

Syllabus: Organismal Biology Laboratory

Bio 135D & E

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Laboratory Times: Th 8:30 am – 11:20 am or 12:40 pm – 3:30 pm, Room: Olin 142

Learning Goals

1. Demonstrate concepts covered in lecture.
2. Gain experience with data collection and laboratory procedure.
3. Synthesize observational and experimental data into hypotheses and concepts.
4. Communicate concepts and hypotheses derived from observational and experimental data.

Laboratory Objectives By the end of this lab you should be able to:

1. Develop detailed and specific observations of biological phenomena.
2. Formulate a well-stated and specific hypothesis.
3. Formulate predictions based on a hypothesis.
4. Design experiments that isolate variables based on a hypothesis.
5. Summarize experimental results graphically and statistically.
6. Interpret experimental results within the context of existing knowledge.
7. Communicate experimental findings in verbal, written, and graphical formats.

Laboratory Topics

Topic	Week of:	Assignment
Animal & Plant Form and Function	Feb. 11	Observations & Hypotheses
Photosynthesis	Feb. 18	Results Summary with graphs & Discussion
Plant Respiration	Feb. 25	combined with Animal Respiration
Animal Respiration	Mar. 4	Results Summary with graphs & statistics
Respiration Experimental Design	Mar. 11	
Respiration Experiment Execution	Mar. 18	Data Analysis
Respiration Data Analysis	Apr. 1	Lab Report
Stomata Observation	Apr. 8	Proposal & Methods
Stomata Lab Test	Apr. 15	Poster
Natural Diversity (meet at Nature Park)	Apr. 22	
Zooplankton Observation	Apr. 29	Observations & Proposal
Zooplankton Experimental Set-up	May 6	
Zooplankton Experiment Data Collection	May 13	Results Summary & Future Directions

Expectations I expect you to read and adhere to the *Academic Expectations for DePauw Students* and the *Academic Integrity Policy* outlined in the DePauw Student Handbook.

Attendance Laboratory work is inherently hands-on and therefore laboratory attendance is mandatory. Labs cannot be made-up.

Grading and Evaluation Your final grade for the lab will be the average of all assignments. All lab assignments are due at the beginning of the next lab unless otherwise noted. Although most labs will be conducted as groups, each student must complete their own lab assignment unless otherwise noted. Collaboration with group members is encouraged and expected but direct copying is not acceptable and will not receive credit.