RENEWABLE & NON-RENEWABLE ENERGY

differentiated passages

LEXILE

Renewable and Non-renewable Resources Questions

1. There are 2 types of natural resources. What are they?

   1. _____

   2. _____

2. Label the images below as renewable or non-renewable:





_____ _____

3. What is the problem with relying on fossil fuels as our r

_____

_____

_____

4. Why should we focus on shifting to using more ren

_____

_____

_____

780L

Name: _____ Date: _____

Renewable and Non-renewable Ene

Surviving on Earth means depending on the planet's **natural resources**. A natur resource is any material or organism from Earth that people can use. Natural resources also play a role in **economics** and **industry**. They bring in large amounts of money. Some of the most common natural resources are air, water, soil, wildlife, forests, minerals, and **fossil fuels**. These natural resources are not evenly distributed around the globe. Some places have big supplies of a certain resource while others have very little of it.

Natural resources are divided into two categories. One category is **renewable resources**. These resources never run out or can be grown again. They are easily replenished so they can continue to be used. Resources such as air and water are renewable because they move in cycles. Trees are also renewable. They can be planted again as seeds and regrown.



Solar panels on the roof of a home.

Sunlight is another renewable resource we aren't likely to run out of during our lifetimes. All of these renewable resources provide energy and other products humans use. They are mostly environmentally friendly if properly gathered.

The second category of natural resources is **non-renewable resources**. These resources cannot be replaced once they've been used. Non-renewable resources are usually found in the ground. They include fossil fuels such as coal and oil. Fossil fuels are our sources of energy. They are relatively cheap. These materials don't regrow, tho more of them isn't something that can be done within our lifetimes. They take years to form. Non-renewable resources have mostly been easy to find. We face a time when they are all gone. Humans are using these resources for ene they can be mined.

Mag CORE

4th Grade NGSS 4-ESS3-1

ABOUT LEXILE LEVELS

MagiCore Learning, LLC is a certified Lexile® Partner. These texts are officially measured and approved by Lexile and MetaMetrics® to ensure appropriate rigor and differentiation for students.

The Lexile Framework® for Reading measures are scientific, quantitative text levels. When the Lexile of a text is measured, specific, measurable attributes of the text are considered, including, but not limited to, word frequency, sentence length, and text cohesion. These are difficult attributes for humans to evaluate, so a computer measures them.

Common Core State Standards uses Lexile level bands as one measure of text complexity. Text complexity ranges ensure students are college and career ready by the end of 12th grade. Lexile measures help educators scaffold and differentiate instruction as well as monitor reading growth.

Grade Band	Lexile® Bands Aligned to Common Core Expectations
K-1	N/A
2-3	420L-820L
4-5	740L-1010L
6-8	1185L-1385L

Keep in mind when using any leveled text that many students will need scaffolding and support to reach text at the high end of their grade band. According to Appendix A of the Common Core Standards, "It is important to recognize that scaffolding often is entirely appropriate. The expectation that scaffolding will occur with particularly challenging texts is built into the Standards' grade-by-grade text complexity expectations, for example. The general movement, however, should be toward decreasing scaffolding and increasing independence both within and across the text complexity bands defined in the Standards."

Renewable and Non-Renewable Energy

4th grade

Table of Contents

1. How to Use This Resource
2. Renewable and Non-renewable Energy (780L, 980L)
3. Wind Energy (790L, 990L)
4. Coal as Energy (770L, 980L)
5. Petroleum Energy (790L, 980L)
6. Hydropower (770L, 990L)
7. Solar Power (760L, 970L)

Each passage set includes two differentiated passages on a fourth-grade level (one at the beginning of the band, one towards the end) and a question set geared towards comprehension and science mastery. The first question is differentiated to include a fill-in-the-blank diagram (lower complexity) or an open-ended diagram (higher complexity).

How to Use This Resource

This resource was created with the NGSS Science Standards in mind. It includes six differentiated passages aligned to the following standard:

4-ESS3-1: Renewable and Non-renewable Energy

Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. (Cause and Effect)

Clarification Statement: Examples of renewable energy resources could include wind energy, water behind dams, and sunlight; non-renewable energy resources are fossil fuels and fissile materials. Examples of environmental effects could include loss of habitat due to dams, loss of habitat due to surface mining, and air pollution from the burning of fossil fuels.

Assessment Boundary: None

Here are some suggestions for using these passages:

- Use as independent work after you have taught an overview of this standard. Assign the different levels based on the passage students can read and comprehend independently.
- Use as a reading center to reinforce key comprehension and science concepts at the same time!
- Use as a homework or review packet.
- Use as an intervention for students who need to revisit science concepts.

