Carle

Hermit crab moves out of his small shell in search of a bigger one. This colorful and exciting book illustrates how shells protect marine animals.

## ***Lesson 3: Shells on the Beach***

*Seashells* by Ann O. Squire

A simple introduction to seashells, this book discusses different types of shells, where they are found, and how they are made.

## ***Lesson 4: Shell Mystery***

*My Shell Book* by Ellen Kirk

This book illustrates a variety of shells of different colors, shapes and sizes. Children learn about their unique characteristics through colorful photographs.

**Read Aloud****Guidelines****1. Choose a book.**

Select a book from the *Discovering Shells Read Aloud Books* list. If these books are not available, find another content-related book.

**2. Get to know the book.**

- Read the story to yourself before reading the book to your class.
- Plan ways to change your voice to fit the plot and characters.
- Gather props.

**3. Enjoy reading time!**

Make sure everyone is comfortable and able to see the book. If needed, establish rules for good behavior.

When children are read to, they are likely to grow into good readers. As they listen to stories, children hear rich vocabulary and proper language structure, and learn new information about the world. Being read to can enhance imagination, creativity, and curiosity. When selecting a book for a Read Aloud, consider the amount of text and the children's attention span.

**1. Before reading the story:**

- Show the cover of the book.
- Read the title, the author's name, and the illustrator's name.

**2. While reading the story the first time:**

- Focus on the flow of the story.
- Read with expression, change your voice for different characters.
- Vary the reading speed: fast for exciting parts, slow for scary or quiet parts.

**3. After reading the story:**

- Ask a few questions about the book. For example:

**Who would you like to be in the story?**

**When did the story get exciting/scary?**

**What would you have done?**

**Why did they do that?**

**Where did the story happen?**

**How would you change the ending?**

- Have the children re-tell the story or act out their favorite part.

**4. For additional readings:**

- Invite children to ask questions or discuss the story.
- Encourage children to say words they remember from the story as you read them.
- Assist children in recognizing the sounds that make up words.

**5. Leave the book in the science or book area for the children to enjoy.**

**Read Aloud Books*****Lesson 1: Waves in a Bottle***

*Joshua by the Sea* by Angela Johnson

Joshua is a young boy who enjoys a day at the beach with his family as he discovers the sun, sand, and sea.

***Lesson 2: Shells Protect***

*Shells! Shells! Shells!* by Nancy Elizabeth Wallace

When Buddy Bear and his mother go to the beach she teaches him all about shells and mollusks. This book also includes facts about shells.

***Lesson 3: Shells on the Beach***

ECHOS Book: *Busy Beach Day* by Ava Goldman

Kayla and Nick head to the beach with their Dad to discover the wonders of seashells and ride their bikes. It's a busy beach day for Kayla and Nick!

***Lesson 4: Shell Mystery***

*Seashells by the Seashore* by Marianne Berkes

This rhyming book introduces many shells found in the seashore and includes a shell identification card.



# Shell Counting

### Materials

- assortment of small shells
- *Shell Counting Board* page
- copy paper

### For each child:

- small bowl filled with small shells
- *Shell Counting Board*

### Preparation

Make one copy of the *Shell Counting Board* page for each child.

Children use shells to count using one-to-one correspondence and begin recognizing written numerals.

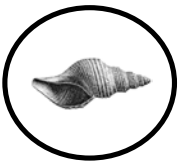
### Procedure

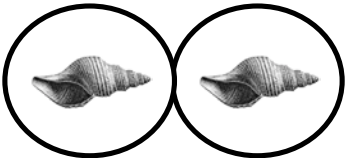
1. Say: **Today we are going to count shells and learn about numbers.**
2. Give each child a *Shell Counting Board* (numbers 1-5). Say: **Look at your board.** Point to the number “one” on it and say its name. **This is the number “one.” Next to it, you will find one circle. Can you find a shell and put it inside the circle?** Demonstrate as needed. Point to the number “one” again. Say: **This is the number “one.”** Then point to the shell inside the circle. Say: **“one shell.”**
3. Repeat prompts with numbers two through five.
4. Say: **Let’s look at our counting board again. Can you point to each number and count with me?** Use a chant-like voice and count each row. **One shell, two shells, three shells, four shells, five shells.**
5. *Variation:* As children become developmentally ready, challenge them to use the *Shell Counting Board* from page M1.2 to count the numbers 6-10.




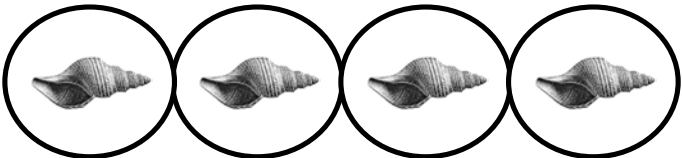


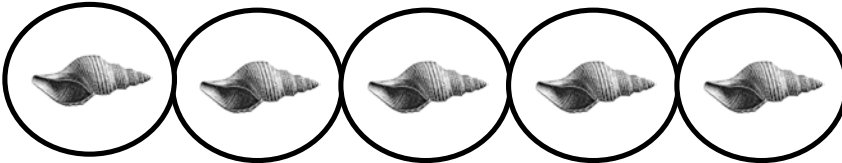
# Shell Counting Board

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2 

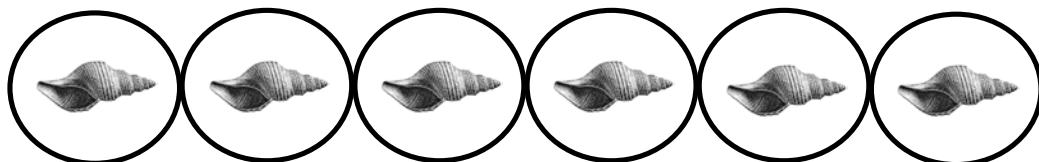
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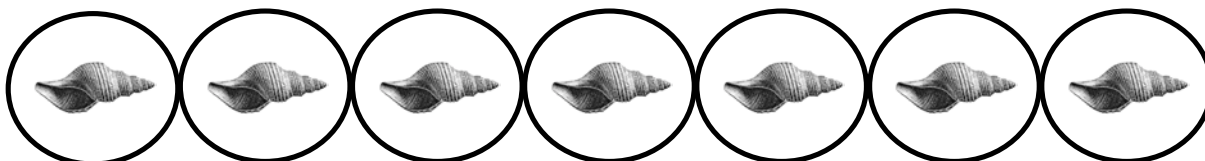
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# Shell Counting Board

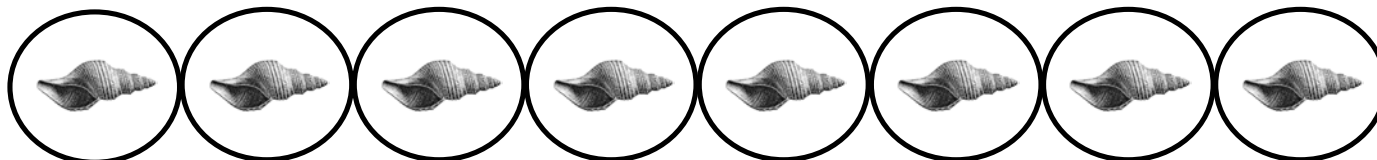
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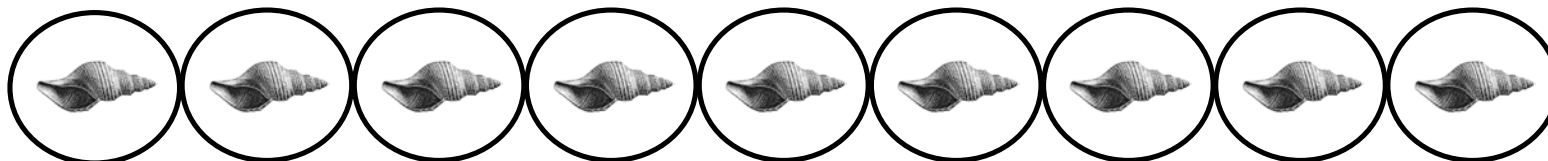
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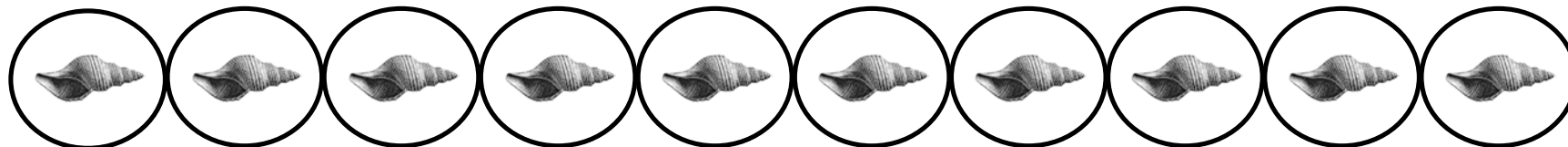
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9



