Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_

**Characteristics of Life Exercise 1**

1. Look outside. Close your eyes and open them. List the first five different things that you see (Sally, Jack and Dan are all 1 thing – people, not three separate things). Based on the criteria we established in class, classify these 5 things as living or nonliving.

|  |  |
| --- | --- |
| Name of thing | Living or nonliving |
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|  |  |

If you classified some of the things as nonliving, explain which criteria they don’t meet in the space below.

1. How many criteria does a living organism have to meet to be classified as living? Justify your answer.
2. You are an astrobiologist (a biologist who studies other planets for signs of life). You have discovered a unique substance which is made up of four metals, organized in a specific and repeatable pattern. When exposed to electromagnetic radiation, this substance becomes bigger and can produce multiple copies of itself. If it is poked with a stick, it moves away from the stick. If the substance is kept in a dish for a while, rust accumulates in the dish.
   1. Classify this substance as living or nonliving using the criteria developed in class, justify your answer.
3. Look up viruses in your textbook (use the index). Write a short summary of what they are and what they do.
   1. Based on the criteria we developed in class would you classify viruses as living or nonliving? Explain your answer.
   2. Based on the criteria in the textbook would you classify viruses as living or nonliving? Explain your answer.
   3. How do the two criteria differ from one another? Is one more correct than the other? Justify your answer.