

# Park Ranger



**Grade:** 1, 2, 3, 4

**Length:** 30-45 minutes

**Big Ideas:** Physical Traits of Animals

**Topic:** Different animals have different physical traits

**Summary:** This is a running game, similar to sharks and minnows, where the students will take on the role of animals, and learn about their different traits and adaptations.

*A Stay-at-Home Activity called "Animal Artist" can be found at the end of this lesson.*

## **Standards:**

### Strand 1.2: The Needs of Living Things and Their Offspring

Living things (plants and animals, including humans) depend on their surroundings to get what they need, including food, water, shelter, and a favorable temperature. Plants and animals have external features that allow them to survive in a variety of environments. Young plants and animals are similar but not exactly like their parents. In many kinds of animals, parents and offspring engage in behaviors that help the offspring to survive.

**Standard 1.2.2** Construct an explanation by observing patterns of external features of living things that survive in different locations. Emphasize how plants and nonhuman animals, found in specific surroundings, share similar physical characteristics. Examples could include that plants living in dry areas are more likely to have thick outer coatings that hold in water, animals living in cold locations have longer and thicker fur, or most desert animals are awake at night. (LS1.A, LS1.D)

### Strand 2.2: Living Things and Their Habitats

Living things (plants and animals, including humans) need water, air, and resources from the land to survive and live in habitats that provide these necessities. The physical characteristics of plants and animals reflect the habitat in which they live. Animals also have modified behaviors that help them survive, grow, and meet their needs. Humans sometimes mimic plant and animal adaptations to survive in their environment.

**Standard 2.2.2** Plan and carry out an investigation of the structure and function of plant and animal parts in different habitats. Emphasize how different plants and animals have different structures to survive in their habitat. Examples could include the shallow roots of a cactus in the desert or the seasonal changes in the fur coat of a wolf. (LS1.A, LS4.A, LS4.D)

### Strand 3.2: Effects of Traits on Survival

Organisms (plants and animals, including humans) have unique and diverse life cycles, but they all follow a pattern of birth, growth, reproduction, and death. Different organisms vary in how they look and function because they have different inherited traits. An organism's traits are inherited from its parents and can be influenced by the environment. Variations in traits between individuals in a population may provide advantages in surviving and reproducing in particular environments. When the environment changes, some organisms have traits that allow them to survive, some move to new locations, and some do not survive. Humans can design solutions to reduce the impact of environmental changes on organisms.

**Standard 3.2.4** Construct an explanation showing how variations in traits and behaviors can affect the ability of an individual to survive and reproduce. Examples of traits could include large thorns protecting a plant from being eaten or strong smelling flowers to attract certain pollinators. Examples of behaviors could include animals living in groups for protection or migrating to find more food. (LS2.D, LS4.B)

#### Strand 4.1: Organisms Functioning in Their Environment

Through the study of organisms, inferences can be made about environments both past and present. Plants and animals have both internal and external structures that serve various functions for growth, survival, behavior, and reproduction. Animals use different sense receptors specialized for particular kinds of information to understand and respond to their environment. Some kinds of plants and animals that once lived on Earth can no longer be found. However, fossils from these organisms provide evidence about the types of organisms that lived long ago and the nature of their environments. Additionally, the presence and location of certain fossil types indicate changes that have occurred in environments over time.

**Standard 4.1.1** Construct an explanation from evidence that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Emphasize how structures support an organism's survival in its environment and how internal and external structures of plants and animals vary within the same and across multiple Utah environments. Examples of structures could include thorns on a stem to prevent predation or gills on a fish to allow it to breathe underwater. (LS1.A)

#### **Essential Questions:**

- What makes certain animals different from others?

#### **Enduring Understandings:**

- Physical traits help us distinguish one animal from another

#### **Objectives:**

##### **Students will...**

- Will be able to determine what physical traits their animals have, and that they are different from other animals.

#### **Materials:**

- A large open area for running
- Cones for boundaries (optional)

**Procedure:**

1. Line the students up on one side of the field, shoulder to shoulder.
2. Choose one student to be the “Park Ranger”. The Park Ranger will stand out in the field, and will try to tag students as they try to run to the opposite side.
3. Ask all of the students to choose an animal. You can go down the line and ask each of them what animal they chose.
4. Once everyone is ready, explain the rules: The Park Ranger (or you, the teacher) will name a physical trait (e.g. Does your animal have fur/eyes/four legs/a tail/etc.?). If the trait matches the traits of the animal the students chose, they have to run! If a trait is called that doesn’t match their animal, tell students to stay at the line.
  - a. If a student is tagged on their journey, they have to stand still and act like a tree, and tag anyone who comes near them.
5. Play a couple rounds, have students choose new animals, choose a new park ranger, or even add more than one ranger.
6. Debrief together: Traits and survival-write a list of physical traits on the whiteboard or large poster paper.
  - a. Ask students to think about what their animal looks like. Does it have large ears? Does it have claws? Does it have wings?
  - b. Write these categories on the board: Head, body, arms/legs.
  - c. Call on students to share what their animals look like, one category at a time. For example: A rabbit has **long ears** on its head; A spider has **8 eyes** on its head; A cat has **whiskers** on its face (on its head). Repeat for the other categories.
  - d. Ask the students why animals look so different. How do these physical traits help the animals live?
7. Debrief together: Traits and habitat-write another list on the board or poster paper of the habitats that these creatures they thought of live in.
  - a. List some habitats that animals can live in (i.e. forest, desert, water, grassland, snow, etc).
  - b. Next, think of the animals they came up with in the game. What habitats do they live in?
  - c. Do the creatures in each of these habitats have similar traits? Different traits? How do these traits help them survive where they live? For example, an animal might have fur to help it stay warm or scales to help them trap in moisture.

**Supplemental Idea:** Plants can be added to this game OR you can do a version with JUST plants and talk about how their traits help them survive and live in their habitats.

**Stay-at-Home Activity**

**Stay-at-Home Materials:**

- ‘Animal Artist Activity’ Worksheet

- pencil (optional: crayons)
- partner (i.e. parent, sibling, or someone else in household)

### **Stay-at-Home Procedure**

1. The student's partner thinks of an animal.
  - a. Ideally, think of an animal with outstanding physical traits (i.e. An elephant and its trunk or a rabbit and its ears.).
2. The partner will describe the animal's physical traits one at a time without saying the name of the animal. The student draws the body parts on the provided worksheet.
  - a. For example, if the partner states "It has 4 legs," then the student will draw 4 legs on the worksheet.
  - b. The student will continue to add body parts and connect them to each other to complete a picture.
3. Partner continues to give physical descriptions until the animal is complete, and debrief.
  - a. Compare finished drawing of the animal with an image of that animal found in a book or on the internet. Then, discuss and have the student write 2 physical traits of the animal and guess how these traits help the animal to live. For example, a giraffe has a long neck to reach leaves it likes to eat.
4. For extension, play multiple rounds with different animals or have the student share the description and the partner draws the animal.