

# Bay Area Scientists in Schools Presentation Plan

**Lesson Name:** \_\_\_\_\_ Animal Body Structure and Habitat \_\_\_\_\_

**Presenter(s):** \_\_\_\_\_ Falina J Williams \_\_\_\_\_

**Grade Level** 1<sup>st</sup> **Standards Connection(s)** Life Science: Different external features of living things help them thrive in different environments; Needs of living things; How animals meet needs.

**Next Generation Science Standards:**

**1-LS1-1.** 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.

**1-LS1-2.** Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

<i>Science &amp; Engineering Practices</i>	<i>Disciplinary Core Ideas</i>	<i>Crosscutting Concepts</i>
<p><b>Constructing Explanations and Designing Solutions</b></p> <p>Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <p>Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. <b>(1-LS3-1)</b></p> <p>Use materials to design a device that solves a specific problem or a solution to a specific problem. <b>(1-LS1-1)</b></p>	<p><b>LS1.A: Structure and Function</b></p> <p>All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. <b>(1-LS1-1)</b></p>	<p><b>Patterns</b></p> <p>Patterns in the natural world can be observed, used to describe phenomena, and used as evidence. <b>(1-LS1-2),(1-LS3-1)</b></p> <p><b>Structure and Function</b></p> <p>The shape and stability of structures of natural and designed objects are related to their function(s). <b>(1-LS1-1)</b></p>

## Common Core Standards:

*ELA/Literacy:*

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

*Mathematics:*

**MP.2** Reason abstractly and quantitatively.

**MP.5** Use appropriate tools strategically.

## FOSS Connections:

Grade 1 Module: *Plants and Animals*

Investigation 3: *Terrariums*

Part 3: *Habitat Match*

## Teaser:

This lesson introduces students to the basics of being a scientist: asking questions, making observations followed by educated predictions. The focus of the lesson is on predicting habitat (where an animal lives) based on an animal's structure.

**Objective:** *As a result of your lesson, what will students learn? What will they be able to do?*

The students will learn about different adaptations of body structure and how you can deduce what type of environment an animal lives in based on observations of their body structure. This will introduce students into observing an animal and making hypotheses about its environment based on those observations.

## Vocabulary/Definitions:

*3 – 6 important (new) words*

- **Body Structure:**
- **Habitat:** Environmental Area Animal Lives
- **Environment:** Animal's Surroundings
- **Survival:** Live in an environment

## Materials:

*What will you bring with you?*

- enlarged pictures of several animals
- enlarged picture of their corresponding habitats
- handouts of pieces of animals body's

*What should students have ready (pencils, paper, scissors)?*

- scissors and tape/glue
- blank paper

## Classroom Set-up:

*Student grouping, Power/Water, A/V, Light/Dark, set-up/clean-up time needed*

As a part of the second activity, students will need to be divided into 5 groups (one group per habitat)



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## Classroom Visit

### 1. **Introduction:**

**10 Minutes**

Ask the students:

Do you know what a habitat is?

What is your Environment like?

What things do we need to survive? Food, Water, Shelter

Where do you find these things at home?

What are the different types of animals? Amphibians, Fish, Reptiles, Mammals, Birds, Insects

Idea: An animal's body structure can tell you about where they live and how they can survive in that environment!

### 2. **Learning Experience(s):**

**30 Minutes**

After the topic introduction, I will have a series of enlarged animals or animal parts and ask the children to describe (observe) what they see.

3 different habitats with 6 different animals (2 from each habitat).

*Desert* – (Wolf), Camel, Turkey Vulture;

*Forest* – Wolf, Caribou;

*Sea/River* – Otter, Pelican

- Where do you think this animal lives, what habitat? Is it hot or cold? Is it in a dry or wet environment?
- Look at its feet, how do you think this helps it?
- Look at its fur, how do you think that benefits it?
- How about its teeth? Do you think it is a predator or prey?

Once we identify some key features of each from different environments (webbed feet of sea otter, thick fur of wolf), I'll show different environments and we will see if we can match the animals to the environments. I'll point out that there are many different species of wolf that have different thickness of coats to adapt to the environment they live in, showing that it's not just between different kinds of animals but within the same species as well. (maybe at this point, I could pass out a worksheet that is small matching game to cartoon animals and where they live).

### 3. **Wrap-up: Sharing Experiences**

**10-15 Minutes**

As a type of wrap-up/home-work/post-BASIS day activity, I'll have an animal in the middle of a blank sheet of paper and the child has to draw a habitat that addresses food, water, and shelter.

### 4. **Connections & Close:**

\_\_\_\_\_ **Minutes**

This should spark children's interest in the environment and animals not only in the wild but in their own back yard. It teaches them about observing, asking questions, and making hypotheses based on those observations. They can learn more by finding information about different animals they



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may not know about, not only the fuzzy mammals but about insects and worms as well.

**Total 50 – 60 Minutes**

### **Differentiated Instruction:**

**English Learners:** Repeat directions, if necessary, and physically model how to match organisms with their habitats. Write vocabulary on the board and read words aloud. Vocabulary words can also be visually demonstrated, e.g. using an illustration, and/or redefined in very simplistic terms.

**Advanced Learners:** Have students think of other animals that they are familiar with. Students can draw/write about the features on the animals and how they help it survive in its habitat.

### **Follow-up Possibilities**

#### **ELA Activity:**

Students respond to the following journal prompt:

-Write a letter to a friend telling them about one animal and how its body structures help it survive in its habitat.

#### **Reading Connections:**

- All Around Me I See by Laya Steinberg  
<http://www.amazon.com/All-Around-Me-I-See/dp/1584690682>
- Would Your Survive?: Animal and Plant Adaptation by John Townsend  
<http://www.amazon.com/Would-You-Survive-Adaptation-Raintree/dp/1410919692>
- Let's Look At Animal Feet by Wendy Perkins (Capstone Press Series)  
<http://www.capstonepub.com/product/9780736863520>
- Let's Look At Animal Legs by Wendy Perkins (Capstone Press Series)  
<http://www.capstonepub.com/product/9780736867177>
- Let's Look At Animal Tails by Wendy Perkins (Capstone Press Series)  
<http://www.capstonepub.com/product/9780736867184>

#### **Mathematics Activity:**

-Print out pictures of different habitats and have students count and sort animals by their habitats. Students can also create a habitat animal graph.

#### **Other:**

Examples of activities, websites, connections for additional learning:

- **Nature Drawing** - <http://nationalzoo.si.edu/education/conservationcentral/pdfs/draw.pdf>
- **Toad Abode** – Make an eco-friendly home for a toad using a clay pot and some environmentally friendly paint. Leave it someplace outside (at home or school) and wait for a toad to make a home.  
[http://www.aza.org/uploadedfiles/conservation/commitments\\_and\\_impacts/amphibian\\_conservation/amphibian\\_resources/toad\\_abode.pdf](http://www.aza.org/uploadedfiles/conservation/commitments_and_impacts/amphibian_conservation/amphibian_resources/toad_abode.pdf)
- **Habitat Observations** – Read **An Empty Lot** by Dale H. Fife and then go on a field trip or outside someplace to observe animals in a habitat.



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