

# Hermit Crab STEM

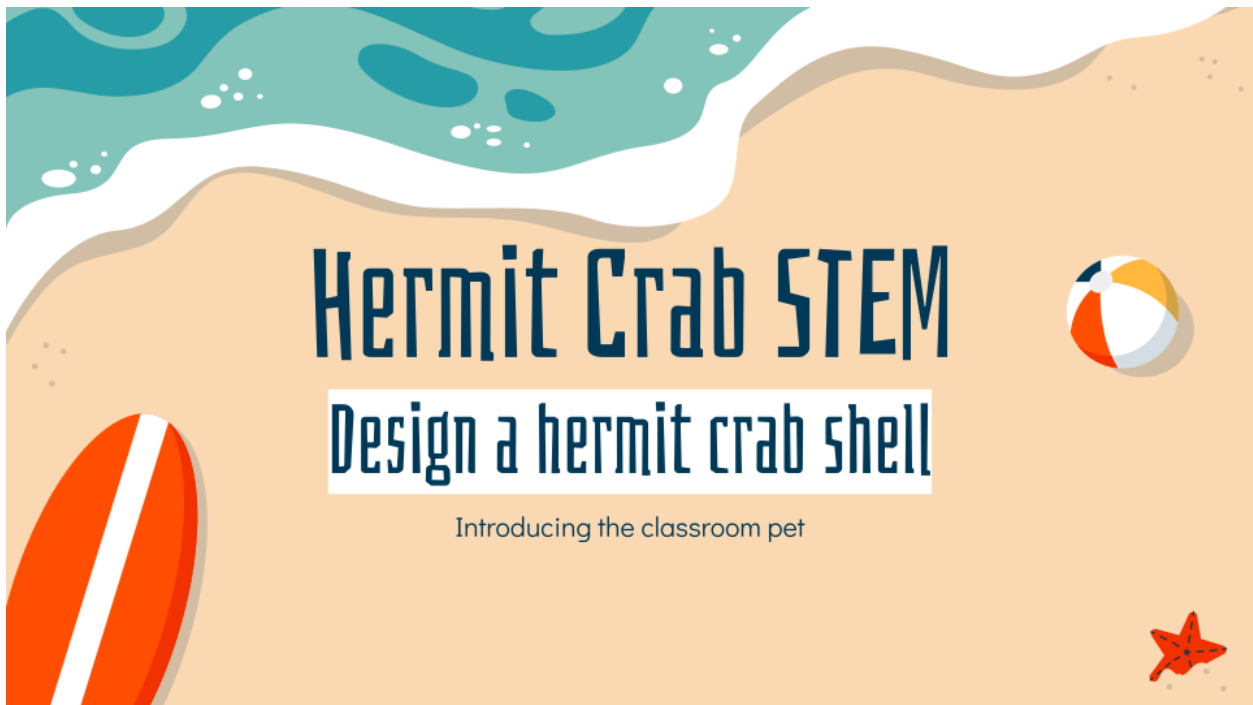
Lesson organized by Jenna Spain

Description of lesson: The idea of this lesson is to introduce students to a hermit crab as a classroom pet, along with introducing STEM, Design Engineering Process, and how Makerspace may be used in your classroom.

Objectives -

- Students will learn through real interactions with hermit crabs about their physical and behavioral characteristics.
- Students will learn the proper procedures on how to handle and treat live animals.
- Students will develop an understanding about the importance the shell serves as the hermit crab's protection from the outside world.

Google Slides: (Click picture to Make a Copy of slides)



Listen to the story: [Is This a House for Hermit Crab?](#) Read Aloud by Megan McDonald

Additional Read aloud (if time): [READ ALOUD -DREAMY the Hermit Crab's House Hunt BOOK](#) BY Renju Sridhar (lol kids books) Hermit Crab

Watch this video: [Hermit Crabs LINE UP To Swap Shells! | Life Story | BBC Earth Kids](#)

Share articles: [These Hermit Crabs Are Using Our Garbage as Shells, Litter-Loving Crabs](#)

Class Discussion: What do hermit crabs look like? What is special about them?/ What do they use as their house or home? What would you like to know about hermit crabs? (Record responses in a brainstorm on chart paper or use the Popplet App).

Present them with the real-world problem: *There is a hermit crab living in this tank in our classroom as the class pet. Hermit crabs are growing animals that need to move out of the shell they are living in when it gets too small for the crab to no longer fit. If you could use any materials to create a new home for your hermit crab, what would you design? You will need to be able to design a shell-like structure that the following item is able to fit into while also being safe from the outside world.*

Questions to consider:

*Does my "hermit crab" fit? Can it get in and out?*

*Is the structure enclosed?*

*Is the structure safe from the outside world? (can't see through it)*

Explain to students that they will not be able to take a real hermit crab from their shell because of the safety and care of the animal. Instead the teacher will need to determine what will be used for the final test.

Students can work alone or in collaborative groups to design their shell while also being introduced to the Engineering Design Model.

[Engineering Design Progress Planning](#) (free download) worksheet Source: Teachers Pay Teacher by Carrie Tronovitch

Work through steps of process together-

**ASK:** Example: What would make a good design using any materials to create a new shell “home” for hermit crab?

**IMAGINE:** Remind students to think about the brainstorming chart or on their iPad/device to help create their list.

**PLAN:** Students will draw, color, and label their design.

**CREATE:** Students are provided with materials (these materials can be determined by the teacher beforehand and shared with students for what is available to use or students can determine what they need from their plan and teacher provides those materials when it is time to create).

- This could be where an introduction to Makerspace could be introduced.

**TEST:** Did it work? YES or NO

*Does my hermit crab fit? Can it get in and out?*

*Is the structure enclosed?*

*Is the structure safe from the outside world? (can't see through it)*

[Evaluation Worksheet](#)

**IMPROVE:** What works? What didn't work? How can you make it better?

If time: Students can present their idea to the class