

Pets in the Classroom Animal Adaptations Lesson Plan

Aquarium/Fish Grades 3-5

Teaching Point/Objective:

Students will investigate and understand that adaptations allow animals to satisfy life needs and respond to the environment by designing their own pattern of animal coloration (e.g., countershading camouflage) that might help an animal survive in its habitat. They will observe the physical adaptations of their class pet (e.g., fish or other animal) and consider how those features benefit the animal.

Students will work together in groups to design and construct a paper costume to be worn by a student that is responsive to an artificial environment created by placing dark butcher paper on the ground to mimic the dark sea floor and light butcher paper on the wall in order to mimic the bright sky.

The student will investigate and understand that adaptations allow animals to satisfy life needs and respond to the environment. Key concepts include:

- a) behavioral adaptations; and
- b) physical adaptations.

Key Vocabulary:

adaptation, prey, predator, diet, camouflage, habitat

Materials:

butcher paper (various colors), scissors, tape, markers, pencils

Data to Inform Instruction:

(specific to each class)

Differentiation/Intervention/Prompts: word banks, sentence frames, strategic pairings/groupings

Mini-Lesson

connect	Examine the class pet’s physical features and watch a series of brief video clips featuring animals with familiar physical (or behavioral) adaptations (e.g., a giraffe with a long neck to reach leaves on a tree or a zebra whose stripes might disorient flies or create a “dazzle” camouflage effect) and ask the students to share with their partner what they’ve noticed about the animals’ adaptations.
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<p>teach/model</p>	<p>Review how adaptation is a way that animals become more and more efficient at living in their habitats, meeting their basic daily needs, and staying safe from predators.</p> <p><i>Active engagement:</i> Ask students to tell their partner about how the an animal’s adaptations help it survive in its environment. Perhaps they have noticed how a bat's echolocation helps it navigate at night or how a poison dart frog warns potential predators with bright colors? The students will help complete the chart (<i>see below</i>) in order to organize information about the animal, its habitat, one of its adaptations, and how this adaptation helps it survive.</p>
<p>group work</p>	<p>Introduce the artificial habitat that mimics the bay; dark butcher paper placed on the classroom floor is the darker-colored sea floor and light-colored paper is the sky.</p> <p>Students will work together to brainstorm ideas about what kind of coloration adaptation would benefit a fish living in this of habitat, taking into account predators. They may use any color butcher paper, markers, scissors, etc. in order to design and construct a costume to be worn by a student in the group. After the coloration pattern costumes are designed, assembled, and put on, the students will work together to present their models orally. They will analyze and describe their adaptations, saying a few words about their unique features and how they help them survive in their habitats using key vocabulary. Video recordings of the students wearing their costumes while passing through their “habitat” will be projected and shared with the whole class. At the end of the work period the short video presentations will be shown the class and discussed as a whole class. The students will then be shown video clips of their class pet in its natural environment, and their adaptations and colorations will be compared and contrasted with their own designs.</p>
<p>link</p>	<p>At the end of the lesson, the students will be shown video clips of their class pet in its natural environment and its adaptations and colorations will be compared and contrasted to their own designs. Students should then complete a Venn diagram that describes the similarities and differences they’ve found between their designs and nature’s designs. (This may be assigned as homework).</p>

Assessment

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content	The description of the coloration design included a strong explanation for how it helps the animals survive in its habitat, providing at least 2 examples.	The description of the coloration design included an explanation for how it helps the animals survive in its habitat.	The description of the coloration design included a weak explanation for how it helps the animals survive in its habitat.	The description of the coloration design did not include an explanation for how it helps the animals survive in its habitat.
vocabulary	The students used almost all the target vocabulary in their presentations.	The students used at least 2 target vocabulary words in their presentation.	The students used a target vocabulary word in their presentation.	The students used no target vocabulary words in their presentation.
effort	All of the students' voices were heard in the recording and there was a fair distribution of work.	Most of the students' voices were heard in the recording and there was a mostly fair distribution of work.	Some of the students' voices were heard in the recording.	The students did not describe or explain their projects in a recording.

Student Groupings

<p>Below Grade Level</p> <p>Provide students with a word bank or sentence frames to help them articulate what their findings.</p>	<p>Above Grade Level</p> <p>Analyze what might happen if an animal was moved from its habitat to a different one. Would it be able to survive? Might it eventually develop new adaptations? In terms of the changes in climate due to global warming, what might this mean for the future of animals and humans?</p>
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Sample Graphic Organizer

animal	habitat <i>(including predators)</i>	adaptation	How does this adaptation help the animal survive?