



What Do You Think Now?

At the beginning of this activity you were asked:

- Generally, what type of dissolved solids do you think a conductivity probe measures? Explain.
- Specifically, what dissolved solids do you think are present in each sample?

Return to the *What Do You Think?* questions and reconsider your original answers. Do you think any of the three solutes measured in class constitute a large percentage of the total dissolved solids for your specific water sample? If yes, which solute seemed to be the largest portion of the total dissolved solids? If no, what other ions do you predict are a large part of the TDS for your water sample? Explain your answer.

Chem Essential Questions

What does it mean?

Chemistry explains a macroscopic phenomenon (what you observe) with a description of what happens at the nanoscopic level (atoms and molecules) using symbolic structures as a way to communicate. Complete the chart below in your *Active Chemistry* log.

MACRO	NANO	SYMBOLIC
<i>Each technique had its own macroscopic phenomenon to observe. Choose two and explain what you observe on the macroscopic level.</i>	<i>Describe at the nano level what is occurring during a titration.</i>	<i>Mathematics is used to calculate concentrations during titration. Provide an example of such a calculation.</i>

How do you know?

Which of the two methods for determining iron concentration gave the highest values? Make specific reference to your data and observations from each technique presented in this activity.

Why do you believe?

Does natural water conduct electricity? Does distilled water conduct electricity? Explain your answer to both of these questions, referring back to the activity when appropriate.

Why should you care?

Why is it important that you understand how to measure hardness of water and what effect it has on your daily use?