

Animal Classifications

3rd Grade

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1. References

Columbus Public Schools Third Grade Curriculum Guide, January 2005 Printing, Pgs. 47-64.

2. Benchmarks

GLI LS-3: Classify animals according to their specific survival functions (e.g., body coverings and body structure)

3. Objectives

- Have students understand how and why scientists classify animals.
- Familiarize students with kingdoms of animals, Vertebrates and Invertebrates and the subgroups that comprise these kingdoms.
- Have students be able to identify and distinguish traits that are necessary for an animal to be classified into an appropriate group.

4. Materials

- ✓ Shapes of varying size and colors
 - Colors: Red, Blue
 - Shapes: Triangles, Circles
 - Sizes: Small (~1”), Large (~2”)
- ✓ Deck(s) of Standard playing cards
- ✓ Pictures of animals from each kingdom and the major groups of the kingdoms
 - Vertebrates: Mammals, Fish, Reptiles, Amphibians, and Birds.
 - Invertebrates: Annelids, Mollusks, Arthropods, and Echinoderms.
- ✓ Pictures of other animals and the cards from pages 61-64.

5. Demonstration

Begin by handing each group (station) of students a set of 8 shapes. Keeping one group for you and your teacher. Tell the students you want to sort/classify the shapes. First ask for a Name for the group as a whole. Ask students for their input on a name for the whole group. Write the name at the top of a chart and use tally marks to count the number of items in the group. Then instruct the students that you would like the whole group to be broken up into two smaller groups, be certain to stress that the members of the groups that they choose have one common feature. Ask the students for their opinions about what subgroups to break the whole into. Some responses may be Red/Blue, Circle/Triangle, Large/Small. Choose one of these pairs and write the names on the 2nd row of the chart, use tally marks to count the number of items in the subgroups. Next, instruct the students that you would like to sort each of the subgroups into two smaller groups, reiterate that in order for the group to be valid, all members must have one thing in common. Have a chart designed similarly to Figure 1 and fill in the classes’

responses. Finally you get to a point where breaking the shapes into smaller groups would leave individuals.

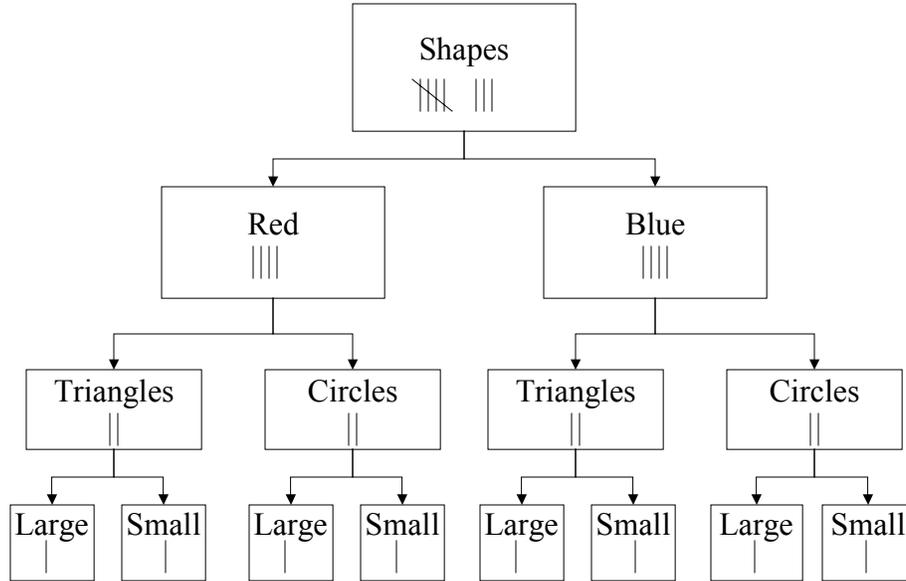


Figure1: Diagram of chart to be used for Initial Demonstration

Once the class has done this exercise and filled in the chart, explain to them that this what scientists do when the categorize animals, plants, etc. A scientist will start with a somewhat universal feature and classify members based on what they have in common.

6. Target Observations

- Scientists classify things based on what they have in common.
- Each subgroup is a member of a larger group.
- There are several ways to classify objects.

7. Target Model

- Classifying Objects helps us to learn what they have in common
- Classifying objects can be done in different ways.

8. Procedure

Separate the students into 4-5 groups and give each group a set of cards from a standard deck of playing cards. Hand out a chart similar to Figure 1 or one from the curriculum guide. Have each group of students devise their own way to classify the group of cards. Give the class ~7-10 minutes to do this, then bring them together to discuss what each group did. This will go smoother if jobs are assigned to each student in the group (Materials collector, Paper passer-outer, Teacher/Fellow Liaison,

Recorder/Reader, Reporter, etc.) . At the end of this lesson provide time for the students to record in their science journals what they have done and what they have learned (urge them to use complete sentences).

9. Target Observations

- The different groups of students may classify the cards in different ways
- There are many ways to classify things
- Members of one group may have something in common with members of another group

10. Target Revised Model

- Grouping things may be difficult because one item could belong to multiple groups
- Guidelines or criteria need to be defined before classifying objects that can possibly be in multiple groups.

*(The first two lessons can be interchanged. If you choose to use the shapes for the group work, then be certain to make it more complex...say 3 colors, 3 shapes, and 3 sizes.)

11. Procedure

This lesson is the crux of GLI LS-3 (Animal Classifications). We are now ready to start introducing the kingdoms of animals, Vertebrates and Invertebrates. Explain to the students what the major differences are between these two kingdoms. Also explain that there are major groups in each of these kingdoms. The 5 major groups of vertebrates are birds, fish, mammals, reptiles, and amphibians. The 4 major groups of invertebrates are annelids, mollusks, arthropods, and echinoderms. Provide examples and pictures, if possible, of animals that belong to each of these major groups.

During this lesson, be sure to find out what the students know and what they do not know...use a KWL (Know, Want to know, Learned) chart as shown in Figure 2. Be certain during this to explain the criteria scientists use to classify an animal in its kingdom and major group. Then use the cards for Lesson 4 from pages 60-64 of the 3rd grade curriculum guide to help solidify what you have discussed with them. Use these cards or color pictures from books, magazines, internet, etc. to help students decide which kingdom and which major group the animals belong to. Take time to examine the more difficult animals to place and explain the features they have that define them into a specific major group use the cards from pages 61-64 to help.

KWL Chart		
Know	Want to know	Learned
I know...	I want to know...	I learned...

Figure 2: KWL Chart to be used for the third portion of this lesson plan.

Be certain to allow time for the students to record in their science journals a summary of what they did and what they learned.

12. Target Observations

- Animals are sorted into groups by various common features, live on land/in water, have fur/scales; smooth/rough skin, are warm/cold-blooded, etc.
- Setting up criteria for classifying allows us to infer something about a strange animal or object.

13. Target Revised Model

- Classification of animals makes identification of animals easier for scientists.
- Identify several ways that scientists classify animals.

14. Summary

Students should be able to describe how and why scientists use classification schemes for animals. The students should also be able to differentiate between vertebrates, invertebrates, and some of the major groups of these kingdoms based on characteristics that a specific animal possesses.