Physics 11

FALL SEMESTER 2017

Ms. Jackson **mejackson@sd43.bc.ca**
Classroom: Room 200 **Office:** beside (left of) room 200

Topics Covered:

INTRODUCTION

- We will begin our course by setting up the necessary skills to be successful in the rest of the course. These skills include:
    - Significant figures and scientific notation
    - Unit conversions
    - Graphing techniques and interpretations

KINEMATICS

- This unit will take a closer look at objects in motion in one dimension
- We will be revisiting familiar concepts from Science 10 such as distance, displacement, velocity and acceleration

DYNAMICS

- This unit will explore the nature of various forces such as gravity and friction
- We will be applying an understanding of Newton's laws to describe the effects of forces on objects
- We will also be learning about momentum and the role it plays in various collisions and explosions

ENERGY

- In this unit we will develop an understanding of the three main forms of energy and perform calculations involving the Law of Conservation of Energy

WAVES

- Here, we will explore the reflection and refraction of light and its wave nature

MODERN PHYSICS

- In this unit we will be introduced to and gain further understanding of the fundamental principles of special relativity
- We will also revisit and delve deeper into nuclear processes such as nuclear fission and nuclear fusion that were explored previously in Science 10

Course Assessment:

Both your **work habits** (commented on in report card comments) and **content knowledge** (letter grade) will be assessed throughout the semester.

You will have opportunities to demonstrate your content knowledge through assignments, labs, in-class work, discussions, unit tests and projects. Below is a breakdown of marks:

Assignments and Labs – 20%
Unit Exams and Tests – 60%
Final Exam – 15%
Quizzes – 5%

All assignments, labs and projects should be handed in on time. Late assignments will only be accepted up until the assignment is marked and returned to classmates.

If you are absent for a quiz or test, please ensure that a parent/guardian calls into the school to excuse you. Furthermore, it is your responsibility to arrange a time to write it with me.

Classroom Website:

http://myriverside.sd43.bc.ca/mejackson/

The classroom website is a useful tool for you to get a sneak peek of what we are doing each day, obtain copies of digital handouts and resources and stay up-to-date if you are away.

Course Textbook:

We will be using 'BC Science Physics 11' Workbook for this course. All students will be provided with a workbook free of charge for the duration of the course, however it is expected that students return the workbook at the end of the course, undamaged and not written in.

Students may wish to purchase their own copy of the workbook so they can write directly in the workbook and keep it at the end of the course. This is completely optional. The workbook fee has been included in the students' school fees – simply pay for the workbook if you want to write in it, or ignore the fee if you wish to "borrow" a workbook for the semester.

Classroom Expectations:

Our classroom is a community collectively working towards the goal of learning.

Your overall attitude and behavior can have both positive and negative impacts on, not only your own learning, but those around you.

My wish is that we can work together to provide the most positive, safe, encouraging and engaging learning environment possible.

Suggestions for Success:

- **Participate in class:** come on time, prepared to learn, with all necessary materials; ask questions and get involved in the lessons
- **Stay up to date on assignments** – if you start to fall behind or are having trouble understanding a concept, seek help as soon as possible
- If you are absent, it is YOUR RESPONSIBILITY to **get caught up with notes and assignments** you may have missed
- **Stay organized**
    - Complete all notes/assignments and keep in designated sections in your binder or electronic device; you will need your notes/assignments to study for unit tests and the final exam
- Be open to learning with new people in new ways

Your success in this course depends on you.
Take responsibility and be an advocate for your learning