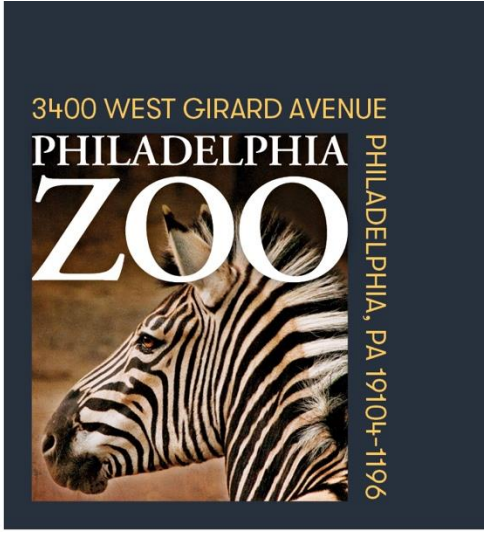
Characteristics of Life
3-5 Pre-Activity



Lesson Summary
Students explore similarities and differences between animals by making observations of photos and placing depicted animals into groups.

Objectives
Students will be able to group animals based on physical features.

Essential Question
How are living things similar or different from one another?

Materials
- Photos of different animals (examples provided at end of the lesson)
- Scrap paper
- Writing utensils

Prep
1. 1 week before: Select photos to present to students.
2. 1 day before: Print and cut out photos for students. Prepare as many sets of media as there will be groups.

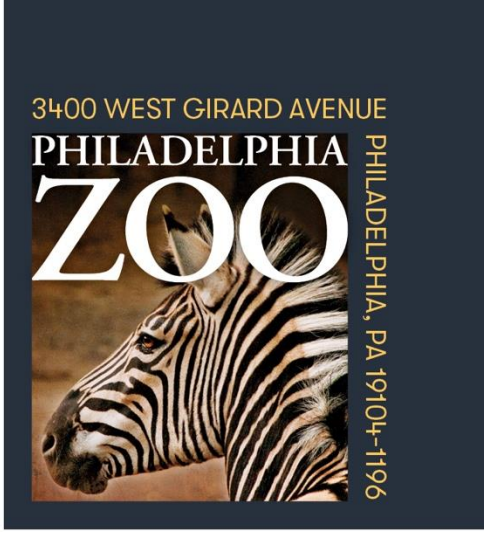
Key Terms
- **Classification:** the assignment of organisms to groups that share characteristics
- **Nonliving:** not having life
- **Living:** having life, able to breathe, eat, drink, move, grow, and reproduce

Background
There are many ways in which organisms (living things) can be classified. This process involves grouping organisms together based on shared characteristics. Some of these characteristics might include habitat, presence of a backbone, food source, diet, how they move, etc. By observing these organisms and sorting through their similarities and differences, we gain a better understanding of them and their needs, and are therefore able to better work toward protecting and preserving all living things!

Implementation
1. Excite: Ask students to share their favorite animal, and to provide some explanation of why those animals are their favorite. They may share that there are certain physical features or behavioral features that their animals have that make them their favorite. Be sure to emphasize these features as they explain.

2. Point out to the students that they shared some interesting features about these animals.

3. Explore: Share with the students that they will now be asked to look at other animals and their features. This time, however, they will be looking at the photos of animals. Each group will be given a set of photos that they will look at, find some similarities and differences between the animals depicted, and place the animals into groups based on shared features.



4. Split the class into groups and provide each group with a set of animal photos. Tell the students to look at the cards and to think of a yes-or-no question that can be used to divide the set of animals into two groups. After they have picked their trait they should put each animal into the appropriate group. Give them enough time to sort through the photos and place the animals into groups.

    a. If needed, give some examples to the groups of ways they can group the animals (such as colors, textures, patterns, etc.)
    b. If students finish early, ask them to the group the pictures of the animals differently than they had before. Students can be challenged to find as many different ways to put the animals into groups as possible.

5. After students have time to divide the animals into groups, discuss as a class the different characteristics that were used to group the animals. Keep track through a list for all students to see.

6. Explain: Share with the group that scientists also make observations of animals to sort them into groups. This process is called classification. Often, scientists group animals based on their habitat, presence of a backbone, food source, diet, how they move, etc. Many of these things might be difficult to observe through a photo, and require scientists to do more research to gain a better understanding.

7. Elaborate: Challenge the group to sort the animals into a maximum of 4 groups (instead of 2 as they had practiced with), with a specific focus. (i.e. number of legs, type of diet, how they move).

    a. Although there are many ways students can continue to group the animals, if needed, provide the students support by giving them an example of sorting the animals by what their skin appears to be covered in.

8. Evaluate: Ask the class to review some ways that they can classify animals into groups.

Expansion

As an extra challenge, have the students keep their photos split into two piles, and have the other groups of students walk around and see if they can determine what yes-or-no question other groups used to divide their animals by looking at the two piles.

For a local connection, head outside to find some wildlife neighbors! Record your observations of these animals, including as many details as possible of physical features you notice. Afterwards, compare and contrast the animals your group observed.

Curriculum References

3.1.K.A1, 3.1.1.A1, 3.1.3.A1, 3.1.4.A1, K-LS1-1

Additional Resources

Here are some image options to print and provide to the studentsw

Black & White Ruffed Lemur

Reticulated Giraffe

Indian Peafowl

Red Panda

Cheetah

Galapagos Tortoise

Western Lowland Gorilla

Andean Bear

Splendid Tree Frog

Two-toed Sloth

Giant River Otter

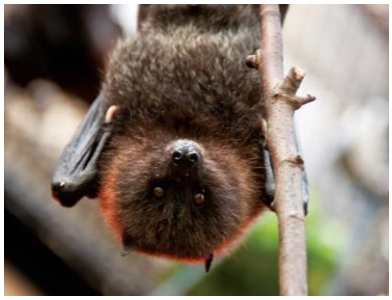
Humboldt Penguin

Snow Leopard

Southern White Rhinoceros

Blue and Gold Macaw

Golden Lion Tamarin



Rodrigues Fruit Bat

Gaboon Viper