Electricity

Circle the correct word.

1.	magnihtihk fild	magnetic field	magnetic feeld	magnitic field
2.	curren	currunt	currint	current
3.	generator	jehnuaytur	jehnurayturr	generater
4.	resistoor	resistar	resistor	rusistar
5.	lodestonne	ladestone	lodestoni	lodestone
6.	insulator	insulato	insulater	insulatar
7.	compass	cimpess	campass	compess
8.	fyoo	fuse	fus	fooz
9.	elecricity	electricity	electricety	electicity
10.	ihlehktrahmagnuht	olectremugnet	electromagnet	eletromagnet
11.	swihh	switc	switch	swich
12.	electric feld	electric field	eletric field	electic fild
13.	magnit	magnet	magneet	megnuht
14.	chargu	charge	cherge	chargi
15.	sihreez circuit	sihreaz ciriut	sereis circeut	series circuit
16.	conducter	conductor	canductor	conductar
17.	magnetic poles	megnetic polles	megnetic poles	magnetic pohl
18.	static electricity	stotohk electricity	staic ihlehktrihsuhttee	static ihlehktrehsuhtee
19.	parallel circuet	pehruuhlehl circuit	perallel circiutt	parallel circuit
20.	cicuit	circuet	serkuht	circuit
21.	ampeere	ampere	ampee	apere

Circuits & Switches

Match the words in the first column to the best available answer in the second column.

_____ Electric Charge	1)the particular purpose or task a circuit is designed to complete
_____ Electrical Current	2)the movement of electrons from one atom to another
_____ Electrical Load	3)the condition of having an excess or deficiency of electrons
_____ Switch	4)current that only moves in one direction
_____ AC Power Adapter	5)a device used in a circuit to temporarily store electricity
_____ Alternating Current (AC)	6)current that changes direction on a regular time interval
_____ Capacitor	7)a material that when combined with some other material can be turned into an insulator or a conductor
_____ Charge	8)the flow of electrons from one place to another
_____ Conductor	9)the control unit placed in a circuit that provides the ability to open or close the circuit
_____ Current	10)a diode that produces light when current moves through it
_____ Diode	11)a device used to limit the flow of electricity to one

direction

_____	Direct Current (DC)	12)a particle that is held loosely in orbit around the atom's nucleus
_____	Electron	13)the potential of electrons or protons to attract each other
_____	Insulator	14)converts alternating current to direct current
_____	Light Emitting Diode (LED)	15)a material that does not let electricity flow through it
_____	Resistor	16)a type of switch that contains no moving parts and uses electricity to turn itself on and off
_____	Transistor	17)any material that allows electrons to flow through it
_____	Semiconductor	18)a device that impedes the flow of electrons

Crack the Code

Each of the words below have been changed using a secret code. For example, A might be represented by the letter Z or F. The code is the same for every word. Crack the code for each word. **HINT: The letter 'r' is really the letter 's'!**

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

1. RAIAYVBLBVAEYVYAS _____	2. VHQCUVAHE _____
3. EBRYRAHE _____	4. VDIEGB _____
5. VHZMIRR _____	6. ZIGQBAYVFYBLC _____
7. MIEILLBLVYEVUYA _____	8. RBEYBRVYEVUYA _____
9. BLBVAEYVYAS _____	10. BLBVAEHZIGQBA _____
11. IZMBEB _____	12. YQRULIAHE _____
13. VYEVUYA _____	14. RJYAVD _____
15. FURB _____	16. ZIGQBAYVMHLBR _____
17. THLAIGB _____	18. LHCBRAHQB _____
19. BLBVAEYVFYBLC _____	20. GBQBEIAHE _____

Matching Circuits

Match the words in the first column to the best available answer in the second column.

_____	switch	1) energy source for a circuit
_____	battery	2) measures the potential difference across any two points of a circuit
_____	resistor	3) ratio of potential energy to current
_____	voltmeter	4) potential energy per unit of charge
_____	ammeter	5) converts electric energy into other forms
_____	potential difference	6) a device for closing and opening a circuit
_____	current	7) measure the current flowing through a circuit
_____	resistance	8) a flow of electric charge

Word List

alternating current	electric field	kilowatt-hour	series circuit
ampere	electricity	lightning rod	short circuit
charge	electromagnet	lodestone	static electricity
circuit	fuse	magnet	voltage
compass	generator	magnetic field	
conductor	ground	parallel circuit	
direct current	insulator	resistor	

Multiple Choice

Select the definition that most nearly defines the given word.

1. **generator**
   - (A) A machine that produces electricity by changing energy of motion into electrical energy.
   - (B) Material that allows current to easily flow.
   - (C) An electric circuit that has only one path for the current.
   - (D) An object with two poles that attracts iron and steel.

2. **charge**
   - (A) A path that allows most of the current in an electric circuit to flow around or away from the principal elements or devices in the circuit.
   - A measure of the amount of electricity in an atom that is determined by the extra positive or negative particles that an atom has.
   - (C) The amount of energy used when you consume one kilo-watt of power in one hour.
   - (D) An electric current that reverses its direction of flow at regular intervals.

3. **fuse**
   - (A) The force that pushes electricity or a current. In most homes this force is 110 volts.
   - (B) A piece of metal that stands at the highest point of a building and is connected to the Earth. The purpose of the piece of metal is to ground the large amount of electrical energy in the event of a lightning strike.

Ⓒ A safety device placed in an electric circuit. This contains a metal strip that melts when overheated.
Ⓓ A magnet created when electric current flows through a coil of wire.

