Performance Station: Plants

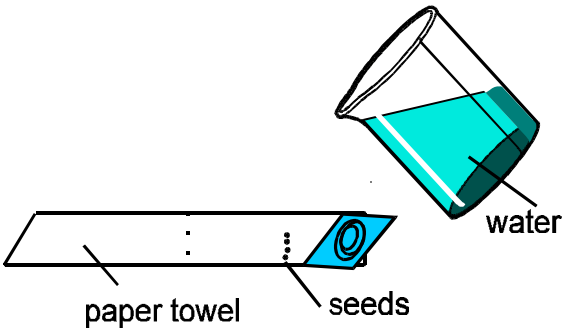
Plants: C3, C12

Learning Objective: To experiment with variables that influence seed germination.

Note to Teachers: Try this with various types of seed to compare length of germination time. Use old seeds, or seeds used for cooking eg. dried beans. Try weed seeds.

Materials

- 2 sheets of paper towel, not separated
- glass jar
- 2 elastic bands
- water
- 25 seeds of one kind

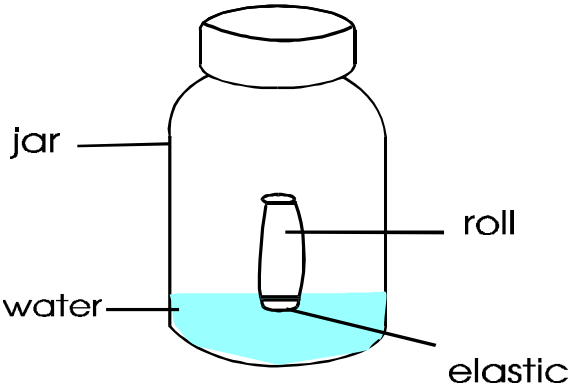


Procedure

1. Fold the sheets of paper towel lengthwise into a long thin rectangle.

2. Slightly moisten the rectangle with water. Place 5 seeds on it, and roll the towel up lengthwise. Continue placing seeds 5 at a time and rolling until all 25 seeds are in the rectangle and the towel is completely rolled up.

3. Gently place an elastic over each end of the roll, about 2 cm from each end. Moisten the roll with more water and put the roll in the jar.



4. Fill the jar with water to the level of bottom the elastic (about 2 cm). The water should be kept at this level. In about 5 days, check to see how many seeds have germinated.

5. Keep a record of which seeds sprouted first.

6. Make a graph showing rates of germination.

7. Add up the number of seeds that germinated out of 25. Multiply by 4. This will give you a prediction of the number of seeds that would germinate out of 100 — a percentage.

8. Find out the percentages for the seeds used in this experiment.

9. What practical application could this have in real life?

10. Why is it useful to try a sample of 25 rather than one or two?