**ROBBIE’S EXPERIMENT**

Robbie has a knack for growing plants. He has heard that a new plant food called “Grow Tall” allows plants to grow twice as fast. He began devising his own controlled experiment to help him find an answer to this question. He took clippings from his most healthy plant and plants them in separate pots. He placed each clipping in the same type and amount of soil. He used the same kind of clay pot for each plant. He let each plant grow for 1 month to make sure each plant had rooted and was healthy.

The plants were then placed in the same room in the same window so that all the environmental factors would be the same – temperature, airflow, sunlight, etc. He gave each plant identical amounts of water. The only difference between the two plants was that one plant was given 2 tablespoons of “Grow Tall” plant food each day. The other plant received no “Grow Tall.”

Robbie conducted his experiment for 3 months. He measured each plant every 2 weeks. He used a meter stick to measure the growth of each plant and record the data in centimeters. (See Data Table on back.) If there was a significant difference in growth between the two plants, then he could conclude that it had to be due to the administration of “Grow Tall.” Of course, if there was only a small difference, then that could be due to chance, but a consistent and great difference would be connected to the plant food.

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| How "Grow Tall" Affects the Growth of Plants Over Time | | |
| Date | Plant #1 (No "Grow Tall") | Plant #2 (Grow Tall) |
| 9/1 | 7.0cm | 7.0cm |
| 9/15 | 8.0cm | 9.0cm |
| 9/29 | 9.5cm | 10.5cm |
| 10/13 | 11.5cm | 13.0cm |
| 10/27 | 13.0cm | 16.0cm |
| 11/10 | 15.0cm | 19.0cm |
| 11/24 | 16.0cm | 20.0cm |
| 12/1 | 16.5cm | 21.0cm |

1. Graph the data. You will have a double line graph.

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1. Identify the problem investigated

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1. Write an appropriate hypothesis with explanation

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1. Identify the control group

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1. Identify the independent and dependent variables

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1. Identify 10 constants (controlled variables)
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12. Write a conclusion with supporting data

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