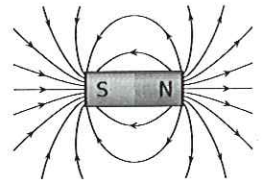


Name:
Date:
Number:
Hm Rm teacher:

KEY



Electricity and Magnetism Review

Directions: Use the words below only once to fill in the blanks.

parallel circuit series circuit attract short circuit
will not compass repel D-cell insulator rivet
induced magnetism will stick plastic stronger brad
conductor will not conduct

1. All components are in one circle in a Series circuit.
2. induced magnetism is when an iron/steel item behaves like a magnet because a permanent magnet is touching it.
3. A device that has a metal needle that is attracted to magnetic north, and attracted to a magnet in close proximity is a compass.
4. A parallel circuit has all components in their own individual circuit.
5. If you have two batteries with both negative ends facing each other, the circuit will not work.
6. The power source for a circuit could be a D-Cell.
7. A circuit that is incomplete, broken or has a loose connection is called a Short circuit.
8. The mineral magnetite will not conduct electricity.
9. The mineral magnetite will stick to a magnet.

10. A rivet becomes a temporary magnet when electricity flowing through the wires, which are wrapped around it, gives off a magnetic field.

11. The number of winds effects the magnetic field, because the more winds of wire, the stronger the effect.

12. A substance like plastic, rubber, glass or air, through which electricity will not flow is called an insulator.

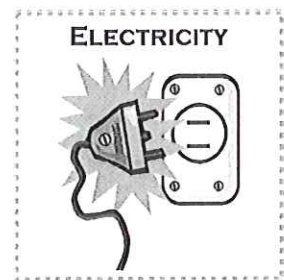
13. A conductor is a substance that allows electricity to flow easily through it such as: aluminum, copper, and silver.

14. When two magnets come together they attract.

15. When two magnets push away from each other they repel.

16. A brad conducts electricity.

17. plastic does not conduct electricity.



Directions: Please answer the following questions. Short answers are appropriate.

1. You have a mystery circuit with four brads. Two of the brads are connected. What can you do to test the circuit to see which wires are connected?

I would build a series circuit and touch matching brads until I got my bulb to light.

2. What is the purpose of a switch in a complete circuit?

A switch controls the flow of electricity

3. Is it possible for an item to stick to a magnet but not conduct electricity?

Yes or no

Example: magnetite

4. Which three items are necessary to build an electromagnet?

Motor

steel rivet

D-cell

wire



5. List one way to make an electromagnet stronger.

ADD A cell

ADD thicker wire

increase # of winds

6. What does a D-cell do in a complete circuit?

It is the source of power

7. How could you test the mineral magnetite to see if it sticks to a magnet?
How could you test it to see if it conducts electricity?

I could touch it to a magnet and see if it sticks,
OR I could hook it up to a complete circuit
and use the magnetite as a switch.

8. Why will a paperclip stick to a magnet with a piece of paper in between it,
but not stick to it with a book in between it?

There is too much space. - the greater the
space between the magnet and the metal
the weaker the force of attraction.