10



# Shell Patterns

**Materials**

assortment of shells (smooth and rough shells)

Children describe attributes of shells.

**Procedure**





1. Say: **Today we will look closely at two special features of shells.**
2. Give each child a shell with either a rough or smooth surface. Say: **Close your eyes and hold out your hand. I'm going to give you each a shell.** Give each child a shell.
3. Ask the children to feel the shell without looking. **Tell me if your shell is rough or smooth. We're going to make a pattern with our shells.**
4. Ask:
  - **Who has a rough shell?** Choose one child to place a rough shell on the table.
  - **Who has a smooth shell?** Choose one child to place a smooth shell on the table next to the rough shell to begin a pattern.
  - **Who else has a rough shell?** Choose one child to place another rough shell on the table next to the smooth shell to continue the pattern.
5. Say the pattern out loud. **Look at our pattern: rough, smooth, rough. What kind of shell comes next?** Prompt children to say *smooth*.
6. Repeat until all the children have had a chance to place a shell in the pattern.



### Materials

- *Shell Lotto Board* page
- copy paper
- sand
- large assortment of shells

### For each child:

- small bowl of sand
- *Shell Lotto Board*
- four types of shells:
  -  one moon snail
  -  one auger
  -  one conch
  -  one cockle
- four other types of shells of different shapes

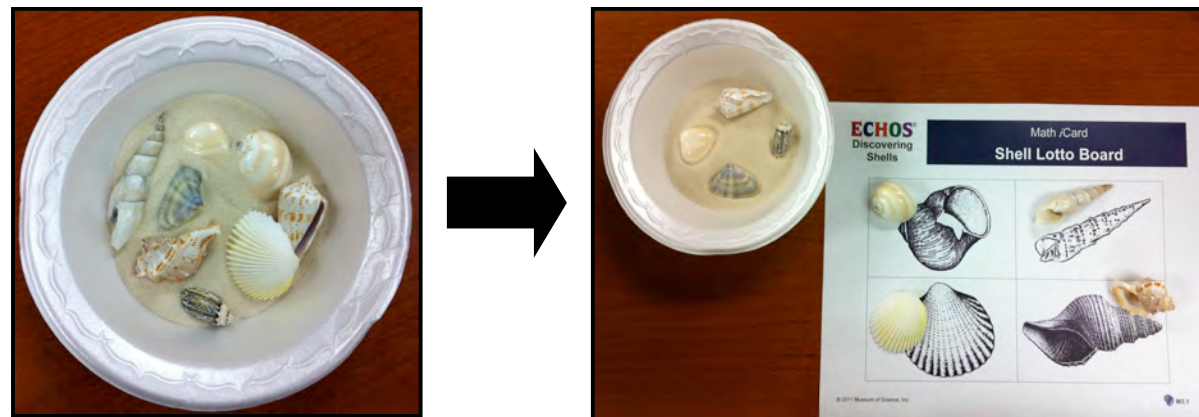
### Preparation

1. Make a copy of the *Shell Lotto Board* page for each child.
2. Add to each bowl of sand eight shells (four shells must match the *Shell Lotto Board*.)
3. Set aside four shells for teacher use that match shell pictures on the *Shell Lotto Board*.

