



pets in the
classroom

Design a Home for a Hermit Crab

Adapted from	A House for Hermit Crab Lesson Plan Hermit Crab Lesson Plan for Pre-K students By Michelle Kush Basic understanding of a hermit crab Pets in the classroom lesson plan Pre-K Gabriella Giglio St. Mark Catholic Academy Overview: I use A House for a Hermit Crab i
Pet: Hermit crab	Class: PK -2

Brief Overview: Students learn about hermit crabs and how they use their shells. After making observations about hermit crab shells, these students design their own hermit crab shell.	Lesson Breakdown Lesson 1: Meet the Crabby Crusaders! Lesson 2: Design a Shell
Essential Question How do hermit crabs choose and use their shells?	

Subjects <ul style="list-style-type: none"><input checked="" type="checkbox"/> Science<input checked="" type="checkbox"/> ELA<input checked="" type="checkbox"/> Math<input checked="" type="checkbox"/> STEM<input type="checkbox"/> Art<input type="checkbox"/> Other	Stem Connections Science: adaptation Technology: scales Engineering: designing a shell Math: measuring
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Performance Expectations/ Standards

NGSS

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive

K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs

CCSS

Math K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object

ELA-LITERACY.SL.K.1 Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.

ELA-LITERACY.SL.K.1.A

Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).

I CAN statements

- describe the body parts of a hermit crab.
- explain why hermit crabs need shells.
- identify different types of seashells.
- design and color my own hermit crab shell.
- share my ideas about hermit crab shells with others.

Materials

- Large picture of a hermit crab
- seashells of different shapes and sizes
- [A House for a Hermit Crab](#) by Eric Carle or
▶ [A house for Hermit Crab By Eric Carle - Read Well - Read Aloud Videos for Ki...](#)
- Student pictures (see Lesson 1)
- Paper plates
- Scissors
- crayons, markers, glitter, and glue

Teacher Background

Hermit crabs lack their own hard carapace, relying instead on a second-hand sanctuary: the seashell. But these aren't just pretty beach finds; they're life-sustaining shields, portable apartments, and even fashion statements in the ever-shifting underwater world.

Unlike their hard-shelled brethren, hermit crabs have soft, vulnerable abdomens. Enter the seashell, a pre-owned palace plucked from the ocean floor. These shells, primarily composed of calcium carbonate, a mineral secreted by mollusks like snails and clams, act as life-saving fortresses. They shield the crab's squishy interior from hungry fish, curious gulls, and the perils of a rocky coastline. It's a portable security blanket, ensuring our crustacean friend avoids becoming a tasty snack.



But beyond a mere shield, the shell is a multi-functional marvel. It's a cozy condo, offering space for rest, dining, and even sunbathing. Some shells even come with built-in camouflage, sporting patterns and textures that blend seamlessly with the seabed, transforming the crab into a stealthy ninja of the reef.


As hermit crabs grow, their homes become cramped. They undergo a process called molting. The crab secretes a new, larger exoskeleton beneath its old one. Then, it contorts its body and escapes its old shell. With its shiny new exoskeleton exposed, the crab embarks on a house-hunting spree, often engaging in epic shell battles with competitors before claiming the perfect upgrade.

Hermit crabs are nature's ultimate recyclers, giving used shells a new lease on life. This reduces the need for new shell production, saving marine animals valuable energy and resources. Sadly, with pollution and habitat loss plaguing our oceans, finding a suitable shell has become a growing challenge for hermit crabs. This highlights the importance of protecting marine ecosystems and the creatures that call them home. By ensuring clean waters and healthy coral reefs, we can give these shell-ebrating crustaceans a fighting chance to find their perfect fit.

These little critters are a testament to ingenuity and adaptability.

Lesson 1: Meet the Crabby Crusaders!

