

Name _____ Period _____ Date _____



Water Quality

STEM Sims

Lesson 4: What is the Relationship Between Dissolved Oxygen and Water Temperature?

In Lesson 1, you investigated the relationship between seasons and water temperature. The concentration of dissolved oxygen in water is related to water temperature. Can you determine the relationship between water temperature and dissolved oxygen concentration in water?

Doing the Science

1. Start the Water Quality Simulation by clicking on the “Simulation” tab.
2. Select the “Sisson Pond” location.
3. Next, select the “Dissolved Oxygen” icon.
4. Move the cursor to a position in the body of water in the bottom right frame and click on the water.
5. Note and record in Table 1 below the month and dissolved oxygen displayed in the popup box.
6. Click the forward arrow next to the month “September” at the top, middle of the screen and again select the body of water.
7. Click on the “x” (close icon) at the top right-hand corner of the “Dissolved Oxygen” pop-up box in the middle of the screen.
8. **Repeat steps 5 – 8 until you have collected dissolved oxygen data through the month of August.**
9. **Enter your Temperature data from Lesson 1 in Table 1 below.**

Table 1.

Month	Dissolved Oxygen (mg/L)	Temperature (°C)	Month	Dissolved Oxygen (mg/L)	Temperature (°C)
September			March		
October			April		
November			May		
December			June		
January			July		
February			August		

Do You Understand?

1. During which month was the dissolved oxygen level the highest? _____
2. During which month was the dissolved oxygen level the lowest? _____
3. Compare how the dissolved oxygen level changed over the course of the months with how the temperature changed.
4. Describe the relationship between the dissolved oxygen concentration in water and water temperature. Discuss the implications of this relationship on aquatic life.