**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristics of Life** | Made of Cells which contain DNA | Reproduction | Grow and Develop | Use Energy | Respond to their environment | Populations adapt to their environment over time | Classification |
| Organism # | **Name of organism** | **Unicellular or multicellular?** | **Sexual or Asexual Reproduction?** | **How does the organism change over its lifetime?** | **Is it a producer or consumer?** | **Does it visibly respond to stimuli?** | **Name one adaptation of organism to its environment** | **Animal****Plant****Fungi****Protist****Bacteria** |
| **1** |  |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |  |
| **5** |  |  |  |  |  |  |  |  |
| **6** |  |  |  |  |  |  |  |  |
| **7** |  |  |  |  |  |  |  |  |
| **8** |  |  |  |  |  |  |  |  |

**Observing and Inferring Characteristics of Life in Living Organisms**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristics of Life** | Made of Cells which contain DNA | Reproduction | Grow and Develop | Use Energy | Respond to their environment | Populations adapt to their environment over time | Classification |
| Organism # | **Name of organism** | **Unicellular or multicellular** | **Sexual or Asexual Reproduction** | **How does the organism change over its lifetime?** | **Is it a producer or consumer?** | **Does it visibly respond to stimuli?** | **Name one adaptation of organism to its environment** | **Animal****Plant****Fungi****Protist****Bacteria** |
| **9** |  |  |  |  |  |  |  |  |
| **10** |  |  |  |  |  |  |  |  |
| **11** |  |  |  |  |  |  |  |  |
| **12** |  |  |  |  |  |  |  |  |
| **13** |  |  |  |  |  |  |  |  |
| **14** |  |  |  |  |  |  |  |  |
| **15** |  |  |  |  |  |  |  |  |
| **16** |  |  |  |  |  |  |  |  |

C**onclusion: Review your class notes to answer these questions**

* April says that fire is living because it uses energy, moves, can create new fires, and can die.
* Beatrice says that fire is not living because it is not made of cells.
* Charlie says that since fire responds to more oxygen by getting bigger and to water by going out it is living.

1) Use your class notes to determine which student(s) is/are correct. Justify your answer with information from your notes.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) Cars are NOT living organisms. Which of the six characteristics of life do cars have? Which characteristics of life do cars lack?

|  |  |
| --- | --- |
| Characteristics of life found in cars | Characteristics of life missing in cars |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

3) Briefly describe how you could design an experiment to determine if an unknown object was a living organism or was nonliving.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Challenge Question**: When a paleontologist finds a fossil, what characteristics of the fossil make them think that it came from a living organism instead of just being an oddly shaped rock? 

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Vocabulary:**

**Organism**: A living thing

**Unicellular**: The organism is up of only one cell.

**Multicellular**: The organism is made up of many cells.

**Differentiation**: (Found in multicellular organisms)- The organism has parts that have different functions (ex: muscles, brain, flowers, stem)

**Asexual Reproduction**: The organism makes a new organism that is identical to the original. Only one parent is involved.

**Sexual Reproduction**: 2 organisms combine genetic information to make an offspring that is unique from both parents. 2 parents involved- male and female

**Producer**- The organism has the ability to make its own food in its cells ex: photosynthesis

**Consumer**- The organism gets its energy from another organism ex: eating

**Adaptation**: Something the animal has or does that allows it to be successful in its environment (gills in the water)

**Stimuli**- Something in the environment that an organism reacts to (ex: smell, light, sound, touch, taste)

**Kingdom**: How scientists group organism based on their characteristics.

**Animals**- ex: insects, mammals, fish, reptiles, etc

**Plants**: Trees, bushes, grasses, moss

**Fungi**: Mushrooms, mold, yeast

**Protist**: Mainly single celled organisms that have a nucleus. Found in water. Ex: Algae, paramecium, euglena, amoeba

**Bacteria**: single celled organisms that DO NOT have a nucleus ex: E.coli, Found everywhere!!