780L

Name: _____ Date: _____

Renewable and Non-renewable Energy

Surviving on Earth means depending on the planet's **natural resources**. A natural resource is any material or organism from Earth that people can use. Natural resources also play a role in **economics** and **industry**. They bring in large amounts of money. Some of the most common natural resources are air, water, soil, wildlife, forests, minerals, and **fossil fuels**. These natural resources are not evenly distributed around the globe. Some places have big supplies of a certain resource while others have very little of it.

Natural resources are divided into two categories. One category is **renewable resources**. These resources never run out or can be grown again. They are easily replenished so they can continue to be used. Resources such as air and water are renewable because they move in cycles. Trees are also renewable. They can be planted again as seeds and regrown.



Solar panels on the roof of a home.

Sunlight is another renewable resource we aren't likely to run out of during our lifetimes. All of these renewable resources provide energy and other products humans use. They are mostly environmentally friendly if properly gathered.

The second category of natural resources is **non-renewable resources**. These resources cannot be replaced once they've been used. Non-renewable resources are usually found in the ground. They include fossil fuels such as coal and oil. Fossil fuels are our main sources of energy. They are relatively cheap. These materials don't regrow, though. Making more of them isn't something that can be done within our lifetimes. They take millions of years to form. Non-renewable resources have mostly been easy to find. We could, however, face a time when they are all gone. Humans are using these resources for energy faster than they can be mined.

©Julia Bochoso



Smoke escaping from a coal-fired power plant.

Humans use both renewable and non-renewable resources as energy. Shifting to more renewable ones is something people are thinking more about lately. Non-renewable resources have limited supplies. They can cause pollution of our environment. Ways for getting and using them are already in place, however. We've become used to them. Renewable resources, on the other hand, cause little to no pollution if carefully used. They have the ability to last far longer than non-renewable resources. Renewable resources are expensive, though. They also don't have the ability to meet the needs of the global population alone at the present time. Renewable resources are also not as reliable as non-renewable ones. They depend on things such as the wind blowing or the sun shining.

The demand for natural resources is on the rise with populations increasing around the world. Science and technology focused on making the best use of natural resources for energy need to be explored to keep us powered into the future.

©Julia Bachosa

Renewable and Non-renewable Resources Questions

1. There are 2 types of natural resources. What are they?

   1. _____

   2. _____

2. Label the images below as renewable or non-renewable:







_____ _____ _____

3. What is the problem with relying on fossil fuels as our main source of energy?

_____

_____

_____

4. Why should we focus on shifting to using more renewable resources?

_____

_____

_____

©Julia Bochoso

980L

Name: _____ Date: _____

Renewable and Non-renewable Energy

Surviving on Earth means depending on the planet's **natural resources**. A natural resource is any material or organism from Earth that people can use. Natural resources also play a role in **economics** and **industry**, bringing in large amounts of money. Some of the most common natural resources are air, water, soil, wildlife, forests, minerals, and **fossil fuels**. These natural resources are not evenly distributed around the globe. Some places have big supplies of a certain resource while others have very little of it.

