SCIENCE 9 COURSE OUTLINE 2023/2024

Teacher: F. Dhanani, Room 311

There are two textbooks that we will be using as resources in this course. A copy of the ***BC Science Probe 9*** textbook will be assigned to each student. The ***BC Science Connections 9*** textbook will remain in the classroom and students will be referring to it for reference.

Textbooks: ***(i) BC Science Probe 9*** *(Nelson, 2007)*
(ii) BC Science Connections 9 *(McGraw-Hill Ryerson, 2016)*

** Note: Topics may not necessarily be covered in the order indicated.

A. APPLICATIONS AND PROCESSES OF SCIENCE
(i) Chapter 1 (ii) Pages xiv-xxix

1. Safety
2. Science in Your World
3. Scientific Method
4. The Nature of Science – Chapter 1
5. The Nature of Scientific Inquiry – Chapter 1
6. First Peoples Perspectives in Science

B. CHARACTERISTICS OF ELECTRICITY
(i) Chapters 9-11 (ii) Unit 3: Topics 3.1 to 3.5

1. Static Electricity – Chapter 9
2. Insulators and Conductors – Chapter 9
3. Current Electricity – Chapter 10
4. Voltage – Chapter 10
5. Ohm's Law – Chapter 10
6. Work, Energy, and Power – Chapter 11
7. Electrical Energy and Power – Chapter 11
8. Household Electrical Energy – Chapter 11

C. ATOMS, ELEMENTS, AND COMPOUNDS
(i) Chapters 5-8 (ii) Unit 2: Topics 2.1 to 2.5

1. The Classification of Matter – Chapter 5
2. Properties of Matter – Chapter 5
3. Changes in Matter – Chapter 5
4. The Kinetic Molecular Theory and Changes of State – Chapter 5
5. The History of Chemistry – Chapter 6
6. The Modern Atomic Theory – Chapter 7
7. The Bohr Theory of the Atom – Chapter 7
8. The Modern Periodic Table – Chapter 7
9. Using the Bohr Theory – Chapter 7
10. Writing Chemical Formulas – Chapter 8
11. Ionic Compounds – Chapter 8
12. Chemical Families – Chapter 8

D. LIFE SCIENCES: REPRODUCTION
(i) Chapters 2-4 (ii) Unit 1: Topics 1.1 to 1.4

1. Cell Division – Chapter 2
2. The Cell Cycle – Chapter 2
3. Changes to a Cell's DNA – Chapter 2
4. Asexual Reproduction – Chapter 2
5. Sexual Reproduction – Chapter 3
6. Human Reproduction – Chapter 4

E. ECOSYSTEMS
(i) not in textbook (ii) Unit 4: Topics 4.1 to 4.5

1. The biosphere, geosphere, hydrosphere, and atmosphere are all interconnected.
2. Matter cycles and how energy flows through them.
3. Effects of solar radiation on the cycling of matter and energy.
4. Matter cycles within biotic and abiotic components of ecosystems.
5. Sustainability of systems and First Peoples' principles of interconnectedness.