

Name: \_\_\_\_\_

Section: \_\_\_\_\_

### Lub Dub - Your Phenomenon

According to Merriam-Webster Dictionary, a phenomenon is "something (such as an interesting fact or event) that can be observed and studied and that typically is unusual or difficult to understand or explain fully." For this lesson, you were presented with a phenomenon that had to be explained after engaging in scientific practices (SEPs), considering disciplinary core ideas (DCIs), and highlighting important themes, or crosscutting concepts (CCCs). Apply your understanding of the different ideas used in this lesson to complete the four prompts below.

1. Come up with a phenomenon that can be explained by using some of the same ideas and themes from the lesson. **Your phenomenon does not have to be phenomenal!**

2. Check the box of any/all DCIs from the lesson that apply to your phenomenon.

- ☐ All living things are made up of cells, which is the smallest unit that can be said to be alive. An organism may consist of one single cell (unicellular) or many different numbers and types of cells (multicellular).
- ☐ Within cells, special structures are responsible for particular functions, and the cell membrane forms the boundary that controls what enters and leaves the cell.
- ☐ In multicellular organisms, the body is a system of multiple interacting subsystems. These subsystems are groups of cells that work together to form tissues and organs that are specialized for particular body functions.
- ☐ Within individual organisms, food moves through a series of chemical reactions in which it is broken down and rearranged to form new molecules, to support growth, or to release energy. (*Cellular respiration in plants and animals involve chemical reactions with oxygen that release stored energy. In these processes, complex molecules containing carbon react with oxygen to produce carbon dioxide and other materials.*)
- ☐ Some chemical reactions release energy, others store energy.

3. Check the box of any/all CCCs from the lesson that apply to your phenomenon.

- ☐ **Cause and Effect** - Cause and effect relationships may be used to predict phenomena in natural or designed systems.
- ☐ **Systems and System Models** - Systems may interact with other systems; they may have sub-systems and be a part of larger complex systems.
- ☐ **Structure and Function** - Complex and microscopic structures and systems can be visualized, modeled, and used to describe how their function depends on the shapes, composition, and relationships among its parts; therefore, complex natural and designed structures/systems can be analyzed to determine how they function.

4. Provide an explanation for your phenomenon. Be sure to incorporate any/all of the identified DCIs and CCCs in your explanation.