



Classification: Organizing and Describing Diversity

Activity 2: Classifying Animals

Key Question

How can we use physical characteristics to classify animals?

Objectives

- Students will **classify** animals into groups based on physical traits and characteristics
- Students will **compare, contrast, and discuss** the traits of different organisms

Grade: 3

Time: 90 minutes

Location: Classroom

Materials

- EOL Species Cards* (http://eol.org/info/eol.org/info/species_cards)
*Okaloosa Biodiversity Deck was designed to for classification activities. Any deck can be used if it has all animal taxa for students to compare and classify
- Computer with internet
- [List of websites](#) or books for research
- Pencils, colored pencils or markers (for field)
- Clipboard (for field)

Culminating Activity

After using EOL species cards to sort and make observations of animals, students will use the RAFT writing strategy to create short presentations about the characteristics of each major group of animals.

Student Resources

- Birds: <https://www.nwf.org/Wildlife/Wildlife-Library/Birds.aspx>
- Mammals: <https://www.nwf.org/Wildlife/Wildlife-Library/Mammals.aspx>
- Amphibians: <https://www.nwf.org/Wildlife/Wildlife-Library/Amphibians-Reptiles-and-Fish.aspx>
- Reptiles: <https://www.nwf.org/Wildlife/Wildlife-Library/Amphibians-Reptiles-and-Fish.aspx>
- Fish: <https://www.nwf.org/Wildlife/Wildlife-Library/Amphibians-Reptiles-and-Fish.aspx>
- Invertebrates: <https://www.nwf.org/Wildlife/Wildlife-Library/Invertebrates.aspx>

Directions

Engage (3 minutes): Re-engage student understanding of classification: what does it mean to classify things? How is classification used in understanding biodiversity?

Explore (15 minutes): Classifying with EOL Species Cards

Students will work in six small groups to organize species cards into groups based on characteristics. Be

sure to remove plants and fungi from cards before activity. There are multiple ways to do this activity. You can choose to have students do Steps 1 and 2 sequentially or choose one or the other.

1. Students can organize cards however they want (e.g., they may organize all of the animals with wings together.) Ask students to share their classification systems.
2. Next, tell students to organize cards according to species card color first, then study cards for each group to make a list of the things that they share in common, such as physical characteristics, etc.
3. Ask students to share the groups of animals they classified.
4. Pass out Classification: Animal Characteristics Worksheet (attached) Have each group work together to spend 5-10 minutes observing the cards and filling out the first column of the worksheet: "characteristics you observe." Give students an example for a different animal: for jellyfish they might write something like translucent, squishy, stingers
5. Students will continue filling out this worksheet in the next section.
6. Ask students to share some of their observations. In the next section, students will research and present the different characteristics of these groups of animals.

Explain (40 minutes)

Explain that the groups of animals have some characteristics in common, and others that distinguish them from each other, and are classified accordingly. Explain that students will now work in their small groups to learn more about the characteristics of each animal group.

1. Assign each of the small groups to an animal group: fishes, amphibians, reptiles, birds, mammals, invertebrates (which includes many different things).
2. Have students watch this BrainPop JR video (<https://jr.brainpop.com/science/animals/classifyinganimals/>) for animal classification and take notes on their worksheet about their group in the "What are the Characteristics of this Group?" cell. Have students spend a few minutes discussing and comparing notes. They will now explore another resource to learn more about their animals.
3. Using the links provided in the [Student Resources](#) section, each group will work together to read about and identify major characteristics of their animal group. They will add their notes to the "What are the characteristics of this group?" cell.
4. Students will create a 3-minute presentation for their class that includes:
 - a. the characteristics of that group
 - b. examples in their card deck
 - c. examples from around the world
 - d. ask the class to think of another example
 - e. a drawing of one of these, with the characteristics labeled

Use the **RAFT** writing method to help guide student presentations. Encourage creativity!

Role: Documentary crew for Planet Earth

Audience: TV viewers of the world

Format: Short presentation with visual aid (drawing/model of animal in that group, a student modeling as an animal, etc.)

Task: Present to the world as if you discovered this group of animals

5. As each group presents, have other students write the major characteristics in the "What are the characteristics of this group" cell on the worksheet and fill in the "draw and label a picture" cell.

Recommendation: Draw a larger version of worksheet on board and have each group write their characteristics on the board so rest of class can follow along.

