AN02542_**Background:** Certain traits characterize all living things. In this lab, you will identify some of these key traits by observing living and nonliving things.

**Procedure:**

1. With your partner, brainstorm a list of what traits and/or characteristics ALL living things have in common. Write these below. Try to come up with at least seven.
2. As a class we will compile this list.
3. In the first column of the table, list the 10 traits from the list we made in class that YOU and your lab partner think are the most important and/or accurate. The first one has been filled in for you.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Specimen** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **Trait** |  |  |
| 1. Growth |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. |  |  |  |  |  |  |  |  |  |  |  |  |
| 6. |  |  |  |  |  |  |  |  |  |  |  |  |
| 7. |  |  |  |  |  |  |  |  |  |  |  |  |
| 8. |  |  |  |  |  |  |  |  |  |  |  |  |
| 9. |  |  |  |  |  |  |  |  |  |  |  |  |
| 10. |  |  |  |  |  |  |  |  |  |  |  |  |

1. You will be given about 1 ½ minutes at each of the 12 lab stations (each containing one specimen)
2. Look for each of the ten traits which you wrote down in each specimen that you observe. Place a check mark next to each trait that the specimen possesses.
3. Return to your lab table and answer the lab questions in complete sentences.

**Analysis and Conclusions:**

1. Which specimens did you determine were living (as seen in lab)? Nonliving?

Living: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Nonliving: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What traits do living things seem to have in common? List at least three.
2. Divide the nonliving specimens into two *new* groups. Categorize the specimens that you classified as nonliving (in #1) into these two new groups
3. List two of the nonliving specimens that had at least three of the characteristics for living things **AND** discuss what those three characteristics were for **EACH** specimen.
4. Give an example of a living specimen (in this lab) in which you were **unable** to observe all of the characteristics of life? What methods or conditions might allow you to observe these characteristics?
5. Do you think it is difficult for scientists to come up with criteria to define life? Why or why not?
6. According to your textbook, what are the characteristics of life? How did the “official” list compare with yours? If you could add one more characteristic to these, what would it be and why?