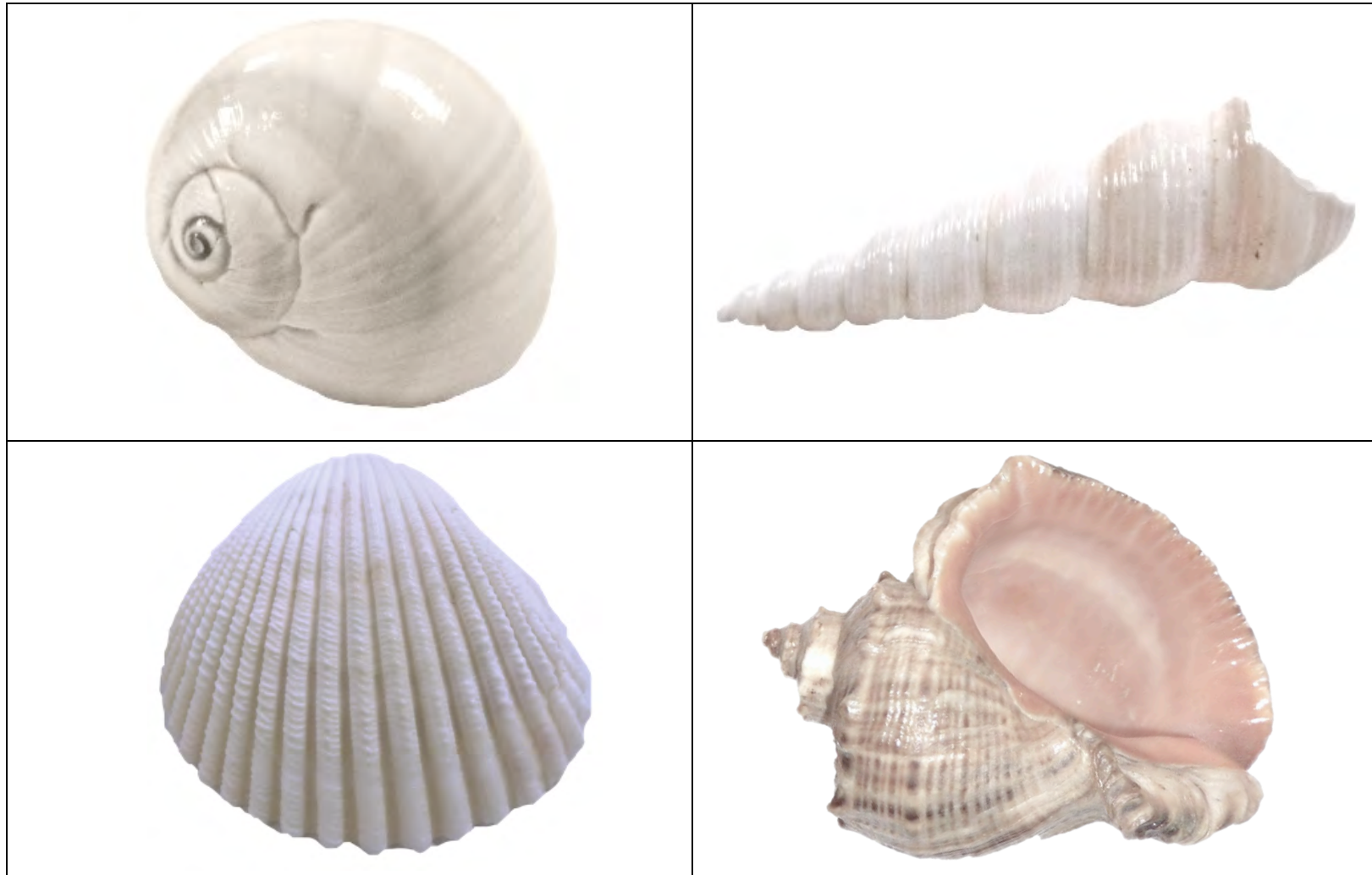
Children match real shells to pictures of shells.

