

Name _____ Period _____ Date _____



Water Quality

STEM Sims

Lesson 3: How Do Nitrogen Levels Change During the Year?

One of the main ingredients in most fertilizers is nitrogen in the form of nitrates and nitrites. Rain falling on the ground carries some of the nitrogen compounds into local bodies of water. Do you think that higher levels of nitrogen are present in bodies of water during different times of the year?

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 “Nitrogen” 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 Nitrogen 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 “Nitrogen” pop-up box in the middle of the screen.
8. **Repeat steps 4 – 7 until you have collected nitrogen data through the month of August.**

Table 1.

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

Do You Understand?

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