

Students will use electronic data acquisition tools to explore respiration in animals. Computerized tutorials will serve as a guide in use of probeware, oxygen electrodes and oxygen chambers, enabling students to formulate predictions about metabolic rates in goldfish and develop experimental strategies by which to test them.

**Concepts:** proposing a testable hypothesis; designing an experiment with controls; understanding and interpreting p-values.

**Skills:** handling live experimental subjects; use of a computer interface with a dissolved oxygen probe to collect data; analyzing results in Excel (creating a graph, finding the slope, combining data between groups to strengthen analysis).