### Procedure

1. Say: **Today we are going to play a matching game called *Shell Lotto*. In this game you will dig for shells in a bowl of sand.**
2. Give each child a *Shell Lotto Board* and a bowl of sand with eight shells (four shells must match the shell pictures on the cards.) **Place your lotto board in front of you.**
3. **When I hold up a shell, look at it closely. Then dig in your bowl of sand for a shell that looks the same. When you find it, place it on the matching picture on your *Shell Lotto Board*.**
4. **Let's begin.** Hold a shell. **Do you remember the name of this shell?** Listen to the children's responses. Recall the specific name of the shell. **This is a \_\_\_\_\_ shell. Start digging! Did you find it? When you find it place it on your *Shell Lotto Board*.**
5. Guide the children and assist as needed until each child has covered their *Shell Lotto Board* with the correct matching shells.



# Shell Lotto Board



# Arranging Shells in Sequence

### Materials

- assortment of five shells of different sizes, colors and shapes (choose shells that are very different in size)
- *Shell Sequence Boards* page
- copy paper
- small bowl for the teacher

### For each child:

- one small bowl with an assortment of five shells
- one set of *Shell Sequence Boards*

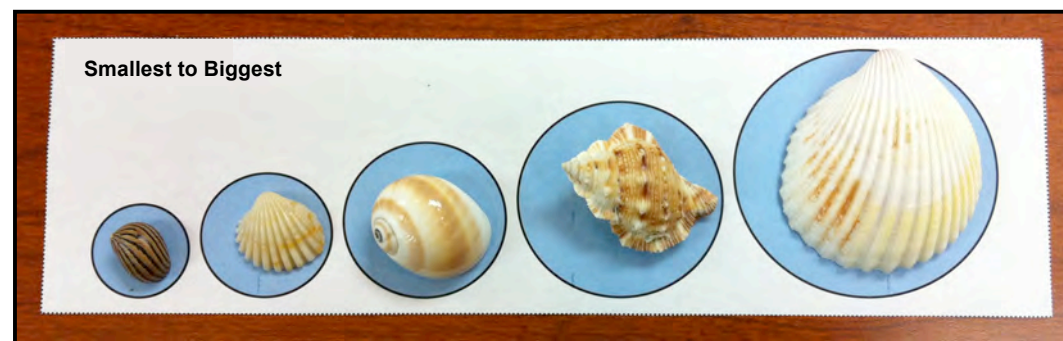
### Preparation

1. Prepare the bowls with the five shells for each child.
2. Make a copy of the *Shell Sequence Boards* page for each child and cut both boards.

Children learn how to sort shells by size from smallest to biggest and biggest to smallest.

