Electricity and Magnetism N	lotes	Name	Date		
CHARGES					
1. Protons have a	_ charge while electrons h	ave a	charge.		
2. Why do electrons stay around the nucleus of an atom?					
3. The force between charged objects is					
4. Identify two factors that increase the electric force between objects					
5. Charged things have					
6. Label the electric charge, electric force, and the electric field in the diagram below.					
7. Define electricity.					
9. How does an object become positively charged?					
9. How does an object become negatively charged?					
10. Objects can become charged in three main ways. Briefly describe each method below:   a. Objects can be charged when					
22. Describe an example of static electricity "building" up on an object					
23. Describe an example of static electricity being released or "discharged"					
24. Define and identify examples of Electrical Conductors.					

25. Define and identify examples of Electrical Insulators.

26. Explain why many electric conductors are surrounded by electric insulators. Provide an example.

## **Electricity and Magnetism Notes**

Name \_\_\_\_\_ Date \_\_\_\_\_

## CIRCUITS

1. An electric current is \_\_\_\_\_ 3. Higher Current = \_\_\_\_\_ 4. Electric circuits control the movement of \_\_\_\_\_\_ \_\_\_\_\_. The path of an electric circuit is a \_\_\_\_\_\_. 5. An electric circuit allows electrons to \_\_\_\_\_ 6. Draw arrows indicating the direction of the electric current in the diagram to the right. 7. Identify and define the parts of the simple electric circuit to the right. Simple Circuit 8. Explain what is meant by the load. Give examples \_\_\_\_\_ 9. What is the purpose of a switch in a circuit? 10. A complete circuit \_\_\_\_\_ 11. Identify whether the illustrations to the right

will be "On" or "Off" based on the circuit connection. Explain your answer.



## Electricity and Magnetism Notes

Name	Date
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Series Circuit	Parallel Circuit	
Characteristics:	<u>Characteristics:</u>	
Advantages/Disadvantages:	<u>Advantages/Disadvantages:</u>	
12. Describe voltage		
13. Describe resistance.		
14. Describe electrical conductors.		
15. Describe electrical insulators.		
MAGNETISM		
1 All Magnete have		
Each and of the magnet is called a	One and of a magnet always points	
Each end of the magnet is called the	One end of a magnet always points	
and is called the	The opposite end of the magnet points	
and is called the	magnetic poles are always	
what happens if a magnet is broke in half?		
2. Magnets exert		
Magnetic forces result from	which is created	
by	The force can either	
	The force depends on	
	Like poles	
and opposite poles	·	

Electricity and Magnetism Notes	Name	Date
3 Add the following to the diagram on the right:		
North pole		
South pole		
direction of the force		
(demonstrating attraction or repulsion)		
4. Magnets are surrounded by		
Magnetic field lines show		
The closer together the lines	_	
The lines around a magnet are closest together	-	
because		
	_	
Draw the magnetic field lines on the magnets below		
S N S	Ν	N S
S N S	Ν	
5. The Cause of Magnetism		
Whether a material is magnetic depends		As
, a magnetic field	d is generated. The ato	om will then have a
	The atoms group t	ogether in areas called
which are like In most mate	erials, the magnetic fiel	ds
In materials such as		the north and south poles
of the atoms in a domain	,	
		·
What determines whether an object is magnetic?		
6. Losing Alignment: Identify the ways in which a magnetized obje	ct might become dema	agnetized.

7. Describe how an object can become magnetized