

# How Are Animals Classified?

Subject: Life science, classification

Grade: 6-8

Lesson Topic: Taxonomy

Length: 2

## Learner Objective:

After completing the investigation the students will be able to"

- 1) *Identify* common characteristics of some imaginary animals
- 2) *Compare and contrast* characteristics of groups
- 3) *Classify* the imaginary animals according to their similarities, all three with 100% accuracy.

## Introduction:

To make order out of a collection of different things, it is helpful to put these things into groups. In this activity students will use a set of imaginary animals to practice classification based on taxonomy. The importance of this lesson becomes evident in latter weed identification activities and in using the XID Expert Classification System where students may rely on observed attributes rather than having a deep knowledge of botanical physiology.

## Content:

**Taxonomy** is the science of grouping living things on the basis of like characteristics. The ones most often used are *external structure, internal structure, and behavior*. This method sometimes leads to grouping together animals that seem very different. The whale and the bat are examples. Though very different in size and habitat, they are both classified as mammals. How are they different? Why are they alike?

## Materials and Supplies:

Animal Classification worksheet  
Overhead of imaginary animals  
Colored pencils

## Anticipatory Set:

Place the overhead of imaginary animals on the projector to gain their attention! Ask them to come up with some names for the animals based on the observed characteristics.

## Activity Outline:

In this investigation, students will identify the common characteristics of some imaginary animals. They will then put them into groups based on such features of external structure as means of locomotion, type of body covering, and type of appendages.

Provide the animal classification handout and colored pencils. Assist students in completing the worksheet in cooperative groupings.

### Closure and Assessment:

Relate this activity to previous classification lessons. Stamp and collect the completed worksheets at the end of class for scoring assessment.

### Independent Practice and Related Activities:

Allow the students to construct their own "divisions of taxonomy" from a collection of animal flashcards or from a random collection of animals cut from magazines.

### Resources:

None noted for this intro lesson.

### Vocabulary:

Taxonomy

### National Science Education Standards:

#### **Life Science - CONTENT STANDARD C:**

As a result of their activities in grades 5-8, all students should develop understanding of

- Structure and function in living systems
- Reproduction and heredity
- Regulation and behavior
- Populations and ecosystems
- Diversity and adaptations of organisms

Name \_\_\_\_\_

## Animal Classification Worksheet

To make order out of a collection of different things, it is helpful to put these things into groups. **Taxonomy** is the science of grouping living things on the basis of like characteristics. The ones most often used are *external structure, internal structure, and behavior*. This method sometimes leads to grouping together animals that seem very different. The whale and the bat are examples. Though very different in size and habitat, they are both classified as mammals. How are they different? Why are they alike?

In this investigation, you will identify the common characteristics of some imaginary animals. You will then put them into groups based on such features of external structure as means of locomotion, type of body covering, and type of appendages.

A. Study the six imaginary animals.

1. In which animal(s) is the principal form of locomotion flying? \_\_\_\_\_

Walking? \_\_\_\_\_ Swimming? \_\_\_\_\_ Rolling? \_\_\_\_\_

2. In which animal(s) is the principal body covering feathers? \_\_\_\_\_

Bare skin? \_\_\_\_\_ Scales? \_\_\_\_\_ Armored plates? \_\_\_\_\_

3. Which animals have legs and feet? \_\_\_\_\_

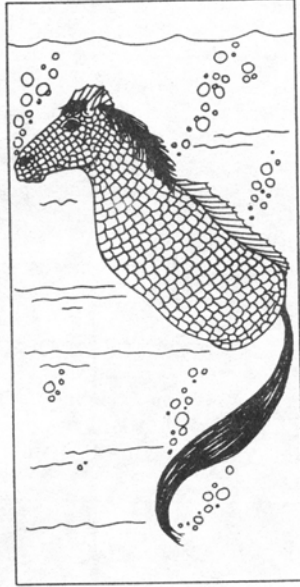
Fins? \_\_\_\_\_ no limbs? \_\_\_\_\_

B. Using a different colored pencil for each animal, write the number that corresponds to each animal in the appropriate space under "Principal Form of Locomotion," "Principal Type of Body Covering," and "Limbs/Appendages" on Chart B. Then fill out the rest of the chart.

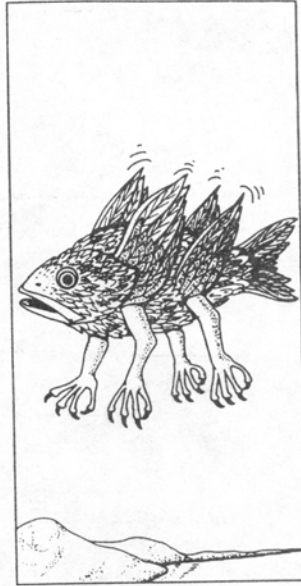
C. Use the information in Chart B to fill out Table C. Animal #1 has been done for you.



