*7-ESS2-1. Develop a model to describe the cycling of Earth’s materials and the flow of energy that drives this process. [Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth’s materials.] [Assessment Boundary: Assessment does not include the identification and naming of minerals.*

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| **Learning Target** | **Mastery** | **Advanced** | **Meets** | **Approaching** | **Beginning** |
| **I CAN model how convection cycles Earth’s materials.** | Student is able to develop a model that demonstrates a thorough understanding of convection within the Earth’s mantle with relationship to density and energy and how convection acts as a driving force to cycle rocks through the Earth’s surface. | Student is able to develop a model that thoroughly describes the process of convection in the mantel and describes how it causes rocks to cycle through the Earth’s surface. | Student is able to develop a model that describes how convection causes materials to move through the mantle. | Student is able to develop a model that inaccurately describes how convection causes materials to move through the mantle | . Student is not yet able to make an attempt or is not yet willing to do so. |

**Capacity Matrix**

To receive **Advanced or Meets:**

* Give two examples of evidence used to make inferences about the layers of the Earth.
* Compare how pressure and temperature are related as the depths increase in the layers of the Earth.
* Be able to illustrate and explain the states of matter of particles in the convection cycle.
* Label the Earth’s interior on a model.

**Mastery:** Be able to answer the above for Advanced and

* Describe how adding and removing energy affects the density of matter in the mantle.