

Petco Pets in the Classroom Lesson Plan Overview

Project Title Habitat by Proof—Using Hermit Crab Class “Pets” to explore the Scientific Process

Lesson Plan creator: Myra Stoudt **School:** Hanover Elementary School, Bethlehem, PA

Science Objective:

Common Core Standard:

Supplies: 20-gallon aquariums with locking lids,

plexiglass, caulk, stones, rock, sand, pond pump and tubing, etc.) because the students were interested in hardscaping a salt water lagoon as well as a circulating fresh-water waterfall for each habitat, based on their research (as you’ll see below), humidity/temp hygrometers, ocean salt mix, shredded coconut fiber, and plastic plants.

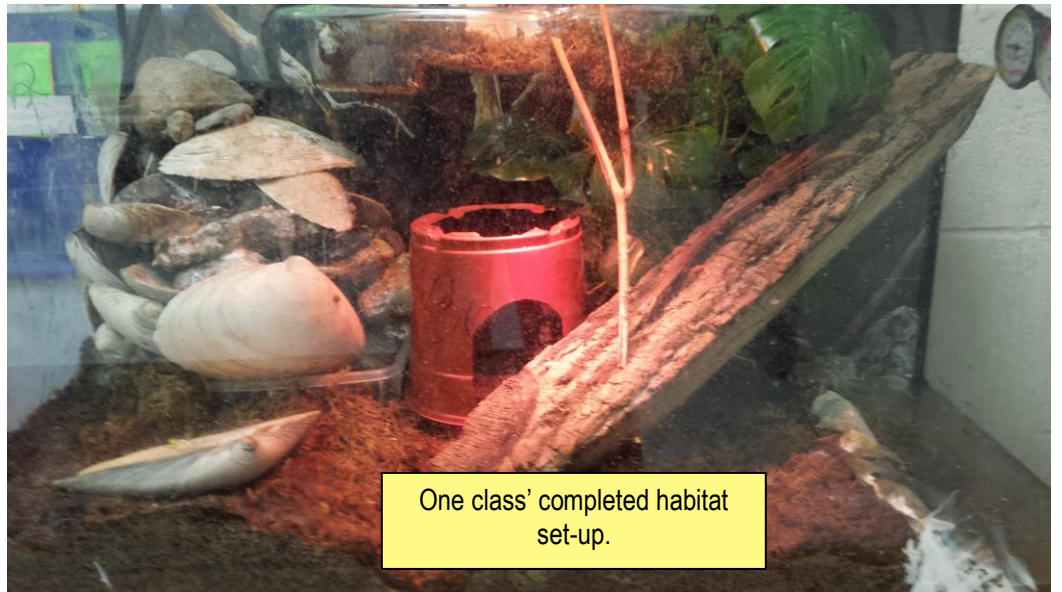
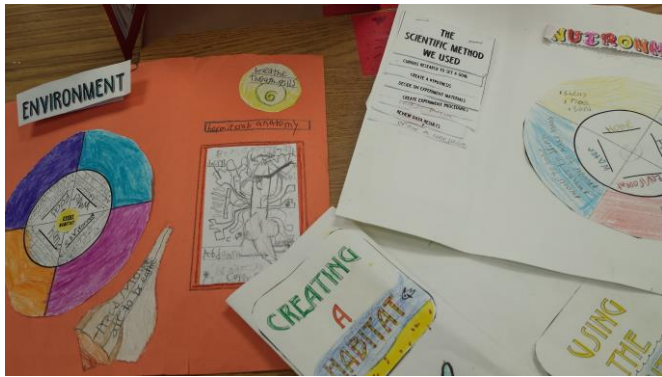
This science-based project involves the use of online research using Chromebooks or laptops. I used the Pinterest website (as an organizational tool so students could file research finds by picture on my teacher wall), and many real world supplies to create a class habitat

that will rise to fulfill the students’ hypothesized goal of “keeping hermit crabs as healthy and happy as they would be in their native habitat.” Students follow the scientific process of to learn about these creatures through a research mindset, erasing preconceived/experiential bias. They then seek to create an ideal habitat and collect data from live specimens. These young scientists learn the anatomy of a hermit crab, how they walk, eat, drink, sleep and socialize. They collect data and observe the habitat, draw

conclusions and take great responsibility to succeed on behalf of an often “throw away living creature . Long after the “project” is finished, you will find these beloved animals being “babysat” in the grass at recess if you are willing to take your hermit crabs outdoors.

