

Life Sciences 11 – Semester 1 - 2020 Teacher: Ms. Jenny Bonny Room: 220

This course covers the fundamentals of biology and an overview of the increasing complexity of living organisms. 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 or call School at 667-8665

Teacher Website: www.jbonny.weebly.com

Online Platform: <https://classroom.google.com/> (join with class code: **pa25rcj**)
All notes, assignments, and video links will be posted in classwork. All assignments can be submitted and graded in classroom.

Textbook: Biology (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 Conducting***: plan and carry out field and lab investigations, make precise and accurate 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.

Life Science 11: Curricular Content and Timeline

Unit 1 – Cells and Taxonomy (August / September)

- Levels of Organization
- Cell structure and function
- DNA structure and function
- Cell Cycle
- Taxonomic principles for classifying (domains and kingdoms)
- First People's knowledge on classification

Unit 2 – Adaptation and Evolution (September)

- Evidence and process of macroevolution
- Adaptations to changing environments
- Changes in DNA
- Natural Selection
- Speciation
- Artificial selection and genetic modifications
- Reproductive Cycles – sexual and asexual
- Trends in complexity among various life forms
- Evidence for phylogenetic relationships
- First People's understandings of interrelationships between organisms

Unit 3 – Microbiology (October)

- Viruses life cycles
- Immune system
- Kingdom Monera - Bacteria
- Antibiotic Resistance
- Kingdom Protista – Paramecium, Amoeba etc.

Unit 4 – Fungi and Plants (November)

- Kingdom Fungi - mold, yeast, mushrooms
- Kingdom Plantae Non-Vascular – Algae, moss, ferns
- Kingdom Plantae Vascular – Angiosperms (flowers) and Gymnosperms (Cones)

Unit 5 – Animal Biology (November / December)

- General trends in complexity and some of the following in more detail:
- Phylum porifera – sponges
- Phylum cnidarians – jelly fish, sea anemones...
- Worms – Phylum Platyhelminthes, Nematoda, and Annelida,
- Phylum Mollusca - clams, squid, mussels
- Phylum Echinodermata – star fish, sea urchins ...
- Phylum Arthropoda – insects, crabs, crayfish ...
- Phylum Chordata – fish, frogs, mammals

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.

I have read the course outline and the student expectations for Life Sciences 11.
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?

