

Rapid Climate Change Research Packet 2

Topic: How Are People Affecting Our Climate? Modern Human Communities Use Machines

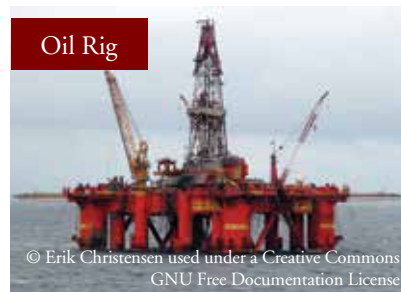
Directions: Read the following as a group. Create a newscast to explain what fossil fuels are: how they are made in the earth, how we extract them, and how we use them. Include a “special report” using information from the *Special Report: Our Living Home* section in your newscast.

There has been a big change in the way people in many human communities live and work in their natural habitats over the past few hundred years. This has had a huge impact on our global climate.

Over the past 200 years or so, people have invented **machines** of all different kinds: cars, trucks, airplanes and rockets; power plants that generate electricity for lights and refrigerators and other appliances; boilers and air conditioners to heat and cool buildings all year around; and machines for farming, repairing roads and building skyscrapers.

Most of the machines we use are fueled by **burning oil, natural gas or coal**. These fuels are called **fossil fuels** because they are found deep in the earth, like the dinosaur fossils from the same geologic period. They come from the carbon (an important element in all living beings) in decayed plants and animals that has been changed to **oil, coal, and natural gas** by heat and pressure deep in the earth's crust over tens of millions of years.

We get the coal, oil and gas from deep within the earth by **drilling, fracking, mining, and processing tar sands**. These are called “extractive technologies,” which give us access to the hard-to-reach places where oil, coal or natural gas can be found.



Special Report:

Our Living Home: Local Communities Protest Gas and Oil Pipelines

The local communities where oil, coal, and gas extraction occur often experience very serious habitat destruction and pollution of their soil, water, and air. As fossil fuel energy companies search for oil and gas in more hard-to-reach places, they are also building a growing network of pipelines to carry oil and fracked natural gas across large parts of the country to coastal ports where they can be used in the United States or shipped to other countries. This process puts many more communities along the pipeline routes at risk of pollution, particularly to their fresh water supplies. People who live where these pipelines are being planned or already built are working to protect their natural resources and to support finding new, safer ways to get energy.