

From Sorting to Understanding!

4TH GRADE

SORT

RENEWABLE & NONRENEWABLE RESOURCES

4th Grade Science Station

KEEP SCROLLING TO SEE WHAT'S INSIDE!

YOU WILL LOVE THIS BECAUSE



Engaging and Interactive Learning

Students complete a hands-on sorting card activity with real-life examples of renewable and non-renewable resources.



Aligned with NGSS

These lesson plans aren't just random; they're laser-focused on Next Generation Science Standards. No more curriculum guesswork!



Supports Critical Thinking

Encourages students to analyze and categorize energy types, deepening their understanding of renewable and nonrenewable resources.

WHAT'S INCLUDED

Science Sorting Activity

- Reading Passage
- Color Sorting Cards
- Black and White Sorting Worksheet
- Differentiated Comprehension Questions + MORE



READING PASSAGE & ACTIVITIES

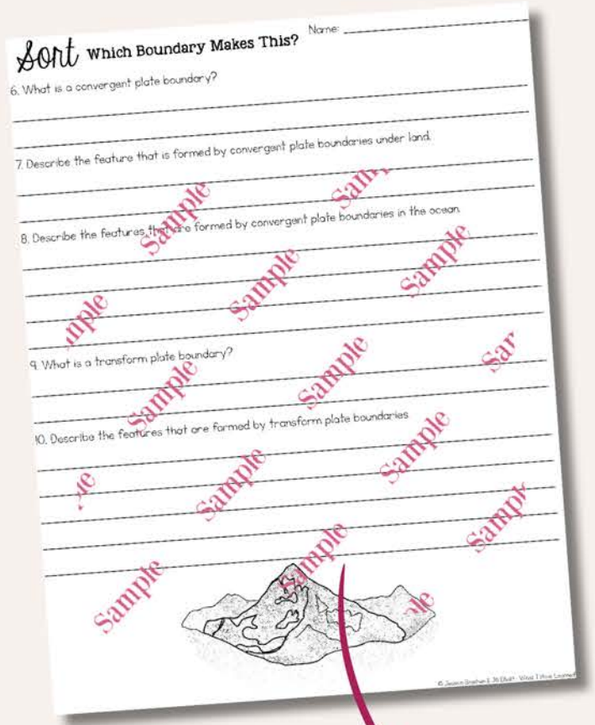


ENGAGING READING: 2 TYPES OF READING PASSAGES

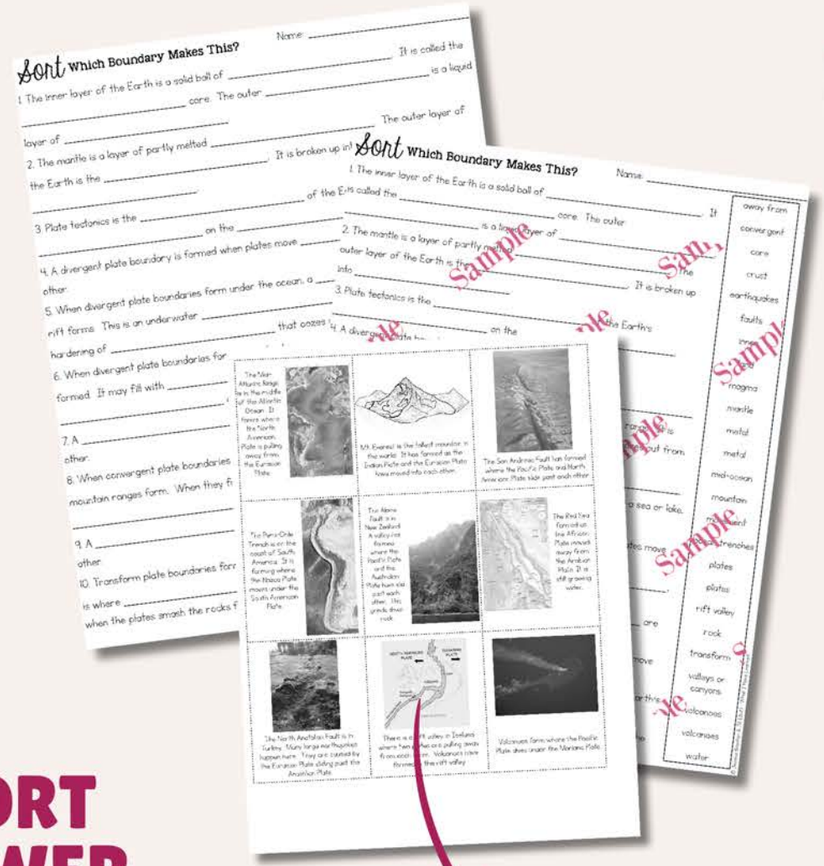


HANDS-ON ACTIVITIES

Differentiated Questions



SHORT ANSWER



FILL-IN-THE BLANK



TASK CARDS:
SHORT ANSWER &
MULTIPLE CHOICE

SORT: What Type of Energy Is It?

Sort
Nonrenewable

Sort
Renewable

Long pipelines bring petroleum to huge oil tankers. These ships carry petroleum to refineries, where it will be turned into plastic, gasoline, and many other products.
Sort
What Type of Energy Is It?

Huge mines are dug deep into the Earth. Large deposits of black rock, called coal, are dug out of these mines.
Sort
What Type of Energy Is It?

Natural gas is sent from the gas well in long pipes.
Sort
What Type of Energy Is It?

Some solar panels turn the sun's light energy directly into electricity.
Sort
What Type of Energy Is It?

A solar farm uses the sun's heat energy. Heat energy is turned into chemical energy using turbines (motors) in a solar power plant.
Sort
What Type of Energy Is It?

Ocean waves have kinetic energy, which is the energy of motion. New technology is being used to capture this kinetic energy. It is being turned into electrical energy and sent to nearby cities.
Sort
What Type of Energy Is It?