This project takes a bit of legwork, but the student participation in seeking to “solve a problem” ignites their innate scientist as they are working hard to care for the habitat they help to design ...and its participants. In terms of student engagement to teach the scientific method, as well as laying a foundation for the interrelationship of creatures with their habitats It will meet every expectation and then some.

It’s always the challenge of teachers, to move students a little further away from dependence on us “sages on the stage” to spoon feed them at every “what do we do next?” moment, as well as how to organize their



One class’ completed habitat set-up.

direction/thinking. This project allows the teacher to ask students to help decide what direction to research online, and what data is more or less important to collect to prove (or disprove) their hypothesis regarding keeping hermit crabs healthy and happy. The students will be very engaged as scientific teams in the process of collaboration and self-propulsion! This alone is a huge step for intermediate learners

Students also transfer their leadership skills in watchdogging supplies they need others to contribute to the ongoing care of the hermit crabs to other areas where ownership and leadership in learning how to support and inspire is beneficial to a mutual end goal for the entire community of learners!

Two hermit crabs climbing in and out of "the salt water lagoon."

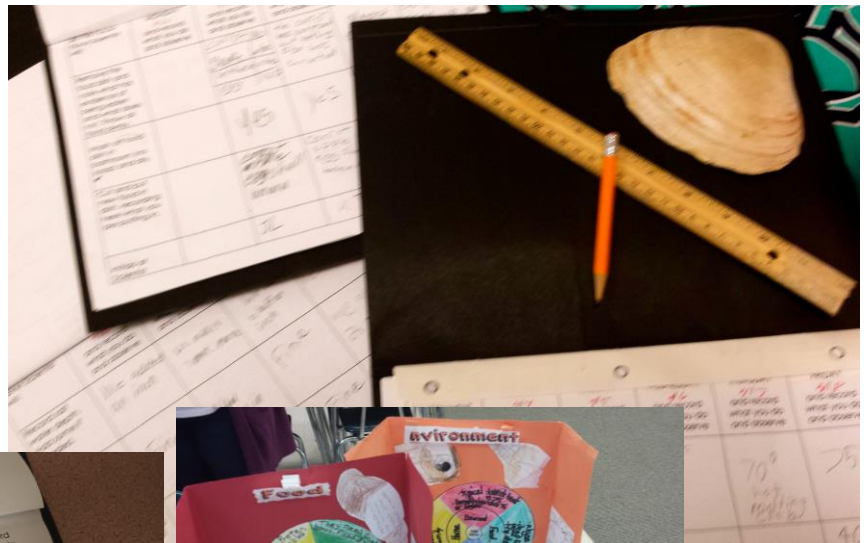


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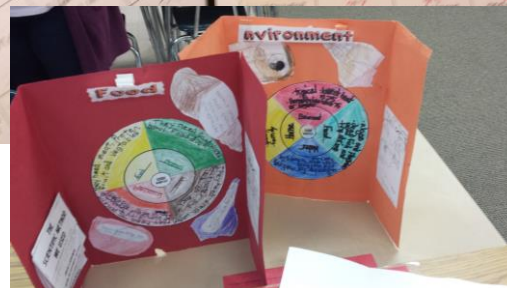


Another class' habitat completed set-up.

Students participate in research with a peer (sharing a Chromebook all the while and learning to collaborate in that process), participate in a Lab Team, regarding one of the facets of a habitat (home/shelter, environment, water needs, food needs) where they have to hash out the most important goals in which to focus as well as



30-1111111111 TEAM Scientist will:	1. Record what you do and observe	2. Observe and record what you do and observe	3. Observe and record what you do and observe	4. Observe and record what you do and observe	5. Observe and record what you do and observe
Remove the food dish and note what has evidence of being eaten and what does not. Throw all food away.	Apple bits bit of carrot little bit of coconut	Kiwi lizard and Coconut	They eat all of squash coconut	An Apple an coconut flakes and an banana	Use every thing - eat banana APPLE SLICES
Wash off food dish in bathroom (no soap) and dry.	✓	✓	✓	✓	✓
Cut and put new food in holding	Squash Kiwi	coconut banana apple carrots		Apple coconut banana grape	Apple coconut apple



establish a daily written schedule and routine.

