

The Heat Is On

Polar bears reign as the kings of the Arctic. Yet there is trouble underfoot for those snow-colored creatures and other wildlife as their icy habitat slips away.

The Arctic is the icy, cold region located around the North Pole. In November 2004, scientists from eight countries released a report saying that the Arctic is warming twice as fast as the rest of Earth.

In the report, scientists predict that at least half of the summer sea ice in the Arctic will melt by the end of this century. The scientists blame **global warming** for the Arctic thaw. That is the gradual rise in Earth's temperature.



Leigh Haeger

The Arctic Circle.

Too Hot to Handle

Arctic ice is melting at an alarming rate. Winter temperatures in the Arctic have risen between 4 and 7 degrees Fahrenheit. During the past 30 years, polar bears have lost more than 386,000 square miles of ice--an area larger than the states of Texas and Arizona combined.

More than 20,000 polar bears live in the Arctic regions. Disappearing sea ice threatens polar bears and other cold-weather animals. Polar bears use the ice as a bridge to hunt seals, their primary source of food.

As the sea ice disappears, the mighty **predators**, or hunters, catch fewer seals and risk starvation. Seals also depend on the ice to rest and give birth. Scientists fear that polar bears, seals, and other animals that rely on the ice could be wiped out by the end of the century if the warm-up continues.



U.S. Fish and Wildlife Service

A polar bear and her cubs.

Earth's Air Conditioner

Some of the 4 million people who live in the Arctic have also found themselves on shaky ground. As the frozen land thaws, buildings and roads have weakened.

Inuits (IH-nyoo-wets), a group of native people in the region, fish and hunt Arctic animals, including polar bears. They depend on those animals as their main source of food. Inuit hunters are also falling through thinning ice.

Rising sea levels have forced some people in the Arctic to move their coastal villages inland. The report warns that melting ice could cause sea levels to continue to rise--up to 3 feet by the end of this century. Towns and cities along coastlines around the world could flood as a result.

The warm-up also affects other parts of the planet. Arctic ice and snow reflect heat from the sun into space. Without the ice and snow, the planet would be much warmer. "The polar regions are essentially the Earth's air conditioner," said scientist Michael McCracken.

Fossil Fuels' Fault

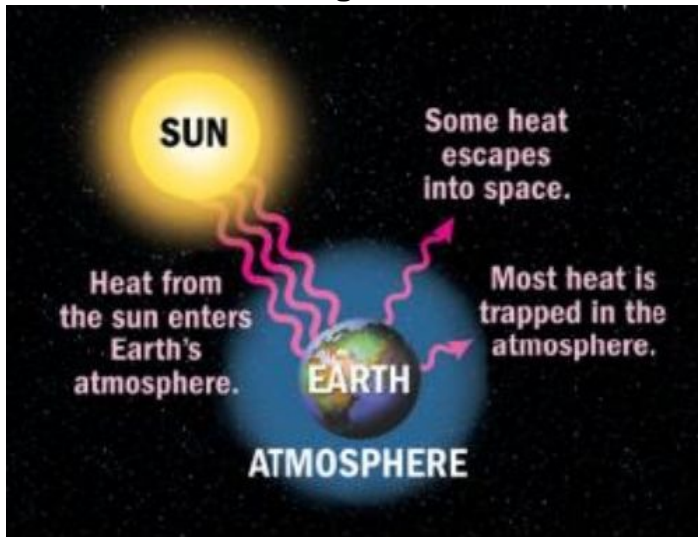
Who cranked up the thermostat on the Arctic? Scientists say human activity is to blame for global warming. People use **fossil fuels**, such as coal, oil, and natural gas, to power cars, heat homes, and create electricity.

Fossil fuels come from the remains of plants and animals that lived millions of years ago. Burning those fuels gives off gases that trap heat from the sun and add to the overheating of

the Earth.

To protect life in the Arctic, scientists say people need to limit their use of fossil fuels. "Climate change is not just about the future," said scientist Pal Prestud, who worked on the report. "It is happening now."

How Global Warming Works



Leigh Haeger

The burning of fossil fuels releases carbon dioxide and other gases into the air. Those gases collect in a layer and trap heat from the sun. The layer of gases is like the windows in a greenhouse. The process is called the **greenhouse effect**. Too much of those gases in the air causes temperatures to rise. That is known as global warming.

Name: _____ Date: _____

1. The author wrote this passage to

- A. suggest that polar bears and seals be added to the endangered species list.
- B. inform the reader about global warming.
- C. encourage the reader to visit the arctic.
- D. tell the reader things that they can do to stop global warming.

2. The author included a diagram at the end of the passage to show

- A. the relationship between the earth and the sun.
- B. how the Earth's temperature is rising.
- C. the different kinds of gases that make up the Earth's atmosphere.
- D. that global warming does not affect the Earth.

3. The Earth's temperature is rising, because

- A. there is less arctic ice to cool the Earth.
- B. the sun's rays cannot escape the polluted atmosphere.
- C. people use a lot of fossil fuels that give off gases that are polluting the atmosphere.
- D. all of the above.

4. The author includes a section on Inuits in this passage, because they

- A. are greatly affected by global warming.
- B. believe that global warming is a myth.
- C. are hoping for some warmer weather in the region where they live.
- D. are major contributors of global warming.

5. How could your life change if global warming continues as scientists think it will?