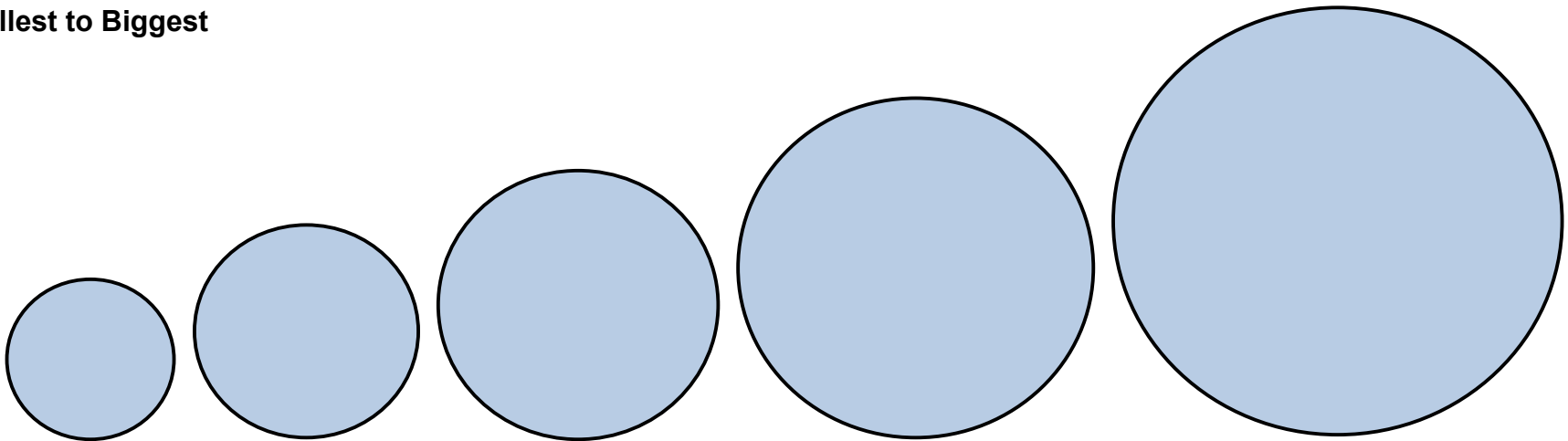
### Procedure

1. Say: **Today we are going to sort shells by size from smallest to biggest.**
2. Start by introducing two shells of different sizes, then a third, fourth and fifth shell.
3. Give each child the “Smallest to Biggest” *Shell Sequence Board*. Ask the children to arrange up to five shells from smallest to biggest.
4. When the children have completed this task successfully, give each child the “Biggest to Smallest” *Shell Sequence Board*. Ask the children to arrange their shells from biggest to smallest. Challenge the children to arrange up to five shells in this way.
5. When done, have the children carefully pour back all their shells into their bowls.
6. Tell the children the materials will be in the science area so they can sort for fun.
7. *Variation:* Challenge the children to arrange up to five shells from smallest to biggest on a 12” x 18” piece of construction paper, without the Shell Sequence Board. Model this activity.

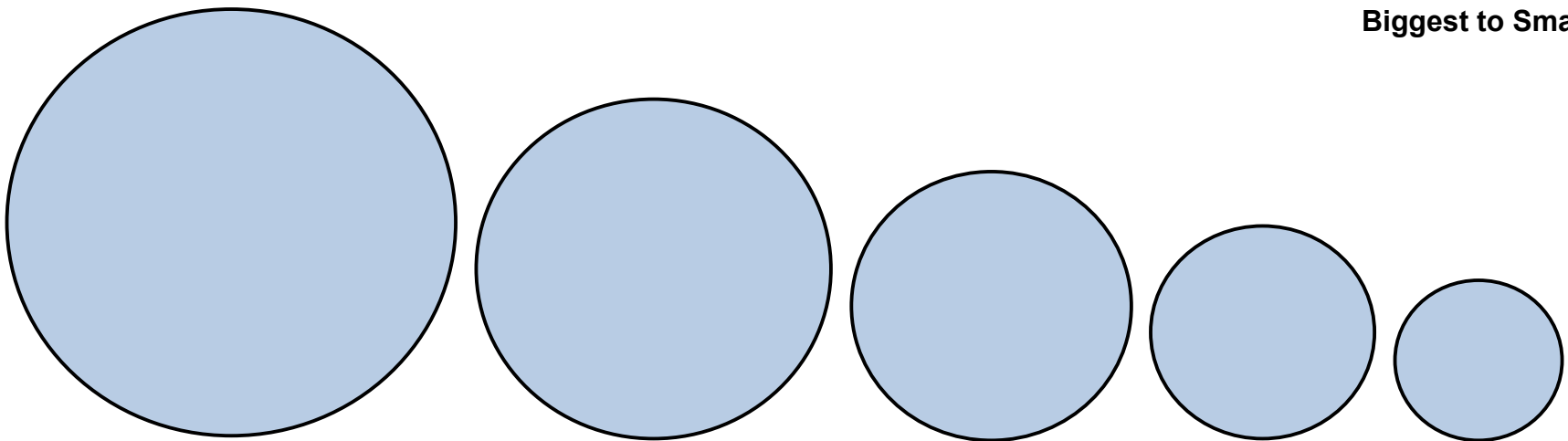


# Shell Sequence Boards

Smallest to Biggest



Biggest to Smallest



# Creative Arts iCard

## Seashell Painting

### Materials

- assortment of seashells
- clear plastic container
- variety of art materials: *crayons, markers, pencils, colored pencils or paint*

### For each child:

- sheet of 9" x 12" white construction paper
- magnifier (if needed)

### Preparation

1. Choose art materials that are accessible and age-appropriate for the children in the group and place them on the table.
2. Place container with seashells on the table.

