

Steve Trash Science Video & Question and Activity sheet

Renewable VS Nonrenewable



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RENEWABLE VS. NONRENEWABLE STEVE TRASH SCIENCE - VIDEO Grade 1-5

Thank you for downloading this resource!

Renewable vs. Nonrenewable - STEVE TRASH SCIENCE - VIDEO
is approx. 12:47 long.

It's curriculum based, fun, and even a little bit funny.

It's appropriate for grades 1-5.

Grade specific questions or activities (grades 1-5) for the video are in this pdf. The **key (with answers)** is included in this pdf as well.

Feel free to download the video and save to your computer and use anytime you want. Or use the link to simply view online when you want your kids to watch. No problem either way. Also... feel free to share the video with others.

You can download the video here for FREE...

<https://vimeo.com/240509572>

I hope your students love this video and develop a passion for the environment and for environmental science.

Steve Trash - Rockin' Eco Hero

www.stevetrash.com

Name: _____ Date: _____

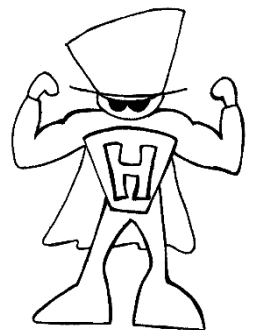
GRADE 1 ACTIVITY
Renewable vs. Nonrenewable - STEVE TRASH SCIENCE - VIDEO

Complete the table to show the natural resources that are renewable and nonrenewable.

Cut out the natural resources below and paste them in the correct column.

| Renewable | Nonrenewable |
|-----------|--------------|
| | |

| | | | |
|---------|----------------|--------------|-------|
| Air | Minerals | Oil | Water |
| Animals | Natural Gas | Plants | |
| Coal | Nuclear Energy | Sun's Energy | |



Challenge Question:

Can you draw a picture by each natural resource to explain it?

ANSWER KEY

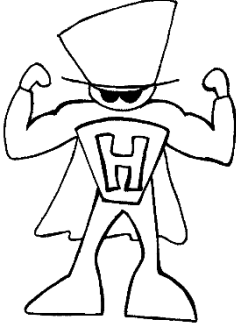
GRADE 1 ACTIVITY

Renewable vs. Nonrenewable - STEVE TRASH SCIENCE - VIDEO

**** Scissors and Glue Needed for Each Student.****

Complete the table to show the natural resources that are renewable and nonrenewable. Cut out the natural resources below and paste them in the correct column.

| Renewable | Nonrenewable |
|-----------|----------------|
| Plants | Coal |
| Animals | Minerals |
| Water | Natural Gas |
| Air | Nuclear Energy |
| | Oil |
| | Sun's Energy |

| Air | Minerals | Oil | Water |
|---------|----------------|--------------|---|
| Animals | Natural Gas | Plants |  |
| Coal | Nuclear Energy | Sun's Energy | |

Challenge Question:

Can you draw a picture by each natural resource to explain it?

Student pictures will vary. These are a few examples: Air–wisps or swirls, Animals–cat, Coal – black circle, Minerals–circle with multiple earth tone dots, Natural gas–wavy lines moving up, Nuclear energy–cooling tower, Oil–droplet, Plants–tree, Sun's energy–sunshine and Water–blue droplet

Name: _____ Date: _____

GRADE 2 ACTIVITY

Renewable vs. Nonrenewable - STEVE TRASH SCIENCE - VIDEO

Identify alternative forms of energy.

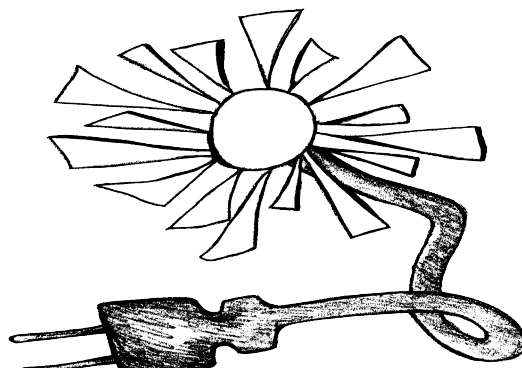
- Create a mobile showing the alternative forms of energy with facts about the energy conversion below it.
- Start with the type of energy.
- Then put where the energy comes from second and how to harness the energy last.

