Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Lesson 1: What is the Relationship Between Season and Water Temperature?**

Many locations experience four distinct seasons: spring, summer, fall, and winter. Air temperature changes during the various seasons can cause bodies of water to also change temperature. Do differences in water temperature occur in a regular pattern, or are the changes less ordered?

**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 “Temperature” icon.

4. Move the cursor to a position on 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 water temperature displayed in the popup box.

6. Click the forward arrow next to the month “September” at the top, left of the screen and then select the body of water.

7. Click on the “×” (close icon) at the top right-hand corner of the “Temperature” pop-up box in the middle of the screen.

8. Repeat steps 4 – 7 until you have collected temperature data through the month of August.

**Table 1.**

|  |  |  |  |
| --- | --- | --- | --- |
| Month | **Temperature (°C)** | **Month** | **Temperature (°C)** |
| September |  | March |  |
| October |  | April |  |
| November |  | May |  |
| December |  | June |  |
| January |  | July |  |
| February |  | August |  |

**Do You Understand?**

1. During which month was the water temperature the highest? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. During which month was the water temperature the lowest? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. During which season did the water temperature change the most? Propose an explanation as to why this season produced the largest change in water temperature.

4. Did the water temperature change in a consistent pattern, or were the changes less ordered? Please explain your answer. Draw a graph on the back of this paper to support your explanation.