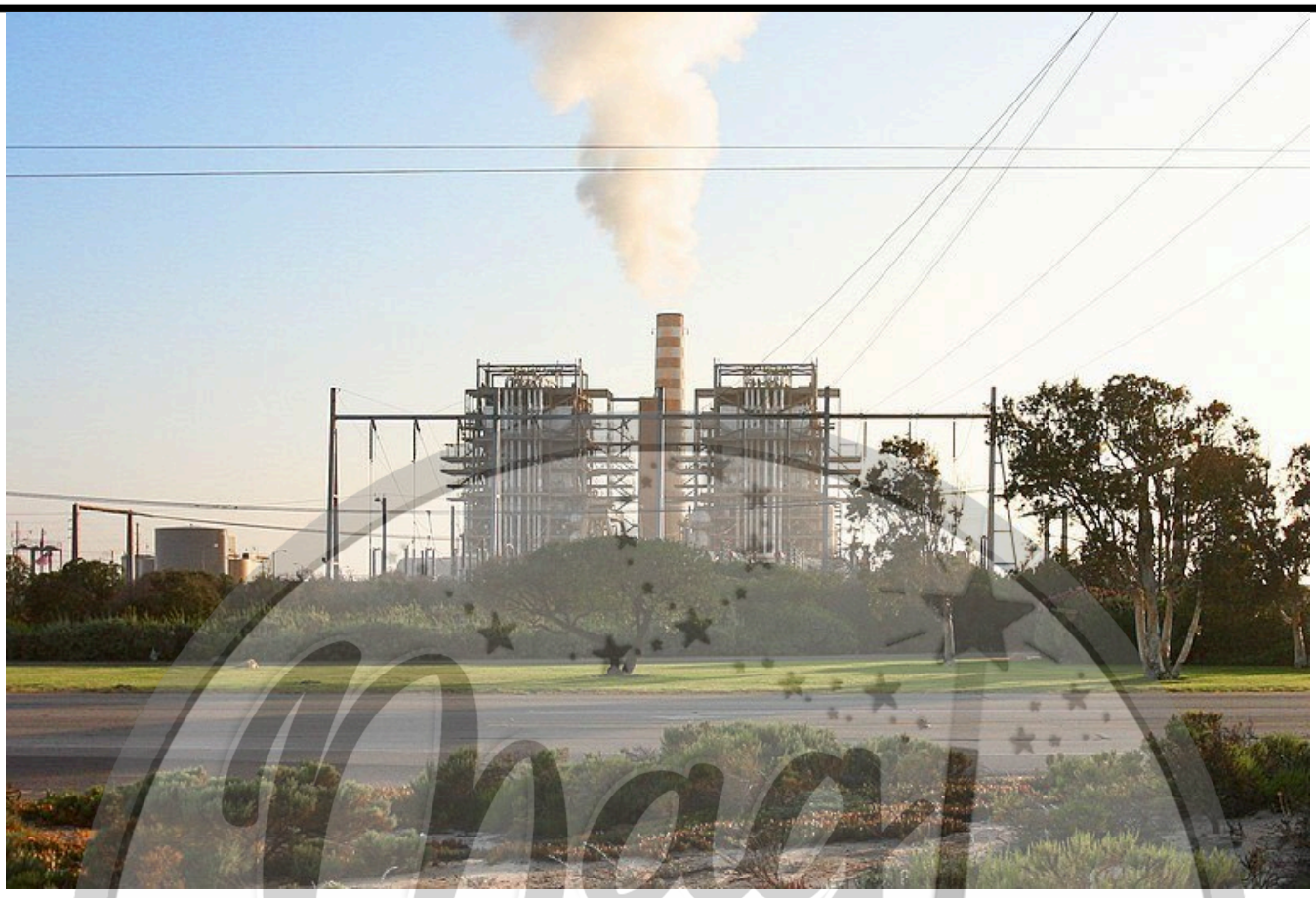
Natural resources are divided into two categories. One category is **renewable resources**. These resources never run out or can be grown again. They are easily replenished in a reasonable amount of time so they can continue to be used. Resources such as air and water are renewable because they move in cycles. Trees are also renewable because they can be planted again as seeds and regrown. Sunlight is another renewable resource we aren't likely to run out of during our lifetimes. All of these renewable resources provide energy and other products humans use and are environmentally friendly if properly gathered.



Solar panels on the roof of a home.

The second category of natural resources is **non-renewable resources**. These resources cannot be replaced once they've been used. Non-renewable resources are usually found in the ground and include fossil fuels such as coal and oil. Fossil fuels are our main sources of energy because they are relatively cheap. These materials don't regrow, though. Making more of them isn't something that can be done within our lifetimes because they take millions of years to form. Non-renewable resources have mostly been easy to find, but we could face a time when they are all gone. Humans are using these resources for energy faster than they can be mined.

©Ruby Bacheco



Smoke escaping from a coal-fired power plant.

Humans use both renewable and non-renewable resources as energy. Shifting to more renewable ones is something people are thinking more about lately. Non-renewable resources have limited supplies and cause pollution of our environment. Ways for getting and using them are already in place, however, and we've become used to them. Renewable resources, on the other hand, cause little to no pollution if carefully used. They have the ability to last far longer than non-renewable resources. Renewable resources are expensive, though. They also don't have the ability to meet the needs of the global population alone at the present time. Renewable resources are also not as reliable as non-renewable ones because they depend on things such as the wind blowing or the sun shining.

With populations increasing around the world, the demand for natural resources is on the rise. Science and technology focused on making the best use of natural resources for energy need to be explored to keep us powered into the future.

