

Title: What's the Limit?

Introduction: All living things need several essential substances to stay alive. Air, water, and food are necessary for life as we know it. A limiting factor is one that if it is in short supply it will limit a population from growing or even may prevent it from existing. How long can a human go without air, water or food? Fortunately, most of us never have to find out by experience what the answer to that question is. In this activity, you will experiment with radishes to see how water can be a limiting factor in their growth.

Materials: 20 radish seeds, 5 plastic cups, graduated cylinders, soil, water, marker

Procedures:

1. Label the cups A, B, C, D and E. Add the same amount of soil to each.
2. Decide with your group how much water each cup will get. Each should be different.

Write the amounts here: A _____ B _____ C _____ D _____ E _____

3. Plant the 4 seeds in each cup and add the correct amount of water to each.
4. Check the plants daily but only water them twice a week. Measure the heights of each plant and record on the data table.
5. Place the plants under a light source.

Data

Day	Cup A	Cup B	Cup C	Cup D	Cup E

Analysis:

1. Compare your results with your classmates. What amount of water seemed to be necessary for the healthy growth of radishes?

2. Use the term “limiting factor” in a sentence describing the outcome of this lab:
3. What is an example of an environment where water is a limiting factor?
4. What is an example of an environment where water is not a limiting factor?

Conclusion: