15.1 Using the Periodic Table

Chemistry

Summarize main points from each video.

Video Title / topic _____

Video Title / topic _____

Video Title / topic _____

Topic Introduction

Summarize your understanding of each paragraph.

Like sports, the study of atomic and molecular properties, and how they relate on the periodic table, is like going to practice. Learning about chemical reactions, is like stepping out onto the field for the game itself.

Just as every sport has its "vocabulary"—the concepts of offense and defense, as well as various rules and strategies—the study of chemical reactions involves a large set of terms.

If liquid water is boiled, it is still water; likewise frozen water, or ice, is still water. Melting, boiling, or freezing simply by the application of a change in temperature are examples of physical changes – not chemical changes.

A chemical change occurs when the actual composition changes—that is, when one substance is transformed into another. Water can be chemically changed, for instance, when an electric current is run through a sample, separating it into oxygen and hydrogen gas.

Read/Summarize Text

1. **Read the passage.**
2. **Underline key expressions in each sentence.**
3. **Re-write each word (or expression) you underlined.**
4. **Summarize the passage.**

Title of Passage.

1

2

The relative position of an element on the periodic table is directly related to the likelihood of a reaction happening and even what kind of compound will be formed from a combination of elements.

Central to a discussion of element reactivity is the concept of electronegativity. Electronegativity is a measure of the strength of electrical attraction between an element's nucleus and its valence (highest energy) electrons. Metals tend to be more reactive the further down the periodic table we look. This is especially true of the Alkali and Alkaline Earth Metals. Metal elements will likely lose electrons when they react.

http://learningchemistryeasily.blogspot.com

Re-write words you underlined

3

Using a complete sentence, summarize or rephrase the passage

4

Read Text for Comprehension

Read this article for deeper understanding. No summary is required, although you may want to circle, underline, or mark key ideas and words.

https://www.pinterest.com/explore/chemical-reactions/?lp=true

Household items can be useful learning tools for chemical reactions. Some of these can be dangerous – so BEFORE conducting a “household item” chemical combination, research the combination through the internet and other sources.

Commonly used materials from the kitchen and household supply of items:

Baking Soda

Vinegar

Water

Soda (Coke)

Lemon / Lemon Juice

Potato

Hydrogen Peroxide

Sodium Iodide

Table Salt

Sugar

Balloons

Bottles

Pennies

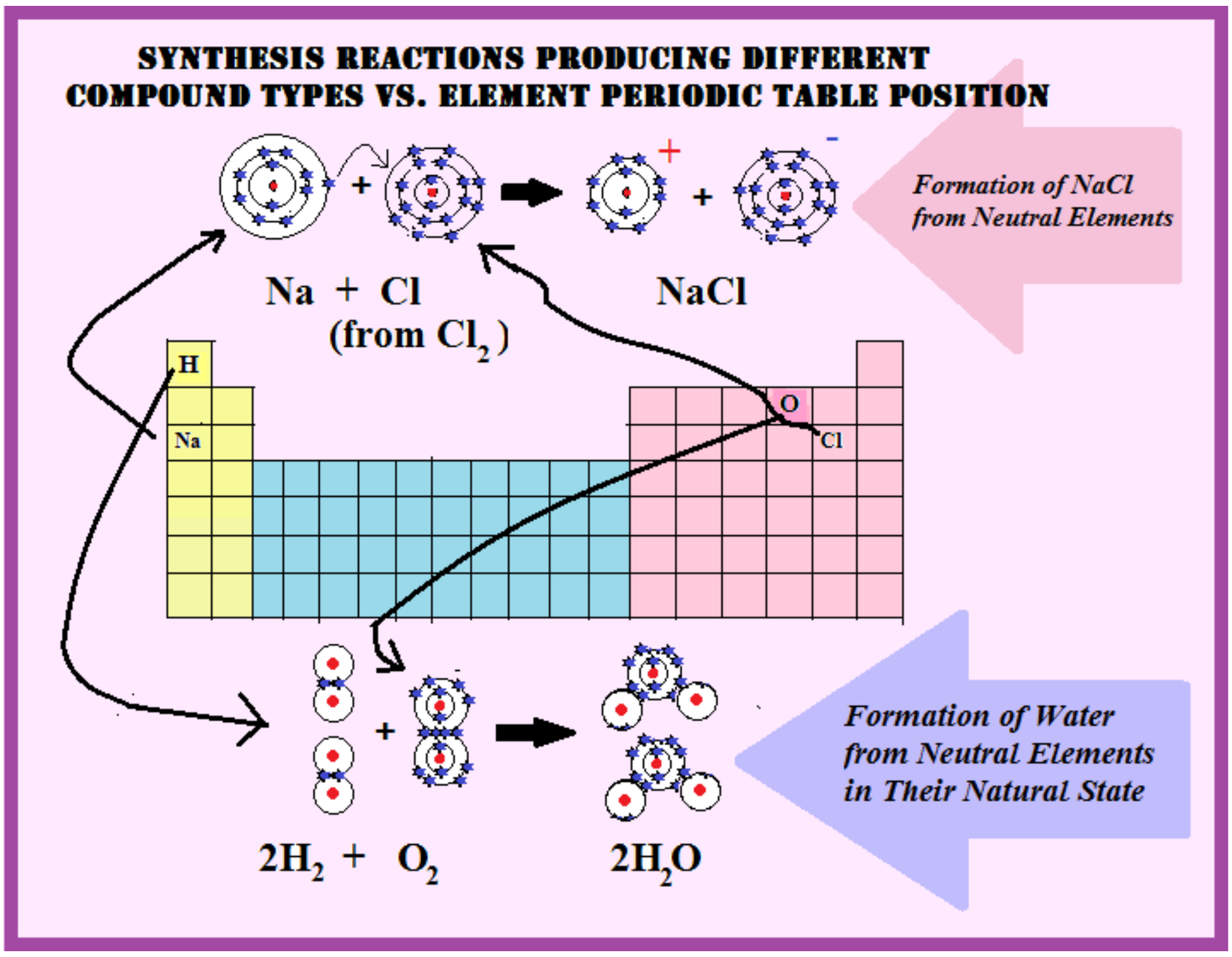
(Old) dimes

Hair follicles

Milk

Draw Illustration

Copy and Label the Illustration in the Space Provided



http://learningchemistryeasily.blogspot.com/2013/04/chemical-reactions-and-periodic-table.html

Draw (Copy) the Illustration Here

Interpret a Graph

Write the title of the graph _____

Circle the type of chart this represents

Bar Chart *Line Chart* *Pie Chart* *Other*

If applicable,

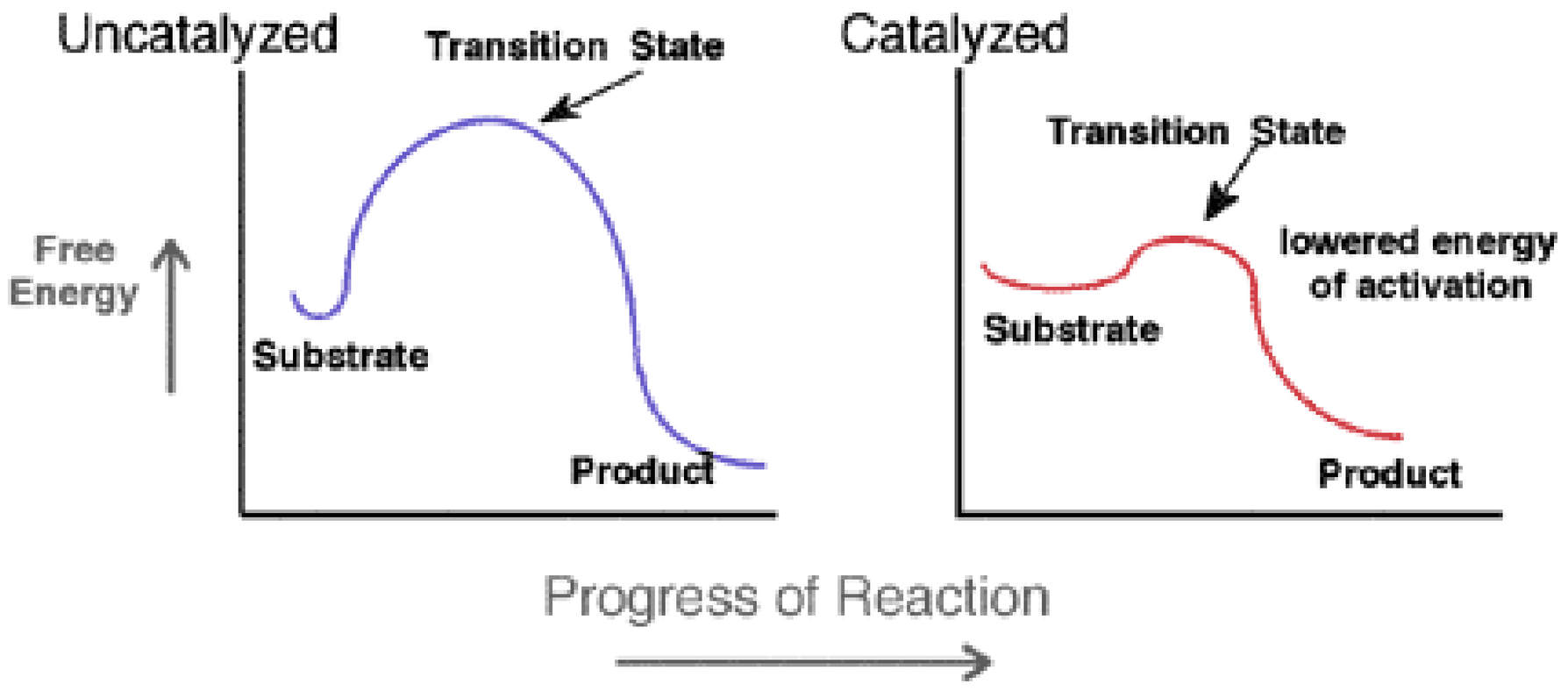
What does the X-axis represent _____

What does the Y-axis imply _____

Summarize what this graph represents or conveys

_____

https://socratic.org/questions/how-can-chemical-reactions-affect-the-decomposition-of-important-nutrients-in-fo



Show-Off Your Smarts!

Instructions

- Complete as an individual or small group.
- Discuss your ideas/answers/responses in a small group.
- Select one person to present your responses to the class.

Q1. How can this information be applied to a young-person's life?

Q2. How does this information apply to (or impact) communities?

Q3. When do scientists need to apply this information? How?

Q4. How would a person from 100 years ago view this information?

Q5. How does this topic connect to other science topics or math?

Write down at least three words introduced or covered by this topic.

1.
2.
3.
4.
5.
6.

Make a Poster

In the space provided here, create/draw a poster which conveys the concepts you have learned on this topic.