

Investigation Seven - Classification Schemes

Standard V Students will understand the physical characteristics of Utah's wetlands, forests, and deserts and identify common organisms for each environment.
Objective 3 Use a simple scheme to classify Utah plants and animals.
Intended Learning Outcomes 1. Use science process and thinking skills 3. Understand science concepts and principles

Standard
V
Objective
3

Background Information

In 1753, Carolus Linnaeus, a scientist from Sweden, created the first known system to classify all known living things in that time period. Linnaeus divided all living organisms into two large groups known as kingdoms: Plantae and Animalia. Since then more and more organisms have been identified and the classification system has grown. Recent studies suggest five kingdoms: Plantae, Animalia, Fungi, Protista and Monera.

Remember not to tell the students what groups the organisms go into. Students must be able to place them into groups and justify their reasoning. As long as a student can state the common characteristic for their group and create a scheme for it, then they have learned to classify.

Pre-Assessment/Invitation to Learn

Give the students an opportunity to classify objects such as buttons, cereal, Chex Party Mix, shoes, or potato chips. Let the students classify the objects into groups and have them describe their reasoning. Remember the students must be able to include all objects and a reason for their decisions. This can be done as a class using a chalkboard or overhead.

Instructional Procedure

1. Hand out the plant and animal pictures for the students to cut out and the classification worksheet.
2. In small groups, let the students classify the pictures into groups and record their classification schemes on the classification worksheet. See how many groups the students can come up with. Walk around the room to provide extra clues and check classification schemes and groups. Examples of groups are on the next page.

Materials

- Pictures of Utah plants and animals
- Classification worksheet
- An overhead copy of the classification worksheet for teacher use
- Butcher paper or poster board to record results
- Optional: overhead pictures of Utah plants and animals for the teacher to use

Lives in Wetlands

- bulrush
- cattails
- beaver
- frog
- salamanders
- muskrat
- catfish
- carp
- trout

Lives in Desert

- prickly pear cactus
- sagebrush
- jackrabbit
- cottontail rabbit
- coyote
- deer mouse
- kangaroo rat
- red-tailed hawk
- gopher snake
- rattlesnake
- desert tortoise
- lizard
- pinyon jay

Lives in Forest

- mule deer
- elk
- moose
- cougar
- bobcat
- barn owl
- red fox
- lark/robin
- magpie
- crow
- spruce
- fir
- quaking aspen
- cottonwood

Insects

- grasshopper
- ant
- moth
- butterfly
- housefly
- bee
- wasp
- pill bug
- millipede

Mammals

- jackrabbit
- cottontail rabbit
- red fox
- coyote
- mule deer
- elk/moose
- cougar
- bobcat
- deermouse
- kangaroo rat
- muskrat
- beaver

Birds

- red-tailed hawk
- barn owl
- lark
- robin
- pinyon jay
- magpie
- crow

Reptiles

- gopher snake
- rattlesnake
- lizard
- tortoise

Fish

- carp
- trout
- catfish

3. Other ideas for classifying groups can include: What do the animals eat? carnivore, herbivore, and omnivore. What covers their body? hair, scales, and feathers. What is it? plant or animal. As long as the students can provide a solid reason for their classification scheme that satisfy all the pictures in their group, they have classified the organism.
4. Have each group of students explain their classification system to the class.

Curriculum Extensions

Language Arts-

- Have the students answer the following questions in their science journal.
Journal entry: What does it mean to classify? Give some examples of what other groups of classification that the class came up with. Do you agree with these groups of classification schemes? Why or why not?

Science-

- Give the students different pictures of Utah animals to see if they can create classification schemes. (ILO 1)

Assessment Suggestions

- Show students pictures of additional animals and see if it fits into their classification groups.

Resources

Websites:

- www.livingthings.com

Homework & Family Connections

As a family, find some objects they can classify: tools; a can of miscellaneous nuts, bolts, nails, and screws; toys; shoes; etc. Have students share what they classified in class.

CLASSIFICATION

What does this group have in common?	What does this group have in common?	What does this group have in common?	What does this group have in common?