Children draw/paint seashells using a variety of art materials.

### Procedure

1. Ask children to reach into the container and choose one shell.
2. Say: **Today we are going to paint a picture of a seashell.**
3. Allow each child time to observe their shell closely. Use magnifiers if needed.  
Ask the children:
  - **What type of shell did you choose?** Prompt the children to say: *auger, cockle, conch or moon snail.*
  - **How does it feel?** Prompt the children to say: *bumpy, pointy or smooth.*
  - **What colors do you see?**
4. Give each child a set of art materials.
5. Encourage children to draw and paint their shell using the art materials provided.
6. Display the children's work.





# Sand-sational Ocean Art

### Materials

- masking tape
- blue food coloring or watercolors
- water

### For each child:

- 4½" x 5½" sheet of sandpaper (9" x 11" sheet cut into four pieces)
- 8½" x 11" sheet of white paper
- paper
- crayons
- small shallow bowl with water
- paint brush

### Preparation

Tape each piece of sandpaper near the edge of the table and in front of each chair.

Children use sand rubbing, crayons and watercolors to depict the ocean.

### Procedure

1. Say: **Today, we are going to make a drawing of the ocean.**
2. Model for the children how to make a crayon rubbing with the sandpaper. Put the sandpaper under one corner of the white paper and rub over it with a brown crayon to represent the beach. Use other crayons to add waves, sand, shells, or plant and animal ocean life.
3. Encourage the children to make a rubbing and drawing on their own.
4. Add a few drops of blue food coloring to each bowl of water, or use watercolors instead.
5. Instruct each child to lightly paint over the entire painting with the blue water. This blue wash will complete the artwork by making it look like an underwater scene.



### Materials

- crayons or markers
- assortment of seashells

### For each child:

- sheet of drawing paper

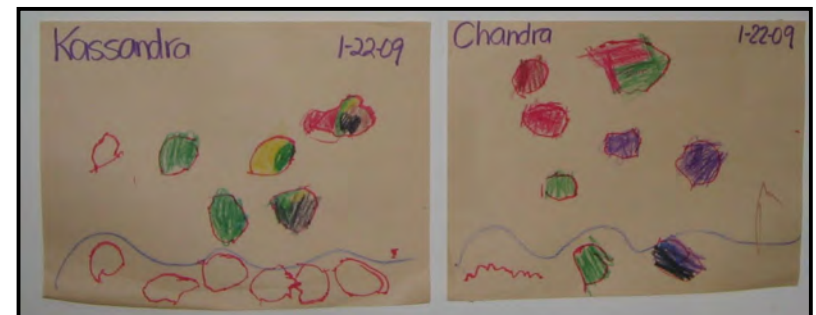
### Preparation

1. Set out one sheet of drawing paper for each child on a table.
2. Place a variety of seashells on the table.
3. Place markers and crayons on the table.

Children trace an assortment of seashells.

### Procedure

1. Say: **Today we are going to trace the shapes of seashells.**
2. Guide the children as they choose a shell to trace. **See if you can trace the whole shell onto your paper. Follow the edges of the shell with your crayon or marker.**
3. Allow the children to continue tracing a variety of shells onto their paper. They can color in the shells they have traced and draw a beach scene or ocean scene on the rest of the paper.
4. Display the children's work.



# Seashell Imprints

### Materials

assortment of seashells

### For each child:

small handful of play dough

### Preparation

1. Place one small handful of play dough per child on the table.
2. Place an assortment of seashells on the table.

Children learn about the various textures of seashells by imprinting them in play dough.

### Procedure

1. Say: **We are going to explore the textures of seashells by pressing them into play dough.**
2. Show the children how to make an imprint by pressing one shell into play dough.
3. Allow the children to freely explore the materials, practicing how to make imprints and observing the textures of shells.
4. Suggest that the children press the shell into the play dough.
5. Encourage the children to compare the different shapes, patterns and textures.

