# Nackawic High School

# Science 10 Syllabus

### Time: Semester 2, Period 1, 2016-2017

**Teacher:** Mr. Lagacy
Email: peter.lagacy@nbed.nb.ca (506) 575-6020

**Texts:** Nelson Science 10 (Replacement cost $87.50)

**Course Outline:**

The aim of science education in the Atlantic Provinces is to develop scientific literacy. Scientific literacy is an evolving combination of the science-related attitudes, skills, and knowledge students need to develop inquiry, problem-solving, and decision-making abilities; to become lifelong learners; and to maintain a sense of wonder about the world around them. To develop scientific literacy, students require diverse learning experiences that provide opportunities to explore, analyze, evaluate, synthesize, appreciate, and understand the interrelationships among science, technology, society, and the environment.

**Units and Learning Objectives**

**Ecosystems**

Objectives:

1. Acquire an appreciation of ecology.
2. Understand the roles in an ecosystem.
3. Identify the energy movement in an ecosystem.
4. Discuss roles in an ecosystem.
5. Understand change and stability in ecosystems.
6. Investigate the carbon and nitrogen cycles.
7. Investigate Canadian Biomes.
8. Discuss soil and its formation.
9. Understand the procedures for sustaining aquatic ecosystems.
10. Examine abiotic factors in lakes.
11. Investigate sources of water pollution.
12. Discuss marine ecosystems.

**Weather**

Objectives:

1. Acquire an appreciation of how weather affects each of us personally.
2. Examine and review the particle theory of matter.
3. Investigate the changing states of water.
4. Investigate heat capacities.
5. Investigate and report on severe weather events.
6. Identify the processes for convection in air and water.
7. Discuss sea and land breezes.
8. Understand the layers of the atmosphere.
9. Investigate unequal heating of the earth and how it drives global weather.
10. Determine the methods for making weather observations and forecasts.
11. Investigate making weather instruments.
12. Understand the process of interpreting satellite and radar images.
13. Examine El Nino and La Nina.
14. Investigate and identify clouds.

**Chemical Processes**

Objectives:

1. Acquire an appreciation of chemicals in action.
2. Examine and review elements and the periodic table.
3. Investigate how elements form compounds.
4. Investigate ionic, polyatomic and molecular compounds.
5. Investigate hydrocarbons.
6. Identify ways chemical reactions conserve mass.
7. Discuss balancing chemical reactions.
8. Understand types of chemical reactions; synthesis and decomposition as well as single and double displacement.
9. Investigate ways to control chemical reactions and the factors that affect those reactions.
10. Determine the effects of catalysts and enzymes.
11. Investigate properties of acids and bases and the PH scale.
12. Understand elements and oxides and ways to neutralize reactions.

**Motion**

Objectives:

1. Acquire an understanding of relating speed to velocity and acceleration.
2. Examine constructing distance-time graphs.
3. Investigate instantaneous speed.
4. Investigate vectors, position and displacement.

**Grading Calculations:**

Labs & Class Mark 20%

Assignments 20%

*Formative Assessment 10%*

*(Items such as lab routines, safety, exit cards etc.)*

Tests & Quizzes 25%

Exam 25%

**Each Unit covered will have a minimum of 1 major project or lab that is compulsory to complete. This means it must be completed satisfactorily in order to obtain credit for the course.**

* *Late assignments/projects – If an assignment is not handed in on the required due date students will have 1 week to complete the project and hand in to be marked.*
* *Late assignments/projects will be deducted 10% per day.*

**EXPECTATIONS**: We **respect** each other and work together to be successful together.

**Student:**

1. Attend class regularly and on time (please review the attendance policy for missed days and work)

2. Bring course materials (binder, lined paper, pencil/pen and notebook) every day.

1. Participate in class, work to their ability and encourage others to do so.
2. Be organized and aware of quiz, assignment and test dates.
3. Obtain notes (from students) and handouts (from teacher) if time is missed.
4. If a test is missed, it must be made up within three days of returning.
5. Attend and ask for extra help when necessary.
6. Be a good citizen
7. Contribute to a positive and safe learning environment
8. Contribute to an orderly learning environment (resolving conflict by constructive means)

**Parent/Guardian:**

1. Be aware of homework, marks and attendance.
2. Provide help to son/daughter when requested.

**Teacher:**

1. Provide a positive learning environment.
2. Provide communication of marks (mini-reports once a month).

*Parents please remember that all school policies will be sent electronically through Synervoice to each home. A paper copy is available for any students or parent who requests one. Please contact the school office for these paper copies at (506) 575-6020*

**Making this course and the term a great one is up to YOU!!!**

Always do your best and get involved and you will have success at Nackawic High School – the best high school in New Brunswick!

**We are glad you are part of our school community.**

*Extra help is available most noon hours and afterschool upon request by students.*

Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phone Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Parent email: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

# NHS LAB SAFETY CONTRACT

As a science student at NHS, I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, agree to follow the safety procedures learned in class and abide by the guidelines below.

* I will act in a mature and responsible manner at all times.
* I will dress in a manner that is appropriate for the lab - , no open footwear, and no short-sleeve shirts or shirts that expose the belly.
* I will use all equipment with due care and diligence.
* I will do my best to protect myself and others from harm and danger.
* I will follow instructions, including wearing eye protection, at all times.
* I will report all spills and clean up the spill.
* I will report any injuries or any dangerous situations to the teacher.
* I will keep my work area uncluttered and clean all equipment when the lab work is complete.
* I am aware of the location and use of the emergency shower, eyewash station, the fire blanket and the fire extinguisher.
* I will exit the building via the fire exit when the fire alarm sounds.
* I will refrain from eating and drinking in the lab.

If you have any questions or concerns you may contact myself 575-6020.

Teacher Mr. Lagacy Subject: Science 10

Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_