

Name _____ Period _____ Date _____



Water Quality

STEM Sims

Lesson 2: How Do Phosphate Levels Change During the Year?

Many fertilizers and cleaning products contain phosphates. Runoff from rainwater often carries these phosphates into water sources, such as lakes and ponds. How do you think the time of year affects the concentration of phosphates in ground 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 “Phosphates” 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 Phosphates concentration displayed in the popup box.
6. Click the forward arrow next to the month “September” at the top, left 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 “Phosphates” pop-up box in the middle of the screen.
8. **Repeat steps 4 – 7 until you have collected phosphate data through the month of August.**

Table 1.

Month	Phosphates (mg/L)	Month	Phosphates (mg/L)
September		March	
October		April	
November		May	
December		June	
January		July	
February		August	

Do You Understand?

1. During which month was the phosphate level the highest? _____
2. During which month was the phosphate level the lowest? _____
3. During which season did the phosphate level change the most? Propose an explanation as to why this season produced the largest change in concentration of phosphates in water.
4. Did the phosphate level change in a consistent pattern, or were the changes less ordered? Please explain your answer.