

Topic: Characteristics of Life Lab

Summary: Students will learn to use their observation skills to determine if an object is living, dead, dormant, a product of a living thing, or never alive using the main characteristics of life.

Goals & Objectives: Students will be able to list the seven characteristics of life.

Standards: CA Biology 1. The fundamental life processes of plants and animals depend on a variety of chemical reactions that occur in specialized areas of the organism's cells.

Time Length: 60 minutes

Prerequisite Knowledge: Students know the seven characteristics of life, as well as, lab safety rules.

Materials:

- 12 lab stations that are numbered 1 through 12
- Place one object at each lab station. The object should either be living, dead, dormant, a product of a living thing (shell), or never alive. Make sure you have used all five of the conditions.
- Handouts and pencils

Procedures:

1. Students go to each of the lab stations and fill in their data table at each lab station around the room.

Accommodations: Students with an IEP can work with a partner and collaborate on the entire lab.

Evaluation:

This assignment is worth a total of 20 points. At the end of the lab, go over each of the stations and ask students what condition they think it is and why. This might generate a good debate over the condition based upon students' observations. When grading the assignment, focus on the missing characteristics and the reason for decision.

Characteristics of Life Lab

Problem: Scientists use the following characteristics of life to determine if an object is alive. Even if one characteristic is missing, the object can not be alive. Write a definition for each of the following main characteristics of life:

Made of Cells: _____

Respond to Stimuli: _____

Reproduction: _____

Metabolism: _____

Heredity: _____

Homeostasis: _____

Evolve: _____

Hypothesis: If _____,
then _____.

Experiment: Around the room, there are different stations, each with an object. You must determine the condition of the object: alive, dead, alive dormant, a product of a living thing, or never alive.

You must state the *current* condition of the material (underlined above) and your reasoning behind each decision. Cross out each characteristic the object *currently* exhibits at each station.

#	Characteristics	Condition	Reason for Decision
1	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
2	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
3	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
4	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		

#	Characteristics	Condition	Reason for Decision
5	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
6	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
7	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
8	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
9	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
10	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
11	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		
12	Made of Cells Respond to Stimuli Reproduction Metabolism Heredity Homeostasis Evolve		

Conclusion: After doing this lab, use complete sentences to describe what you learned about the characteristics of life.
