Title: Join the Herd

Activity
Theme: Animals
Topic: Vertebrate classification
Suggested Grade Level: 2-5
Indoors or Outdoors: Either

Objective: Classify animals based on one or more characteristics
Time: 10-15 minutes
Materials Needed: Animal pictures (found at jeffersfoundation.org), white boards

Directions:

1. Have students sit at their desks or in a circle outside. Give each student an animal picture card face up.
2. Create a herd by selecting animals with a similarity. This similarity could be habitat, physical characteristic, adaptation, animal classification, etc. For example: A group with alligator, flamingo, turtle, shark. They live in the tropics (or they live near water).
3. Call up students holding cards in the same herd. They should stand in a line at the front of the room with their animal picture card facing the rest of the class.
4. Ask the rest of the class: *"What do all these animals have in common*?" Have students write their ideas down on a white board and turn and talk before opening it up to the whole group.
5. Call on students until the similarity has been identified.
6. Teacher and/or students continue to create different groups with similarities from list shared in direction #2.

Discussion Questions:

1. What do all mammals have in common? Amphibians? Reptiles? Birds? Fish?
2. What other animals can you name that fit into these classifications? How do you know that?
3. What adaptations do animals from several categories (birds, mammals, reptiles, amphibians, fish) possess that help them survive in a specific habitat (wetland, forest, desert, etc.)?

Science and Engineering Practices:
1. Asking questions (science); 6. Constructing explanations (science); 7. Engaging in argument from evidence.

Cross Cutting Concepts:
6. Structure and function.

Disciplinary Core Idea:
Life Sciences: LS 3: Heredity: Inheritance and variation of traits.

Background Information:
- **Mammals**: are warm-blooded, they grow hair, give live birth to young, and use lungs to breathe. Examples include squirrel, fox, coyote, sheep, porcupine, polar bear, and camel.
- **Amphibians**: have soft moist skin, lead one life in water and one on land. Many begin life with gills and develop lungs. They are cold-blooded, the environment regulates their body temperature. Examples include frog, toad, salamander, and newt.
- **Reptiles**: are covered in dry scales. Most reptiles live on land and most lay eggs. They are cold-blooded. Examples include alligator, turtle, gecko, snake, crocodile, and lizard.
- **Birds**: are the only animals with feathers. All birds are warm-blooded, lay eggs and incubate their young. Birds also have wings which most use for flight. Examples include robin, bald eagle, blue jay, and flamingo.
- **Fish**: are covered with slime-coated scales to protect them in their aquatic environment. Most lay eggs but some give live birth. They breath with gills, taking in oxygen from the water. Examples include sharks and walleye.

Additional Resources:
- National Geographic: This site includes information about specific animals - https://www.nationalgeographic.com/animals
- MN DNR: *Super Squirrels, These Dogs are Wild* - https://www.dnr.state.mn.us/mcvmagazine/young-naturalists.html

Correlates with:
Greeting - Vertebrates: Common Trait Greeting (p. 36)
Interdisciplinary Lesson - Know Your Vertebrates (p. 101)

