



The Fish Respiration Experiment

Student name _____

Period _____ Date _____



We will collect several different temperature readings, one at room temperature, some at lower temperatures, and some at higher temperature. To collect this data:

1. Use the slider on the Heater/Cooler to raise or lower the water temperature.
2. Allow a few seconds for the water temperature inside the tank to adjust.
3. Note and record the temperature of the water and the DO content (see below).
4. Count and record the respiration rate of the goldfish for one minute.

Baseline Data (Room Temp.)		
Temperature	<input type="text"/>	°C
DO	<input type="text"/>	ppm
Respiration rate	<input type="text"/>	breaths/min

Temperature Reading #1		
Temperature	<input type="text"/>	°C
DO	<input type="text"/>	ppm
Respiration rate	<input type="text"/>	breaths/min

Temperature Reading #2		
Temperature	<input type="text"/>	°C
DO	<input type="text"/>	ppm
Respiration rate	<input type="text"/>	breaths/min

Continue to collect temperature readings until you believe you understand the relationship between temperature and DO content of the water. Then, collect an algae reading, by adding algae to the bowl and recording:

Effects of Algae		
Temperature	<input type="text"/>	°C
DO	<input type="text"/>	ppm
Respiration rate	<input type="text"/>	breaths/min

Compare these readings with your baseline readings. What can you conclude?

You should have developed a theory or hypothesis about how temperature affects DO. What do you believe the relationship between DO and temperature is?

One of the main sources of DO in a pond comes from photosynthesis. Oxygen is produced when sun shines on the plants in the water. How do you think the data collection in the experiment might have been affected if the fish bowl were in the sunlight?

Make a prediction about the DO in a pond on a hot, cloudy day.

