

Welcome to Physics 11!

Throughout this course, you will explore four Big Ideas, Content and Curricular Competencies as set by the BC Curriculum [<https://curriculum.gov.bc.ca/curriculum/science/11/physics>]. The four Big Ideas are:

- 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 has the ability to do work.
- Mechanical **waves** transfer energy but not matter.

How To Be Successful

1. Take good, organized notes for your own reference as you learn new concepts.
2. Make sure that you understand and can do the problems presented in lessons.
3. Complete practice assignments after each lesson and compare your answers to the answer key.
4. Correct your mistakes!
5. Write a Unit test only after your send-in assignment has been marked, returned and corrected. That way you can use your send-in assignment as a review.
6. One-on-One Help is available! If you need assistance, please don't hesitate to contact me via email or phone to ask a question or to set up a one-on-one appointment. We can do this in person or we can meet online using Zoom. Remember, I am your teacher and I'm here to help.

Substantive Activity (Graphing, relationships and vectors)

In order to be officially activated in this course you must first complete a substantive activity. For this activity you will complete the send-in assignment and test for unit 1: "Graphing, Relationships and Vectors". In this unit, you will learn and practice some skills which will be foundational in analyzing/solving a wide variety of physics problems across all four of the Big Ideas. The substantive activity covers a variety of curriculum outcomes such as:

Content

- Vectors and scalar quantities
- Graphical methods

Curricular Competencies

- Seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies
- Construct, analyze, and interpret graphs, models, and/or diagrams
- Analyze cause-and-effect relationships
- Implement multiple strategies to solve problems in real-life, applied, and conceptual situations
- Communicate scientific ideas and information ... using appropriate scientific language, conventions, and representations

Resources

- Content Connections online lessons: <https://apps.contentconnections.ca/ccltiprocess/>

Course Evaluation

Final Grade Course Calculator

Send-in Assignments (Including 3.6% substantive activity) 40% X 0.40 =

Tests (Including 5.5% substantive activity) 60% X 0.60 =

Final Grade

Course Organization

The course content is divided into 11 Units as shown below with suggested. Note that once the substantive activity is complete, the time allotted for the remainder of the course is 16 weeks. Students may choose to complete a teacher-approved project in lieu of a test.

Unit	Suggested time (1 week = 7.5 hours)	Assessments	Weight	Mark
1. Graphing, relationships and vectors	10.5 hours (1.5 weeks)	Send-in Assignment (Substantive Activity)	3.6%	
		Test	5.5%	
2. Kinematics	15 hours (2 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
3. Projectile Motion	10.5 hours (1.5 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
4. Forces and Newton's Laws	15 hours (2 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
5. Applied Forces	10.5 hours (1.5 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
6. Inclined Surfaces and Connected Masses	7.5 hours (1 week)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
7. Work and Energy	10.5 hours (1.5 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
8. Power and Conservation of Energy	10.5 hours (1.5 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
9. Heat	7.5 hours (1 week)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
10. Waves	15 hours (2 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
11. Circuitry	15 hours (2 weeks)	Send-in Assignment	3.6%	
		Test (or project)	5.5%	
		Final Grade	100%	