



## **Lesson Seven: Earth, Water, Sun - Elements That Work**

**Grade Level:** 3<sup>rd</sup> Grade

**Time:** 45 minutes

**Essential Question:** How can we be stewards of Wyoming's mineral and energy resources to benefit current and future generations?

**Objective:** Students will utilize a digital source to learn about other renewable resources.

**Purpose:** Students learn about and compare/contrast the use of other renewable resources available in Wyoming.

### **Required Materials/Resources:**

- National Geographic website (Source 1)  
<https://www.nationalgeographic.org/article/renewable-energy/3rd-grade/>
- Energy Kids – US Energy Administration Information website (Source 2)  
[https://www.eia.gov/kids/energy.php?page=renewable\\_home-basics](https://www.eia.gov/kids/energy.php?page=renewable_home-basics)
- Computers, laptops, or iPads
- “Renewable Resource” notes sheet (one per student)
- Sticky notes (one per student) or utilize an electronic resource like Word, Padlet, or Popplet for students to share their response to the final question.

**TEACHER NOTE:**

Try not to limit 1-2 students per device.

**Suggested Teacher Preparation:**

- Reserve computer lab time or arrange for laptop/iPad use in your classroom.
- Read about each of the focus resources on the websites.
- Optional: Pre-assign the resource that each student or pair of students will research by circling the name of the assigned resource at the top of the “Renewable Resource” note sheet.

**Standards:**

Social Studies: SS5.6.1 (Explicit)

ELA: 3.RI.1, 3.RI.5, 3.RI.7, 3.RI.9, 3.W.7, 3.W.8  
(Practiced/Encountered)

**Vocabulary:**

- **Geothermal energy** - energy in the form of heat obtained from hot circulating ground water
- **Hydropower** - electricity produced from machines that are run by moving water
- **Solar energy** - energy from the sun

**Instructional Procedure/Steps:**

1. Say: **“In previous lessons, we have talked about the renewable resource wind. Today, we will learn about three other renewable energy resources and their advantages and disadvantages.”** Place students with their electronic devices.
2. Connect to National Geographic and Energy for Kids websites, and have students take notes. Pass out the “Renewable Resource” notes sheets and assign each student or pair of students a specific resource to research. Say: **“These sites will discuss many types of renewable energy resources, but today, we are going to learn about solar energy, geothermal energy, and**

**hydropower. Focus only on the resource you are assigned. Read about your assigned resource and take specific notes about it using the note sheet I have passed out."**

3. Say: **"For your first task, explain how the resource generates electricity using pictures and/or words. You will then list at least one advantage and disadvantage of the resource. Finally, you will answer a prompt using the notes you have taken."** *Students' responses to the final question should stay focused on the task, not on information about the resources. The prompt is meant to be a quick write to check students' understanding of what they've read. Students should provide specific, accurate support for the method they chose.*
4. Have students get to work. Circulate to ensure that students are productively moving through all aspects of the activity. The quick write needs to be completed before you reconvene for closure.

**Assessment:**

With 10 minutes remaining, reconvene the class. Pass out a sticky note to each student. Say: **"On your sticky note, answer this question: How does using renewable resources and wind power to generate electricity help us be stewards for Wyoming?"** Collect the students' "Renewable Resource" notes sheets and the sticky notes. *Student answers should illustrate the connection between renewable resources and being a good steward.*

TEACHER NOTE:  
Keep the sticky notes as they will be used in Lesson 8.

## Credits/Sources:

1. National Geographic Society. (1996-2020). *Renewable energy*. Retrieved October 14, 2020 from <https://www.nationalgeographic.org/article/renewable-energy/3rd-grade/>
2. U.S. Energy Information Administration. (n.d.). *Energy Sources Renewable*. Retrieved August 16, 2018, from [https://www.eia.gov/kids/energy.php?page=renewable\\_home-basics](https://www.eia.gov/kids/energy.php?page=renewable_home-basics)