Waterloo Region District School Board
FOREST HEIGHTS COLLEGIATE INSTITUTE

Grade 10 Science – SNC2DN
Course Overview 2017

Course Type: Academic / Innovate
Grade Level: 10
Teacher: Mr. White
Department: Science
Textbook: Investigating Science 10 by Pearson Publishing

Course Description:

This course enables students to enhance their understanding of concepts in biology, chemistry, earth and space science, and physics, and of the interrelationships between science, technology, society, and the environment. Students are also given opportunities to further develop their scientific investigation skills. Students will plan and conduct investigations and develop their understanding of scientific theories related to the connections between cells and systems in animals and plants; chemical reactions, with a particular focus on acid–base reactions; forces that affect climate and climate change; and the interaction of light and matter.

Prerequisite: Science, Grade 9, Academic or Applied

Big Ideas:

Biology
• Plants and animals, including humans, are made of specialized cells, tissues, and organs that are reorganized into systems.
• Developments in medicine and medical technology can have social and ethical implications.

Chemistry
• Chemicals react with each other in predictable ways.
• Chemical reactions may have a negative impact on the environment, but they can also be used to address environmental challenges.

Earth and Space Science
• Earth's climate is dynamic and is the result of interacting systems and processes.
• Global climate change is influenced by both natural and human factors.
• Climate change affects living things and natural systems in a variety of ways.
• People have the responsibility to assess their impact on climate change and to identify effective courses of action to reduce this impact.

Physics
• Light has characteristics and properties that can be manipulated with mirrors and lenses for a range of uses.
• Society has benefited from the development of a range of optical devices and technologies.

Overall Expectations:

Biology: Tissues, Organs, and Systems of Living Things
B1. evaluate the importance of medical and other technological developments related to systems biology, and analyse their societal and ethical implications;
B2. investigate cell division, cell specialization, organs, and systems in animals and plants, using research and inquiry skills, including various laboratory techniques;
B3. demonstrate an understanding of the hierarchical organization of cells, from tissues, to organs, to systems in animals and plants.

Chemistry: Chemical Reactions
c1. analyse a variety of safety and environmental issues associated with chemical reactions, including the ways in which chemical reactions can be applied to address environmental challenges;
c2. investigate, through inquiry, the characteristics of chemical reactions;
c3. demonstrate an understanding of the general principles of chemical reactions, and various ways to represent them.

Earth and Space Science: Climate Change
d1. analyse some of the effects of climate change around the world, and assess the effectiveness of initiatives that attempt to address the issue of climate change;
d2. investigate various natural and human factors that influence Earth's climate and climate change;
d3. demonstrate an understanding of natural and human factors, including the greenhouse effect, that influence Earth's climate and contribute to climate change.

Physics: Light and Geometric Optics
e1. evaluate the effectiveness of technological devices and procedures designed to make use of light, and assess their social benefits;
e2. investigate, through inquiry, the properties of light, and predict its behaviour, particularly with respect to reflection in plane and curved mirrors and refraction in converging lenses;
e3. demonstrate an understanding of various characteristics and properties of light, particularly with respect to reflection in mirrors and reflection and refraction in lenses.

ASSESSMENT AND EVALUATION:
A variety of assessment tasks will be used to evaluate student progress.

- **Late and Missed Assignments** – To achieve success in this course, all essential course components must be demonstrated. Incomplete work is **NOT** an option.
- **Cheating and Plagiarism** – It is important for students to do their own best work. If a student is suspected of cheating or plagiarizing, the teacher in consultation with administration, will determine the next steps and/or consequences.
- **Learning Skills and Work Habits** – The areas of Responsibility, Organization, Independent Work, Collaboration, Initiative, and Self-regulation are important and will be assessed and reflected on the provincial report card.
- **Attendance**– Attendance and punctuality in classes are important parts of learning and an expectation of student behaviour. Lates are to be avoided to benefit from full instructional time and not disrupt other's learning time. When a student is absent, a parent/guardian must call the school's attendance line on the date of absence, or provide a note explaining the absence for the student to submit the following day. Students are responsible for missed work during their absence.

Course Evaluation:

Final Evaluation	(exam) 30%	Science Skills	14%
Chemistry	14%	Biology	14%
Physics	14%	Climate	14%

Website: https://mrwhite.updog.co/ **Schoology:** www.schoology.com ---
Quizlet: Grade 10 Science White **Web Access or E-Book:** www.sciencesource.ca
User: FHCIScience910 **Password:** PupilScience910

By signing this course outline, I acknowledge that I have read and understood the expectations and requirements for successful completion of this course.

_____ _____
Student's Name Date

_____ _____

Parent/Guardian Signature Date