The items are not in order, you will need to organize them into groups.

| | | | |
|-------------------|-----------------------|--------------|------------------|
| Sun | Wind | Geothermal | Biofuels/Biomass |
| Energy from Waste | Sunlight | Core Heat | Moving Air |
| Plants | Moving Water | Wind Turbine | Solar Panel |
| Hydroelectric | From Inside the Earth | Dams | |

Challenge Question:

Color the picture below. Then use the back of your paper to brainstorm a list of ideas showing how to use alternative energy sources at your school or home.



ANSWER KEY

GRADE 2 ACTIVITY

Renewable v. Nonrenewable - STEVE TRASH SCIENCE - VIDEO

****A Hanger, Scissors and String Needed for Each Student.****

Identify alternative forms of energy.

- Create a mobile showing the alternative forms of energy with facts about the energy conversion below it.
- Start with the type of energy.
- Then put where the energy comes from second and how to harness the energy last.

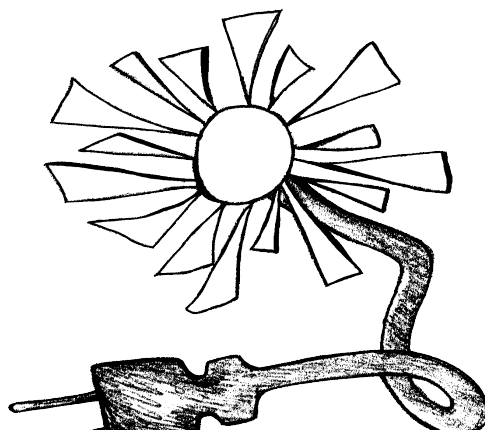
The items are not in order, you will need to organize them into groups.

| | | | | |
|-------------|--------------|-----------------------|-------------------|---------------|
| Sun | Wind | Geothermal | Biofuels/Biomass | Hydroelectric |
| Sunlight | Moving Air | Core Heat | Plants | Moving Water |
| Solar Panel | Wind Turbine | From Inside the Earth | Energy from Waste | Dams |

Challenge Question:

Color the picture below. Then use the back of your paper to brainstorm a list of ideas showing how to use alternative energy sources at your school or home.

Student answers will vary. They may just include ideas from the video like wind turbines on your land, solar panels to power your house or school, geothermal heating of home or school, etc. Let your students research and explore. They will come up with more ideas!



Name: _____ Date: _____

GRADE 3 QUESTIONS
Renewable vs. Nonrenewable - STEVE TRASH SCIENCE - VIDEO

Circle all the natural resources in the list below.

| | | | | |
|--------|---------|-----------|----------|-------|
| air | animals | batteries | cars | light |
| plants | stone | soil | minerals | money |

Read the statement and decide if it is a fact or an opinion. Write (F) or (O) in the blank.

- _____ 1. Natural resources are divided into two groups renewable and nonrenewable.
- _____ 2. There are so many parts to the water cycle so it is the best form of renewable energy.
- _____ 3. The oxygen cycle replenishes the oxygen supply through a combination of plant and animal processes.
- _____ 4. Fossil fuels are valuable and powerful sources of energy.
- _____ 5. Even though the Sun it nonrenewable, humans will not be able to use up its energy because of its enormous size.

Challenge Question: *Be resourceful use the back of your paper.*

Create a table showing the examples of nonrenewable and renewable. Knowing that we need to use nonrenewable sources at times, research a list of ways to use them wisely.

ANSWER KEY

GRADE 3 QUESTIONS

Renewable vs Nonrenewable - STEVE TRASH SCIENCE - VIDEO

Circle all the natural resources in the list below.

| | | | | |
|--------|---------|-----------|----------|-------|
| air | animals | batteries | cars | light |
| plants | stone | soil | minerals | money |

Read the statement and decide if it is a fact or an opinion. Write (F) or (O) in the blank.

