

Augusta Canal National Heritage Area
Grade 8 Science
Scientific Laws at Work in Hydro Electricity
Vocabulary

Acceleration	when something speeds up, slows down, or changes direction
Axle	A bar or shaft on which a wheel turns.
Energy Transformation	The conversion of one form of energy into another.
Force	A push or pull; all forces have both size and direction.
Gravity	A force of attraction between objects that is due to their masses.
Motion	An object's change in position over time when compared with a reference point
Rest	put something in a resting position, as for support or steadying
Mass	the amount of matter in an object
Weight	A measure of the gravitational force exerted on an object, usually by the Earth.
Work	The action that results when a force causes an object to move in the direction of the force.
Electricity	The flow of electrons
Electrons	A tiny negatively charged particle that orbits the core of an atom
Magnet	object that attracts certain materials
Turbine	A device that converts the kinetic energy of a moving fluid (gas or liquid) into electrical energy
Generator	machine that changes mechanical energy into electrical energy
Pulley	a grooved wheel around which is wrapped a rope, chain, or cable

Velocity	the speed of an object in a particular direction
Potential Energy	the capacity for doing work that a body possesses because of its position or condition.
Kinetic Energy	the energy a body possesses because it is in motion, is equal to $(1/2 mv^2)$ where m is its mass and v is its velocity
Mechanical Energy	energy associated with the motion of an object
Electrical Energy	Moving electrical charges that produce electricity and energy