** Course Outline**

*Science 9*

**Teacher**: *T. Cabel –* [*troy.cabel@nbed.nb.ca*](mailto:troy.cabel@nbed.nb.ca)Blackville School

[http://blackville.nbed.nb.ca/teacher/mr-cabel](https://exchange2.nbed.nb.ca/owa/redir.aspx?C=580bb772fdfa4026a603656e0710b6c0&URL=http%3a%2f%2fblackville.nbed.nb.ca%2fteacher%2fmr-cabel)Tel: 506 843-2900

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**September 6, 2012**

Textbook: Science 9 – Science 10

**Unit 1 – *Space Exploration***

* Describe theories on the formation of the solar system
* Describe and classify the major components of the universe
* Describe theories on the origin and evolution of the universe
* Describe and explain apparent motion of celestial bodies
* Describe the composition and characteristics of the components of the solar system
* Describe the effects of solar phenomena on Earth

**Unit 2 – *Life Science: Reproduction***

* Illustrate and describe the basic process of cell division, including what happens to the cell membrane and the contents of the nucleus
* Recognize that the nucleus of a cell contains genetic information and determines cellular process
* Distinguish between sexual and asexual reproduction in representative organisms
* Discuss factors that may lead to changes in cell’s genetic information

**Unit 3 – *Life Science: Sustainability of Ecosystems***

* Illustrate the cycling of matter through biotic and abiotic components of an ecosystem by tracking carbon, nitrogen and oxygen
* Describe the mechanisms of bioaccumulation, and explain its potential impact on viability and diversity of consumers at all trophic levels
* Explain why ecosystems with similar characteristics can exist in different geographical locations
* Explain various ways in which natural populations are kept in equilibrium, and relate this equilibrium to the resource limits of an ecosystem
* Explain how biodiversity of an ecosystem contributes to its sustainability
* Analyze the impact of external factors on an ecosystem
* Describe how soil composition and fertility can be altered and how these changes could affect an ecosystem

**Unit 4 – *Earth and Space Science: Weather Dynamics***

* Describe and explain heat transfer within the water cycle
* Describe and explain heat transfer in the hydrosphere and atmosphere and its effects on the air and water currents
* Describe how the hydrosphere and atmosphere act as heat sinks within the water cycle
* Describe and explain the effects of heat transfer within the hydrosphere and atmosphere on the development, severity, and movement of weather systems
* Analyze meteorological data for a given time span and predict future weather conditions, using appropriate methodologies and technologies

**Class Expectations:**

* Students are expected to be prepared each day for class with necessary materials.
* Students are expected to be on time for class and treat others with respect.
* Attendance is very important. Students are responsible for catching up on missed class work and assignments, and must present a written excuse upon return to class.

**Materials Needed:**

* 1 binder for notes and handouts
* Pencils and pens (pens should be either blue or black)
* Looseleaf
* Optional – scientific calculator, highlighters

*\*These units of study may not be completed in order. Also, students will be responsible for class work and, if necessary, should make arrangements when possible if an absence occurs. Additional mini-lessons may be given if I note particular areas of struggle.*

**Evaluation**

### Test /Projects : 50%

### In class Assignments/

### Quizzes 20%

### Exam 30%