Coal is made from ancient plants buried in swamps. They decayed under high heat and pressure, becoming black rocks.
Sort
What Type of Energy Is It?

Nuclear power generates electricity with little air pollution. The waste from it, however, is very poisonous.
Sort
What Type of Energy Is It?

Petroleum (oil) is pumped out of the Earth using an oil well.
Sort
What Type of Energy Is It?

This dam stretches across a river in Slovenia. It captures the kinetic energy in the river water. Turbines (motors) turn kinetic energy into electrical energy
Sort
What Type of Energy Is It?

In the western U.S., there is very hot water below the surface of the Earth. These hot springs are so hot that much of the water boils into steam. Geothermal power plants turn this heat energy into electrical energy
Sort
What Type of Energy Is It?

Wind energy turns the blades of a wind turbine. The kinetic energy of the wind is turned into electrical energy inside the turbine.
Sort
What Type of Energy Is It?

Nuclear power is a type of energy that uses uranium and plutonium. These come from minerals mined out of the Earth.
Sort
What Type of Energy Is It?

Some power plants burn natural gas. Chemical energy from the gas is turned into heat energy. This heat energy is turned into electricity.
Sort
What Type of Energy Is It?

Birds have a hard time seeing wind turbines. They fly into them and die. People are painting the blades different colors. They hope the birds will now see the blades and stay safe.
Sort
What Type of Energy Is It?

About 30 feet under the Earth is a steady temperature of about 50 to 60°F. Geothermal ("Geo" means Earth, "thermal" means heat) energy uses the steady temperature to heat and cool buildings.
Sort
What Type of Energy Is It?

Sort
What Type of Energy Is It?
Student Instructions

Energy is everywhere. You are using many forms of energy right now. Your body is using chemical energy from the food you ate at breakfast to move your muscles. The lights in your classroom are using electrical energy. The heat energy in the classroom is helping your body stay warm, even when it's cold outside. You can't get away from energy!