- F 1. Natural resources are divided into two groups renewable and nonrenewable.
- O 2. There are so many parts to the water cycle so it is the best form of renewable energy.
- F 3. The oxygen cycle replenishes the oxygen supply through a combination of plant and animal processes.
- F 4. Fossil fuels are valuable and powerful sources of energy.
- F 5. Even though the Sun it nonrenewable, humans will not be able to use up its energy because of its enormous size.

Challenge Question: *Be resourceful use the back of your paper.*

Create a table showing the examples of nonrenewable and renewable.

| Renewable | Nonrenewable |
|-----------------------------|--|
| Plants, Animals, Water, Air | Coal, Nuclear Energy, Minerals, Natural Gas Oil, Sun's Energy |

Have your students think about the three R's: Reduce, Reuse and Recycle to come up with their ideas.

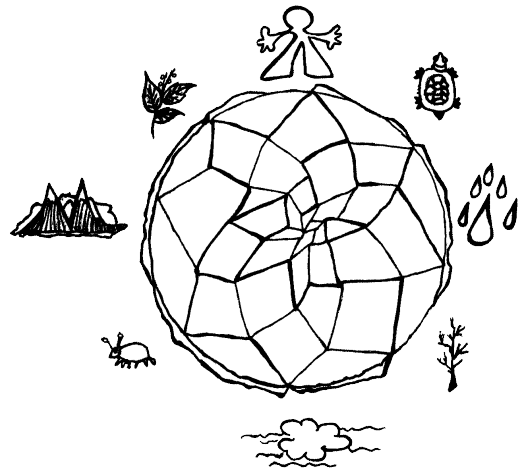
Name: _____ Date: _____

GRADE 4 QUESTIONS

Renewable vs. Nonrenewable - STEVE TRASH SCIENCE - VIDEO

Identify the resource as nonrenewable or renewable.
Put a letter (N) or (R) in the blank.

- | | |
|----------------------|------------------|
| _____ 1. air | _____ 6. nuclear |
| _____ 2. animals | _____ 7. oil |
| _____ 3. coal | _____ 8. plants |
| _____ 4. minerals | _____ 9. Sun |
| _____ 5. natural gas | _____ 10. water |



11. List the fossil fuels that we harness energy from by burning them.

12. Describe the energy conversion when wind turbines are used.

13. Explain why the Sun's energy will not be used up in a human lifespan.

Challenge Question: *Be resourceful use the back of your paper.*
Create a collage using pictures of the different types of alternative energy. Write a caption to describe each picture in your collage.

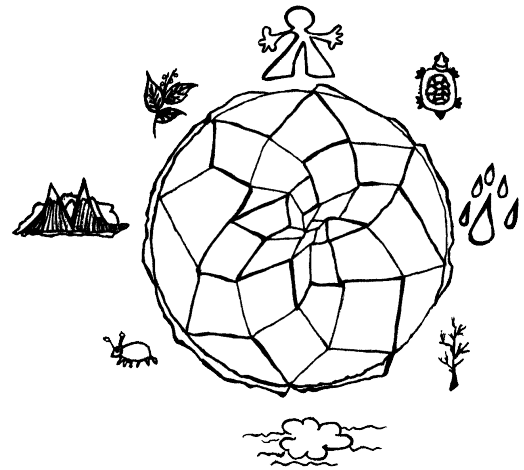
ANSWER KEY

GRADE 4 QUESTIONS

Renewable vs. Nonrenewable - STEVE TRASH SCIENCE - VIDEO

Identify the resource as nonrenewable or renewable.
Put a letter (N) or (R) in the blank.

