



---

## Secrets of the Seashore

Written by Carron Brown

Illustrated by Alyssa Nassner

This unique book reveals the secrets of the seashore: mussels, crabs, starfish, octopus, shrimp, seaweed, sea otters, clams, and more. The hidden wonders of this amazing habitat are all inside.

### Before Reading

- Ask, "What is a secret?" "How can the seashore have secrets?"
- Look at the cover of the book and ask the children what they see. Ask if those could be the seashore's secrets.

### The Read-Aloud Experience

To read aloud a Shine-a-light book, shine a flashlight behind each page asking, "Can you see..." or hold it to the light to reveal what is hidden in and around the tide pool.

- First, read the text of the page, including the question.
- Next, use light to reveal the hidden surprise.
- Once they have seen the surprise, turn the page and read more about the secret.
- This read-aloud experience should not be rushed. Allow the children time to look closely and to make comments on each page.
- Depending on the age and the attention span of your child or your group, you may consider reading half of the book in one sitting and the other half in a later sitting. Then the next time the children will be familiar with the secrets, and you can read it cover to cover. Subsequent readings will be just as exciting, because there will always be new things to see and new things to talk about.

### Activities

This book has many topics that can be expanded upon with activities, lessons, and additional readings. The last two pages of the book give nine fun and educational areas for further exploration. And a list of 18 science and nature topics mentioned in the book follow at the end of this document.

### Salt Water or Freshwater?

- **Tasting:** Make a saltwater solution by adding a little more than 1/4 cup table salt to a gallon of water. Give the children a sample of it along with a sample of freshwater. Let them describe how each one tastes. Explain that freshwater is found in lakes, rivers, ponds, streams, and underground, but 97% of the water on the earth is salt water found in oceans and seas. Not only does salt water (seawater) not taste very good, it also takes the water out of your body in a process known as *dehydration*. That's why people who are out on the ocean can't drink seawater. (Depending on the age of your group, you may want to look into dehydration and/or salt [sodium chloride] in more detail.)
- **Testing density:** Fill one bowl with your saltwater solution and another with freshwater. Ask the children to predict what will happen when you put a fresh egg in each one. Explain that the egg floats in the salt water because salt water is denser than fresh



.....

water. The more salt, the denser the water. This activity may be set up in a learning center for independent experimentation substituting a bar of soap for the egg.

### Octopus

Note: You can choose any of the 15 living things found in the book and design similar activities around them

- **Math:** Explain that *octo* means eight and the octopus has 8 legs.
  - Count by 8s.
  - During daily routines, see how many numeral 8s you can spot, or how many things there are 8 of.
  - Make an 8-inch ruler and measure how many 8-inch units are in various things around the room.
  - If our arms were tentacles, how many of us would it take to have 8? What if our arms *and* feet were tentacles?
- **Tasting:** Bring in octopus to taste explaining that many people around the world eat octopus.
- **Music/Large Motor Skills:**
  - Share the Beatles song "Octopus's Garden."
  - Explain that the octopus moves using rows of suction cups along the edges of its tentacles and swims using jet-propulsion. Let the children walk on all fours as though they had suction cups, and then "swim" to this song or any music. Ask which way of movement is faster?
- **Memory Skills:**
  - Explain that an octopus can squeeze through tight places because it has no skeleton, making it an invertebrate. The octopus is one of the most intelligent of all invertebrates, having shown the ability to store both short-term and long-term memory.
  - Provide a memory card game for the children to play in small groups. Explain that if he could, the octopus would challenge them to this game!
- **Math:**
  - Explain that octopus eggs are very tiny, about the size of a grain of rice. The female octopus lays about 1,000 eggs at a time. She cares for them in a nest she builds under a rock. Once the eggs hatch, the mother dies.
  - As the children are sitting at their tables or desks, give each child 2 small containers, one of which is filled with raw rice. Divide 1,000 by the number of children to determine how many grains of rice each should count out and place in their empty container. Once they've done so, put them all together to show what 1,000 "octopus eggs" looks like. Ask them to share their thoughts.
- **Science: Camouflage**
  - An octopus eats mainly crabs, whelks, clams, prawns, and fish. It has a hard beak, with its mouth at the center point of its tentacles. The 8 tentacles are webbed together by a layer of skin, called a mantle. Underneath are color



cells that allow it to change colors: white, grey, orange, red, or brown. The bright colors help it lure and capture the other sea animals it eats.

- When in danger, an octopus squirts a cloud of black ink then quickly swims away, but changing colors to blend in or resemble different objects in its environment also helps it hide from predators.
- Ask the children to think of other animals that use camouflage for protection or to attract prey. Collect photos and illustrations over the course of many days.

### Art

- **Sand Drawing:** Have the children make a design by squirting glue on construction paper, then sprinkle sand on the paper, shaking off the excess to create a 3-dimensional picture.
- **Sand Painting:** See what happens when sand is added to tempera paint.
- **Sand Fingerprinting:** Put some damp sand on a tray and let the children fingerprint in it.
- **The Ocean Blue:** Let the children get creative with blue paper, blue crayons and markers, blue tissue paper, blue ribbon, blue yarn, blue pompoms, etc. Keep these same materials out for several days.

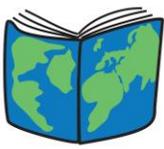
### Creative writing

Choose from any of these questions, or provide your own ideas that the children can use to write a story.

- What would you see, and what would it feel like if you were on the seashore?
- If you met a sea otter or a hermit crab in person, what would happen, and how would you feel?
- If you could breathe underwater, what would you do, and where would you go?

### Guided Independent Study

- Have each child choose a creature to study from the list at the end of this document.
- Provide many resources for them to use to find out as much as they can about their chosen creature.
- Ask them to write several sentences or paragraphs about what they've learned.
- Students may want to present their project to the group.
- This project might also include
  - Drawings and photos
  - Diagrams
  - Diorama
  - Maps
  - Video
  - Posters/display boards
  - Models (figures)
  - Songs
  - Script for a skit
  - Sound effects
  - Costumes/masks
  - Sculpture



.....

These additional topics from ***Secrets of the Seashore*** may be used to explore science, math, literacy, art, and movement as a group, or as subjects of guided independent study projects.

1. Tide pool
2. Mussels
3. Barnacles
4. Sea anemones
5. Crabs
6. Starfish
7. Octopus
8. Hermit crab
9. Shrimp
10. Seaweed
11. Whelk
12. Sea otter
13. Sea urchin
14. Oystercatcher
15. Clams