Energy is the ability to do work. It cannot be created, nor can it be destroyed. The amount of energy in the universe stays the same. Energy can change f… to another. There are many types of energy. Some types of ener… energy, and nuclear energy. Kinetic energy is the en… of energy for Earth. It sends many kinds … to turn the sun's light energy into … of the plant. …eat a

Sort
What Type of Energy Is It?
Student Instructions

Nonrenewable energy is the most widely used type of energy in the world. Long, long ago, plants lived in swamps. Animals and plants lived in rivers and oceans. They died and sank to the bottom. They began to slowly decay, or break down. Meanwhile, they were covered by many layers of rocks, mud, and other sediments. The layers of sediments caused high pressure and heat to build up. When the dead animals and plants slowly decayed under high heat and pressure, they changed. They became fossil fuels. These fuels include coal, petroleum (oil), and natural gas. When they are set on fire, they release a lot of heat. Power plants burn fossil fuels. The chemical energy in the fuel is turned into heat energy. This heat energy is turned into electrical energy inside power plants.

How Coal was Formed
Giant plants and trees grew in ancient swamps.
The dead plants and trees were covered by many layers of sediments. Sometimes they were also covered by oceans.
After many years, high heat and pressure turned the dead plants and trees into coal.

How Oil and Gas was Formed
Ancient plants and animals living in the oceans died and sank to the bottom.
The dead plants and animals were covered by many layers of sediments.
After many years, high heat and pressure turned the dead plants and animals into petroleum (oil) and natural gas.

begin… Almost all renew… not cause pollution.

Right now, renewable sources cost more to use… energy use very expensive machines. They are expensive to … maintain. In addition, not as much energy is generated from these sources … these reasons, many people do not want to use nonrenewable energy sources. United States, people are using both renewable and nonrenewable energy sources. In 2016, more than 80% of all electricity in the United States came from nonrenewable sources. Less than 20% came from renewable sources. 20% sounds like a low number, but it is an improvement. In 2010, only 9% of electricity in the United States came from renewable sources.

Scientists and engineers are finding ways to make renewable energy less expensive. They are also inventing technology to make more electricity from renewable energy. People are working hard to find ways to make all of our electricity come from renewable energy sources.

In this activity, you will read about different types of energy. You will decide whether it is Renewable Energy or Nonrenewable Energy.

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SORT: What Type of Energy Is It?



Nuclear power is a type of energy that uses uranium and plutonium. These come from minerals mined out of the Earth.



Some power plants burn natural gas. Chemical energy from the gas is turned into heat energy. This heat energy is turned into electricity.



Petroleum (oil) is pumped out of the Earth using an oil well.



Natural gas is sent from the gas well in long pipes.

Sort — What Type of Energy Is It?

Name: _____

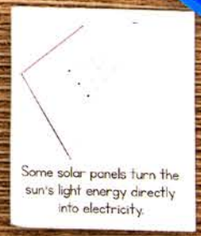
Look at each picture. Determine whether it is a renewable or nonrenewable source.

Nonrenewable	Renewable
 Coal is made from ancient plants buried in swamps. They decayed under high heat and pressure, becoming black rocks.	 Wind energy turns the blades of a wind turbine. The kinetic energy of the wind is turned into electrical energy inside the turbine.
 Long pipelines bring petroleum to huge oil tankers. These ships carry petroleum to refineries, where it will be turned into plastic, gasoline, and many other products.	 This dam stretches across a river in Slovenia. It captures the kinetic energy in the river water. Turbines (motors) turn kinetic energy into electrical energy.
	 In the western U.S., there is very hot water below the surface of the Earth. These hot springs are so hot that much of the water boils into steam. Geothermal power plants turn this heat energy into electrical energy.
	 Birds have a hard time seeing wind turbines. They fly into them and die. People are painting the blades different colors. They hope the birds will now see the blades and stay safe.
 Huge mines are dug deep into the Earth. Large deposits of black rock, called coal, are dug out of these mines.	 Nuclear power generates electricity with little air pollution. The waste from it, however, is very poisonous.
 About 30 feet under the Earth is a steady temperature of about 50 to 60°F. Geothermal ("Geo" means Earth, "thermal" means heat) energy uses this steady temperature to heat and cool buildings.	 A solar farm uses the sun's heat energy. Heat energy is turned into chemical energy using turbines (motors) in a solar power plant.

