

Science 5

Type: Online

Course Description:

Earth Science: Our Earth is made of many materials that change and morph as they move through cycles and can be used as natural resources in the different phases. As a student who is looking forward to a job opportunity, you've been asked to evaluate different natural resource companies about what they do and how they do it. In the end, you are asked to compile your information and create an infographic to demonstrate what you've learned and which company you've decided to work for!

Biology: As students dive into the depth of the human body and how different organ systems function they will be asked to put on their lab coats and join a team of intern doctors on their way to diagnosing a severely ill patient. By the end of their journey through the body they will be able to accurately diagnose the patient based on the symptoms they presented and some suggested diseases. They will have created a medical file for that patient and create a report to deliver back to the patient with their findings.

Chemistry: Clean water is something that everyone requires. What makes up clean water and how can we go about finding, or making it, if we can't find it? Students will dive into Chemistry with a study of solutions. They'll discover what makes a solution and different methods to separate solutions. They'll also explore the Scientific Method – how to craft a lab themselves and apply what they've learned in a hands-on application.

Physics: Chores! Nobody likes them, but the majority of people have to do them. So, how can you make your chores easier? Students are tasked to build a compound machine out of simple machines in order to assist themselves with an assigned chore. Meet Adam, a grade 5 student who is also the designer of the "Water Block", and after learning about the 6 different simple machines, you'll get a chance to create your own machine, just like Adam did!

Major Units and Topics:

- Natural Resources
- Rock Cycle
- Human Body
- Multicellular Organisms
- Scientific Method
- Simple Machines
- Force and Energy
- Solutions



Assessment Requirements:

- Response questions
- Students must complete all lessons and assignments
- Various other lesson assignments
- Projects
- Quizzes
- Labs
- Each lesson designed to take approximately 30 - 45 minutes, with the exception of major projects and assignments

Learning Standards Overview:

Content <i>Students are expected to know the following:</i>				
Questioning and Predicting	Earth Science	Biology	Physics	Chemistry
Demonstrate a sustained curiosity about a scientific topic or problem of personal interest		✓	✓	✓
Make observations in familiar or unfamiliar contexts		✓	✓	✓
Identify questions to answer or problems to solve through scientific inquiry	✓	✓	✓	✓
Make predictions about the findings of their inquiry		✓		✓
Planning and Conduction	Earth Science	Biology	Physics	Chemistry
With support, plan appropriate investigations to answer their questions or solve problems they have identified	✓		✓	✓
Decide which variable should be changed and			✓	✓



measured for a fair test				
Choose appropriate data to collect to answer their questions			✓	✓
Observe, measure, and record data, using appropriate tools, including digital technologies	✓	✓	✓	✓
Use equipment and materials safely, identifying potential risks			✓	✓
Processing and Analyzing Data and Information	Earth Science	Biology	Physics	Chemistry
Experience and interpret the local environment x	✓			
Identify First Peoples perspectives and knowledge as sources of information	✓	✓	✓	✓
Construct and use a variety of methods, including tables, graphs, and digital technologies, as appropriate, to represent patterns or relationships in data				✓
Identify patterns and connections in data			✓	✓
Compare data with predictions and develop explanations for results		✓	✓	✓
Demonstrate an openness to new ideas and consideration of alternatives	✓		✓	
Evaluating	Earth Science	Biology	Physics	Chemistry
Evaluate whether their investigations were fair tests		✓		✓
Identify possible sources of error		✓		✓



Suggest improvements to their investigation methods		✓		✓
Identify some of the assumptions in secondary sources				✓
Demonstrate an understanding and appreciation of evidence			✓	✓
Identify some of the social, ethical, and environmental implications of the findings from their own and others' investigations	✓			
Applying and Innovating	Earth Science	Biology	Physics	Chemistry
Contribute to care for self, others, and community through personal or collaborative approaches		✓		✓
Cooperatively design projects	✓			
Transfer and apply learning to new situations		✓	✓	
Generate and introduce new or refined ideas when problem solving		✓	✓	
Communicating	Earth Science	Biology	Physics	Chemistry
Communicate ideas, explanations, and processes in a variety of ways	✓	✓	✓	✓
Express and reflect on personal, shared, or others' experiences of place				✓

