

Lesson: Renewable and Nonrenewable Resources

Florida Benchmark:

SC.5.E.7.4 – Distinguish between renewable and nonrenewable resources.

NGSS Standard:

ESS3.A – Natural Resources: All materials and energy resources are obtained from Earth and have limits based on how they form and are used.

A. GRADE LEVEL: 5th Grade

B. SUBJECT: STEM / Science

C. DATE: May 5, 2025

D. DURATION: 60 minutes

E. LESSON FOCUS: Students will learn the differences between renewable and nonrenewable resources, explore examples of each, and understand the importance of conservation.

F. MATERIALS:

- PowerPoint presentation
- Projector or smartboard
- Whiteboard and markers
- Printed resource cards (solar, wind, coal, oil, natural gas, trees, etc.)
- Student notebooks
- “Sort the Resources” worksheet
- Chart paper or anchor chart
- Laptops/tablets (optional)
- Exit tickets

G. LESSON OBJECTIVES: By the end of the lesson, students will be able to:

1. Define renewable and nonrenewable resources.
2. Classify various natural resources correctly.
3. Explain why non-renewable resources should be conserved.

H. PROCEDURES:

1. INTRODUCTION:

Begin with a PowerPoint presentation that introduces the concept of natural resources, energy use, and the two main categories: **renewable** and **nonrenewable**. Use visuals, animations, and real-world examples to keep students engaged.

After the presentation, lead a brief discussion asking students:

“Can you name some things we use every day that come from these resources?”

Record responses on the whiteboard.

2. EXPERIMENT:

Activity Title: *Resource Sort*

- Divide students into pairs or small groups.
- Distribute “resource cards” with pictures and names of various natural resources.
- Students will work together to sort cards into *Renewable* or *Nonrenewable*.

- Groups present one of their sorted examples and explain their reasoning to the class.

3. OBSERVATION:

Students write down their observations in their science notebooks, including the name of the resource, its classification (renewable or nonrenewable), and the reason behind their decision.

Encourage them to notice patterns such as renewables being replenished naturally and nonrenewable being limited in supply.

4. GENERALIZATION:

Return to the PowerPoint and review key slides summarizing definitions, characteristics, and examples.

Create a class anchor chart comparing the two resource types.

Facilitate discussion on the importance of conserving nonrenewable resources, connecting to Florida's use of solar, wind, and fossil fuels.

Ask: *"Why is it important to use more renewable energy in the future?"*

5. ASSESSMENT:

- **Formative:** Teacher observation during card sorting and group presentations
- **Summative:** Completion of the "Sort the Resources" worksheet
- **Exit Ticket:**
 - Name one renewable resource
 - Name one nonrenewable resource
 - Explain why we should conserve nonrenewable resources

Note 1 – Safety:

There are no physical safety concerns for this lesson, as it is classroom-based and centers around visual and hands-on sorting activities. If digital devices are used to view PowerPoint or educational videos, ensure students follow safe and appropriate use of technology under teacher supervision.

Note 2 – Accommodations (ELL, ESE, etc.):

ELL students will receive visual support through images in PowerPoint and resource cards, along with vocabulary word banks and sentence stems. ESE students will benefit from scaffolded instructions, peer support during group work, and frequent check-ins. Gifted students can research lesser-known energy resources (like geothermal or biomass) and classify them independently.