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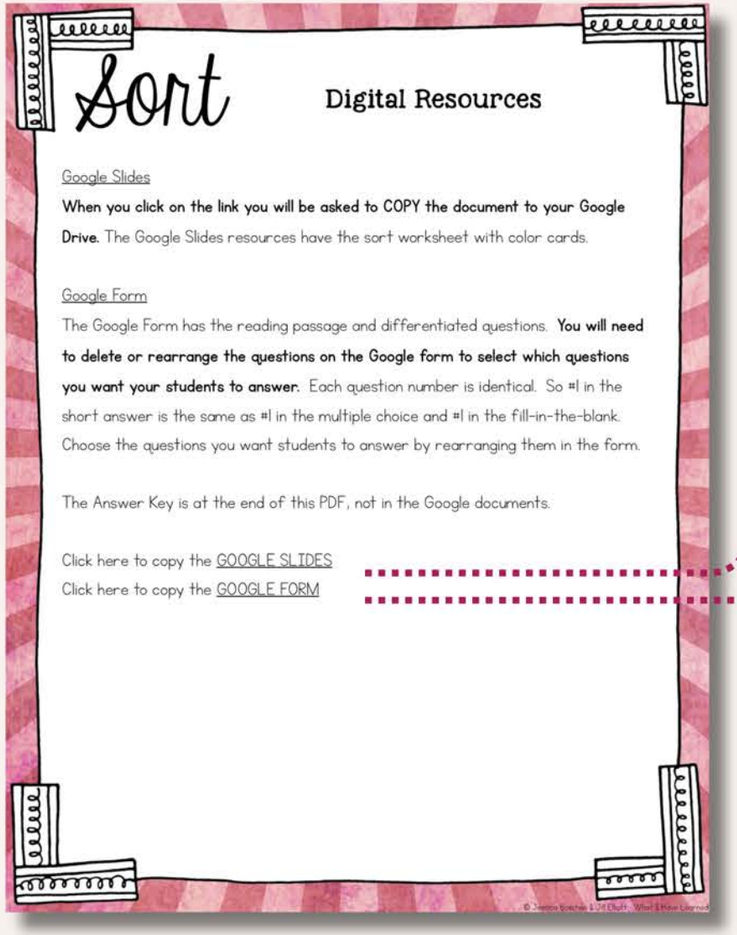


Ocean waves have kinetic energy, which is the energy of motion. New technology is being used to capture this kinetic energy. It is being turned into electrical energy and sent to nearby cities.



Some solar panels turn the sun's light energy directly into electricity.

DIGITAL VERSIONS


Sort

Digital Resources

Google Slides

When you click on the link you will be asked to COPY the document to your Google Drive. The Google Slides resources have the sort worksheet with color cards.

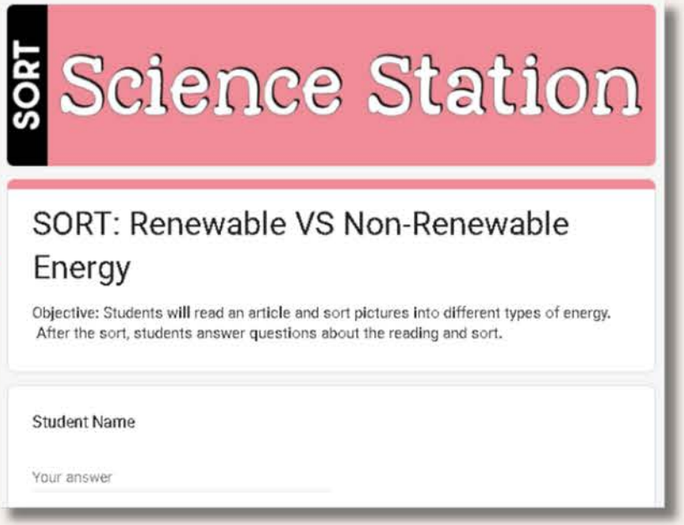
Google Form

The Google Form has the reading passage and differentiated questions. **You will need to delete or rearrange the questions on the Google form to select which questions you want your students to answer.** Each question number is identical. So #1 in the short answer is the same as #1 in the multiple choice and #1 in the fill-in-the-blank. Choose the questions you want students to answer by rearranging them in the form.

