



Coal mines provide jobs across the United States.

Fossil fuels form from the remains of ancient plants and animals. They form deep underground over millions of years. Coal, oil, and natural gas are the three most common fossil fuels. Each is now mined, transported, and burned for energy in places around the world.

What are the advantages and disadvantages of using fossil fuels for energy? Ask different experts to answer this question, and they might list many of the same advantages and disadvantages. But they might evaluate their lists different ways.

Many scientists think that we should try to reduce our use of fossil fuels as quickly as possible. Other people argue for just the opposite goal. They want the United States to increase its production of fossil fuels so that we can reduce our need to import them.

In the rest of this article, you will read five opinions about fossil fuels from five different people. As you read each opinion, try to predict who wrote it. Also look for facts about the advantages and disadvantages of using fossil fuels for energy. When you

find one of these facts, enter it into the table at the end of the article.

Writer 1

Coal, oil, and natural gas are the most useful fuels available today. We should continue mining them and using them to generate electricity and power vehicles.

The vast majority of energy used in the United States comes from fossil fuels. They are inexpensive, easy to transport, and are rich in energy. They also are available in our own country. We still mine coal in Ohio, Pennsylvania, Colorado, and other states. We get oil and natural gas from the Gulf of Mexico and Arctic Ocean.

You might have heard rumors that we are running out of fossil fuels. But huge supplies of fossil fuels remain untapped. New technology allows us to mine them effectively and without damaging the environment. We could reduce our need to import fossil fuels from other countries. We could provide good jobs for Americans, too.

In recent years, people have paid much attention to alternative energy resources. Yet none of these resources has proven able to meet our energy needs. Solar, wind, geothermal, and tidal energy continue to provide a small amount of the of U.S. energy needs, even after billions of dollars of investments. We should not rely on them for the future.

Writer 2

Fossil fuels are nonrenewable resources. This means that the world's supply of fossil fuels decreases every day. It will never increase. Unfortunately, the world is using fossil fuels at an increasing rate. New coal-fired power plants are opening around the world, especially in China. We keep building and driving gasoline-powered cars.

At this rate, humans will someday awake to discover that fossil fuels are no longer a reasonable choice for providing energy. What will replace them? The sooner we begin improving alternative energy resources, the better off we will be.

Writer 3

Every few years, terrible oil spills seem to be in the news. In 1989, the Exxon Valdez ran aground off the coast of Alaska. The oil it carried spread rapidly. It damaged the shoreline and wildlife for thousands of miles. In 2010, an explosion on an oil rig spilled huge amounts of oil into the Gulf of Mexico. We are still evaluating the damage that this disaster caused.

Other forms of oil pollution receive less attention but still cause problems. Old, rusty tanks can leak oil into the ground and water supplies. Careless people pour used motor oil down the drain or into sewers. And have you seen the air over busy cities, especially in the southwestern United States and cities in China? Sulfur compounds released from burning gasoline cause a dirty haze, called smog. Smog is ugly and a health hazard.

Writer 4

Climate scientists point to evidence gathered around the world that Earth's climate is changing. Cities are recording unusually warm summers and winters. Ice caps are melting at both poles. Hurricanes and other severe storms seem to be striking more frequently, and in places where they haven't been common.

To explain these events, many scientists point to increasing levels of carbon dioxide in Earth's atmosphere. Carbon dioxide is a greenhouse gas, meaning it traps heat. All animals, including humans, release carbon dioxide as a waste gas. Burning fossil fuels releases carbon dioxide, too. Scientists think that our use of fossil fuels is causing the carbon dioxide levels to rise, which in turn is causing the climate to change.

Climate change is a serious problem. The best way to solve it is to reduce our use of all fossil fuels, especially coal. We have many other ways to produce electricity instead of by burning coal at power plants.

Writer 5

There are many reasons for decreasing our use of fossil fuels. However, neither the United States nor the rest of the world will stop using fossil fuels anytime soon. Too much of our livelihood depends on them. We can and should take steps to prepare for

the day when fossil fuels must be replaced. Until then, we should use these fuels as wisely as we can.

Of the three main fossil fuels, natural gas may have the brightest future. It burns very cleanly, meaning it adds few if any pollutants to the air. It also provides more energy per pound than other fossil fuels.

People fault coal for releasing pollutants into the air. With “clean coal” technology, however, these pollutants can be trapped. There also are ideas for trapping the carbon dioxide that burning coal releases. It could be turned into baking soda and this would not be harmful to the environment.

Advantages and Disadvantages of Fossil Fuels

	Advantages	Disadvantages
Coal		
Oil		
Natural Gas		

QUESTIONS

1. Who could the writers be? Match them to these choices, and explain your reasoning.
 - A. A climate scientist
 - B. The mayor of a small town near a coal mine.
 - C. An official at the U.S. Department of Energy
 - D. A marine biologist
 - E. The owner of a company that makes solar panels.
2. With which writers do you agree? With which do you disagree? Explain your opinions and ideas.

RESEARCH PROJECT

Research the advantages and disadvantages of using coal as an energy source. Be sure to read a variety of opinions about coal, including those in favor and against the increased use of coal in the future. Present your findings in a written or oral report.