Science 10 Course Outline

*Mrs. K. Nuessler, 2016*

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Welcome to our classroom!

I look forward to getting to know each of you over the year and help you learn to explore the world through science. I expect you to treat our classroom as a place of learning – not the same as the places you socialize with friends. This means your phone should be away, you should be ready to listen and share ideas. Most importantly, I expect you to make this a comfortable place for everyone in our class. If you are ever having a problem in our classroom or in our school, please come see me – I'm here to help!

**Getting Organized – This is important to your success at school this year.**

Students are required to bring the following to EVERY class:

* Pen
* Pencil
* Eraser
* Ruler
* Lined paper
* Binder (You should have a section separated just for Science)
* Textbook and Workbook
* Completed homework

**Assessment:**

Evidence of students’ learning will be gathered through a variety of ways

1. Observations in the classroom.
2. Conversations with students
3. Student work which will include assignments, quizzes, unit tests and projects.

**TERM MARK** **FINAL MARK**

Homework, quizzes, assignments 30 % Term 1 40 %

Tests, Projects, Labs 70 % Term 2 40 %

The Provincial / Final Exam 20 %

**Classroom Policies:**

*Absences:*

If you miss class, you are missing out on learning…it is YOUR job to get caught up.

* If you know you will be away, come see before you go as I may be able to provide you with work ahead of time.
* Extra handouts will be kept in the classroom.
* Check in with me outside of class time as soon as your return to school to see what you missed and make a plan for getting in missed assignments.

*Our Classroom:*

* Please take care of our classroom. This means cleaning up after yourself and taking care of all supplies and items in the classroom.
* Be kind to your classmates. Rude comments and behavior will not be accepted.
* Because we are in a science lab, no food will be permitted during class. You may bring water to class in a water bottle.
* There may be times that I ask you to use your phone/table in class, otherwise they must be kept in backpacks or out of the classroom. If phones/tablets are misused during class time, they will be taken away. Headphones and music can only be used during individual work time.

**Looking for me outside of class time?**

* Check our classroom – wait a few minutes as I may be back soon.
* Check the classrooms nearby
* I do my best to be available often but will sometimes have meetings or other commitments. **Please try to make arrangements with me in advance.**

**UNIT** **TOPIC**

**1 Skills and Processes of Science (appendix of text and throughout the units)**

Introduction, lab safety

Scientific Method, graphing in science

Relationship of Science, Technology and Society

**2** **Life Science: Sustaining Earth’s Ecosystems (Biology) Chapters 1,2,3**

Biosphere, Biomes and Ecosystems

Abiotic and biotic factors within ecosystems

Energy flow and nutrient cycles in ecosystems, bioaccumulation

Natural changes and human influence on ecosystems

Methods in which natural populations are altered or kept in equilibrium

**3** **Physical Science: Chemical Reactions and Radioactivity (Chemistry) Chapters 4,5,6,7**

Atomic Theory / bonding, atoms, ions, Bohr model, Lewis diagrams, molecules and their structure / composition

Compound names and formulas

Chemical reactions, balancing equations, Law of Conservation of Mass

Acids, bases and salts, organic and inorganic compounds

Atomic Theory and radioactivity, radioactive decay, half-life problems, nuclear reactions

**4** **Physical Science: Motion (Physics) Chapters 8,9**

Distance, displacement, time, velocity and average velocity

Graphing motion data and determining relationships

Acceleration, changes in velocity, graphing velocity and time to determine relationships

**5** **Earth and Space Science: Energy Transfer in Natural Systems / Plate Tectonics ( Earth Science / Geology )**

Temperature, thermal energy and heat Chapter 10 ( time permitting )

Energy transfer in the atmosphere and its effects Chapter 10 ( time permitting )

Natural causes of climate change, human activity affecting climate change Chapter 11 ( time permitting )

Processes and features of plate tectonics, volcanoes, earthquakes, mountains **Chapter 12 (our main focus)**

Evidence supporting plate tectonic theory