The Answer Key is at the end of this PDF, not in the Google documents.

Click here to copy the GOOGLE SLIDES

Click here to copy the GOOGLE FORM

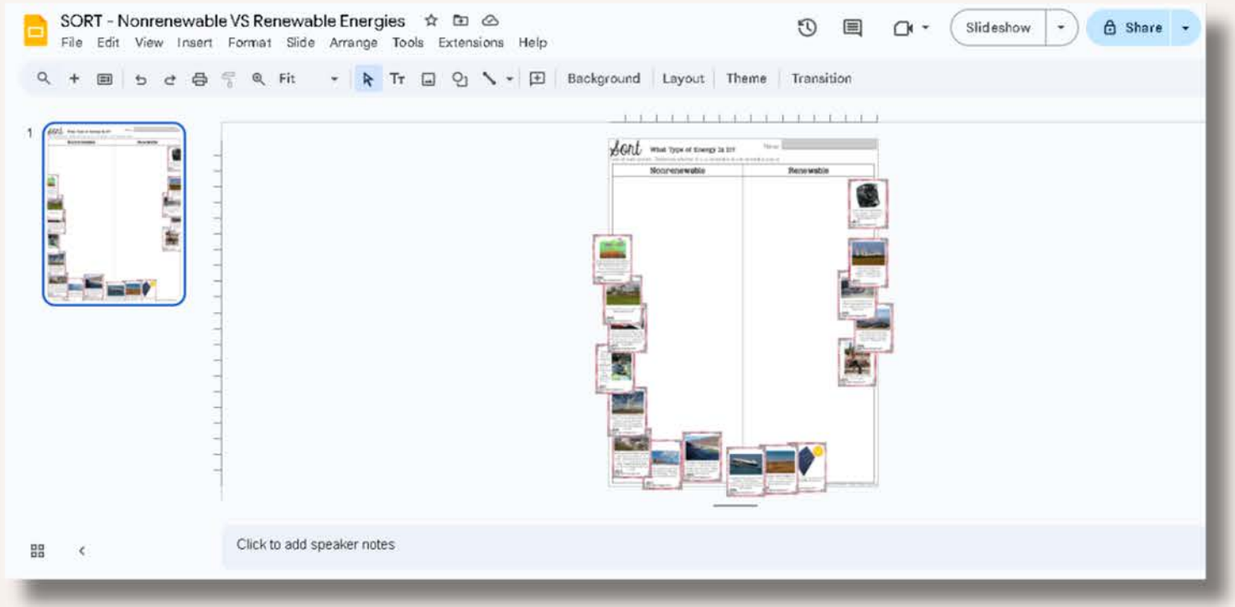

SORT Science Station

SORT: Renewable VS Non-Renewable Energy

Objective: Students will read an article and sort pictures into different types of energy. After the sort, students answer questions about the reading and sort.

Student Name

Your answer



DIGITAL VERSIONS

- ✔ Google Sheet with Activity & Directions
- ✔ Google Form with Reading & Questions

Answer keys provided

TEACHERS LOVE IT!

I used MANY of these products in my science class this past year, and I was ALWAYS very pleased. This was a great way to quickly assess students' understanding.

Lora H.



My students used this resource for homework. They found it easy and relatable to the UNIT being taught.

Chelsea M.



My passion is making learning accessible to all students. I love scaffolding learning, breaking down the concepts and building them up so that students can see the connections. I love figuring out the small components that build up to the big ideas and helping students see it all.



teach MATH

teach SCIENCE

teach READING

teach WRITING

What I have LEARNED