

The following glossary includes terms that are used in the student texts for Cratering in the Solar System section of the Feel the Impact materials. You will probably want to study the terms and their definitions before you read these student texts.

A **crater** is a depression on the surface of a planet (or a moon), usually caused by the impact of a meteoroid, asteroid, or comet.

**Dwarf Planet** is a name given to a small body that orbits the sun. Dwarf planets are large enough to be shaped by their mass into a spherical shape.

This definition of dwarf planets was written by astronomers in 2006 to accommodate the fact that many large bodies, but very small planets are being found beyond the orbit of Neptune, in the Kuiper Belt.

**Ejecta** is material expelled from the impact site during a crater formation.

An **Ejecta Curtain** is a thin, funnel-shaped sheet of material or debris that has projected upward from a point of impact of a projectile on the surface of another object.

**Gravity Dominated** is the term used when the gravitational force pulling the impactor down is significantly larger than the material strength of the target that is resisting that downward motion.

**Hypervelocity** is a velocity many times the speed of sound.

**Impact Velocity** is the speed and direction of motion of two bodies at the time of impact. It is the difference between the speed and motion of each body.

The **Kinetic Energy** of a moving body is one-half the product of its mass and its velocity squared.

A **Meteor** or “shooting star” is what a meteoroid becomes when it starts burning up in our atmosphere. Dust from the tails of comets are also seen as meteors.

We also see regular meteor showers like the Leonids and Perseids when the Earth travels through dust particles left over from a comet's passage long ago.

A **Meteorite** is a meteor that lands on the Earth's surface. Meteorites are found all over the world.

A **Meteoroid** is a piece of rock floating in space. The rock probably came from the asteroid belt between Mars and Jupiter, but some can come from Mars or the moon.

**Porosity** is a measure of the void spaces in a material. A sponge is porous, as is a comet nucleus.

A **Projectile**, or Impactor, is an object that is traveling through space toward a target.

**Projectile Density** is the density, that is, the mass per unit volume, of the object that impacts a surface.

A **Shockwave** is a front that moves through the rock at supersonic speeds structurally altering the rock through which it passes.

**Strength Dominated** is the term used when the strength of the material that makes up the target, or surface, is significantly larger than the gravitational force pulling the impactor down.

**Target Density** is the density, that is, the mass per unit volume, of the surface that is impacted by a projectile or impactor.

**Yield Strength** is the applied stress under which an object experiences plastic deformation. It can be measured in pounds per square inch in the English system or megapascals in the metric system.