They created a visual "research lab book" to

keep track of their learning (pic F) and discussed their findings. After each science lesson our common practice is to use science terms and create a “red line of learning,” and their energy and connections are amazing me.

The lessons of the “lowly” hermit crab have taught my students not only a great deal about these creatures, but about collaboration, research, and following a hypothesis to a clear end. The children have learned so much about the responsibility of caring for creatures that are more than pets, but real-world creatures with specific habitat needs.

For more explanation or detailed answers to your questions, feel free to contact me, Mrs. Myra Stoudt at mstoudt@basdschools.org.

Teaching Plan for Habitat by Proof

Lesson 1- What is a Habitat? (Habitat Record Graphic Organizer Chart worksheet)

Students will discover that all the factors that are important to an animal make up four distinct components of every habitat: Water, Food, Environment, Home

Four Parts of Any Animal's Habitat (food, water, shelter, environment)

Allow students to try and brainstorm and “discover” what the overall 4 categories might be. Teacher then names them and class collaborates details under each category to understand the details... and record these on Habitat Record Graphic Organizer Chart.

Food- what the animal eats IN THE WILD.

Water-what kind of water does the animal use for hydration and consumption (fresh/salt) and how does it obtain this water and use it?

Shelter-where does the animal protect itself, hide, relax? What are its ideal sun/shade, climbing, digging, etc preferences?

Environment/Climate-temperature and humidity and preferred substrate

Lesson 2- What Makes a Hermit Crab's Native Habitat? (Chromebooks, Pinterest site board and password, buddy, Hermit Crab Habitat Record Graphic Organizer Chart worksheet template for discovery records)

Students research what are the needs of hermit crabs in the wild as they relate to the four components of its Habitat?

- *Students will need to know how to log onto Chromebooks*
- *Students will need to navigate to the Internet and onto our class Pinterest board and learn how to “pin” research site.*
- *Students will spend 4 class periods researching with a buddy details for details for the 4 components of a hermit crabs native habitat.*
- *Last class period of this session involves collaborating with buddy to be sure their 4 Habitat component grids are filled with details.*

Sts use info from Lesson 1 to find all the details they can about a Hermit Crab's Habitat IN THE WILD using internet resources (no pet store or pet sites—just native habitat). ... and record these on HERMIT CRAB Habitat Record Graphic Organizer Chart.

Lesson 3 Collaboration and the Scientific Method

Student teams will be placed into a Scientific Community corresponding to the 4 components of a habitat, and will collaborate with other teams to develop the Purpose of their community. They will eventually create a hypothesis statement regarding the establishment of a Crabitat that addresses their component's concerns for healthy, happy hermit crabs.

Documents useful for this unit of study are attached

Name _____ Date _____ # _____

What Are the 4 Parts of a Habitat?

(4 things every creature needs)

Name _____ Date _____ # _____

Details About the 4 Parts of a Hermit Crab's Native Habitat:

Water Needs:

