**Bean Lab Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_**

1. **State the Problem:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. **Research:**

**Define** each of the following terms below:

Independent variable:

Dependent variable:

Constant:

Control:

1. **Control group:**

* 1 gallon zip-lock bag
* 1 brown paper towel
* 15 ml of tap water
* Located on the classroom wall
* Bean Type:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Variables that may be changed**:

* Type of paper towel
* Type of liquid
* Location in the room (more or less light)

1. *Our lab group’s independent variable is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,*

*we are going to measure (dependent variable) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*

1. **The constants for our lab are:**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. **Hypothesis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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1. **Experiment:**
2. Materials:

Plastic bags

Beans

Marker for labeling

Tape

Paper towel

15 ml liquid

b.) Procedures:

1. Label your bag with the first names of people in your group with the marker.

2. Place the paper towel in the plastic bag.

3. Add the 15 ml of liquid into the bag.

4. Place 3 seeds between the bag and the paper towel.

5. Using tape hang on the bag on the wall in the room.

1. **Results:**

We will record the observations of the experimental and control group 1-2 times per week for about 2 weeks. Go to the last page to complete your data table.

1. **Conclusion:**
2. What happened with your beans?
3. Compare and contrast your beans to the beans in the control group?

🡪 Give **three** things that are alike and three things that are different.

|  |  |
| --- | --- |
| **ALIKE** | **DIFFERENT** |
|  |  |
|  |  |
|  |  |

1. Was your hypothesis correct?
2. Is there anything that you would have done differently if you could go back?

**🡪 Write on the line underneath the first headings which group is your bag and which is the teachers bag. Write 2 observations (qualitative or quantitative) each time we check on our beans.**

|  |  |  |
| --- | --- | --- |
| **Day** | **Experimental Group Observations**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Control Group Observations**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |
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