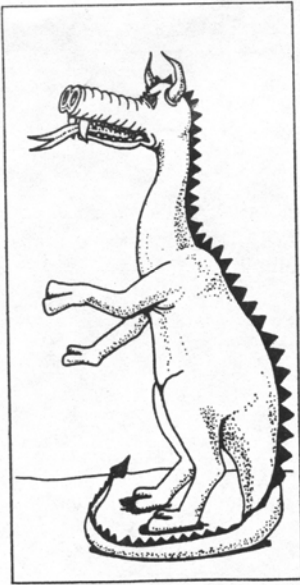
1



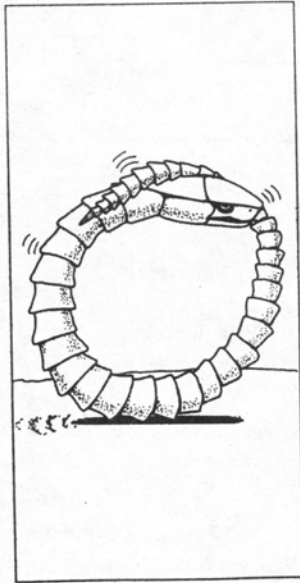
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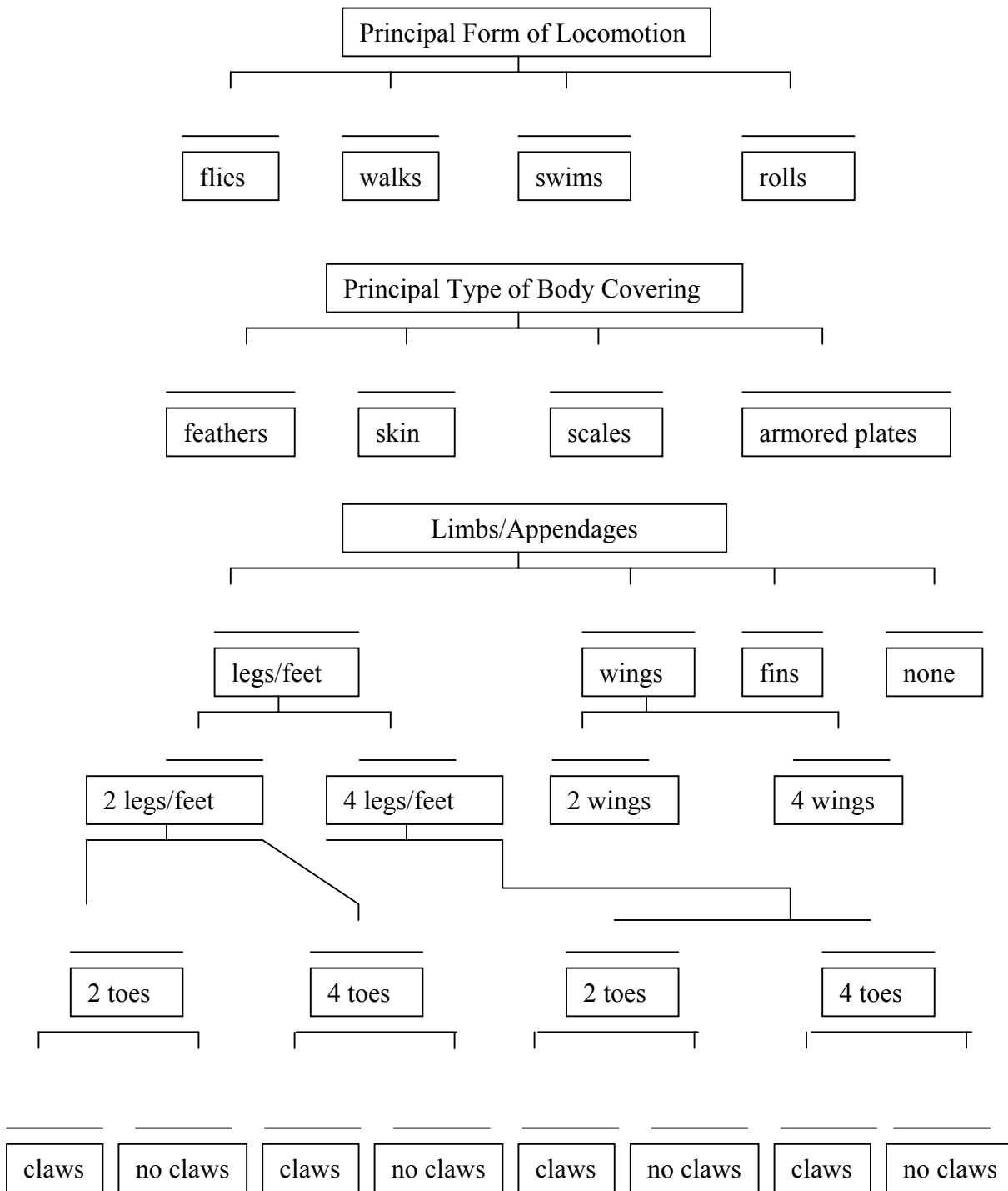


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**Chart B**



Which animals with similar characteristics can be paired?

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**Table C**

1	2	3	4	5	6
Flies					
Feathers					
Legs (2)					
Feet (2)					
Wings (2)					
Toes clawed 4					

**Table D**

In this table the animals have been classified into four groups on the basis I of their similarities. List the characteristics that an animal must have to be placed in each of the groups. The numbers of the members in each group have been indicated.

<b>Groups</b>	<b>Members</b>	<b>Characteristics</b>
<b>A</b>	<b>1,3</b>	
<b>B</b>	<b>2</b>	
<b>C</b>	<b>4,6</b>	
<b>D</b>	<b>5</b>	

