

Science 10 Course Outline

This course allows students to develop the skills necessary in a society increasingly dependent on science and technology. They will gain a further understanding into the scientific method and how to design a controlled experiment. They will also improve their communication skills to share their knowledge with others.

Requirements:

- A scientific calculator. Students may also choose to purchase a graphing calculator if they are planning to take senior courses in Physics or Chemistry.
- Work Ethic: Students will be expected to complete a large volume of work. This includes pursuing their interests in projects and writing formal lab write-ups. Lab write-ups are due within two periods. Review for the unit should be complete by the day of the Unit Test.
- Initiative and responsibility: Students are expected to make up any missed material or tests on their own time, which means seeing me for help or making up tests during lunch or Wise Block. Students are expected to be productive at all times in the class. If they finish the day's assignment in class, they should continue on to the next section.

Materials:

Text: BC Science Probe 10 (Nelson).

Effort Mark: will be evaluated according to the NorKam CARES effort matrix which is posted in the classroom.

Core Competencies: will be evaluated using self-assessment. Students will consider their own development in the areas of:

- Communication
- Critical Thinking
- Creative Thinking
- Social Responsibility
- Personal Identity
- Personal Awareness



Einstein discovers that time is actually money.

Assessment

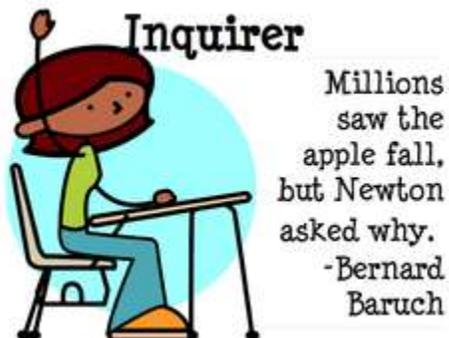
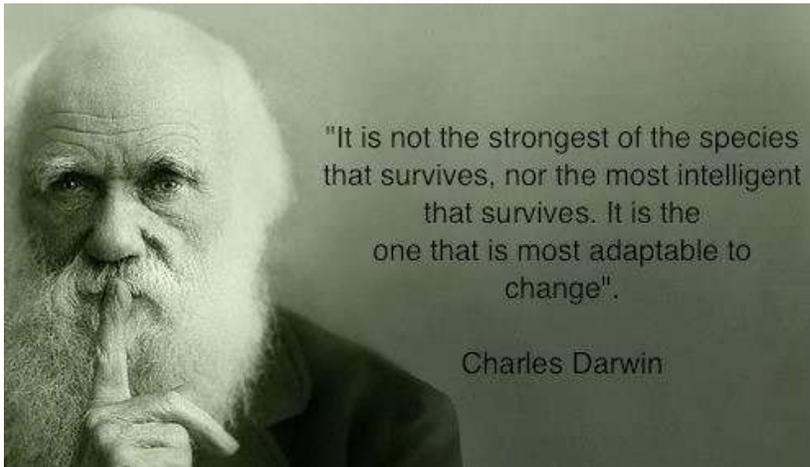
Formative assessment: will consist of assigned questions and quizzes. Formative assessment does not count towards the final mark

Summative assessment: will consist of unit tests, laboratory reports, and projects. There will be rewrite opportunities for unit tests. However, corrections on formative and summative work are expected in order to qualify for a retest.

Curricular Competencies: skills that all students are expected to develop in this course. They will be assessed during experiments and projects in each unit and consist of:

- Questioning and predicting
- Planning and conducting an experiment
- Processing and analyzing data
- Evaluating experimental results
- Applying and innovating
- Communicating

NorKam attributes: students are expected to demonstrate the attributes of Global Citizenship, Adaptability, and Inquiry. These attributes will be incorporated into the rubrics of student projects.



Course Content:

Content is organized into the following units which will be equally weighted:

Unit	Big Ideas	Elaborations
Biology	Genes are the foundation for the diversity of living things.	
		DNA structure and function and patterns of inheritance
		Applications of genetics and ethical considerations
Chemistry	Chemical processes require energy change as atoms are rearranged.	
		Rearrangement of atoms in chemical reactions
		Practical applications and implications of chemical processes, including First Peoples perspectives
		First peoples principles of learning
Physics	Energy is conserved and its transformation can affect living things and the environment.	
		Law of conservation of energy
		Transformation of potential and kinetic energy
		Nuclear energy and radiation
		Local and global impacts of energy transformations from technologies
Astronomy	The formation of the universe can be explained by the big bang theory.	
		Big bang theory
		Components of the universe over time
		Astronomical data and collection methods