

## Lesson: Activity 75: Classifying Animals

<b>Teacher:</b>	Kaylan Duthie
<b>Unit Theme/Course:</b>	Sepup Ecology
<b>Date:</b>	Feb 16 <sup>th</sup> and 17 <sup>th</sup>
<b>Timing:</b>	1.5 class periods

### Challenge Question:

What are some similarities and differences between animals?

### Overview:

Students will complete a short reading about classification systems: 3 domains vs. 5 kingdoms. They will be given a set of animal cards and asked to group the cards together based on information written on the cards as well as pictures. Students will explain why they grouped the organisms in that particular way. Students will then receive a set of phylum cards with information about key characteristics. They will re-group the animal cards based on the new phylum cards.

<b>Learning Objectives [cognitive, academic, language, socio-cultural]</b>	<b>Assessment Criteria</b>
Students communicate scientific procedures and explanations about classification systems	Students are able to explain to a different group how they came up with their classification system and what their groupings are
Students develop descriptions, explanations, predictions, and models using evidence about classification	Students create a classification system based on the pictures and descriptions of the organisms
Scientists formulate and test their explanations of nature using observation	Students discuss that when new evidence is given (phylum cards), changes to scientific observations (classification systems) and theories may change.
In areas of active research it is normal for scientists to differ with one another about the interpretation of the evidence or theory being considered	Students talk about disagreements and differences of opinions that they might have had in their groups

### Standard/EALR:

6-8 INQC Investigate	Collecting, analyzing, and displaying data are essential aspects of all <i>investigations</i> .	<p><i>Communicate</i> results using pictures, tables, charts, diagrams, graphic displays, and text that are clear, accurate, and informative. *a</p> <p>Recognize and interpret <i>patterns</i> – as well as <i>variations</i> from previously learned or observed <i>patterns</i> – in data, diagrams, symbols, and words.</p>
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6-8 APPE	Scientists and engineers often work together to <i>generate</i> creative <i>solutions</i> to problems and decide which ones are most promising.	Collaborate with other students to <i>generate</i> creative <i>solutions</i> to a problem, and <i>apply</i> methods for making trade-offs to choose the best <i>solution</i> .*
6-8 LS1E	In classifying <i>organisms</i> , scientists consider both internal and external structures and behaviors.	Use a classification key to identify <i>organisms</i> , noting use of both internal and external structures as well as behaviors

**Preparation Time:**

30 minutes to gather materials

**Materials:**

- Common characteristics transparency
- Classification of humans transparency
- Sets of 18 animal cards
- Phyla cards

**Instructional Sequence:**

**Day 1 (end of previous period)**

1. Give each group of students a set of animal cards and have them follow the procedure in the book
  - a. Ask each group of students to arrange the cards into groups based on the pictures and information.
  - b. There should be between 4 and 8 groups
  - c. All group members need to agree on the classification system
    - i. Listen to all explanations in the group
    - ii. If you disagree, explain why, and listen to their explanation as well
  - d. On the entry page, write down the groups that were created (name the groups, don't have to have the organisms in all groups written down)
  - e. Share you classification scheme with another group of students.
    - i. Discuss what was similar and different
2. Collect the animal cards at the end of the period

**Day 2**

1. Read the introduction in the book. Write down the challenge question
2. Complete any of the previous procedure that was not finished.
3. Hand out the animal cards again
  - a. Have students recreate the groups that they organized yesterday
4. Hand out sets of phylum cards
  - a. Give students time to make any changes to their classification system.

- b. Note any changes that are made in the entry.
5. As a class, go over the correct grouping of the animals
6. Have students answer the analysis questions in their journals.
7. Have a wrap-up discussion
  - a. Did you have to make any changes to your classification system?
  - b. Do you think scientists ever have to change their classification systems?
  - c. Did you have any disagreements in your groups about how to organize the animals?
  - d. Do you think scientists ever disagree?
  - e. How do you think they solve these disagreements?
8. Ask for group answers to the challenge question

### **Assessment**

- Assess students formatively on answers to the challenge question
- Assess on group communication by listening to their explanations to other groups
- Assess growth during the lesson when reading the lab write-up