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Course: Physics 11

Course Length: 10 months

Teacher: Ms. Leila Dianati

(approx. 120 hours)

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[a](#)

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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

Mark Weighing

Category	Weighing
Learning Guide	20%
Review Quizzes	10%
Projects	20%
Unit Exams	50%

Resources

- Textbook not required.
- Scientific calculator required

Course Content

Completion of items in boldface and underlined will activate a student in this course.

Units	Formative Assessment	Cumulative assessment
<u>1: Math Tools</u>	<u>Quizzes</u> <u>1 Assignments</u> <u>1 Project</u>	1 Unit Exam
2: Motion	Quizzes 1 Assignment 1 Project	1 Unit Exam
3: Projectiles	Quizzes 1 Assignment 1 Project	1 Unit Exam
4: Forces	Quizzes 1 Assignment 1 Project	1 Unit Exam
5: 2D Forces	Quizzes 1 Assignment 1 Project	1 Unit Exam
6: Energy	Quizzes 1 Assignment 1 Project	1 Unit Exam
7: Electricity	Quizzes 1 Assignment 1 Project	1 Unit Exam
8: Waves	Quizzes 1 Assignment 1 Project	1 Unit Exam

Students are expected to:

- contact the teacher by email or phone when help is needed, or questions arise
- be actively engaged and submitting work on a regular basis
- inform the teacher when they will be inactive for two or more weeks.
- be aware that if they are inactive in a course for four or more weeks they may be removed from that course
- check their email at least twice a week
- create and submit completed solutions for all activities in the unit/chapter before requesting a test.
- cite all sources properly
- answer in their own words
- check that their work and tests have been marked.
- make appointments to write tests at least 2 school days in advance.