

SCIENCE

Grade 8 students will be exploring science through four main units:

Cells and Systems

- Characteristics of living things
- Cell theory
- Plant and animal cells
- Relationships among cells, tissues, organs and systems

Optics

- Principles of light
- Reflection and refraction
- Additive and subtractive colour theory
- Electric magnetic spectrum
- The human eye

Fluids

- Particle theory of matter
- Properties of fluids
- Density, viscosity and buoyancy
- Hydraulic and pneumatic systems

Water Systems

- Heat capacity
- Ocean currents
- Global water cycle
- Drainage systems and flooding
- Water quality and treatment

Throughout the exploration of these topics, students will learn about scientific method. Students will pursue learning in these areas through hands-on science activities, inquiry and design projects, assignments, forming and testing hypotheses, experiments, science literacy, current events in science, class discussions, and

cooperative science-team activities. There will be an emphasis placed on connecting observations and results with big ideas and theories.

Assessment is based on learning outcomes. Several forms of assessment will give students feedback about their learning and influence the emphasis of future instruction. These will include teacher observations, formal and informal one-on-one conversations, group conversations, checklists, tests and quizzes, assignments, rubrics, self-assessment, reflection and peer assessment. Learning outcome grids will guide student learning and assessment.

Students will be encouraged to be responsible for their learning, to set goals, develop science skills, follow through, and reflect on the outcomes of their efforts. In accordance with the province-wide report card template, student progress reports will include specific reference to three assessment categories: Knowledge and Understanding, Scientific Inquiry Process, and Design and Problem Solving.

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