- | | |
|-----------------------------|-------------------------|
| <u> R </u> 1. air | <u> N </u> 6. nuclear |
| <u> R </u> 2. animals | <u> N </u> 7. oil |
| <u> N </u> 3. coal | <u> R </u> 8. plants |
| <u> N </u> 4. minerals | <u> N </u> 9. Sun |
| <u> N </u> 5. natural gas | <u> R </u> 10. water |



11. List the fossil fuels that we harness energy from by burning them.

coal, oil and natural gas

12. Describe the energy conversion when wind turbines are used.

mechanical energy to electrical energy

13. Explain why the Sun's energy will not be used up in a human lifespan.

The enormous size of the Sun.

Challenge Question: *Be resourceful use the back of your paper.*
Create a collage using pictures of the different types of alternative energy. Write a caption to describe each picture in your collage.

Have your students think about, take pictures or research copyright free images of solar energy, wind energy, geothermal energy, hydroelectric energy, tidal energy, biofuel and biomass. A sample caption might look like: Solar energy uses solar panels to help power homes.

Name: _____ Date: _____

GRADE 5 VIEWING GUIDE

Renewable vs. Nonrenewable- STEVE TRASH SCIENCE - VIDEO

As you watch the video, complete the following viewing guide.

1. Natural resources are things that people use that come from the _____.
2. Two types of natural resources are:
 - A. Nonrenewable = fixed amount (can be used up)
 - B. _____ = replenished by nature in a short time or human lifetime
3. To remain renewable the resource must not be used _____ than it is replaced.
4. Renewable Resources in Cycles:
 - A. _____ cycle is an example how precipitation, condensation, evaporation lead to renewal.
 - B. Wind energy comes from solar heating on the _____ surface by the sun.
 - C. _____ cycles like the oxygen cycle, nitrogen (Kreb's), carbon and rock cycle.
 - D. _____ energy = energy from within the Earth
5. Fossil fuels are natural resources in which the energy is released by _____ them. They are _____ natural resources.
6. The sun is a _____ natural resource. It is just huge and will take a long time to use all its energy.
7. Alternative Energy Sources:
 - A. Sun = solar energy converted to electric energy
 - B. _____ = moving air
 - C. Hydroelectric/Tidal = moving water
 - D. Geothermal = heat from inside the _____
 - E. Biofuels/Biomass = from plant or animal waste

Challenge Question: *Be resourceful use the back of your paper.* Create a digital poster on the ways you might use renewable technology in the future. Focusing mainly on hydrogen energy cells, biofuel and/or electricity. How might your community, school or you benefit from these new technologies?

ANSWER KEY

GRADE 5 VIEWING GUIDE

Renewable vs. Nonrenewable- STEVE TRASH SCIENCE - VIDEO

As you watch the video, complete the following viewing guide.

1. Natural resources are things that people use that come from the environment.
2. Two types of natural resources are:
 - A. Nonrenewable = fixed amount (can be used up)
 - B. Renewable = replenished by nature in a short time or human lifetime
3. To remain renewable the resource must not be used faster than it is replaced.
4. Renewable Resources in Cycles:
 - E. Water cycle is an example how precipitation, condensation, evaporation lead to renewal.
 - F. Wind energy comes from solar heating on the Earth's surface by the sun.
 - G. Natural cycles like the oxygen cycle, nitrogen (Kreb's), carbon and rock cycle.
 - H. Geothermal energy = energy from within the Earth
5. Fossil fuels are natural resources in which the energy is released by burning them. They are nonrenewable natural resources.
6. The sun is a nonrenewable natural resource. It is just huge and will take a long time to use all its energy.
7. Alternative Energy Sources:
 - F. Sun = solar energy converted to electric energy
 - G. Wind = moving air
 - H. Hydroelectric/Tidal = moving water
 - I. Geothermal = heat from inside the Earth
 - J. Biofuels/Biomass = from plant or animal waste

Challenge Question: Create a digital poster on the ways you might use renewable technology in the future. Focusing mainly on hydrogen energy cells, biofuel and/or electricity. How might your community, school or you benefit from these new technologies?

Student projects will vary. One example might be how biofuel or electric school buses would save school systems money and reduce pollution in their communities.