Grade 7 & 8 Science Outline

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Textbook: Science and Technology 7

Goals: According to the Manitoba Science Curriculum, science education will...

* encourage students to develop a critical sense of wonder and curiosity about scientific and technological endeavors
* enable students to use science and technology to acquire new knowledge and solve problems, so that they may improve the quality of their own lives and the lives of others
* prepare students to critically address science-related societal, economic, ethical, and environmental issues
* provide students with a proficiency in science that creates opportunities for them to pursue progressively higher levels of study, prepares them for science-related occupations, and engages them in science-related hobbies appropriate to their interests and abilities
* develop in students of varying aptitudes and interests a knowledge of the wide variety of careers related to science, technology, and the environment

Topics of Study:

 Unit 1:  Interactions within Ecosystems

       Unit 2: Particle Theory of Matter

       Unit 3: Structures and Forces

       Unit 4: Earth's Crust

\*we will be using the grade 7 curriculum outcomes for both grade 7 & 8 this year, and will use the grade 8 outcomes in 2021 / 2022.

Assessment:

Student progress will be measured throughout the year in the following categories:

**60% - Knowledge and Understanding (Quizzes, Tests, Assignments)**

**20% - Scientific Inquiry (Labs)**

**20% - Design Process / Problem-solving (Projects)**

Students will complete a **summative project as a final assessment** piece, based on one or more of the topics that were covered in this class.

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| **ASSESSMENT CATEGORY** | **INDICATORS–GRADES 5 to 8** |
| **KNOWLEDGE & UNDERSTANDING OF SCIENCE CONCEPTS**Student demonstrates understanding of grade-specific science concepts and skills. | * demonstrates knowledge of life science, physical science, or earth and space science, and applies this knowledge to understand our world.
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| **SCIENTIFIC INQUIRY PROCESS**Student asks questions, generates possible explanations, collects and analyzes evidence, and reaches conclusions based on evidence. | * formulates questions that lead to investigationsmakes predictions/hypotheses
* designs a fair test or a plan to answer questionsmanipulates instruments appropriately and in a safe manner
* makes relevant observations, collects data and information, measures, classifies
* analyzes and interprets data to draw conclusions that explain data
* identifies possible sources of error as well as strengths and weaknesses of the experimental protocol
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| **DESIGN PROCESS AND PROBLEM SOLVING**Student applies science knowledge to seek solutions to practical problems. | * identifies practical problems to solve
* seeks solutions to problems and selects and justifies a method to be used to find a solution
* creates a written plan which includes materials, steps to follow, safety considerations, and detailed diagrams
* develops criteria to evaluate a prototype or consumer product
* constructs and tests a prototype or consumer product using pre-determined criteria
* identifies and makes improvements to a prototype and justifies the changes
* evaluates a consumer product based on predetermined criteria
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I’ll also try using Remind to send important updates, assignments, and information for Math & Sci 2020. Please click on the link below to join our class. (For reference, our class code is @43bf8e9.)

<https://www.remind.com/join/43bf8e9>

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