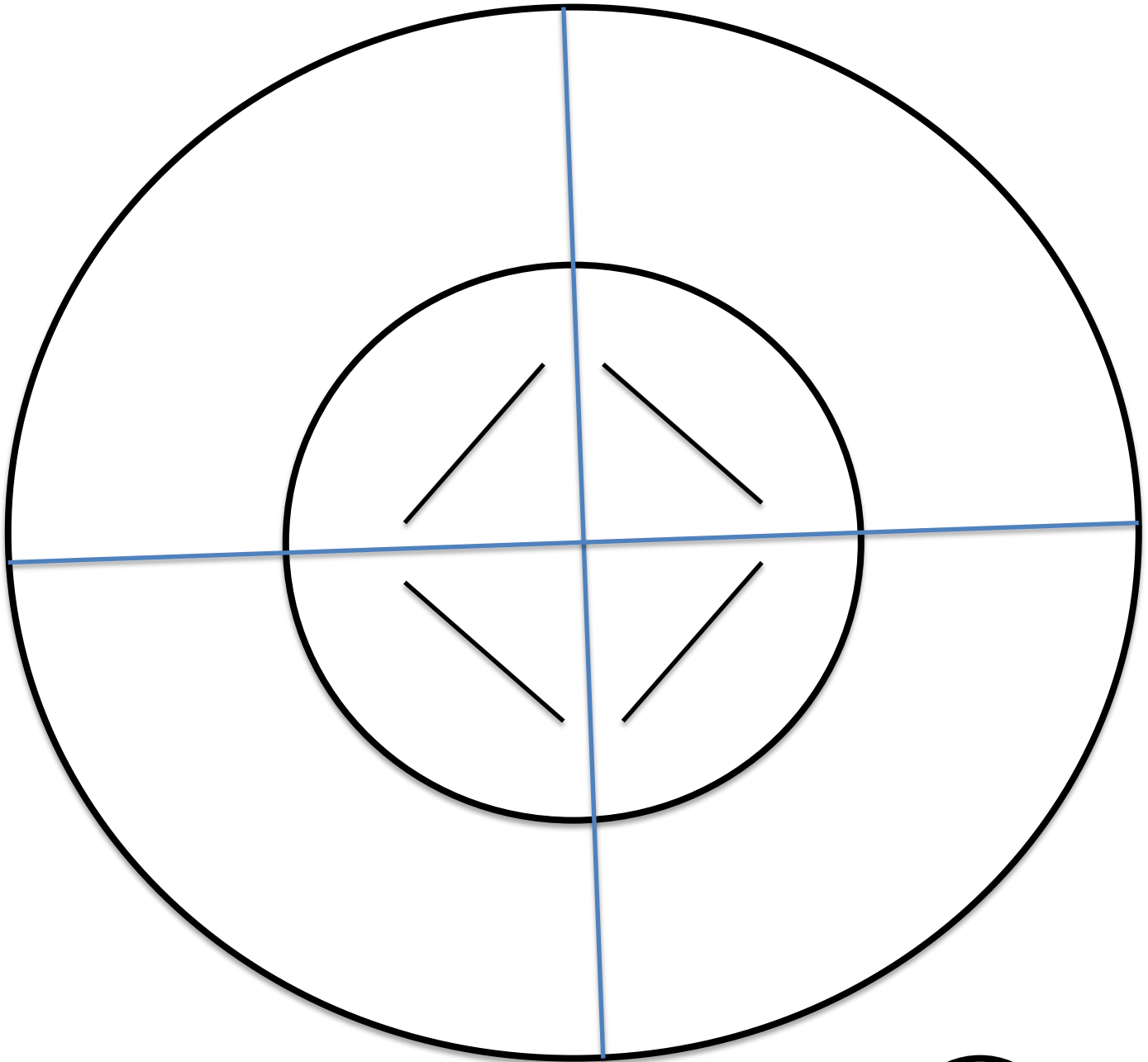
Food Needs:

Home Needs

Environment/Climate
Needs:



Habitat Circle for Habitat By Design Lapbook



DIRECTIONS...

1. Choose 4 colors of crayon or colored pencil.
2. Print the titles of each of the 4 parts of any habitat NEATLY on the lines inside the medium circle. Now trace each title's letters with one color per title.
3. Color lightly the outside circle slice with the color matching the letters inside the medium circle.
4. Now add the specific facts pertaining to a hermit crab's habitat to each correct big circle slice.
5. Last, cut out the small circle and add it to the center of all circles as a title button.



Flipbook of Scientific Method for Habitat by Proof Lapbook

Curious research to set
a goal

Create a hypothesis

Review data
results

Collect data

The
Scientific
Method
We used

Scientific Method We Used	2"
Curious Research to Set a Goal	2.5"
Create a Hypothesis	3.0"
Decide on Experiment Materials	3.5"
Create Experiment Procedures	4"
Collect Data	4.5"
Review Data Results	5"

Draw a Conclusion

5.5"

