

# NORTH BRANFORD PUBLIC SCHOOLS

## Essential Curriculum

### Science

#### *Grade 8*

Upon completion of grade 8, students will be able to:

- Calculate the average speed of a moving object and illustrate the motion of objects in graphs of distance over time.
- Describe the qualitative relationships among force, mass and changes in motion.
- Describe the forces acting on an object moving in a circular path.
- Explain the similarities and differences in cell division in somatic and germ cells.
- Describe the structure and function of the male and female human reproductive systems, including the process of egg and sperm production.
- Describe how genetic information is organized in genes on chromosomes, and explain sex determination in humans.
- Explain the effect of gravity on the orbital movement of planets in the solar system.
- Explain how the regular motion and relative position of the sun, Earth and moon affect the seasons, phases of the moon and eclipses.
- Explain how beam, truss and suspension bridges are designed to withstand the forces that act on them.

**Curriculum Embedded Performance Task: SHIPPING AND SLIDING**