

Observing Plant Growth

Grade Level: 4th grade

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| Overview | The purpose of this lesson is for students to be able to grow a green bean plant and observe how tall it grows throughout a 5 week period by creating a line graph. |
| Objective | Students should be able to grow a green bean plant and provide for the plant in order for it to grow. They should be able to take measurements of the plant and be able to create a line graph using ChartGizmo with 100% accuracy. |
| Standards | <p>4.1-Students, working collaboratively, carry out investigations. They observe and make accurate measurements, increase their use of tools and instruments, record data in journals, and communicate results through chart, graph, written, and verbal forms.</p> <p>4.2- Students use a variety of skills and techniques when attempting to answer questions and solve problems. They describe their observations accurately and clearly, using numbers, words, and sketches, and are able to communicate their thinking to others. They compare, explain, and justify both information and numerical functions.</p> |
| Materials | <ul style="list-style-type: none"> • Container • Soil • Green bean seeds • Water • Heat lamp • Ruler • Pencil • Paper • Computer • Science notebook • Labels |
| Procedure | <ol style="list-style-type: none"> 1. Start by explaining to the students what they will be doing and what is expected throughout the experiment. Have students get into groups of 4. 2. Demonstrate how to construct the green bean plant's home by using the container and placing soil in the bottom of container. 3. Add some water to the soil, and take the green bean seed and bury it in the soil so it is not visible. Water the seed some more. 4. Once you have completed the demonstration, have students get materials needed to make their plant's home and assist them when needed. Make sure students do not water the seed too much. 5. Once all of the groups have completed their plant's home, have them label their container by their group number. 6. Have students place all of the containers under a heat lamp for 12 hours so the plant can grow. The plant will be in the dark for 12 hours as well. 7. Each day, have students observe their plant's growth and water the plant daily. Take measurements of the plant's height each day and write measurements and observations in their science notebook. 8. After 5 weeks, have students collect all of their data and make a line graph showing the amount of weeks observed and the amount of growth the plant reaches each week by using ChartGizmo. Assist students when needed. |
| Evaluation | If the students correctly construct the plant's home and take care of it every day, then |

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| | <p>they have learned how to grow a plant. If they observe the changes the plant goes through and records data through a line graph on ChartGizmo, then the students have learned how to create a graph using ChartGizmo. Also, students will know how to make correct observations and how to be organized with their results.</p> |
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