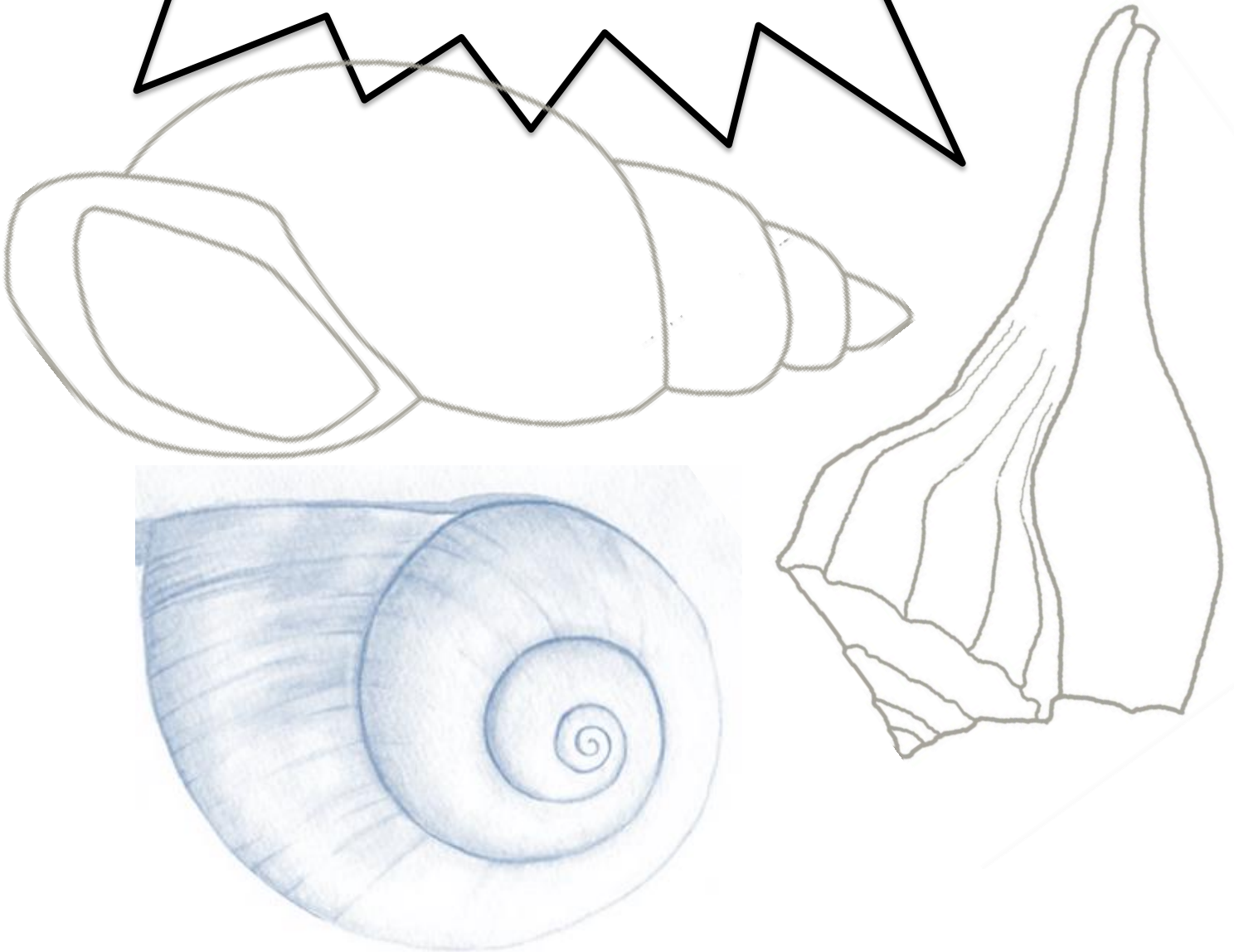
Draw a conclusion



Decide on experiment materials

Create experiment procedures

What About Molting?



The Scientific Method

Goal... What are we trying to achieve?

Hypothesis... What one thing do we want to try to do to achieve the Goal, and what do we think will happen if we do it?

Experiment Materials... What supplies will we need to carry out our Hypothesis?

Experiment Procedure... What exact steps are we going to take to make our hypothesis happen, step-by-step?

Results... What happened when we tried our Hypothesis? Record what you observe and can measure over time.

Conclusion... Was our Hypothesis correct? If not, how might we amend it?

