

Use with textbook pages 270–275.

## 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.

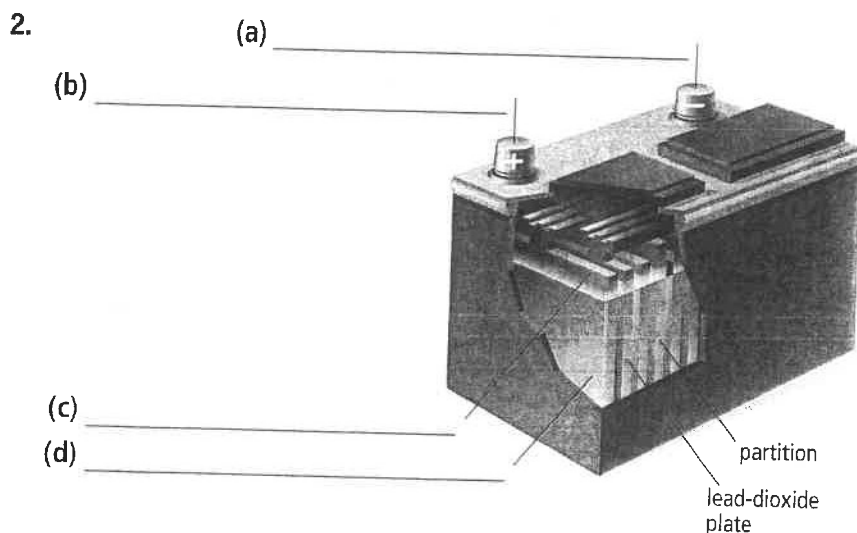
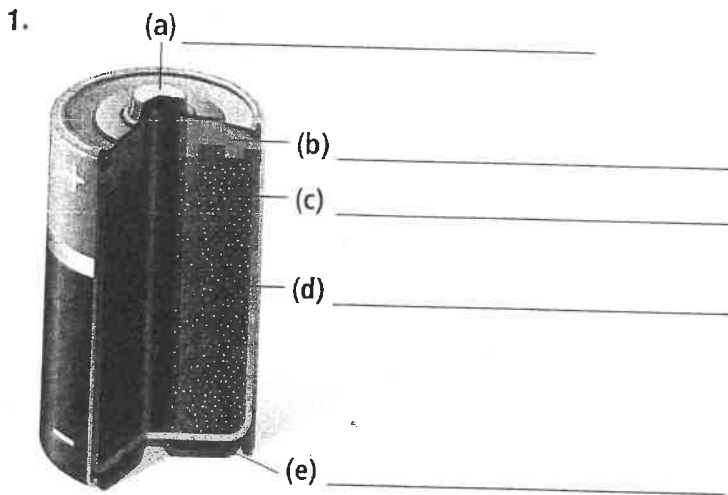
1. The ability to do work is called \_\_\_\_\_.
2. A device that stores the energy in electric charges so that it can be used at some later time to do work is called a(n) \_\_\_\_\_  
or \_\_\_\_\_.
3. Energy that is stored in a battery is called electric \_\_\_\_\_.
4. A battery that powers a flashlight 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.

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## Electrochemical cells

Use the following terms to label the two diagrams. You can use terms more than once. Some parts have been labelled for you.

Terms	
carbon rod	negative terminal
electrolyte	plastic insulator
lead plate	positive terminal



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## Electric potential energy and voltage

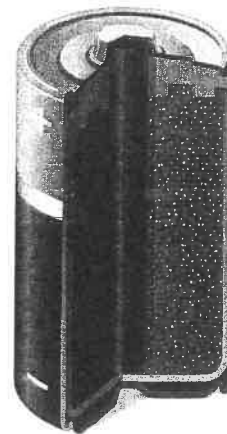
Match each Term on the left with the best Descriptor on the right. Each Descriptor may be used only once.

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