4. **lodestone**
Ⓐ Energy formed by the motion of protons and electrons.
Ⓑ A safety device placed in an electric circuit. This contains a metal strip that melts when overheated.
Ⓒ An electric circuit that has more than one path for the current.
Ⓓ A hard, black, naturally magnetic rock.

5. **short circuit**
Ⓐ The space around a magnet where the force of the magnet can be felt.
Ⓑ A path that allows most of the current in an electric circuit to flow around or away from the principal elements or devices in the circuit.
Ⓒ A machine that produces electricity by changing energy of motion into electrical energy.
Ⓓ The area around charged particles where electric forces occur.

6. **lightning rod**
Ⓐ An electric current flowing only in one direction.
Ⓑ A piece of metal that stands at the highest point of a building and is connected to the Earth. The purpose of the piece of metal is to ground the large amount of electrical energy in the event of a lightning strike.
Ⓒ Material that slows down or resists the flow of current. These are used in electric circuits to help control the flow of current.
Ⓓ An electrical connection that allows electrons to be carried away in the event of a problem.

7. **kilowatt-hour**
Ⓐ Material through which a current cannot pass or easily flow.
Ⓑ The amount of energy used when you consume one kilo-watt of power in one hour.
Ⓒ A closed path along which electricity flows.
Ⓓ A unit used to measure current.

8. **series circuit**
Ⓐ This has a magnetized needle that is attracted to the earth's north magnetic

pole.

Ⓑ An electric circuit that has only one path for the current.

Ⓒ A charge that stays on an object instead of flowing in a current.

Ⓓ The area around charged particles where electric forces occur.

9. **compass**

Ⓐ An electric circuit that has only one path for the current.

Ⓑ This has a magnetized needle that is attracted to the earth's north magnetic pole.

Ⓒ Material that slows down or resists the flow of current. These are used in electric circuits to help control the flow of current.

Ⓓ The amount of energy used when you consume one kilo-watt of power in one hour.

10. **parallel circuit**

Ⓐ A safety device placed in an electric circuit. This contains a metal strip that melts when overheated.

Ⓑ An electric circuit that has more than one path for the current.

Ⓒ A unit used to measure current.

Ⓓ The space around a magnet where the force of the magnet can be felt.

11. **electric field**

Ⓐ The area around charged particles where electric forces occur.

Ⓑ An electric current flowing only in one direction.

Ⓒ This has a magnetized needle that is attracted to the earth's north magnetic pole.

Ⓓ The force that pushes electricity or a current. In most homes this force is 110 volts.

12. **conductor**

Ⓐ A charge that stays on an object instead of flowing in a current.

Ⓑ Material that allows current to easily flow.

Ⓒ An object with two poles that attracts iron and steel.

Ⓓ A hard, black, naturally magnetic rock.

Vocabulary Matching

Word List

alternating current	electricity	lodestone	short circuit
ampere	electromagnet	magnet	static electricity
charge	fuse	magnetic field	voltage
circuit	generator	parallel circuit	
direct current	ground	resistor	
electric field	insulator	series circuit	

Matching

Match each definition with a word.

1. A hard, black, naturally magnetic rock. **lodestone**	2. An electric current that reverses its direction of flow at regular intervals. _____
3. A path that allows most of the current in an electric circuit to flow around or away from the principal elements or devices in the circuit. _____	4. A unit used to measure current. _____
5. An object with two poles that attracts iron and steel. _____	6. A safety device placed in an electric circuit. This contains a metal strip that melts when overheated. _____
7. An electric circuit that has more than one path for the current. _____	8. An electric current flowing only in one direction. _____
9. A magnet created when electric current flows through a coil of wire. _____	10. The area around charged particles where electric forces occur. _____

11. The space around a magnet where the force of the magnet can be felt. _____	12. An electric circuit that has only one path for the current. _____
13. Material that slows down or resists the flow of current. These are used in electric circuits to help control the flow of current. _____	14. Energy formed by the motion of protons and electrons. _____
15. A measure of the amount of electricity in an atom that is determined by the extra positive or negative particles that an atom has. _____	16. A closed path along which electricity flows. _____
17. Material through which a current cannot pass or easily flow. _____	18. A machine that produces electricity by changing energy of motion into electrical energy. _____
19. An electrical connection that allows electrons to be carried away in the event of a problem. _____	20. A charge that stays on an object instead of flowing in a current. _____
21. The force that pushes electricity or a current. In most homes this force is 110 volts. _____	22. This has a magnetized needle that is attracted to the earth's north magnetic pole. _____

Match - Up

Match the words in the first column to the best available answer in the second column.

_____	insulator	1) a deficiency of electrons
_____	induction	2) a device for detecting the presence of electric charge
_____	charged	3) a term referring to matter having an excess or deficiency of electrons
_____	electroscope	4) a material that does not allow electric charges or heat to move freely on or through it
_____	lightning rod	5)an electric discharge caused by electrons jumping from one conductor to another through the air
_____	ground	6) to connect a conductor through some conducting material directly to the Earth
_____	positive	7) the process by which an object having an electric charge produces the opposite charge in a neighbouring object without actually touching it
_____	spark	8) a metal rod or wire attached to a building to prevent lightning damage by conducting the electrons to the ground

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	Potential difference	9) ohm
_____	resistance	10)) ampere
_____	energy	11) joule
_____	charge	12) coulomb
_____	current	13) volt