

## **Power Indicators**

### **Grade 8 - Science**

#### ***Earth and Space Sciences***

- 8.1.1 Describe how objects in the solar system are in regular and predictable motions that explain such phenomena as days, years, seasons, eclipses, tides and moon cycles.
- 8.1.3 Compare the orbits and composition of comets and asteroids with that of Earth.
- 8.1.4 Describe the effect that asteroids or meteoroids have when moving through space and sometimes entering planetary atmospheres (e.g., meteor-"shooting star" and meteorite).
- 8.1.5 Explain that the universe consists of billions of galaxies that are classified by shape.
- 8.1.6 Explain interstellar distances are measured in light years (e.g., the nearest star beyond the sun is 4.3 light years away).
- 8.1.9 Describe the interior structure of Earth and Earth's crust as divided into tectonic plates riding on top of the slow moving currents of magma in the mantle.
- 8.1.13 Describe how landforms are created through a combination of destructive (e.g., weathering and erosion) and constructive processes (e.g., crystal deformation, volcanic eruptions and deposition of sediment).
- 8.1.14 Explain folding, faulting and uplifting can rearrange the rock layers so the youngest is not always found on top.
- 8.1.15 Illustrate how the three primary types of plate boundaries (transform, divergent and convergent) cause different landforms (e.g., mountains, volcanoes and ocean trenches).

#### ***Life Sciences***

- 8.2.2 Recognize that in sexual reproduction new combinations of traits are produced which may increase or decrease an organism's chances for survival.
- 8.2.4 Explain that diversity of species is developed through gradual processes over many generations (e.g., fossil record).

#### ***Physical Sciences***

- 8.3.2 Explain that motion describes the change in the position of an object (characterized by a speed and direction) as time changes.

#### ***Science and Technology***

- 8.4.2 Explain how decisions about the use of products

#### ***Scientific Inquiry***

- 8.5.2 Describe the concepts of sample size and control and explain how these affect scientific investigations.

#### ***Scientific Ways of Knowing***

- 8.6.1 Identify the difference between description (e.g., observation and summary) and explanation (e.g., inference, prediction, significance and importance).