

# PEACE RIVER SCHOOL DIVISION

VIRTUAL EDUCATION PROGRAM

*"Learning Together - Success for All"*



## **Science 30**

Course Outline

2021-2022 | Semester 1

**Teacher: Mr. P. Robinson**

### I. Course Overview

Science 30 is a Grade 12 level course for students who are interested in science and want a general understanding of many subjects. In comparison to other 30-level science courses, the focus will be more conceptual and less technical. Any 20-level science is a prerequisite. Science 30 is a diploma course, and can be used for admission into some post-secondary programs.

Science 30 consists of four units: biology, chemistry, physics, and environmental science. In the biology section, we will study the circulatory system, the immune system, and genetics. Acids and bases, organic compounds, and pollution will be the focus of the chemistry section. The physics section is a survey of electromagnetism and the electromagnetic spectrum. Finally, in our study of environmental science, we will get an overview of the demand for energy and its consequences for pollution, development, and the direction of research for new technologies.

### II. Key Messages/Expectations

Virtual Education is an exciting opportunity for PRSD students. Regular attendance and productive engagement in course material is an expectation and requirement for success in this course, both during synchronous and asynchronous instruction and learning activities.

Course content is organized into both teacher-directed and student-directed learning activities. Successful students will employ effective time management strategies to complete all activities on time.

Students are expected to demonstrate appropriate online and in-person behaviour in accordance with PRSD Board Policies and Administrative Procedures. By default, teachers will require students to have their cameras on during class time and require students to respond to questions or participate in discussions with their microphone. There will be times when teachers may allow students to turn their cameras off.

In some student contexts, there will be lab work. During labs, students are expected to follow safety procedures and treat their classmates with respect.

### III. Scope and Sequence

**Unit A: Biology**

1. the human circulatory system
2. the human immune system
3. genetics and inheritance

25% of time  
September  
Text. Ch. A

**Unit B: Chemistry**

1. acids and bases
2. organic chemistry
3. assessing environmental risks of chemical processes

25% of time  
October  
Text. Ch. B

**Unit C: Physics**

1. electromagnetism
2. the electromagnetic spectrum

25% of time  
November  
Text. Ch. C

**Unit D: Environmental Science**

1. energy and pollution
2. energy production

25% of time  
Dec.-Jan.  
Text. Ch. D

## IV. Instruction and Assessment

A variety of instructional and formative and summative assessment strategies will be used throughout this course, including through the use of both technology and traditional pencil-and-paper. Summative assessments will be used to determine course grades which can be accessed through PowerSchool.

Please note, the diploma exam will not be included in the final PowerSchool grade, but will be on official student transcripts. The course will be evaluated over the term as follows:

<b>Total Unit Weight</b>	<b>Gradebook Category</b>	<b>Gradebook Weighting</b>
<b>Unit A</b> <b>25%</b>	Unit A Assignments	7%
	Unit A Quizzes	3.5%
	Unit A Exam	7%
<b>Unit B</b> <b>25%</b>	Unit B Assignments	7%
	Unit B Quizzes	3.5%
	Unit B Exam	7%
<b>Unit C</b> <b>25%</b>	Unit C Assignments	7%
	Unit C Quizzes	3.5%
	Unit C Exam	7%
<b>Unit D</b> <b>25%</b>	Unit D Assignments	7%
	Unit D Quizzes	3.5%
	Unit D Exam	7%
<b>Diploma Exam</b>	Diploma Exam	30%

## V. Resources

The required textbook for Science 30 is *Science 30*. A digital version of the textbook will be available. A student-owned scientific or graphing calculator is also required.

Students require access to reliable high speed internet that supports Google Meets. Students require a compatible device, usually a Chromebook, with a working webcam to access and participate in the course. Students require a working headset that includes a microphone and headphones.