Thomas Haney Secondary School

Science 10

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LG 3: Energy in Chemical Processes

BIG IDEA: How is energy involved in chemical processes?

Learning Standards:

Fundamental Knowledge *(what I need to know)*	**Curricular Competencies** *(What I need to do)*
☆ *Energy is involved in chemical processes* ☆ *Chemical reactions occur in predictable ways (single replacement, double replacement, etc.).* ☆ *Chemical reactions result from the rearrangements of atoms and their bonds.*	• I can seek and analyze patterns, trends, and connections in data, including describing relationships between variables and identifying inconsistencies • I can formulate hypothesis and probable outcomes. • I can use knowledge of scientific concepts to draw conclusions that are consistent with the evidence.

Assessment of Learning Standards:

Have an interview to show evidence of the **Learning Standards.**

MASTERY (A)

I CAN:

✓ **Balance** the examples of the different reaction types and explain how they prove that mass is conserved.

ADVANCED (B)

I CAN:

➢ **Predict** the products of a reaction give the reactants AND **List** the different reaction types and provide an example of each.

➢ **Explain** how conservation of mass and energy changes are relate (ie. Endothermic vs Exothermic).

ESSENTIALS (C/C+)

I CAN:

☆ **Recognize** the different reaction types (single replacement, double replacement, combustion (oxidation), acid/base neutralization, synthesis, and decomposition.

☆ **Explain** how atoms are rearranged in each of the reaction types.

☆ **List** the different reaction types and provide an example of each.

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Reflection:

After finishing my learning activities what do I understand? How have I answered the BIG Question?

OPTION 1

- ☆ **Read** BC Science 10 pgs. 256 - 267 to learn about Types of Chemical Reactions and complete Pg. 105-110 from the Section 6.1 Worksheets.
- ☆ **Read** BC Science 10 pgs. 202 - 211 to learn about Balancing Chemical Reactions and complete Pg. 77-79 from the Section 4.3 Worksheets.
- ☆ Go to the following website: https://www.youtube.com/watch?v=L-G7pLufXAo and **complete** the Bozeman Science worksheet
- ☆ **Complete** the "Chemical Reaction Types" lab by completing the attached worksheet.

OPTION 2

- ☆ **Read** BC Science 10 pgs. 256 - 267 to learn about Types of Chemical Reactions and do questions on p. 271.
- ☆ **Read** BC Science 10 pgs. 202 - 211 to learn about Balancing Chemical Reactions and do questions on p. 215.
- ☆ Go to the following website: https://www.youtube.com/watch?v=L-G7pLufXAo and **complete** the Bozeman Science worksheet
- ☆ **Complete** the "Chemical Reaction Types" lab by completing the attached worksheet.