

Name _____



Solar Flares & Earth's Magnetosphere

Solar flares are sudden bursts of energy from the Sun's surface. When they reach Earth, they interact with the planet's magnetic shield: the magnetosphere. This activity helps you connect the dots by showing what causes what in a sequence of events. Below are six "cause" boxes. Your task is to complete the "effect" box that follows each one. Think about how energy from the Sun can ripple outward and affect life on Earth.

1. **Cause:** The Sun releases a powerful solar flare.
Effect: _____
2. **Cause:** A burst of charged particles speeds toward Earth.
Effect: _____
3. **Cause:** The particles collide with Earth's magnetosphere.
Effect: _____
4. **Cause:** The magnetosphere is disturbed and shaken.
Effect: _____
5. **Cause:** Energy is redirected toward the poles.
Effect: _____
6. **Cause:** Technology on Earth depends on satellites and power grids.
Effect: _____

Extension Challenge: Write a **3-4 sentence mini-paragraph** describing one positive effect and one negative effect of solar flare impacts on Earth.