Time	Materials	Activity
5 mins	Large picture of a hermit crab, seashells of different shapes	<p>Show the picture of the hermit crab and discuss its body parts. Show a real hermit crab in its habitat in the classroom. Discuss what the students see (crab, sand, soil, food, water, cage, etc...)</p> <p>Explain that hermit crabs don't have their own hard shells, so they use seashells for protection. Explore different seashells, talking about their shapes, sizes, colors, and textures. Ask students questions like: "Do you think all hermit crabs can use the same shell?" "Why do you think so?"</p>
10 mins	Scale Ruler	<p>Have the students think of all the ways they can describe the hermit crab's shell (size, color, shape, etc.)</p> <p>With teacher supervision, have the students weigh and measure the hermit crab.</p>
15 mins	<p> A house for ...</p> <p><u>A House for a Hermit Crab</u> by Eric Carle.</p>	<p>Teachers and students will take a picture walk using the text, <u>A House for a Hermit Crab</u> by Eric Carle. Or show the video at</p> <p> A house for Hermit Crab By Eric Carle - Read Well - ...</p> <p><i>Book Description: One day Hermit Crab discovers that he has outgrown his shell. He is frightened and moves into another shell but thinks that it looks too plain. So, each month he finds a new friend to live with him. Eventually, Hermit Crab outgrows his shell and must find an even bigger shell to make his home. He is reluctant to leave his new friends but finally does, and a little hermit crab, who promises to be good to Hermit Crab's friends, moves into the shell. Hermit Crab finds a bigger shell in which to reside, but this time he isn't afraid. He knows that he can make new friends.</i></p>
5 mins		<p>Discuss the book with the students.</p> <ol style="list-style-type: none"> 1. Name some of the animals the hermit crab met. How do these different animals move through the ocean? 2. What is a habitat? Describe hermit crabs' habitat.

		<p>3. Discuss why hermit crabs need a house.</p> <p>4. Ask students to give ways the plants and animals helped hermit crab with his house. (for example the snails cleaned his house, the spiky sea urchins protected it, and the lantern fish provided light)</p>
10 mins		<p>Take a picture of each child pretending to be a hermit crab coming out of its shell. Have preschoolers hold their hands and fingers to look like a claw and squat down. Print the photos before beginning the next project.</p> <p>Example below from A House for Hermit Crab Lesson Plan</p> 

Lesson 2: Design a Shell		
Time	Materials	Activity
25 mins	Student pictures Paper plates scissors crayons, markers, glitter, and glue	Pass out paper plates and have preschoolers watercolor them. When they are finished, teachers will help them to cut the paper plate into a swirl shape and glue on their photo to the shell.

		Allow students to use crayons, markers, glitter, and glue (with adult supervision) to decorate their shells with their chosen features.
15 mins		Have students share their finished shell designs with the class. Encourage them to describe the features they created and explain why they thought they would be helpful for a hermit crab.
5 mins		Wrap up the lesson by summarizing the importance of shells for hermit crabs and why they come in so many different shapes and sizes.

Differentiation

For students who need additional support:

- provide pre-drawn features like camouflage patterns or claws that they can cut out and glue onto their shells.

For students who need additional challenges:

- challenge them to research different types of hermit crabs and design shells specifically suited to their needs.

Assessment

Skill	Exceeding Expectations	Meeting Expectations	Developing	Needs Improvement
Creativity & Originality	Design is creative and unique, demonstrating imagination	Design showcases good originality and features.	Design shows some unique elements but may borrow heavily from other students' ideas.	Design lacks unique features or inspiration from the hermit crab theme.
Color & Decoration	Color choices are creative and detailed	Color choices are bright and varied	Color choices are present but basic	Color choices are limited or absent.
Contribution to Discussions	Actively participates in discussions, shares ideas thoughtfully, and	Participates in discussions, shares ideas, and listens to others.	Occasionally participates in discussions and may interrupt others.	Rarely participates in discussions and may be disruptive

	listens respectfully to others.			
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Extension

- Paste the creations on a large sheet of paper or bulletin board and have the students draw detailed scenes, illustrating the hermit crab living its daily life.
- Have the students write or dictate a story about the life of their hermit crab