

**Science 9 Course Outline 2016-2017**

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**Course Focus**

The general curriculum outcomes are as follows:

* Students will develop an understanding of the nature of science and technology, of the relationships between science and technology, and of the social and environmental contexts of science and technology.
* Students will develop the skills required for scientific and technological inquiry, for solving problems, for communicating scientific ideas and results, for working collaboratively, and for making informed decisions.
* Students will construct knowledge and understandings of concepts in life science, physical science, and Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge.
* Students will be encouraged to develop attitudes that support the responsible acquisition and application of scientific and technological knowledge to the mutual benefit of self, society, and the environment.

<http://www.ednet.ns.ca/pdfdocs/curriculum/LOFs7-9-April20-2012-WEB.pdf>

The Nova Scotia Department of Education sets the focus of the grade 9 science curriculum in the

following four units:

**UNIT 1: LIFE SCIENCE: Reproduction**

* Cell Division, mitosis and meiosis
* Cell Theory
* Genetics
* Sexual vs. asexual reproduction
* Structure of the cell
* Biotechnology and the History of Genetic Research

**UNIT 2: PHYSICAL SCIENCE: Atoms and Elements**

* WHMIS and lab safety
* Physical Properties of different materials
* Changes in physical properties of materials resulting from chemical reactions
* Modelling atoms and molecules
* Compare characteristics and atomic structure of common elements
* Chemical Symbols and Molecular Formulae of common elements

**UNIT 3: PHYSICAL SCIENCE: Characteristics of Electricity**

* Static Electrical Charges –Properties and Production
* Compare Static Electricity and Electrical Current
* Flow of charge in an electrical circuit
* Series and Parallel Circuits
* Transfer and Conversion of Energy

**UNIT 4: Earth and Space Science: Space Exploration**

* Formation of the Solar System
* Major Components of the Universe
* Evolution and Origin of the Universe
* Motion of Celestial Bodies
* Composition and Characteristics of the Components of the Solar System

**Expectations**

Students are expected to:

* Adhere to the school’s student code of conduct
* Arrive to class on time

Arrive prepared to each class

* Respect themselves, the school community, and the learning environment
* Complete all assessments on-time
* Comply with agreed upon classroom rules
* Follow lab safety rules

**Note**: If time is missed, it is the student’s responsibility to get the work missed when they return or get someone to bring it home for them. When tests or assignments are missed, it is their responsibility to make arrangements with me as soon as they return back to school to make up the work. Parents and/or guardians should periodically monitor their child’s progress by checking their binders for completed assignments and notes and overall organization. Parents can also follow their child’s progress by logging on to PowerSchool; assessment information will be updated regularly.

**Necessary Materials:**

The following materials will be required for every class. Please come to class prepared.

3 ring binder Calculator Colored pencils

Loose leaf Highlighter Ruler

Pens Graph Paper Erasers

**Assessment**

Students will be assessed on their knowledge and understanding of the curriculum outcomes through completion of class work, projects, presentations, group work, labs, quizzes, journals and tests. Each one of the four units will be worth 25% of their final grade, and will end with a unit test.

**Website**

Students, parents and guardians are encouraged to check my website on a regular basis.  Important reminders and information will be posted regularly.

Extra help will be available on a regular weekly schedule or as arranged individually.

I am looking forward to working with you and your child this year.  If you have any questions at any point in the year please do not hesitate to contact me.