

# Natural Resources Around the World: Use and Sustainability

— Grade 7 —

Written by Bill Gowsell

**BRIEF OVERVIEW:** This book is designed to give students and teachers an overview of the many natural resources found around the world. Students will have a chance to explore how natural resources are used, the effect of extraction on the Earth, and value to the people.

**MEETING YOUR STUDENT'S NEEDS:** Depending on the needs of the students in your class, the teacher may want to scan any Reading Notes into Kurzweil on the computer. By doing this, no matter the reading abilities of your students, they will be able to access the information of the text. Teachers are also encouraged to allow their students to collaborate on as many activities possible, in order to allow all students to be successful without modifying the text significantly.



**BILL GOWSELL** is a teacher for the Catholic District School Board of Eastern Ontario. He currently teaches grade 3/4 in Gananoque. Bill has been fortunate to work on multiple school committees that develop long range goals for his students and his school in Language and Math goals. He loves to create resources that are fun and informative, but allow all of his students to succeed.

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Learning Intentions	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Extras
<b>Knowledge and Understanding Content</b>							
Identify Earth's renewable, nonrenewable, and flow resources.	●				●		●
Identify significant short term and long term effects of natural resource extraction.	●	●	●				●
Describe some responses to social and environmental challenges arising from the use of natural resources.			●				●
Describe the perspectives of different groups regarding the use of natural environment.				●			●
<b>Thinking Skills</b>							
Gather and organize data about the impact of resource extraction.		●					●
Draw conclusions about issues related to the impact of natural resources.			●				●
<b>Communication</b>							
Communicate the results of their inquiries about natural resources.	●	●	●	●	●	●	●
<b>Application</b>							
Examine interrelationships between the location and mode of extraction of a natural resource.	●						●

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# Teacher Assessment Rubric

Student's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Success Criteria	Level 1	Level 2	Level 3	Level 4
<b>Knowledge and Understanding Content</b>				
Demonstrates an understanding of the concepts, ideas, terminology definitions used	Demonstrates limited knowledge and understanding of content	Demonstrates some knowledge and understanding of content	Demonstrates considerable knowledge and understanding of content	Demonstrates thorough knowledge and understanding of content
<b>Thinking Skills</b>				
Gather and organize information on major challenges facing different groups and communities	Uses critical thinking skills with limited effectiveness	Uses critical thinking skills with some effectiveness	Uses critical thinking skills with considerable effectiveness	Uses critical thinking skills with a high degree of effectiveness
Analyse and construct print and digital media maps	Constructs and analyses maps with limited effectiveness	Constructs and analyses maps with some effectiveness	Constructs and analyses maps with considerable effectiveness	Constructs and analyses maps with a high degree of effectiveness
<b>Communication</b>				
Organize and communicate ideas and information in oral, visual, and/or written forms	Organizes and communicates ideas and information with limited effectiveness	Organizes and communicates ideas and information with some effectiveness	Organizes and communicates ideas and information with considerable effectiveness	Organizes and communicates ideas and information with a high degree of effectiveness
<b>Application of Knowledge and Skills</b>				
Apply knowledge and skills to makes connections between the past and present day situations	Makes connections with limited effectiveness	Makes connections with some effectiveness	Makes connections with considerable effectiveness	Makes connections with a high degree of effectiveness

# Student Self-Assessment Rubric

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Put a check mark ✓ in the box that best described you.

Expectations	Always	Almost Always	Sometimes	I Need Improvement
I am an active listener during class discussions and group activities.				
I always followed directions with minimal supervision.				
I always stayed on task and used my resources to help explain my thinking.				
My writing was neat and comprehensive with multiple details explaining my thinking.				

1. I liked \_\_\_\_\_

\_\_\_\_\_

2. I learned \_\_\_\_\_

\_\_\_\_\_

3. I want to learn more about \_\_\_\_\_

\_\_\_\_\_

# Introduction

The activities in this book have two intentions: to teach concepts that relate to natural resources in Canada and around the world, and the impact of our use of so many natural resources.

This book is intended to provide a snapshot for the teacher to expose their students to a variety of activities that will allow them to interact with and learn about a variety of issues, and people that connect with natural resources.

The book starts off with the first lesson *Earth's Resources*. The students will be introduced to a variety of resources that are currently harvested on Earth.

The second lesson *Extraction and Use of Natural Resources* will focus on how we harness our natural resources and what they are used for.

The third lesson *The Impact of Extraction* provides a focus on the impact of extraction on the environment.

The fourth lesson *Different Perspectives* allows the students to look at two competing opinions on the use of and how we harness our natural resources.

