Questions - How is pH Important to Living Organisms

DIRECTIONS: Go to science blog, Trimester 1, Water Properties, click on the Importance of pH for Living Things. Answer the questions in COMPLETE SENTENCES.

1. What is the normal blood pH range? Is blood acidic, basic, or neutral?
2. Make a **chart** to list the differences between acidosis and alkalosis.
3. If breathing becomes slower and/or shallower, will this increase or decrease the acidity of the blood?
4. Which organ adjusts blood pH faster, the lungs or the kidneys?
5. Why is soda dangerous for your teeth? How long does it take for your mouth to produce enough saliva to wash away the soda?
6. Are diet sodas any better to drink than regular soda in terms of acidity level? What about sports drinks?
7. What is the pH level of stomach acid? What is the acid found in your stomach?
8. What is heartburn, what causes it, and how do antacids work to stop heartburn?
9. What kind of pH is necessary for plants to take up N and P? What happens if the soil is too acidic?
10. What is the danger associated with acidic soil and pesticide use?
11. What is added to soil to lower the pH? What is added to soil if the pH is too low?
12. What element must hydrangea plants have to produce a blue flower color? What kind of soil makes it possible for hydrangea plants to absorb this element?

ACID RAIN: What Causes it and What are the Dangers?

DIRECTIONS: Go to science blog, Trimester 1, Water Properties, click on the Importance of pH for Living Things. Answer the questions in COMPLETE SENTENCES.

1. What is the pH of normal rainwater? Does this make it acidic, neutral, or basic? What causes it to be in this pH range?
2. What time of year is acid rain more acidic? Why?
3. What are the two major gases that cause acid rain? What are the major sources of these gases?
4. Will areas with a lot of naturally occurring lime experience the effects of acid rain more or less than areas without lime? Why?
5. List all the ways that fish populations can suffer as a result of extremely acidic environments.
6. Is an acidic environment harmful to all species? Be specific in your answer.
7. Which area of Europe is so affected by air pollution and acid rain that thousands of its lakes are devoid of life? Where did this air pollution originate?
8. What is one sign that a lake has no life within it?
9. Explain how acid rain is especially harmful to asthma patients.
10. What disease has been linked to people eating “toxic” plants and/or animals?