

Name _____



Tapping into the Earth's Treasures

Welcome to the world beneath our feet, where ancient treasures lie hidden in the Earth's depths. In this adventure, we'll uncover some examples of non-renewable energy sources – powerful fuels that have fueled human progress for centuries but come with a limited supply.

Let's start with coal, often called "black gold." Coal is a fossil fuel formed from the remains of ancient plants that lived millions of years ago. Over time, pressure and heat transformed these plants into coal deposits deep underground. We mine coal from the Earth's crust and burn it to generate electricity, heat buildings, and power industrial processes. Coal has been a vital energy source for centuries, but it's not infinite – once we've mined it all, there won't be any left to use.

Next, there's oil, also known as petroleum. Imagine vast underground reservoirs filled with liquid gold – that's oil! Like coal, oil is a fossil fuel formed from the remains of ancient marine plants and animals. We extract oil from the Earth's crust using drilling rigs and pump it to the surface. Oil is used to make gasoline for cars, diesel for trucks, jet fuel for airplanes, and countless other products like plastics, cosmetics, and lubricants. But like coal, oil is finite – one day, we'll run out of oil reserves to tap into.

Now, let's talk about natural gas, a clean-burning fuel found deep beneath the Earth's surface. Natural gas is composed primarily of methane and is often found in association with oil deposits. We extract natural gas through drilling and use it for heating homes, cooking food, and generating electricity. While natural gas burns cleaner than coal and oil, it's still a non-renewable resource with a limited supply.

Lastly, there's uranium, the fuel for nuclear power plants. Uranium is a radioactive metal mined from the Earth's crust. In nuclear reactors, uranium undergoes a process called nuclear fission, where its atoms split apart, releasing immense amounts of heat energy. This heat is used to generate steam, which turns turbines to produce electricity. While nuclear energy doesn't produce greenhouse gases like coal or oil, it comes with its own set of challenges, including the disposal of radioactive waste and the risk of nuclear accidents.

As we delve into the world of non-renewable energy sources, it's essential to understand their role in powering our world and the importance of finding sustainable alternatives for the future.

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Reading Comprehension Questions

1. What is coal primarily used for?

- A) Cooking food
- B) Making plastics
- C) Generating electricity
- D) Fueling airplanes

2. How is oil extracted from the Earth's crust?

- A) By using wind turbines
- B) By drilling rigs
- C) By capturing sunlight
- D) By burning wood

3. What is natural gas primarily used for?

- A) Heating homes and cooking food
- B) Generating wind energy
- C) Making jewelry
- D) Fueling cars

4. What is uranium used for?

- A) Making plastics
- B) Fueling nuclear power plants
- C) Heating buildings
- D) Generating solar energy

5. Why are non-renewable energy sources considered finite?

- A) Because they are endless
- B) Because they are harmful to the environment
- C) Because they can be easily replaced
- D) Because they have a limited supply