**** SCILLSS Classroom Science Assessment Workshop

# High School Earth and Space Science Unpacking Tool Activity Directions

To complete the Unpacking Tool Activity, use the HS Earth and Space Science **Partially Completed Unpacking Tool**. To complete the tool for the given standard, sort the statements below into the appropriate dimension (SEP, DCI, CCC) and section (*Key Aspect* or *Prior Knowledge*) on the tool. Use the recommended resources listed in the PowerPoint presentation. Note the statements are organized by dimension below to support your work

## Science and Engineering Practices

* Plan an investigation individually and collaboratively to produce data to serve as the basis for evidence.
* Conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence.
* Measure and observe relevant variables.
* Use appropriate tools for accurate and precise measurements.
* Use observations and/or collected data as evidence for the phenomenon under investigation.
* Use data to answer scientific questions.
* Use data to test design solutions.

## Disciplinary Core Ideas

* Water movement causes weathering and erosion, changing landscape features.
* The unique combination of physical and chemical properties of liquid water on Earth’s surface is central to the planet’s dynamics.
* The mechanical effects of water on Earth materials.
* The role of the polarity of water (through cohesion) and soil saturation in erosion.
* The ways water changes its state as it moves through the multiple pathways of the hydrologic cycle.
* There is a connection between the properties of water and its effects on Earth materials and surface processes.
* The role of the density of water in the liquid and solid states in the breakdown of rock.
* Water cycles among land, ocean, and atmosphere, and is propelled by sunlight and gravity.
* The properties of water affect energy transfer.

## Crosscutting Concepts

* Often the focus of an investigation is to determine how energy or matter flows through the system.
* The functions of designed objects can be inferred from their overall structure, the way their components are shaped and used, and the molecular substructures of its various materials.
* Energy and matter flows into, out of, and within a system.
* The properties of designed objects can be inferred from their overall structure, the way their components are shaped and used, and the molecular substructures of its various materials.
* The properties of natural objects can be inferred from their overall structure, the way their components are shaped and used, and the molecular substructures of its various materials.
* Structures and systems can be modeled.

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