

Procedure

Materials: Elodea, green plastic, blue plastic, red plastic, black construction paper, beaker for each wavelength tested, stock water solution with bromothymol blue.

1. You will set up two light conditions and you will work with another team that will set up the other two conditions. You will then share your data. Your teacher will set up a control. Find the team you will be working with.
2. Your team (of two) should gather two sprigs of Elodea and blue plastic and red plastic. (The other half of your team will need two sprigs of Elodea and green plastic and black construction paper.)
3. Fill each of your beakers with the same amount of stock solution. Add a sprig of Elodea to each.
4. Wrap each beaker with the designated color of plastic (red, blue, green or construction paper).
5. Put the entire apparatus underneath a grow light and start timing with a stopwatch.
6. Watch each beaker and record how long it takes for an observable color change to take place. Record.
7. List the results for each condition below.

Plant with full light:

Plant with red light:

Plant with blue light:

Plant with green light:

Plant with red light:

Draw a conclusion about the effect of photosynthesis based on your results. Explain your results. Use your knowledge about the differences in wavelength for each of the different colors.