# Lesson Plan: Exploring Natural Resources Using Technology

Grade Level: 6th Subject: Science Topic: Natural Resources

## **Learning Objectives**

By the end of this lesson, students will:

- 1. Understand the types of natural resources and their uses (air, water, land, soil, minerals, plants, and animals).
- 2. Analyze data and draw meaningful insights related to the availability and usage of natural resources.
- 3. Use technology to collaborate, analyze, and present real-world applications of natural resources.

## **Materials Needed**

- Laptops or tablets with internet access
- Google Sheets/Excel for creating flowcharts and graphs
- Google Earth or online maps for identifying geographic distribution
- **Canva** for creating visuals

## **Lesson Flow**

## 1. Introduction: Understanding Natural Resources (45 minutes)

- 1. **Show visuals** from the chapter (e.g., Figures 8.2 to 8.13) to introduce different activities and their connections to natural resources:
  - Agriculture, fishing, mining, forestry, and energy generation.

## 2. Ask engaging questions:

- What do these activities have in common?
- How do these resources fulfill human needs?
- What happens if these resources are overused?
- What happens if these resources run out?
- **3.** Provide definitions and explain the importance of **renewable vs. non-renewable resources** with an example.
- 4. Present a **real-life statistic**: For instance, only a small fraction of Earth's water is usable, yet large amounts are wasted daily.

## 2. Activity 1: Researching Natural Resources (120 minutes)

- 1. **Group Formation**: Divide students into groups, each focusing on one resource (e.g., water, soil, forests, minerals, animals, wind energy).
- 2. Research Task:
  - Students will use internet to find specific data about:
    - How the resource is used.
    - Where it is found (geographic distribution).
    - Challenges in its sustainable use.

## 3. Technology Use:

- **Google Earth**: Students will identify and mark areas rich in their resource. For example:
  - Highlight forests on different continents.
  - Mark regions of mineral extraction or significant water bodies.
- **Google Sheets/Excel**: Students will input data (e.g., global distribution, usage percentages) and create:
  - A flowchart showing how the resource is extracted, processed, and used.
  - A pie chart or bar graph to compare availability vs. consumption.

## **3.** Activity **2:** Creative Representation (120 minutes)

- 1. Task: Each group creates a visual infographic that includes:
  - A brief explanation of their resource.
  - A flowchart from Google Sheets/Excel showing its uses (refer to the example in Figure 8.14 from the chapter).
  - A map from Google map/ Earth showing where the resource is most abundant.
  - Proposed solutions for conserving the resource.
  - Use **Canva** to combine graphs, maps, and text into a single infographic.

#### 4. Presentation and Reflection (10 minutes each group)

#### 1. Group Presentations:

- Each group shares their infographic with the class.
- They explain the resource's importance, the insights from their map/chart, and proposed conservation methods.

#### 2. Class Reflection:

- Discuss the interdependence of resources and the need for sustainable practices.
- Brainstorm actionable conservation steps for the school or community.