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Space Weather

Space weather refers to the changing conditions of the sun and space that can affect the technology we use on Earth. It can affect satellites – which control phones, Internet and TV. And it can affect the electric grid, leading to blackouts. Sudden bursts of elements from the sun's atmosphere, along with solar flares, cause space weather here on Earth.

Am I at risk?

Northern territories are at greater risk than areas farther south. Power outages due to space weather are very rare, but they have big effects.

Did you know?

Just like the Earth, the Sun has seasons. They occur in 11-year cycles.

FACT CHECK

1. **True or False?** The sun is the main source of space weather.
2. **True or False?** A solar flare can cause your toilet to stop working.
3. **True or False?** Space weather can be predicted.

ANSWERS

(1) True. Sudden bursts of plasma, magnetic fields, radiation (or solar flares) from the sun cause space weather effects here on Earth.

(2) True! Solar flares send radiation and geomagnetic storms that can impact or interrupt power grids here on Earth. This in turn can impact your toilet, as a water pump requires energy.

(3) True. NASA (National Aeronautics and Space Administration) and NOAA (National Oceanic and Atmospheric Administration) monitor and detect space weather.

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For more facts and info on space weather visit
http://www.ready.gov/kids/know-the-facts/space-weather
http://www.noaawatch.gov/themes/space.php

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Be Prepared

BEFORE

- ✔ Build an emergency kit.
- ✔ Make a family communications plan.

DURING

- ✔ Use as little electricity as possible so power companies don't have to impose a blackout. How? Shut the TV, don't turn on lights unless you have to, and turn off the computer.
- ✔ Don't use the telephone unless you have to.

AFTER

- ✔ If your home lost power, don't eat any food that was in the refrigerator. Food could have spoiled and will make you sick.

WORDS TO KNOW

Electric Grid The network that gets electricity from the power company to the consumer. It consists of power stations, transmission lines, and transformers.

Blackout A widespread loss of power

Solar Flare A sudden burst of radiation from the sun's atmosphere

Solar Storm A result of changes in the continuous flow of solar particles and magnetic fields from the sun (or solar wind)

Solar Wind A stream of energized and charged particles flowing out from the sun, through the solar system, at speeds up to 900 km per second and at a temperature of 1 million degrees Celsius

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