

## Unit Standards

S8P2 Students will be familiar with the forms and transformations of energy.

- a. Explain energy transformation in terms of the Law of Conservation of Energy.
- b. Explain the relationship between potential and kinetic energy.

S8P3 Students will investigate the relationship between force, mass, and the motion of objects.

- a. Determine the relationship between velocity and acceleration.
- b. Demonstrate the effect of balanced and unbalanced forces on an object in terms of gravity, inertia and friction.
- c. Demonstrate the effect of simple machines (lever, inclined plane, pulley, wedge, screw and wheel and axle) on work.

S8P5 Students will recognize characteristics of gravity, electricity, and magnetism as major kinds of forces acting in nature.

- a. Recognize that every object exerts gravitational force on every other object and the force exerted depends on how much mass the objects have and how far apart they are.