Elaborate/Evaluate (10 minutes):

Option A: Provide additional photos ([see below](#)) that are not color-coded, have students add them to species card piles. Students must justify their choices by describing the characteristics of the organism that match the other cards in the pile. Attached photos are from schoolyard bioblitzes in Florida, visit and explore eol.org to download any images for free!

Option B: Charades - put animal species cards into a hat. One student will reach in and choose a card. For each card, the student must act out the characteristics of that animal group. For example, if a student picks a bird, he/she may pretend to flap wings or tap arm to represent hollow bones. Other students raise their hand to guess which animal group he/she is acting.

Option C: Animal Password - write the following words or other vocab words on paper and put into a hat (scales, skin, feathers, fur, cold-blooded, warm-blooded, lungs, gills, bones, exoskeleton, eggs, live young, mammal, bird, reptile, amphibian, fish, invertebrate). Have a student choose one of the words from the hat and can choose ONE word to give a clue to the class to guess

Field Extension (20 minutes)

Animal Classification Bingo

Bring students outside and play animal classification bingo. Hand out Animal Classification Bingo sheet (attached), pencils/colored pencils, and a clipboard. Students can work in pairs or alone to find and draw the things on this bingo sheet. See what your students can find in your schoolyard!

Next Generation Science Standards

3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.



Encyclopedia of Life
eol.org + education.eol.org



This activity was developed by the Encyclopedia of Life Learning + Education Group as part of the Okaloosa SCIENCE grant, supported by the Department of Defense Education Activity (DoDEA) under Award No. H#1254-14-1-0004. Opinions, interpretations, conclusions, and recommendations are those of the author and are not necessarily endorsed by the Department of Defense. Learn more about this grant at: www.okaloosaschools.com/okaloosascience/

Photos for Classification from Schoolyard BioBlitzes in Florida panhandle







Images: Least Tern, finatic CC-BY-NC; Centipede, bobsikeselementary CC-BY-NC; Hemiptera, shoalrivermiddle CC-BY-NC; Greater Beefly, walkerelementary CC-BY-NC; Short-horned grasshoppers, bobsikeselementary CC-BY-NC; Scarlet Snake, johnwilliams CC-BY-NC; Green Tree Frog, edgeelementary CC-BY-NC; Wolf Spiders and Allies, shoalriverelementary CC-BY-NC; Gopher Tortoise, alorenz CC-BY-NC; Common Buckeye, riversideelementary CC-BY-NC; Darkling Beetle, riversideelementary CC-BY-NC; Hammerhead Flatworm, alorenz CC-BY-NC; Southern Yellowjacket, bobsikeselementary CC-BY-NC; Atlantic Horseshoe Crab, bobcat19 CC-BY-NC; Southern Two-lined Salamander, bobsikeselementary CC-BY-NC; Cellar Slug, edgeelementary CC-BY-NC; Common Sanddragon, edgeelementary CC-BY-NC; Earwig, plewelementary CC-BY-NC

Classification: Animal Characteristics

Use this worksheet to organize the characteristics of each group of animals. First, write your observations about each group as you play with species cards. Then, take notes and draw examples of each animal group during presentations.

Color Code	Maroon	Teal	Dark Orange	Bright Orange	Purple	Black	Blues
Group Name	Fishes 	Amphibians 	Reptiles 	Birds 	Mammals 	Arthropods 	Other Invertebrates 
How would you describe this group?							
What are the characteristics of this group? <ul style="list-style-type: none">• Do they have bones?• How do they breathe?• Are they warm- or cold-blooded?							
Draw a picture and label							

Animal Classification Bingo!

Explore your schoolyard and try to find as many things on this sheet as you can! Follow the directions for each box and either collect or draw what you find. 4-in-a-row means BINGO! Try to fill the entire board.

Have fun!



Draw an insect you see	Draw a reptile you could find in your schoolyard	Describe a bird song you hear	Find and draw an invertebrate with no legs
Find and draw an arthropod with 8 legs	How would you classify a bat ?	Draw a mammal you would not find in Florida	Draw an insect with wings
How many legs do insects have?	Find an animal sign (feather, scat, tracks, bones)	How would you classify a salamander ?	Find and draw an arthropod with more than 8 legs
How would you classify a snail ?	Draw a bird you see. Can you identify it?	Draw and name an insect without wings	Draw an amphibian you could find in your schoolyard