7th Grade Core Essential Questions

Standard 5: Students will understand that structure is used to develop classification systems.

Objective 1: Classify based on observable properties.

Enduring Understanding:

Classification schemes reflect orderly patterns and observable distinctions among objects and organisms. Scientists classify most things based upon structure and other observable properties. Careful observations are important to correct classification. Classification allows scientists to name and understand relationships between natural objects. There are many ways to classify objects.

Essential Questions

1. Why are living things classified into groups?

2. What properties could you use to classify non-living things into groups?

3. What does it mean to be alive?

4. How can you tell between living, non-living, and dead?

5. Why do classification methods change?

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Standard 5: Students will understand that structure is used to develop classification systems.

Objective 2: Use and develop a simple classification system.

Enduring Understanding:

 A simple classification system uses observable structural characteristics to group objects. Objects being grouped can only exist in one category and should be similar in most ways to objects in their group. Science knowledge is enlarged as investigations of the characteristics of natural objects occur. Patterns in nature have been revealed by as classification continues.

Essential Questions

1. Devise a classification scheme to group the following objects: rock, tree, grass, squirrel, dog, fish, and air.

2. What do you need to know about an object to classify it?

3. Why do scientists classify objects?

4. Describe an animal that appears to be related to one group of organisms, but on upon closer study, is found to be a member of another group.

Standard 5: Students will understand that structure is used to develop classification systems.

Objective 3: Classify organisms using an orderly pattern based upon structure.

Enduring Understanding:

One of the most general distinctions among organisms is between plants and animals. Biologists consider an organism's structural features more important for classifying organisms than behavior or general appearance. Classification systems may change as science develops new knowledge. A classification key can be used to name and describe objects.

Essential Questions

1. Describe characteristics of plants, animals, and organisms that are neither.

2. In which kingdom would the following organisms be placed: cat, tree, bacteria, mushroom, paramecium

3. What is the purpose of a classification key?

4. When do classification systems change?