Our Animal Neighbors Classroom Visit



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A collaboration between the Santa Cruz Museum of Natural History and the UCSC Ken Norris Center for Natural History

SANTA CRUZ MUSEUM of natural history

Kenneth S. Norris Center for Natural History

Our Animal Neighbors Program Overview

Grades: K-2nd

Topic: Through an interactive, inquiry-driven program using a live animal, animal specimens, and activities, students learn how to discuss adaptations that help native animals survive in their habitats. By focusing on common native animals and accessible habitats, this program encourages students to connect with wildlife and builds awareness of the animals that live around us.

Why is this a relevant and interesting topic? Being able to identify local species and their specific adaptations for their habitats brings people closer to their native environment. It also helps children make connections to the natural world and inspire them to care about their wild animal counterparts. Native animals are a critical aspect of ecosystems, their adaptations are indicative of how they live successfully in their environment.

Stewardship Goal: Students should understand that the adaptations animals have help them survive in the habitats they are adapted for. If a habitat changes, the animal's adaptations may no longer be beneficial.

Objectives *By the end of the program, students will:*

1. Know the 4 things that animals need to survive (food, water, shelter, space)
2. Understand what a habitat is and name at least 1 example of a habitat
3. Understand what an adaptation is and name at least one example of an adaptation
4. Understand the similarities and differences between how animals get their food and how they protect themselves from being eaten.

Click here for a more detailed look at the standards and how this program supports them.

Next Generation Science Standards

Performance Expectation

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

1-LS1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

2-LS4-1: Make observations of plants and animals to compare the diversity of life in different habitats

Science and Engineering practices	Disciplinary Core Ideas	Crosscutting Concepts
Analyzing and Interpreting Data	Organization for Matter and Energy Flow in Organisms	Patterns
Planning and Carrying Out Investigations	Structure and Function	Structure and Function
	Biodiversity and Humans	

California Environmental Principles and Concepts

Principle II: The long-term functioning and health of terrestrial, freshwater, coastal, and marine ecosystems are influenced by their relationships with human societies.

ELA/Literacy

SL.K.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-ESS3-2)

W.1.8: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-LS4-1)

Mathematics

K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference.

1.G.1 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

2.G. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Our Animal Neighbors Program Outline

We will do our best to adhere to the following outline. Please let our staff know as soon as possible if your class has specific needs with respect to timing, such as an early ending time. Late starts or early ending times may result in the exclusion of some parts of the program.
Total program time: 1.5 hours including set up and clean up

Set up

Time: 15 minutes
Objective: Staff need 15 minute set up time. For a presentation space and set-up time, please choose a common area like a multipurpose room, the library or your classroom when students are at recess. If multiple classes from your school would like a presentation on the same day we highly encourage the use of a single area such as a multipurpose room that does not require break down and re-set up in a new space. If we need to move the program between classrooms we will need 20 minutes between classes for clean up and set up.

Greeting/Introduction

Time: 10 minutes
Objective: Students will understand that a **habitat** is a place where an animal lives and animals that live in different habitats have **adaptations** that help them survive in their particular habitat
Vocabulary: habitat, adaptation

Station 1: Skull Detective (Teacher led)

Time: 15 - 20 minutes
Objective: Students will discover how animals' skulls and teeth reflect their diet.
Materials: Skulls, laminated animal pictures
Vocabulary: omnivore, carnivore, herbivore, skull, predator, prey

Station 2: Adaptations (Museum Staff led)

Time: 15 - 20 minutes
Objective: Students will explore animal adaptations and discuss how those adaptations help animals survive. They will compare body coverings (scales, feathers, and fur) and discuss how they help animals survive.
Materials: live snake, pelt, bobcat taxidermy, shoveler taxidermy, chicken wing, snake skeleton, posters of habitats.
Vocabulary: adaptation, camouflage, scales, fur, feathers

Conclusion:

Time: 10 minutes
Objectives: Students will play a game to help them understand how 2 animals use their adaptations to find food and avoid being eaten

Clean up (15 minutes)

Our Animal Neighbors Classroom Kit

Why do we provide the Our Animal Neighbors Kit?

