Limits to Growth

Procedure

1. Collaborate  Work with a partner. Label the three cups A, B, and C. Place soil into the cups until they are nearly full. Each cup should contain roughly the same amount of soil. Safety: Wear goggles when handling soil.

2. Use Variables  Place 2 seeds in cup A. Place 10 seeds in cup B. Place 20 seeds in cup C.

3. Measure  Measure and pour 25 mL of water into each cup.

4. Record Data  Place all three cups in a sunny spot. Fill in the first column of the chart below.

<table>
<thead>
<tr>
<th>Plant Growth</th>
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</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Dates Watered</td>
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<tr>
<td>Measured Growth</td>
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</tbody>
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<table>
<thead>
<tr>
<th></th>
<th>Cup A</th>
<th>Cup B</th>
<th>Cup C</th>
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<tbody>
<tr>
<td>Dates Watered</td>
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5. Observe  Over the course of the next two weeks, water the cups when the soil is dry and measure growth. Be certain that all the cups receive the same amount of water and sunlight. Record your observations at least twice a week.
Conclusion

Write the answers to the questions.

1. Observe  What differences did you observe in the growing seeds?

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2. Hypothesize  What factor might have caused these differences?

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3. Use Variables  Why was it important to give each cup the same amount of sunlight and water?

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Investigate More!

Design an Experiment  Design an experiment to determine how sunlight affects growth. Remember to keep other variables constant, and to include a control.