

Study Guide: **Chemical Reactions, Conservation of Matter, Endo / Exothermic and Engineering: Act. 7-12**

Quiz date: Thursday, Feb. 6, 2020

What you need to know/ do:

- Interpret chemical equations to recognize and justify whether or not they demonstrate the Law of Conservation of Mass.
- Identify evidence of chemical changes/ chemical reactions.
- Understand the difference between exo and endothermic reactions, and identify the types of reactions by looking at temperature data.
- Understand the difference between a closed and an open system, and identify examples.
- Understand and identify the steps in solving a problem using the engineering design process (criteria, constraints, building prototypes, testing and evaluating, redesigning and retesting). Apply this to new problems or challenges.
- Understand and explain how chemists are able to reclaim metal using chemical reactions, and how the Law of Conservation of mass is demonstrated in the process.

What you should use and what you should do to study:

- Use:
 - Vocab
 - Textbook
 - Lab book
- Do:
 - Explain the vocab terms to someone (parent, friend, dog, houseplant) and provide examples of these ideas that were present in our labs.
 - Re-read the section introductions to the activities. Remind yourself what we did in each lab and how those activities helped answer the guiding questions.
 - Review all your data. You do not need to memorize the chemical names, but you should understand what happened, and why and how these activities relate to the main topics and guiding questions.
 - Review all analysis questions. Explain your answers to someone (parent, friend, dog, houseplant). If unsure about an answer, call a friend or ask your teacher.