

Photosynthesis Continued:

Test of Wavelength Effect on Algae Growth

Questions: If you manipulate the light illuminating cultures of algae, how do you think it would affect its growth? How might wavelength limit the rate of photosynthesis? Based on what you have observed in lab today, formulate at least 2 testable hypotheses in your notebook.

- State each hypothesis.
- Describe your experimental plan and how it will test the hypothesis.
- Record, analyze and interpret your results.
- Discuss and offer conclusions.

Methods: Grow the green algae *Chlorella* for 1-3 weeks under experimental conditions of your own design that address your hypotheses. Make a dilution of *Chlorella* stock, and put the same volume into each treatment of a six well plate. Take an initial cell density reading for each sample as you set it up. Pipet 7ml into a spec tube and take a reading at 600nm (standard wavelength for cell density) then return to the appropriate well. At appropriate time points, take additional turbidity readings, and look at the cultures under a scope. (At 400x you'll see small round cells and filaments.)