Physics 11: Course Outline

Course:	Physics 11	**Course Length:**	10 months (approx. 120 hours)
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Course Curriculum

The curriculum for this course is organized around these Big Ideas:

- An object's motion can be predicted, analyzed, and described.
- Forces influence the motion of an object.
- Energy is found in different forms, is conserved, and could do work.
- Mechanical waves transfer energy but not matter.

Students are expected to know the following:

- vector and scalar quantities
- horizontal uniform and accelerated motion
- projectile motion
- contact forces and the factors that affect magnitude and direction
- mass, force of gravity, and apparent weight
- Newton's laws of motion and free-body diagrams
- balanced and unbalanced forces in systems
- conservation of energy; principle of work and energy
- power and efficiency
- simple machines and mechanical advantage
- applications of simple machines by First Peoples
- electric circuits (DC), Ohm's law, and Kirchhoff's laws
- thermal equilibrium and specific heat capacity
- generation and propagation of waves
- properties and behaviors of waves
- characteristics of sound
- resonance and frequency of sound
- graphical methods in physics

Course Content

This course is broken down as follows:

Unit	Formative Assignment	Cumulative Assessment
Preliminary Assignments	Course Outline Course Progress and Timeline Activation Assignment	n/a
Unit 1: Math Tools	Learning Guide Review Quizzes	Unit Test
Unit 2: Motion	Learning Guide Inquiry Project Review Quizzes	Unit Test
Unit 3: Projectiles	Learning Guide Inquiry Project Review Quizzes	Unit Test
Unit 4: Forces	Learning Guide Inquiry Project Review Quizzes	Unit Test
Unit 5: 2D Forces	Learning Guide Inquiry Project Review Quizzes	Unit Test
Unit 6: Energy	Learning Guide Inquiry Project Review Quizzes	Unit Test
Unit 7: Electricity	Learning Guide Inquiry Project Review Quizzes	Unit Test
Unit 8: Waves	Learning Guide Inquiry Project Review Quizzes	Unit Test
Course Completion	Defend Your Grade Core Competency Reflection	n/a

Assessment

Quizzes and Unit Tests will be marked using a percentage.

Percentage	Proficiency Scale
86%+	Extending
73% - 85%	Proficient
60% - 72%	Developing
0% - 59%	Emerging

Upon the completion of this course, you will receive a final grade calculated by weight:

Category	Percentage
Activation Assignment	5%
Learning Guides	10%
Inquiry Projects	40%
Quizzes	15%
Unit Tests	30%

Learning Guides

You are encouraged to complete the Learning Guide as you work through the lessons. There is a provided answer key for you to check your learning as you go. A strong student will examine their mistakes and try to fix them to improve their understanding.

Be sure to keep your work neat and organized as you will be studying from the Learning Guide for the Unit Test. Communicate your ideas as well as you can and try not to skip any questions. If you need help with a question, please email your teacher.

Inquiry Projects

Inquiry projects are designed to help you apply what you've learned to real-life situations. These will closely examine your ability to apply the curricular competencies to new environments. These are worth the largest portion of your grade, so be sure to fully explain your thinking in as much detail as possible.

Review Quizzes

Review Quizzes are designed to help you gauge how well you know the lessons you have completed.

Most quizzes allow two attempts, and the highest mark of the two attempts will be used for the final mark calculation.

Exam Supervision

There is a unit test at the end of each unit. There is a total of eight unit tests. All exams are "closed book" and require the supervision of a parent, guardian, or teacher.

Your testing invigilator must:

- ensure the student has submitted the inquiry projects
- email the teacher at Elixa.Neumann@burnabyschools.ca for the passwords
- supervise your test-taking to ensure no additional notes or resources are used while taking the test.

Students will only have one attempt at the unit test unless you receive a score of 85% or less. If this is the case, and students wish to improve their grade, students will be asked to submit their completed and self-assessed learning guide to the Unit called "Tests: Rewind and Rise" before a second attempt will be made available.

Course Activity

Students must be working to complete learning engagements on a regular basis. Students who are inactive after two weeks will receive an email to their Brightspace email program providing a warning of inactivity. Students who are inactive after 1 month may be withdrawn from the course. If a student is planning to be inactive due to personal reasons, they need to contact their teacher to inform them of the period of inactivity.

Students should aim to complete one unit every month to finish the course within a 10-month period (excluding July and August).

To finalize your registration, you need to complete the Activation Unit within 30 days of your registration. You may be removed from the course if this is not completed on time.

If you are inactive for one term, and have not communicated with your teacher, you will be unenrolled automatically from the course.

Resources

There are NO textbooks required for this course.

A scientific calculator is required.

There is a course Data Booklet under the Course Overview.

Plagiarism

Plagiarism is unacceptable under any circumstance. You are expected to create authentic work which demonstrates your own understanding. If you are caught

cheating, plagiarizing, or submitting AI-generated responses within this course, you may be removed from the course.

Keys to Success

1. Actively work through each lesson: try examples and reflect on the materials.
2. Be actively engaged in the course and submit work regularly
3. Use the Learning Guide as your tool for documenting your understanding. Lay it out neatly and well organized.
4. Review feedback from your teacher and from quizzes before writing Unit Tests.
5. Use the message system for regular communication with your instructor.
6. Cite all sources (including AI use) properly.
7. Answer in your own words. Ultimately, this is your learning experience!