Sci 8 **Virtual Lab on Plant Growth** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_

In this virtual lab you will carry out an experiment to determine which colours of the light spectrum are used in photosynthesis as evidence by plant growth.

Click on the link below and read the instructions on the left side. Follow the procedure from 1-10 to complete the lab. Record your data in the chart below then answer the questions below.

<https://nt7-mhe-complex-assets.mheducation.com/nt7-mhe-complex-assets/Upload-20190715/InspireScience6-8CA/LS12/index.html>

1. Make a Hypothesis about which color in the visible spectrum cause the most plant growth and which colour in the spectrum causes the least plant growth. Your hypothesis should be in an “IF .....then .... “ statement.

Hypothesis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Data Table: Plant Growth under different colour filters:

|  |  |  |  |
| --- | --- | --- | --- |
| Filter Colour | Spinach Avg. Height (cm) | Radish Avg. Height (cm) | Lettuce Avg. Height (cm) |
| Red |  |  |  |
| Orange |  |  |  |
| Green |  |  |  |
| Blue |  |  |  |
| Violet |  |  |  |

1. Complete a bar graph of your data. Place the colours on the x-axis and plant height on the y-axis. Make a legend indicating what pattern/colour represent each plant.
2. Identify the variables in this experiment:

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Control Variables: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Analyze the results of your experiment. Did your data support your hypothesis? Explain. If you conducted tests with more than one type of seed, explain any differences or similarities you found among the types of seeds.
2. What conclusions can you draw about which colour in the visible spectrum causes the most plant growth?
3. Given that white light contains all colors of the spectrum, what growth results would you expect under white light?