Mrs. Gill’s Science 10

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| **SAFETY & SCIENTIFIC METHOD*** Safety in the lab Science skills guide
* Measurement in science Science skills guide

**I) BIOLOGY: Genetics**Genes are the foundation for the diversity of living things**II) CHEMISTRY: Atoms**Chemical processes require energy change as atoms are rearranged | mad_scientist.gif**III) PHYSICS: Energy**Energy is conserved and its transformation can affect living things and the environment.**IV) Astronomy: The Big Bang Theory**The formation of the universe can be explained by the big bang theory. |

***Note****: The science 10 outline is subject to change to accommodate the instructional time available. Optional topics may be included if time allows.*

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|  **EVALUATION: WORK HABITS:**

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| **GOOD** | **SATISFACTORY** | **NEEDS IMPROVMENT** |
| All assignmentscomplete.No lates | 2-3 late and/orincomplete | More than 50% lateMore than 3incomplete |

BS01029_ Tests 40% Quizzes 20% Labs & Assignments 20%Final Exam 20%  |
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| **A** | Has deep understanding of the competencies, exceeds expectations of learning standards, sees possibilities and is able to innovate. |
| **B** | Has good understanding of the competencies, regularly meets acceptable learning standards, initiates, plans and follows through to completion. |
| **C+** | Has an understanding of the competencies, generally meets acceptable learning standards, plans and follows through to completion. |
| **C** | Has a working knowledge of key aspects of the competencies, completes straightforward tasks to an acceptable standard, assistance needed for complex tasks. |
| **C-** | Minimal understanding of the competencies, follows a taught structure or framework, may require assistance to complete tasks. |
| **I or F** | Not demonstrating minimal understanding of the competencies does not complete tasks even with assistance. |

**SUPPLIES:**

* + - * Textbook (BC Science 10)
			* pens (black or blue)
			* Metric ruler
* 3 ringed binder
* lined paper
* Graph paper
* Scientific calculator
	+ - * Agenda

SCHOOL GUIDELINES & CLASSROOM EXPECTATIONS

**Behavior:**

* Come to class on time with all of your supplies.
* Behave in a responsible, considerate, **RESPECTFUL** manner when dealing with peers, classroom and/or substitute teachers.
* No food, drinks (exception: water bottles) or hats are permitted. Cell phones and similar electronic devices will be confiscated and can be picked up at the office after school.

**Consequences:**

* Failure to follow the above expectations will result in appropriate action being taken.
	+ 1. You will be reminded on the rule
		2. I will discuss the ongoing problem with you during an after school detention
		3. Your parents/guardians will be notified
		4. A referral will be made to the counselors/administration

**Attendance:**

* Students are expected to arrive to class **on time**. Arriving late is rude and wastes time. If you arrive late to class please wait quietly outside the class until I feel it is appropriate for you to enter.
* Regular attendance is extremely important! If you miss a class, **you are responsible** for the work done. This includes copying notes and completing any work assigned during the missed class **before** the next class.
* With a note from home excusing your absence, you may write any missed tests/quizzes upon your return to class. Missed labs must be made up within a designated time. The note must **explain** your absence, be **signed and dated by a parent/guardian** and have a **phone number** that I can reach them at.
* It is as important to attend class as it is to be in class 100% of the time. ***As a result, bathroom privileges are rarely granted.***
* **Late assignments are unacceptable**. If an assignment is not completed on time, then you will be required to complete it during lunch or after school, unless you have made prior arrangements with me.
* **Cheating is unacceptable** and will result in ***an INCOMPLETE for all parties involved***. Cheating includes:
	+ Copying or allowing someone to copy on a test or quiz
	+ Using a cheat sheet on a test or quiz
	+ Copying or allowing someone to copy and assignment or lab either in whole or in part
	+ Copying directly from the text or other resource

**To achieve success:**

* + Attend all classes.
	+ Be on time.
	+ Complete all homework and assignments.
	+ Bring textbook, notebook and writing tools to each class.
	+ Use your student agenda to record homework and assignments.
	+ Study for tests.
	+ Ask for help if you are confused.
	+ Keep your notebook organized and neat.
	+ NO CELL PHONES!!!!
	+ Maintain a GOOD ATTITUDE! ☺

**LET’S MAKE THIS SEMESTER A SUCCESS!**

Science 10 Assessment Will Use the Following Two Methods:

 Formative Assessment Summative Assessment

The goal of formative assessment is to gather The goal of summative assessment is to

feedback that can be used by the teacher and the measure the level of success or proficiency that

student to guide improvements in the ongoing has been obtained at the end of an

teaching and learning context. instructional unit.

● In-class observations ●Performance tasks

● In-class activities and assignment ● Projects

● Question and answer sessions ● Presentations

● Homework exercises ● Tests/Quizzes/Final Exams

● Graphic organizers ● Concept Map

● Student conferences ● Student reflections and evaluations

● Think-pair-share ● KWL

● Self-assessment/student feedback ● Labs

● KWL (know-want to know-learn)

● Practice Quizzes

● Exit slips/ticket out the door

● Concept Map/Brainstorm

**CONTENT**

BIOLOGY

• DNA structure and function

• genes and chromosomes

• simple patterns of inheritance

• mechanisms for the diversity of life:

— mutation and its impact on evolution

— natural and artificial selection

 • applications of genetics and ethical considerations

CHEMISTRY

• rearrangement of atoms in chemical reactions

• acid-base chemistry

• law of conservation of mass

• energy change during chemical reactions

• practical applications and implications of chemical processes, including First Peoples perspectives

PHYSICS

• law of conservation of energy

• transformation of potential and kinetic energy

• local and global impacts of energy transformations from technologies

• First Peoples perspectives on energy

• nuclear energy and radiation:

— fission versus fusion

— technologies and applications, and implications

ASTRONOMY

• formation of the universe:

— big bang theory

— components of the universe over time

— astronomical data and collection methods

**Learning in Action**

**LEARNING STANDARDS**

**Questioning**

**and**

**Predicting**

•Seek patterns and connections

•Express and reflect on a variety of experiences and perspectives

•Demonstrate a sustained intellectual curiosity

•Contribute to care for

self, others, community, and world through personal or collaborative approaches

•Transfer and apply learning to new situations

**Communicating**

•Communicate ideas, findings, and solutions to problems

•Make predictions

•Identify a question or problem

•Make observations

•Demonstrate an awareness of assumptions

•Construct and represent patterns or relationships in data

•Consider social, ethical, and environmental implications

 of their findings.

•Use scientific knowledge and findings for their own investigations

•Demonstrate an understanding and appreciation of evidence

•Reflect on their investigation methods

•Generate and introduce new or refined ideas

•Observe, measure, and record data

•Ensure safety and ethical guidelines are followed

•Experience and interpret the local environment

•Measure and control variables

•Formulate hypotheses

•Collaboratively plan a range of investigation types

**Core Competencies**

* Thinking
* Communicating
* Personal & Social

•Identify possible sources of error and suggest improvements

•Use scientific understandings

**Planning and Conducting**

**Applying and Innovating**

**Processing and Analyzing Data and Information**

**Evaluating**

•Co-operatively design projects

**BIG IDEAS**

Energy is conserved and its transformation can affect living things and the environment.

Genes are the foundation for the diversity of living things.

The formation of the universe can be explained by the big bang theory.

Chemical processes require energy change as atoms are rearranged.