

Guided Reading Chapter 17 Section 1

1. What is the difference between a magnet and magnetic materials?
2. A permanent magnet (*keeps, loses*) its magnetic properties.
3. All magnets have opposing poles called the _____ pole and the _____ pole.
4. Magnets will always have _____ poles, even if they are cut in half.
 - a) similar
 - b) permanent
 - c) opposing
5. Name several materials that are transparent to magnetic force.
6. What is "Magnetic Resonance Imaging?"
7. Using the graph in Figure 17.4, describe the relationship between force and distance between two magnets as the magnets are separated.
8. When a magnet moves, the magnetic field spreads out at a speed of
 - a) 200 million meters/sec
 - b) 300 million feet/sec
 - c) 300 million meters/sec
9. Draw a magnetic field.
10. A compass is a magnet with a needle. The _____ pole of a compass points to the _____ pole of a permanent magnet.
11. What is the difference between true geographic north and magnetic north?
12. Magnetic declination is the angular difference between _____ north and _____ north.

13. The source of Earth's magnetic field is believed to be due to the composition of the outer core of Earth, which is made of hot molten metals that slowly circulate about the solid inner core. Huge _____ produce the magnetic field.

14. The unit used to measure the strength of a magnetic field is called the

- a) gauss
- b) ohm
- c) Tesla

15. How do scientists know that the poles have reversed over time?