

Natural gas activity card



Grades K–3

This electrical safety activity card is intended to be used along with our age-appropriate booklets, teacher's guides and other resources located at e-smartonline.net/xcelenergy.



Safety quiz

Test your students' natural gas safety IQ. Download and print our age-appropriate safety test online at e-smartonline.net/xcelenergy. It quizzes students on safety issues around how natural gas gets to our homes, its many uses, how to identify a leak and what to do if you smell gas. Discuss and compare their responses to the correct answers. Then, learn more about these topics by ordering our booklets, reading them with your class and performing the activities.

Vocabulary

Put the following words on the board and discuss what they mean. Go further with your class by discovering more about these topics online at e-smartonline.net/xcelenergy.

- Energy
- Furnace
- Natural gas
- Fossil fuel
- Pressure
- Pollution
- Hazard
- Flammable

Fun Fact

In 1821, the first natural gas well was dug in New York. It was only 27 feet deep. Some of today's wells are 30,000 feet deep.

Q&A

Q: How is natural gas made?

A: Natural gas is created from the decayed remains of plants and animals that died millions of years ago. These remains were subject to the pressure, shifting and heat within the earth's rock layers.

Experiment

Gas is formed by a chemical reaction that occurs below the earth's surface. In this experiment, we'll create gas (carbon dioxide) by putting together chemicals that react to each other. This gas is not the same type of gas that is used to heat homes, but the experiment will show students how gas is created.

MATERIALS

- Baking soda
- Vinegar
 - Plastic soda bottle
- Balloon
- Two funnels

DIRECTIONS

1. Using one of the funnels, pour vinegar into the soda bottle. Fill about one-third of the bottle.
2. With the other funnel, pour some baking soda into the balloon. Fill the balloon up about halfway.
3. Attach the balloon to the top of the bottle, making sure you don't spill any baking soda into the bottle.

4. Lift up the balloon so the baking soda drops into the vinegar.
5. The mixture will bubble up and gas will form, blowing up the balloon.

The acid in vinegar reacts with the baking soda, producing a chemical reaction that creates gas. When the gas expands out of the bottle it blows up the balloon.

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