

Name _____

Date _____ Per. _____

Pinto Bean Lab Activity

Question: How does salt affect the growth of pinto beans?

Hypothesis: _____

Materials:

- 2 plastic cups
- 20 pinto beans
- Salt
- Water
- 50 mL graduated cylinder
- 2 paper towels
- 2 self sealing plastic bags
- Masking tape
- Pen/pencil and lab sheet

Procedure:

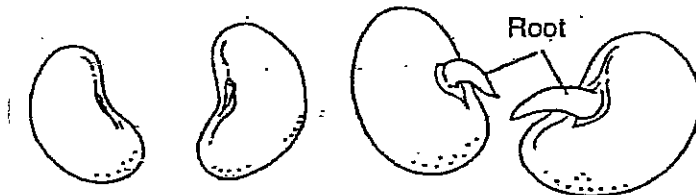
1. Label cups using masking tape. Make sure your names are on both cups. Label one cup A and the other cup B.
2. Make sure each cup has 10 pinto beans in it.
3. Measure 25 mL of water using graduated cylinder and pour into cup A. Repeat this for cup B.
4. Add about 2g of salt to cup B only. (1 level spoon of salt = 1 g of salt)
5. Set cups aside overnight.

Second Day:

6. On the following day, pour out water from both cups keeping the beans in the cup. (Empty water from cup A first)
7. Soak the two paper towels with plain water and lay towels out flat.
8. Place beans from cup A on one towel and beans from cup B on the other towel.
9. Fold towel over beans keeping them as flat as possible and then slide each towel with the beans into a plastic bag. Make sure to take label from cup and put it on the correct bag. (Beans from cup A should be put in bag A and beans from cup B should be put in bag B)
10. Set bags aside overnight.

Third Day:

11. On the following day, unfold paper towels and check the seeds for growth. Look for small white roots.



12. Count the number of seeds that began growing in each bag and record the numbers in your data table below.

Data Table:

| MY GROUP | Seeds Used | Seeds that Grew |
|-------------|------------|-----------------|
| Plain Water | | |
| Salt Water | | |

| CLASS GROUPS | Plain Water | Salt Water |
|--------------|-------------|------------|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |

Controlled Variables – (at least 3)

Independent Variable –

Dependent Variable –

Make a bar graph showing the class results from the experiment.

Conclusion: Write a conclusion paragraph using the following questions as a guide.

- Under what condition, plain or salt water, did more seeds grow?
- Is your hypothesis supported by your data? Explain why or why not.
- What is your evidence?
- How reliable are your results?

Write two other scientific questions about pinto beans that could be investigated by experimentation. (Hint: Choose a different independent variable to investigate)

1.

2.