

Create a Creature

Next Generation Science Standards:

- 3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.
- 3-LS4-3 Construct an argument with evidence that in a particular habitat some organisms can survive well, some survives less well, and some cannot survive at all.

Hawai'i Content and Performance Standards III:

- SC.3.4.1 Compare distinct structures of living things that help them to survive.
- SC.3.5.1 Describe the relationship between structure and functions in organisms.

Description:

This is an activity which integrates the knowledge of adaptations with art. Students start by imagining a new organism or creature which is well adapted to Haleakalā National Park. They will then draw and color their creation and describe the creature's adaptations.

Duration: 45 minutes

Objectives: At the end of this lesson, the students will be able to:

- Describe how plants and animals use adaptations to survive in a particular environment.

Background:

Many ecosystems exist within Haleakalā National Park. The park ranges from a harsh 10,023 foot summit to an east facing rainforest and coastline. Wind, rain, temperature, and altitude all play a role in shaping each zone. The ecosystems range from alpine aeolian (barren, rocky, dry area), to subalpine shrublands, to coastal rainforests. Species have had to adapt to these different habitats over time.

Vocabulary:

Adaptation: A change of form or behavior that helps a species survive in a specific environment.

Survival: Meets the needs of food, water, shelter and space.

Trait: A distinguishing characteristic or quality that makes one organism different from another.

Materials Needed:

Coloring supplies

Procedure:

Step 1: Review the variety of ecosystems in Haleakalā National Park

Many ecosystems exist within Haleakalā National Park. Discuss what they noticed about the environment during their time at Hosmer Grove. Species adapted to this native shrubland environment over time. Review with students how various adaptations are needed for different species to survive in different

ecosystems. Tell students they are going to design and create their own creature that is perfectly adapted to survive in the native shrubland. Encourage Creativity! Students may want to sketch out a few different ideas for their creature.

Step 2: Brainstorm creation of a well-adapted creature

Thinking of what the native shrubland was like from their field trip, students will think of what types of adaptations to give their creatures to help them to survive. They should think back to things like the amount of water available, wind, temperature, soil, sun, and any threats within the ecosystem.

Provide the following list of questions for the students to answer. They should connect each one with an adaptation that will help their creature survive.

- Where will the animal live?
- What will it eat?
- Where will it get water?
- How will it breathe?
- How does it move?
- What type of body covering will it have?
- What is the name of the animal?

Step 3: Draw and Color Your Organism

Students should then draw and color a picture of their creature. They could even create 3-D models of their creatures!

Step 4: Present Your Organism

Have each student present their well-adapted creature to the class. Encourage students to ask questions about how the animal adaptations help it to survive within the ecosystem.

Assessment Tool:

Assess the animal model and types of relevant adaptations shown to see if the student connects the concept of the environmental influences on animal traits needed to help the animal survive.