

**Main Ideas, Key Points,  
Questions:**

*After watching the video segment, write down key points, main ideas and big questions.*

**Objective(s):**

- *To use pH testing to identify materials as acid or base.*
- *To compare and contrast three different models of pH: The Bronsted-Lowry Model, the Arrhenius Model, and the Lewis Model.*
- *To use titration procedures to determine the concentration of an unknown solution.*

**Notes:**

*During the video segment, use words, phrases or drawings to take notes.*

**Summary:**

*After watching the video segment, write at least three sentences explaining what you learned. You can ask yourself: "If I was going to explain this to someone else, what would I say?"*

**After watching the video and performing any associated labs and/or experiments, you should be able to answer the following:**

- 1. Identify all the materials on your data chart from Unit 7G as acid, base or neutral.**
- 2. Identify the acids and bases using a color key that matches the color changes seen in red cabbage juice.**
- 3. List at least three properties of acids and list two common examples.**
- 4. List at least three properties of bases and list two common examples.**
- 5. The most common model of an acid and a base in this course is the Bronsted-Lowry Model. Explain this model in words or pictures.**
- 6. Water is known to be an amphoteric molecule. What does that mean?**
- 7. The Arrhenius model of acid and base is not as useful, since it can only be used for substances that contain hydrogen and oxygen. What is the Arrhenius model?**
- 8. The Lewis Model of acids and bases is helpful when studying chemicals that do not have H<sup>+</sup> ions. Why?**
- 9. What is the definition of a Lewis acid and a Lewis base?**
- 10. What numbers on a pH scale are considered acidic? What numbers on the pH scale are considered bases? What number is neutral on the pH scale?**

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**After watching the video and performing any associated labs and/or experiments, you should be able to answer the following:**

*You are now expected to add chemicals (zinc nitrate or aluminum nitrate) to a water sample and measure the change in pH caused by the dissolving of the substance into water. Once you have completed this investigation, you can resume watching the Unit H video.*

11. What does the term “strong acid” and “strong base” mean?
  
12. Name an example of a strong acid and strong base. Name an example of a weak acid and a weak base.
  
13. Define neutralization.
  
14. The process known as titration involves neutralizing an acid with a base. What is the goal of performing a titration reaction?
  
15. Write the titration equation.
  
16. What do the terms of the equation stand for?
  
17. Write out your plan for carrying out the titration you have been assigned.

*When you have completed writing out this titration plan, you may then continue to the Unit 7I video.*