©Julia Bochoso

Renewable and Non-renewable Resources Questions

1. There are 2 types of natural resources. What are they?

   1. _____

   2. _____

2. Label the images below as renewable or non-renewable:







_____ _____ _____

3. What is the problem with relying on fossil fuels as our main source of energy?

_____

_____

_____

4. Why should we focus on shifting to using more renewable resources?

_____

_____

_____

©Julia Bochoso

770L

Name: _____ Date: _____

Coal as Energy

Coal is a natural resource. It is buried deep in the ground. It is a black or brownish-black **sedimentary rock** that forms when layers of rocks and dirt cover plant and animal remains. Pressure and heat over millions of years turn those remains into coal. People dig for coal in **mines**. They gather it to use in many ways. It is a **fossil fuel** like oil and natural gas. Coal is a **non-renewable resource**. This means there is a limited amount of coal found on Earth. Humans use coal faster than it can be replaced.



Coal mine in Wyoming

About 22% of the United States' energy comes from coal. Electricity is the main use of this resource. Many businesses, such as those that make paper and glass, use coal to run their factories. They may burn coal for heat or use coal in their products. Coal can also be changed into a liquid or gas to make **synthetic fuels**. Coal creates many jobs in areas such as mining, engineering, and geology, as well.

There are many advantages to using coal as an energy source. Coal doesn't need any special equipment for storage. It's also fairly easy to get out of the ground. This makes it cheaper than other fossil fuels. It also creates very little waste when compared to other sources of energy. Often the **by-products** of coal can be used for other things, too. Coal doesn't spoil. It can last a very long time if stored in the right conditions. Using coal for energy doesn't depend on the weather as some renewable energy sources do, such as solar and wind. Improvements in coal use have been made so coal energy is cleaner than it was in the 1970s.

©Julie Bochorso



A piece of coal that was mined in Ohio.

Coal has its disadvantages, as well. We will run out of coal someday. could happen in the nThisext 100-200 years. We need to find other sources of energy. Coal dust stirred up when mining might cause health issues such as asthma and cancer. Mining for coal is also noisy. Large machines are needed for the job. Coal mining involves digging. This means the environment is disturbed. Wildlife is damaged, water is polluted, and the landscape is destroyed. One of the biggest cons of coal use is the high carbon **emissions**. High carbon dioxide levels are responsible for **global warming**. This is a huge problem for planet Earth.

Our dependence on coal means we have to improve how we use it and what it does to our environment. The fact that there isn't a never-ending supply of coal also forces us to seek other sources of energy that are safe, reliable, and in good supply.



Coal Plant

©Julia Bochoso

Coal as Energy Questions

1. Use the chart below to fill in the advantages and disadvantages of using coal as an energy source.

Coal

Advantages	Disadvantages
Coal doesn't need special equipment for storage.	We will run out of coal someday.

2. Write a sentence from the article that supports the following claim:
"*Humans use coal faster than it can be replaced.*"

---

3. The participants in the photo are at a climate change march in England. How do you think they feel about using coal as energy? Use text evidence in your answer.



©Julia Bochoso

980L

Name: _____ Date: _____

Coal as Energy

Coal is a natural resource buried deep in the ground. It is a black or brownish-black **sedimentary rock** that forms when layers of rocks and dirt cover plant and animal remains. Pressure and heat over millions of years turn those remains into coal. People dig for coal in **mines** and gather it to use in many ways. It is a **fossil fuel** like oil and natural gas. Coal is a **non-renewable resource**, which means there is a limited amount of coal found on Earth. Humans use coal faster than it can be replaced.



Coal mine in Wyoming

About 22% of the United States' energy comes from coal. Electricity is the main use of this resource. Many businesses such as those that make paper and glass use coal to run their factories. They may burn coal for heat or use coal in their products. Coal can also be changed into a liquid or gas to make **synthetic fuels**. Coal creates many jobs in areas such as mining, engineering, and geology, as well.

There are many advantages to using coal as an energy source. Coal doesn't need any special equipment for storage, and it's fairly easy to get out of the ground. This makes it cheaper than other fossil fuels. It also creates very little waste when compared to other sources of energy. Often the **by-products** of coal can be used for other things, too. Coal doesn't spoil and can last a very long time if stored in the right conditions. Using coal for energy doesn't depend on the weather as some renewable energy sources do such as solar and wind. Improvements in coal use have been made so coal energy is cleaner than it was in the 1970s.

©Julie Bachose



A piece of coal that was mined in Ohio.

Coal has its disadvantages, as well. We will run out of coal someday because it is a non-renewable resource. This could happen in the next 100-200 years so we need to find other sources of energy. Coal dust stirred up when mining might cause health issues such as asthma and cancer. Mining for coal is also noisy with the large machines that are needed for the job. Coal mining involves digging so the environment is disturbed, often damaging wildlife, polluting water, and destroying the landscape. One of the biggest cons of coal use is the high carbon **emissions**. High carbon dioxide levels are responsible for **global warming**, a huge problem for planet Earth.