In the fifth lesson *Mapping our Resources* focuses on where our natural resources are located in Canada, and provides the students an opportunity to map out where they can be found in the country.

The sixth lesson *Preserving Our Environment* brings the students to a conclusion of the unit with a look at David Suzuki, how he is leading the fight against climate change. The students will conclude the lesson by examining a recent commercial of Suzuki talking to a room full of children about the effect of climate change on the Earth.

The *Extras* section provides a unit test and the answer key that the teacher can use to complete the unit.

## **ASSESSMENT AND DIFFERENTIATION**

Teachers may choose to start the unit with a student duotang which the students can keep all of their work in. Depending on the needs of your students, the teacher can easily scan the worksheets into the Kurzweil reading program on a student laptop, if your school has it. If not, the reading portions of the tasks provided could be completed in group settings, or led as a teacher directed lesson. This should accommodate any student profile needs.

# Lesson 1: Earth's Resources

## LEARNING INTENTION:

Students will learn about multiple natural resources that are found around the world.

## SUCCESS CRITERIA:

Students will be able to identify natural resources that are renewable and non-renewable, and where they are found.

## MATERIALS NEEDED:

- Reading Notes #1,
- Student Worksheets #1, #2, #3
- 1 laptop or iPad per student
- Chart paper labelled *Resources/Canada's Natural Resources*
- 2 sticky notes per student

## PROCEDURE:

**(This lesson should be completed in two days about 30-60 minute long periods.)**

### Day 1

The teacher will start the class by calling the class together and introducing the unit. The teacher will explain that at the start of every lesson, the students will get a chance to read through Reading Notes and take notes for the unit test using the study notes sheet provided with each lesson.

The teacher will start the lesson by handing out the students the sticky notes and asking them to write on the first sticky note what they know about resources in general, and on the second sticky note what they know about natural resources in Canada.

The students will place their sticky notes on chart paper and the teacher can lead a class discussion about what the students wrote on them.

### Day 2

Now that the students have a chance to start the unit, the teacher will pass out Reading Notes #1 and the students will use this time to read through and make study notes with Student Worksheet #1.

The teacher will then call the students together and have a discussion about Renewable and Non Renewable energy.

The teacher could ask questions about what the students learned and whether or not the students think either is important.

The teacher will then divide up the class into nonrenewable and renewable energy sides and have them debate about which is the best for Canada to use.

Once the debate is over, the teacher should pass out Student Worksheet #2 and allow the students to complete the work after the debate.

*(Depending on the needs of your students, you may wish to scan these activity cards onto the computer and have some students complete their work via school issued laptop through the use of Microsoft Word or through Kurzweil.)*

## EXTENSION:

The teacher can extend this lesson by having the students create a poster on Student Worksheet #3 that promotes the use of a natural resource found in Canada. The students will need to use an iPad or laptop to research this natural resource and include facts and images that relate to this Canadian resource.

# What is a Natural Resource?

A natural resource can be defined as something that is found in nature and can be very important to humans.



For example, trees can be converted into a variety of resources, from paper to building materials.

Oil is converted to gasoline and used as fuel in our homes and cars.

Minerals can be converted into metals that are used in a variety of ways including jewelry and construction materials.



Animals can be used as a food source as well as a resource for making clothes.

Wind and sun energy can be converted into a resource to create energy which allows us to generate electricity.

Water can be used as a drinking source as well as a means to create electricity.

## Renewable vs Non Renewable

A *Renewable* resource is a resource that can be used repeatedly because it will naturally replace itself. Examples of this include trees, water, animals, wind, and solar power.

The danger with renewable resources is the overuse by humans. If humans overfish a fish stock, then the fish will not be able to keep up with the demand, and the resource can be depleted. If humans do not replant

trees every time they cut down a tree, then we will run out of trees to use.

A *Non-Renewable* resource is a resource that has a finite amount. This means that it will eventually be used up and cannot be replaced either naturally or through man made attempts.

Examples of Non-Renewable resources are oil and minerals. Once an oil well is pumped dry or a mine is emptied of all of its minerals it can never be replaced.

### Canada's Natural Resources

Canada has an abundance of natural resources that are harvested and used every day.

Canada has oil resources throughout the country, but the largest concentration can be found in the province of Alberta in the oil sands region.

Canada has a mass quantity in potash, which is a main ingredient in fertilizer.

Canada also mines for multiple minerals including diamonds, uranium, iron ore, nickel, and other rare earth elements.

Canada has multiple hydroelectric power created by the many hydroelectric dams located throughout the country.

