**Organizing Data Notes**

Empirical Evidence: information found during an investigation

Is the evidence empirical? Must answer yes to these questions

Can the investigation be repeated?

Yes! Did the investigation include a hypothesis?

Did the investigation include a procedure and materials list?

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  |  |  |
|  |  |  |

Organizing data

Charts – used to help track descriptions and measurements (looks like )

Graphs – used to track numerical (number) data (looks like L )

* Shows a relationship between variables

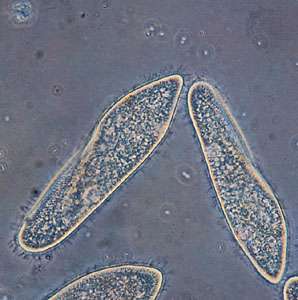
PRACTICE

Students were given a set of cards containing different species of living organisms and the following directions:

Use the information on the cards to group the organisms into domains, and then into kingdoms. Each card contains shows a picture of the organism and the following information: the number and type of cells that make up the organism, the mode of locomotion, and what the organism uses for food. Begin by constructing a table to collect information from the cards



Oak tree: multicellular, cells contain a nucleus, responsive movement only (for example, to light or gravity), uses sunlight to produce its own food.



Paramecium: unicellular, nucleus in cell, uses tiny hairs to move in liquid, eats nutrients for food.



Field mushroom: multicellular, cells contain a nucleus, responsive movement only (for example, to gravity), absorbs nutrients for food.



Gray wolf: multicellular, cells contain a nucleus, walks or runs, eats small animals for food.



E. coli bacteria: unicellular, no nucleus in cell, can move with a circular motion in liquids, eats nutrients for food

Chart

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Wolf** | **E coli.** | **Oak tree** | **Paramecium** | **Mushroom** |
| **# of cells** | many | One | Many | One | Many |
| **Do cells have a nucleus** | Yes | No | Yes | Yes | Yes |
| **What does it use to eat** | Small animals | Nutrients | Sunlight | Nutrients | Nutrients |
| **How does it move?** | Walks/run | In liquid | Responsively | In liquid | responsively |

Graph

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 5 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |
|  | 1 cell | Many cells | Move responsively | Eats nutrients | Cells have nucleus | Moves by walking |