**Matter and Energy in Living Systems**

**Benchmarks: SC.8.L.18.4 Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.** SC.8.L.18.1 Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen. SC.8.L.18.2 Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.SC.8.L.18.3 Construct a scientific model of the carbon cycle to show how matter and energy yare continuously transferred within and between organisms and their physical environment.

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| **4** | I can **develop** and **construct** a model of the carbon cycle to show how matter and energy are continuously transferred in the environment. |
| **3** | I can **cite** evidence that living systems follow the laws of conservation of mass and energy. |
| **2** | I can **define:**\_\_\_\_ Photosynthesis\_\_\_\_ Cellular Respiration\_\_\_\_ Carbon Cycle\_\_\_\_ Carbon dioxide\_\_\_\_ Chlorophyll\_\_\_\_ Glucose\_\_\_\_ Chemical Reaction | \_\_\_\_ I can **describe** and **explain** the process of photosynthesis and cellular respiration.\_\_\_\_ I can **describe** the role light, carbon dioxide, water, and/or chlorophyll in photosynthesis and cellular respiration. |
| I can **define:**\_\_\_\_ Law of Conservation of Mass\_\_\_\_ Law of Conservation of Energy\_\_\_\_ Fossil Fuels\_\_\_\_ Living Systems | \_\_\_\_I can **investigate** and **explain** how living things obey the law of conservation of mass and energy.\_\_\_\_ I can **describe** how energy and matter are transferred in the carbon cycle. |
| **1** | With help, students are able to have partial success with learning goal. |