This activity kit is designed to familiarize your students with topics presented in the “Our Animal Neighbors” classroom visit, and to provide a depth of experience and opportunity to apply knowledge after the trip. The activities within this kit will give your students a better understanding of such topics as **adaptations, habitat,** and **predator-prey relationships** using unique artifacts and hands-on exploration.

How does it work?

We recommend that these activities are done in the order that they are presented, for a more comprehensive understanding of relevant concepts. These activities can be adjusted to different age or learning groups by adjusting the level and amount of reading and writing, and choosing appropriate vocabulary. For example, if you feel that there are too many words for a younger age group, focus more on observational learning; included worksheets can be omitted. Conversely, if you feel as though your students could benefit from more written analyses, feel free to assign the extensional writing prompts provided with particular activities, which help to further understanding and scientific observational skills.

Our Animal Neighbors Kit Contents

1. Supplemental Activity Curriculum Descriptions
2. Visual Aids to support curriculum, including habitat photos, diagrams, and worksheets
3. Skulls and animal footprint molds to support curriculum, including examples of carnivores, herbivores, and omnivores.

List of Activities and Key Concepts Covered

1. **Animals In Their Habitat** - Habitats and adaptations
2. **Hunt Like a Hawk Game** - Adaptations, food webs, animal interactions, camouflage
3. **Create A Creature** - Adaptations, survival, habitats
4. **Track Detectives** - Tracks, making observations and comparisons, identifying patterns
5. **Skull Discovery** - Skulls, diet (herbivore, omnivore, carnivore), form and function

The Educational Kit includes the visual aids and materials for all activities and suggestions for extension activities and writing prompts which encourage deeper understanding.

Additional Resources

Skull Detective Grades 2-3 There's a mystery that we need to solve. What do these animals eat? Observe three different native animal skulls and learn about different types of teeth to solve this mystery!

Coyote Skull Activity: Coyotes are widely known as clever animals. Commonly heard, less commonly seen, and rarely surprised, coyotes are able to survive in all kinds of habitats thanks to their ability to eat lots of different foods. Explore a coyote skull and learn about how these tricky creatures are able to adapt to eating different foods, and how teeth and skeletons can tell us a lot about how an animal survives! Bring this lesson to life with our rentable **coyote specimen and kit**.

Bird Beak Activity Grade 2 You can learn a lot about an animal just by making careful observations. If you want to know what an animal eats, a good place to start is by looking at its teeth. But what if they don't have teeth? When looking at birds, it's all about the beak! Different beaks can tell us quite a bit about what that particular bird eats. Add more interest to this lesson with some of our **rentable bird specimens**.

Pollinator Matching Game Like animals' teeth and birds' beaks, the shape on a pollinator's mouth parts gives us clues to which flowers they prefer. Explore adaptations of pollinators and flowers that make them a perfect match for each other!

Animals in Their Habitats activity Grade 2 What do animals need to survive? This short lesson explores that question and dives into the different kinds of places where animals can live, and how different animals can survive in their habitats. It's up to you to use the clues to figure out which animals live nearby!

Plant Growth Observation It's not just animals that need specific things to survive. What do plants need to grow and how do different seasons affect them? To answer these questions we need to pay close attention to the world around us and think about what changes each season brings.

Animal Tracking Guide Spotting wildlife can be tricky! You can still learn about the animals around us by looking for clues.

Intro to Santa Cruz Habitats video Get the bird's eye view of the factors that have impacted the habitats of Santa Cruz for millions of years, thousands of years, and very recently as we dive into this new series exploring the nature of Santa Cruz, habitat by habitat, with the aim of developing our skills as naturalists.