Our dependence on coal means we have to improve how we use it and what it does to our environment. The fact that there isn't a neverending supply of coal also forces us to seek other sources of energy that are safe, reliable, and in good supply.



Coal Plant

©Julia Bochoso

Coal as Energy Questions

1. Use the chart below to fill in the advantages and disadvantages of using coal as an energy source.

Coal

Advantages	Disadvantages

2. Write a sentence from the article that supports the following claim:
"*Humans use coal faster than it can be replaced.*"

---

3. The participants in the photo are at a climate change march in England. How do you think they feel about using coal as energy? Use text evidence in your answer.



©Julia Bochoso

Terms of Use

How Can I Use This Resource?

Thank you for trusting MagiCore. Our mission is to create resources that support teachers and promote student success. Please note that this resource is licensed for use by a single teacher in a classroom setting. If you need to use this resource with more than one teacher and/or across multiple classrooms, additional licenses are available at a discount. You can purchase additional licenses by visiting your TPT "Purchases" page and then selecting "Download Additional Licenses" or by contacting me at julie@magicorelearning.com.



Good to Go

- Use this resource personally or with your own children.
- Use this resource in your own classroom with your students.
- Provide this resource to your students to use at your instruction.
- Print and/or copy for use in your own classroom.
- Provide printed pages to a substitute teacher with the sole purpose of instructing your students.
- Share with your students via a secure document portal or electronic learning platform that requires individual user verification and limits access to only the students in your own classroom (e.g. Google Classroom).
- Review this resource with others with the sole purpose of recommending it to others for purchase, provided you share one of the links below:

https://magicorelearning.com/

https://www.teacherspayteachers.com/Store/Magicore



Not O.K.

- Share with others to use personally.
- Share with others to use in another classroom.
- Print or copy any page(s) and distribute them to other teachers or other classrooms.
- Publish or host online in a manner where any of the material is accessible to anyone who is not a student in your own classroom., including but not limited to personal, classroom, or district websites that are accessible to the general public.
- Use this resource commercially (e.g. Outschool).
- Publish, sell, or otherwise distribute this product to anyone in manner inconsistent with these terms of use.

© Copyright 2022. All rights reserved. The unlicensed reproduction or distribution of this product is strictly prohibited. Permission is granted to the original purchaser or licensee to make copies to use with students and/or to assign to students digitally providing it is only available to students assigned directly to the purchaser. Placing this product in any manner that makes it accessible to the general public is strictly forbidden. Commercial use, including but not limited to online or in person classes, is prohibited. Contact julie@magicorelearning.com for commercial licensing information. Sharing without permission or hosting online in a public manner is a violation of the Digital Millennium Copyright Act (DMCA). These terms may be updated at any time. You can see the most up to date Terms of Use at https://magicorelearning.com/terms-of-use.

Let's Connect!

www.magicorelearning.com

https://www.teacherspayteachers.com/Store/magicore

https://www.facebook.com/MagiCoreLearning/

https://www.instagram.com/magicorelearning/

https://www.pinterest.com/cckingdom/pins/

Julie@magicorelearning.com

Looking for more?





Membership Opportunity!

If you love these resources and want access to more, check out my membership opportunity with the MagiCore Club.

Join my MagiCore Club waitlist!

MagiCore Club opens its membership doors twice a year to offer teachers all the resources you love, with a membership discount. You can also find support through my custom learning plan.

Find out more https://magicorelearning.com/membership



CREDITS

Rennett Stowe from USA, CC BY 2.0 <https://creativecommons.org/licenses/by/2.0>, via Wikimedia Commons

Installation of solar PV panels - panels in place by David Hawgood, CC BY-SA 2.0 <https://creativecommons.org/licenses/by-sa/2.0>, via Wikimedia Commons

Greg Goebel from Loveland CO, USA, CC BY-SA 2.0 <https://creativecommons.org/licenses/by-sa/2.0>, via Wikimedia Commons

Flcelloguy, CC BY-SA 3.0 <http://creativecommons.org/licenses/by-sa/3.0/>, via Wikimedia Commons

Kate Headley, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons

Marty Aligata, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons

Alisdare Hickson from Canterbury, United Kingdom, CC BY-SA 2.0 <https://creativecommons.org/licenses/by-sa/2.0>, via Wikimedia Commons