

Earth as a Magnet

READ ALOUD PASSAGE

The Earth itself behaves like a giant magnet, which is why a compass needle points roughly North. This happens because of the swirling liquid iron and nickel outer core deep inside the Earth, a process called the geodynamo.

Magnetic North isn't exactly true North; the gap between them, called declination, is different depending on where you stand, and both drift over time. Cooling rocks lock in the direction of the magnetic field at the moment they form, which is how scientists know the poles have completely flipped many times in Earth's history.

The Earth's magnetic field shields us from the sun's charged particles (the solar wind) and helps create the aurora near the poles. Losing a magnetic field can cost a planet its atmosphere, as it likely did on Mars. Some animals, like birds and sea turtles, navigate using Earth's field directly.

Activity 1: Word Builder

Answer each question with your own words.

1. List four nouns that are affected by Earth's magnetic field.

1. _____

2. _____

3. _____

4. _____

2. List three better verbs for go that tell how sea turtles travel.

1. _____

2. _____

3. _____

4. _____

Activity 2: Sentence Scramble

These words are mixed up. Put them in order to make a sentence. Start with a capital letter and end with a period.

1. north / points / a / needle / compass

Activity 3: Match the Sentence Parts

Draw a line from each sentence start to the ending that makes sense.

- | | | |
|--|---|--|
| 1. Because Earth acts like a giant magnet, | ● | ● A. they lock in the direction of the magnetic field. |
| 2. When rocks cool, | ● | ● B. it can lose its atmosphere. |
| 3. Although magnetic north is close to true north, | ● | ● C. the two are not exactly the same. |
| 4. If a planet loses its magnetic field, | ● | ● D. a compass needle points north. |

Activity 4: Sentence Scramble

These words are mixed up. Put them in order to make a sentence. Start with a capital letter and end with a period.

1. magnet / acts / giant / like / Earth / a

2. flipped / times / poles / have / many / the

Activity 5: Build a Paragraph

Here is the first sentence of a paragraph. Write two sentences with facts that support it. Then write a last sentence that wraps it up.

TOPIC SENTENCE

Earth's magnetic field protects and guides living things.

Supporting detail 1:

Supporting detail 2:

Concluding sentence:
