Discovery Channel School's CURRICULUM CENTER

knowledge quiz

Magnetism

Name _____

1. Which is the best explanation of magnetic force?
   A. Magnetism is a metal's gravity.
   B. Magnetism is the attraction between like particles.
   C. Magnetism is the force exerted by an electric current.
   D. Magnetism is none of the above.

2. A bar magnet has two poles — a north pole and a south pole. If the bar was cut in half
   A. each half would be either north or south.
   B. each half would have its own north pole and south pole.
   C. each half couldn't be attracted to the other half.
   D. each half would lose its magnetism.

3. The lights of the Aurora Borealis result from
   A. particles from the Sun hitting Earth's magnetosphere.
   B. static electricity in the troposphere.
   C. lightning storms taking place over the horizon.
   D. rainbows that occur at night.

4. Which of these would increase the force of an electromagnet?
   A. increasing the current being passed through the coil
   B. reversing the flow of electricity through the coil
   C. decreasing the number of windings in the coil
   D. None of these increases the force of an electromagnet.

5. The Earth's magnetic North Pole changes location over time. What causes this?
   A. changes deep in the Earth's core
   B. the rotation of the Earth
   C. the Moon revolving around the Earth
   D. the Earth revolving around the Sun

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6. A compass reads the Earth's magnetic field. Does a compass function the same when south of the Earth's equator as when north of the equator?
   A. No, it will point in the opposite direction.
   B. Yes, it will always point to magnetic south.
   C. Yes, it will always point to magnetic north.
   D. None of these answers is correct.

7. When a magnet is subjected to heat, its magnetism will
   A. decrease.
   B. stay the same.
   C. reverse polarity.
   D. increase.

8. Lodestone has a valued property that has been used for centuries. What is it?
   A. The stone is magnetic.
   B. The stone floats.
   C. The stone is very heavy.
   D. The stone glows in the dark.

9. In which of these environments would a compass work normally?
   A. in a lightning storm
   B. in orbit around the Earth
   C. at the magnetic north pole
   D. underwater

10. Iron filings reveal this in the magnetic field surrounding a bar magnet.
    A. the lines of the magnetic force
    B. the polarity of the magnet
    C. both 1 and 2
    D. neither 1 nor 2