**Learning Outcomes**

8th grade Science

Adam P. Heckler

**Earth & Space Science**

* Students will identify and characterize the composition and properties of Earth’s interior.
* Student will understand how composition and properties of Earth’s interior are identified by the behavior of seismic waves.
* Students will demonstrate and discuss how heat from convection drives plate motion
* Students will explain that the interior heat of the Earth was created from gravitational energy and radioactive decay that started at the formation of Earth.
* Students will recognize that the Earth’s crust consists of major and minor tectonic plates that move relative to each other.
* Students will recognize and explain that a combination of constructive and destructive geologic processes formed Earth’s surface.
* Students will describe and distinguish between the three major types of plate boundaries and the geologic features associated with each.
* Students will interpret and evaluate evidence of the dynamic changes of Earth’s surface through time is found in the geologic record.

**Physical Science**

* Students will describe and explain how forces between objects act when the objects are in direct contact and when they are not touching.
* Students will identify and analyze the magnitude and direction of forces acting on an object.
* Students will describe the effects of net forces on objects including a net force of zero.
* Students will identify the many different types of potential energy.

**Life Science**

* Students will explain how diversity of species occurs through gradual processes over many generations.
* Students will explain how the fossil record provides evidence that changes have occurred in number and types of species.
* Students will diagram and explain the characteristics of an organism as a result of inherited traits received from parent(s).
* Students will distinguish between asexual and sexual reproductions and the benefits of each.