squirrel

fox

coyote

sheep

porcupine

chipmunk

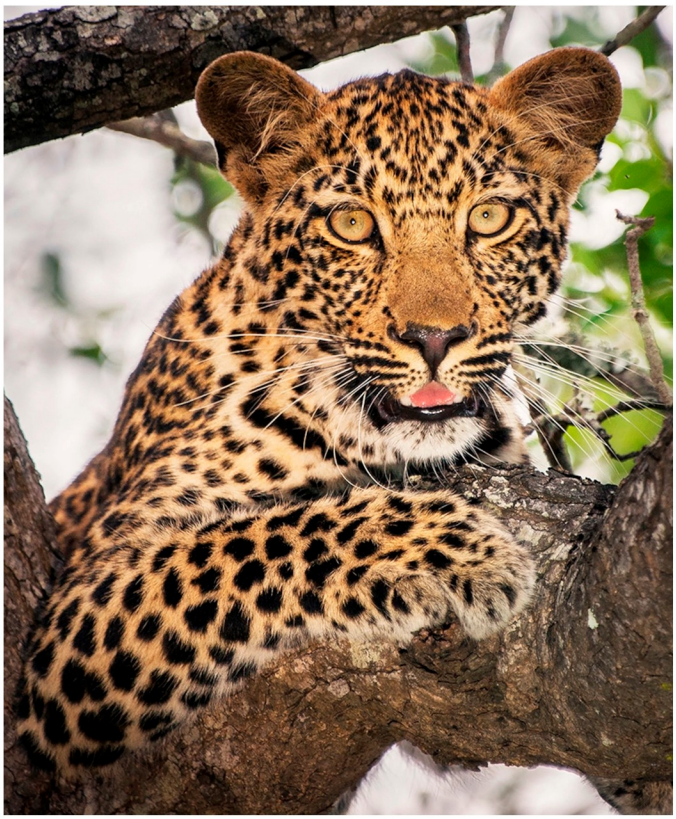
polar bear

camel

elephant

beaver

gorilla



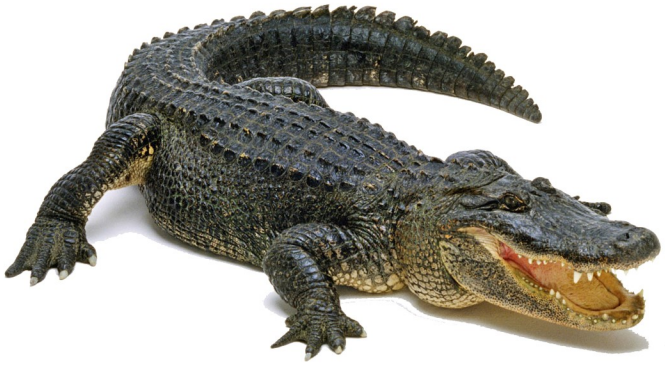
leopard

frog

toad

salamander

newt



alligator

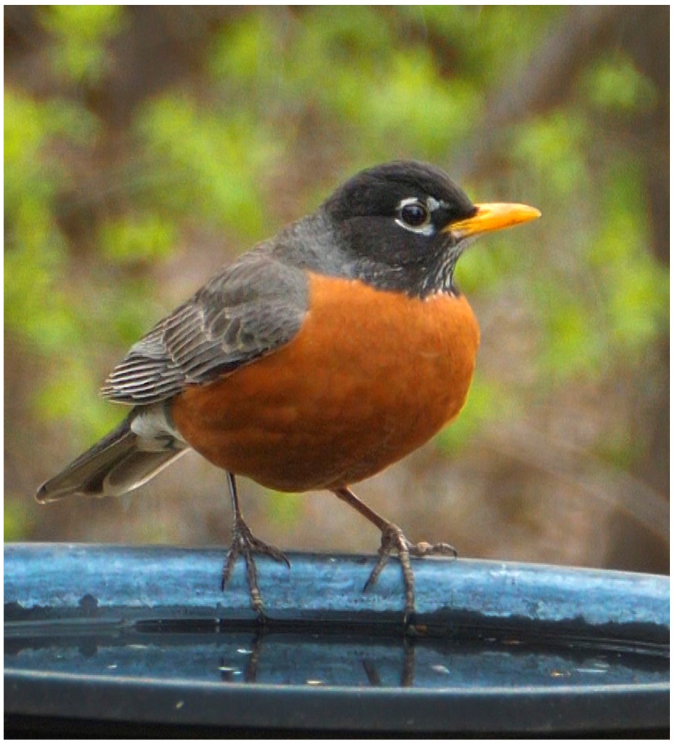
turtle

gecko

snake

crocodile

lizard



robin

bald eagle

blue jay

hawk

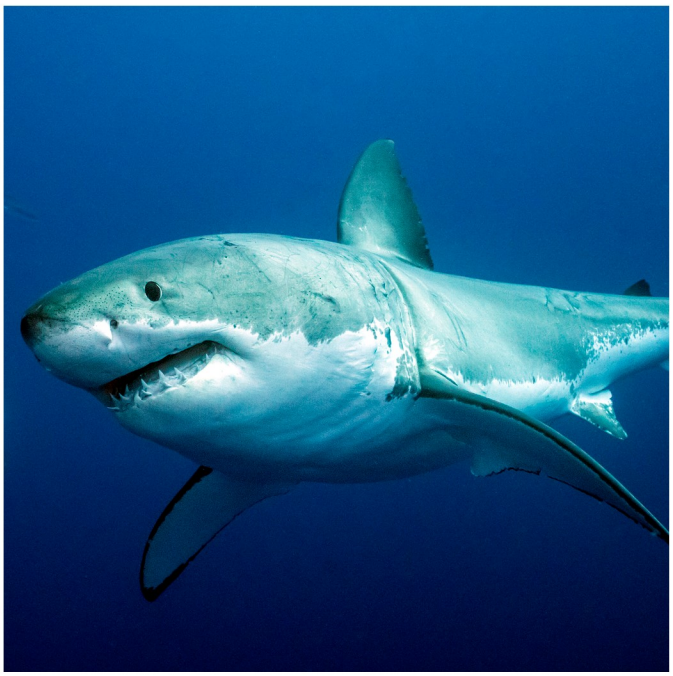
flamingo

penguin

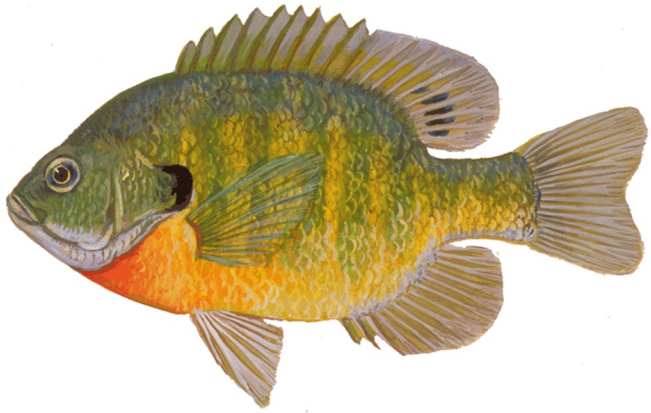
owl

skink

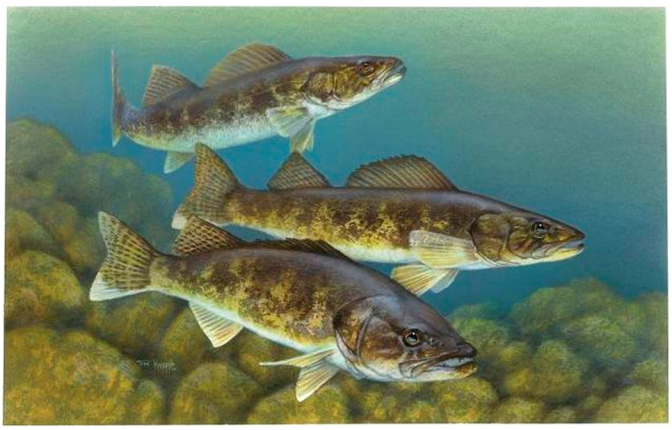
Rainbow Trout



Shark



Sunfish



Walleye