

## **SCIENCE 10 – Semester 1 - 2020**

Teacher: Ms. Jenny Bonny Room: 220

This course includes four units with content in the areas of Biology, Chemistry, Physics, and Earth Science. Each of the units described below will include daily worksheets, lab activities, a project and a test. As we will be meeting only on Day 1, students will have assignments to complete on Day 2 independently. In person activities will include labs, introduction of new concepts, and assignment help.

**Contact Teacher:** [Jennifer.bonny@yesnet.yk.ca](mailto:Jennifer.bonny@yesnet.yk.ca) or call School at 667-8665

**Teacher Website:** [www.jbonny.weebly.com](http://www.jbonny.weebly.com)

**Online Platform:** <https://classroom.google.com/> (join with class code: oikdx6j)  
All notes, assignments, and video links will be posted in classwork. All assignments can be submitted and graded in classroom.

**Textbook:** BC Science 10 Connections (Nelson)

**Supplies:** binder, lined paper, pencil, pen, eraser, ruler, calculator, pencil crayons

### **Evaluation:**

As we work through the four units in this course, we will help students to master the content as well as achieve the following *curricular competencies*:

- ***Questioning and Predicting:*** demonstrate curiosity, ask questions, make observations, formulate hypotheses
- ***Planning and Conduction:*** plan and carry out lab investigation, make observations, use SI units, follow safety guidelines
- ***Processing and Analyzing:*** interpret and organize data and information, make tables, graphs and models, make connections to the local peoples and environment
- ***Evaluating:*** Identify sources of error in investigations, demonstrate an awareness of bias, consider social, ethical and environmental implications of investigations
- ***Applying and Innovating:*** Transfer learning to new situations, individually and cooperatively design projects, introduce new ideas when problem solving
- ***Communicating:*** Communicate ideas, solutions, and conclusions using scientific vocabulary, diagrams and models, reflect on a variety of experiences

At the end of each unit students will self-assess and be assessed as to whether they are “Emerging”, “Developing”, “Proficient”, or “Extending” with respect to these competencies.

## **Science 10: Curricular Content and Timeline**

### **Unit 1 – Biology – Genetics**

(August and September)

- DNA structure and function
- Patterns of inheritance
- Mechanisms for diversity: Mutations, Natural Selection, and Artificial Selection
- Applied genetics and Ethical considerations

### **Unit 2 – Chemistry – Chemical Reactions**

(October)

- Conservation of mass and re-arrangement of atoms in chemical reactions
- Balancing Chemical Reactions
- Energy in Chemical Reactions; exothermic and endothermic
- Types of Chemical Reactions; synthesis, decomposition, single replacement, double replacement, combustion, neutralization

### **Unit 3 – Physics – Energy**

(November)

- Types of energy
- Energy calculations
- Energy transfer
- Energy transformations: cellular respiration, photosynthesis, fuel cells, nuclear reactions, photovoltaic cells, vision etc.
- Energy transformations' effect on Earth: greenhouse effect, temperature regulation, global warming

### **Unit 4 - Earth Science – Astronomy**

(December & January)

- Cultural views of the “universe”
- Big Bang Theory
- Visual observations of the universe: sun, stars, constellations, moon, planets
- Observations facilitated by technology

### **Review and Final Assessment**

(January)

**Student Expectations:**

1. Students are expected to attend regularly on “Day 1”. If a student is absent, parents or guardians must call the office to excuse absences.
2. Students are expected to complete assigned “Day 2” work independently, seeking help through google classroom as necessary.
3. Students are expected to come to class on time. Instructions for the days’ activities will occur at the beginning of class!
4. Students are expected to come to class with the required materials. Bring a pen, pencil, binder every day! Cell phones are not to be used in class.
5. Students are expected to act in a respectful manner towards: themselves, other students, teachers, the school, others’ possessions, and laboratory equipment.
6. Students are expected to follow all laboratory rules and precautions when performing a laboratory experiment.
7. Students are expected to put all food, drink, and electronic equipment away when performing laboratory experiments.

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I have read the course outline and the student expectations for Science 10.  
I agree to follow all laboratory rules. There will be periodic group emails. Please indicate the email addresses of all students, parents, and guardians who wish to receive updates.

Student Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Parent/ Guardian Name(s): \_\_\_\_\_

Signature(s): \_\_\_\_\_

Parent / Guardian phone number (s): \_\_\_\_\_

Parent / Guardian email(s): \_\_\_\_\_

Student’s email: \_\_\_\_\_

Do you have any concerns, needs, or desires that I should be aware of?

What are your strengths and weaknesses? What can I do to help you learn?

