

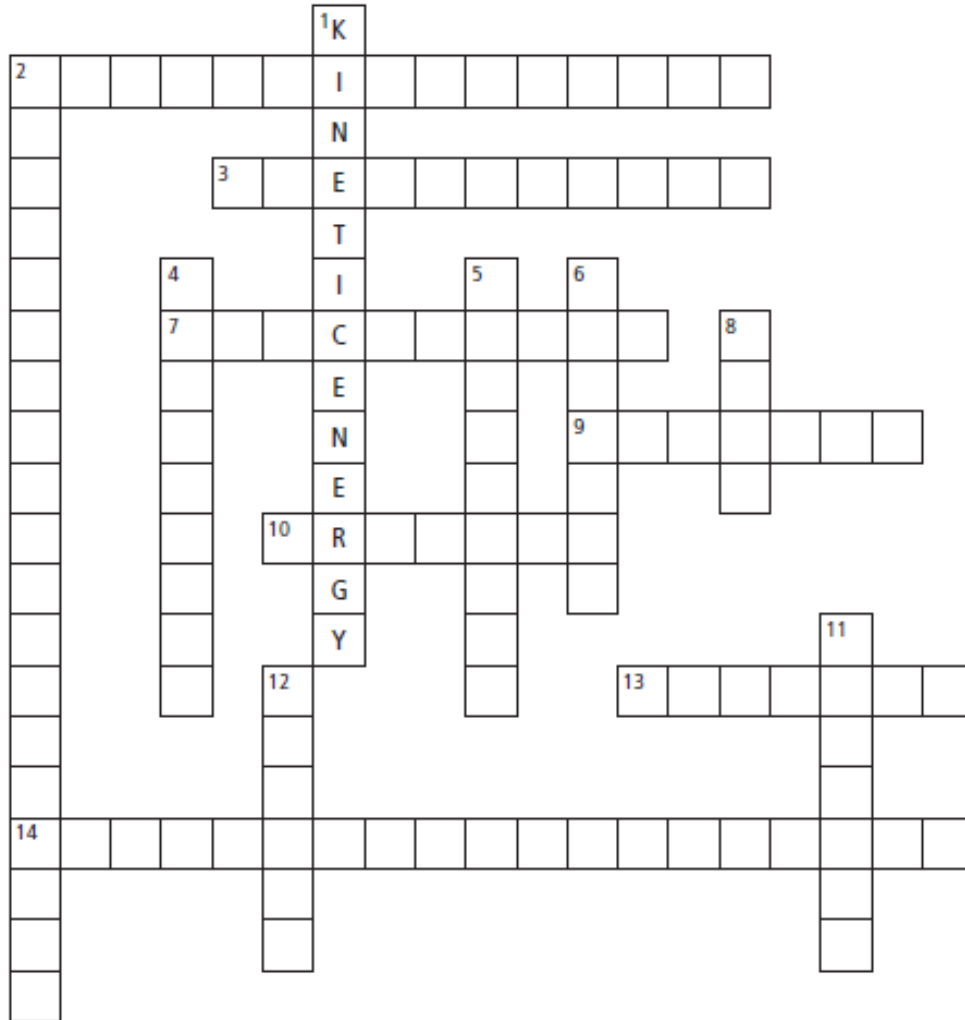
Name:

Block:

Date:

Voltage and Electrical Potential Energy Worksheet

Electricity crossword puzzle



Across	Down
2. stored energy 3. electrodes are placed in a substance that conducts electricity 7. two terminals in a battery 9. unit for charge 10. battery in flashlights 13. amount of electric potential energy per one coulomb of charge 14. converts chemical energy into electrical energy	1. energy a moving object has 2. another name for voltage 4. positive and negative end points of a battery 5. device used to measure voltage 6. battery in cars 8. unit for potential difference 11. converts a form of energy into electrical energy 12. ability to do work

Name:

Block:

Date:

Electric potential energy

Vocabulary

battery	positively
chemical	potential difference
electrical	potential energy
electrochemical cell	removed
electrodes	separated
electrolyte	terminals
energy	volt
negatively	voltage

Use the terms in the vocabulary box to fill in the blanks. You may use terms more than once. You will not need to use every term.

1. The ability to do work is called _____.
2. A device that stores the energy in electric charges so that it can be used at some later time to do work is called a(n) _____ or _____.
3. Energy that is stored in a battery is called electric _____.
4. A battery that powers a flashlight converts _____ energy to _____ energy.
5. Energy to push electrons is available if positive and negative charges are _____.
6. In a flashlight battery, energy from _____ reactions does the work of separating the charges.
7. A flashlight battery has two terminals called _____ in a moist paste called a(n) _____.
8. Electrons build up at one terminal, making it _____ charged. At the same time, electrons withdraw from the other terminal, leaving it _____ charged.
9. _____, or voltage, is the difference in energy per coulomb of charge between one point in a circuit and another point in a circuit.

Name:

Block:

Date:

Use with textbook pages 270–275.

Electric potential energy and voltage

Match each Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

Term	Descriptor
1. _____ electrochemical cell	A. battery terminal
2. _____ potential energy	B. conducts electricity
3. _____ potential difference	C. converts chemical energy into electrical energy
4. _____ electrode	D. another name for voltage
5. _____ electrolyte	E. energy from motion
	F. stored energy

Circle the letter of the best answer.

6. Which of the following could be used to measure the amount of potential difference in a circuit?
- A. electrode
 - B. voltmeter
 - C. electrolyte
 - D. electroscopes
7. What is the unit for measuring potential difference?
- A. volt (V)
 - B. second (s)
 - C. metre (m)
 - D. coulomb (C)

Use the following diagram to answer questions 8 and 9.



8. What is shown in the diagram above?
- A. dry cell
 - B. wet cell
 - C. voltmeter
 - D. electroscopes
9. Which of the following describes the electrolyte used in the object shown above?
- A. a fluid
 - B. a moist paste
 - C. an acid solution
 - D. a copper electrode
10. Which of the following are different names for the same thing?

I.	battery
II.	electrochemical cell
III.	electric potential difference

- A. I and II only
- B. I and III only
- C. II and III only
- D. I, II, and III

Name:

Block:

Date:

Questions:

1) a) How can the energy be removed from a battery?

b) Can a battery in a circuit produce energy forever? Why or why not?

c) Can a battery that is not in use hold energy forever? Why or why not?

2) a) Describe voltage in terms of potential energy in your own words. Use an analogy (comparison to something similar) if needed. Use can also use a picture.

b) How can voltage in a circuit be measured?