

COURSE OUTLINE

Grade 9 Science – Foundation 10F

Instructor: Mrs. Denise Ashcroft

Phone: (204) 734-4511 or Class 204-734-7939

Email: dashcroft@svsd.ca

Course Description: Grade 9 Science – Foundations 10F is designed to address wonders and curiosities about the nature of science. Through scientific inquiry, technological problem-solving and decision making, students can discover the significance of science in their lives.

Framework Reference (Government of Manitoba Web Document):

https://www.edu.gov.mb.ca/k12/cur/science/found/s1/full_doc.pdf

Units of Study:

- **Reproduction**

Illustrate and explain the processes involved in human development:

- Mitosis/meiosis
- Cell cycle
- Male and female reproductive systems (anatomy, physiology, embryology)
- Describe the role of genetics
- DNA
- Genetic mutations
- Dominant/recessive genes
- Inheritance of sex-linked traits

- **Atoms & Elements (Chemistry)**

Analyze and use the Periodic Table and its components:

- Organization (periods, groups, families)
- Rutherford-Bohr models (atomic structure, mass, number, valence number, etc.)
- Formation of ionic compounds, naming, formulas
- Investigate physical and chemical properties of matter
- Identify the different types of physical and chemical changes
- Indicators of physical and chemical change

- **The Nature of Electricity**
 - Identify electrical particles and demonstrate how electronics works:
 - Charges, conduction, induction, insulators, and grounding
 - Demonstrate and explain the nature of current electricity:
 - Series and parallel circuits (voltage, resistance, current, voltmeter, ammeter)
 - Recognize daily consumption and efficiencies of electricity in everyday life

- **Exploring the Universe (Space)**
 - Observe and locate visible and celestial objects:
 - Planets, moons, stars, comets, and asteroids, etc.
 - Investigate ways in which Canada contributes to space research:
 - Technological advancements (Canadian Space Station and Canadarm)
 - Effects of space travel (health and body)

Textbook: Hounjet, C. (2013). *Pearson Science 9: Saskatchewan edition*. Pearson Canada.

Required Materials: Writing material (including a binder/scribbler/notebook system with loose-leaf), pen(s), pencil(s), erasers, pencil sharpener/lead, calculator (not mobile device), ruler. *Students may need to bring coloured pencils/supplies from home for labs.

Course Evaluation:

Rich Performance Tasks	45%
(Homework, daily work, participation, assignments, quizzes, labs, projects, etc.)	
Summative Assessments	40%
(Tests)	
Final Examination	15%

Digital Responsibility

Students should not share personal information or photos online, as this creates the potential for serious personal harm. Students also need to be aware that anything put online does not disappear and is retrievable. Any inappropriate postings of photos, videos, sexual comments, threats and/or bullying will result in consequences under the Student Code of Conduct and the Criminal Code of Conduct.

Cell Phone Use The Swan Valley School Division is committed to providing an engaging and safe learning environment where the potentially harmful impacts of online platforms and cell phone use is minimized. To support his positive environment, the following personal device or cell phone guidelines will be in place:

Welcome to 'Grade 9 Science – Foundation 10F', I look forward to learning with you!