**Observation Investigation**

Background: Scientists make many types of observations. Some of these observations, like counting and measuring, are based on ***quantity***. Others, like noticing colors and shapes, are based on ***quality***. In this investigation, you will explore many of the different types of observation, and learn the difference between ***quantitative*** and ***qualitative*** observations.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + itative = **quant**itative

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ + itative = **qual**itative

Instructions: Each group will be given a plant. With your group, make observations about your plant by answering the questions listed below.

* Answer each question about your plant in the **“observations”** column
* In the **“Method of Observation”** column, explain how you answered the question. What **tools** did you use?
* Decide whether the observation is **quantitative** or **qualitative**, and check off the correct box in the **“quantitative vs. qualitative”** column.

**Observations:** Answer each about your plant

1. The color of the plant (qual)
2. Height of plant (quant)
3. Number of main stems (quant)
4. Shape of the leaves (qual)
5. Leaves have jagged or smooth edges (qual)
6. Number of leaves in a cluster (connected together) (quan)
7. Leaves opposite one another or alternate (qual)
8. Veins in leaves distinct, central vein (qual)
9. Width of main stem (quant)
10. Leaves in clusters or separate (qual)
11. Width of the plant (between furthest leaves) (quant)
12. Length of leaves (quant)

**Observation Table:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Observation** | **Method of Observation** | **Quantitative or qualitative?** | |
| Quantity | Quality |
| **1.** |  |  |  |
| **2.** |  |  |  |
| **3.** |  |  |  |
| **4.** |  |  |  |
| **5.** |  |  |  |
| **6.** |  |  |  |
| **7.** |  |  |  |
| **8.** |  |  |  |
| **9.** |  |  |  |
| **10.** |  |  |  |
| **11.** |  |  |  |
| **12.** |  |  |  |