

Important Concepts . . .

Preview Review



Science

Grade 9 TEACHER KEY

W1 - Quiz

Important Concepts of Grade 9 Science

W1 - Lesson 1	Electrical Principles
W1 - Lesson 2	Electrical Circuits
W1 - Lesson 3A	Energy Consumption
W1 - Lesson 3B	The Distribution of Matter in Space
W1 - Lesson 4	Objects in Space
W1 - Lesson 5	Optical and Radio Telescopes
W1- Quiz	
W2 - Lesson 1	Physical and Chemical Properties of Materials
W2 - Lesson 2	Chemical Reactions
W2 - Lesson 3	Using the Periodic Table
W2 - Lesson 4	Naming Chemical Compounds
W2 - Lesson 5	Writing Chemical Equations
W2 - Quiz	
W3 - Lesson 1	Variation
W3 - Lesson 2	Reproduction and Patterns of Inheritance
W3 - Lesson 3A	Genes and Cell Division
W3 - Lesson 3B	Organisms and Matter in their Environment
W3 - Lesson 4	Biological and Chemical Monitoring/Acids and Bases
W3 - Lesson 5	Transfer of Materials through the Air, Ground, and Water/Biological Impacts of Hazardous Chemicals
W3 - Quiz	

Materials Required

Textbook:

Science in Action 9

Science Grade 9

Version 5

Preview/Review W1 - Quiz TEACHER KEY

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Preview/Review Concepts for Grade Nine Science

TEACHER KEY



W1 - Quiz

W1 - Quiz

/30 marks

This quiz should take approximately 20 minutes.

Part I: Multiple Choice

Place the letter of the best answer in the blank before each question. (5 marks)

- B** 1. A television is plugged into your household wall socket. What type of power is running through it?
- A. direct current
 - B. alternating current
 - C. reverse current
 - D. static current
- D** 2. Mercury at absolute zero can be identified as a
- A. conductor
 - B. semiconductor
 - C. insulator
 - D. superconductor
- C** 3. Which planet has a similar size and as Earth?
- A. Pluto
 - B. Mars
 - C. Venus
 - D. Mercury
- A** 4. Which planet is the largest in our solar system?
- A. Jupiter
 - B. Neptune
 - C. Uranus
 - D. Saturn
- B** 5. A telescope that uses two lenses to gather and focus starlight is called a
- A. reflecting telescope
 - B. refracting telescope
 - C. radio telescope
 - D. audio telescope

Part II: Matching

Match the following words to their definitions. (9 marks)

Words

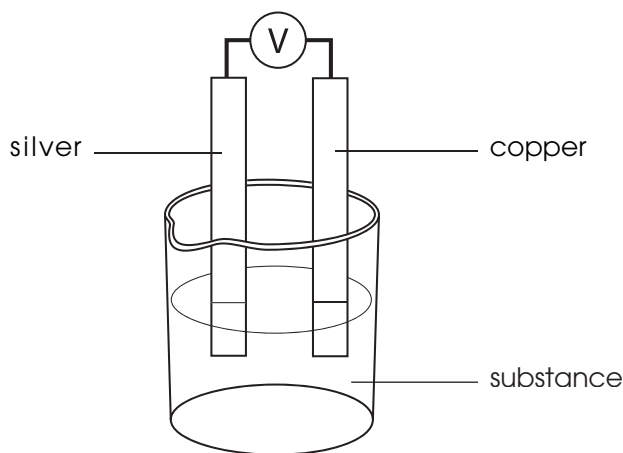
- A. rheostat
- B. thermocouple
- C. galaxy
- D. asteroid
- E. comet
- F. ecliptic
- G. satellite
- H. refracting telescope
- I. reflecting telescope
- J. interferometry
- K. azimuth
- L. altitude

Definitions

- G a small body that orbits a larger one
- F the path of the sun and planets through the stars as viewed from Earth
- I a type of optical telescope that uses mirrors instead of lenses to gather and focus light
- D small rocky bodies orbiting the Sun and located mainly in a narrow belt between Mars and Jupiter
- L the height of a celestial body above the horizon ranging from 0 at sea level to 90 degrees straight up
- C a grouping of millions or billions of stars, gas, and dust held together by gravity
- J a technique of combining the observations of two or more telescopes to produce images that have a better resolution than what one telescope can produce alone
- B a device consisting of two wires of different metals joined to conduct heat
- A a continuously variable resistor used to regulate electric current

Part III: Written Response

1. Use the following diagram to answer the next questions.



- a. What type of cell is shown in the diagram? Explain. (2 marks)

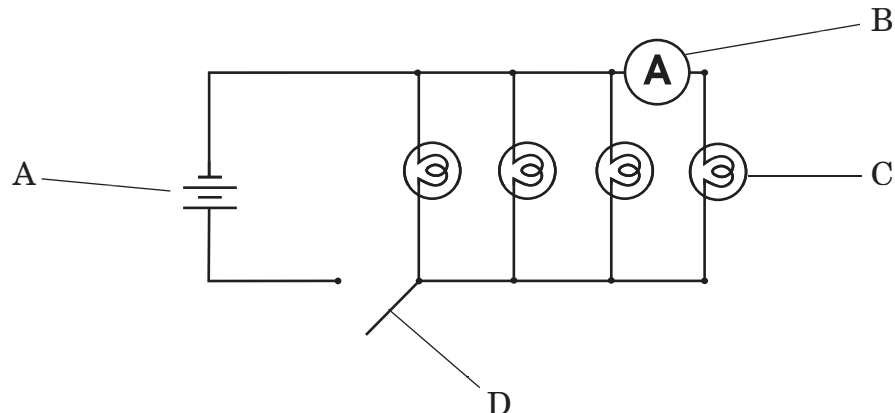
A wet cell. There are two different metal electrodes in a beaker that probably contains a solution

- b. Identify a substance that could be in the beaker if electricity is produced. What name best describes this substance? (2 marks)

For example: sodium chloride solution, hydrochloric acid, tap water, etc.

This substance would be called an electrolyte.

2. Use the following diagram to answer the next questions.



a. What type of circuit is shown? (1 mark)

A parallel circuit

b. What do the letters on the diagram represent? (1/2 mark each = 2 marks)

A source B Ammeter
C load D switch

c. If we added one more unit of type C, what would happen to the resistance in this circuit? (1 mark)

The resistance of the circuit would decrease.

3. A circuit has an electrical current flowing through it at 15 amps. The resistance of the circuit is 10 ohms. How much voltage is flowing through this circuit? (2 marks)

$$I = 15 \text{ amps}$$

$$V = I \times R$$

$$R = 10 \text{ ohms}$$

$$V = (15 \text{ amps})(10 \text{ ohms})$$

$$V = ?$$

$$V = 150 \text{ volts}$$

4. A stereo is plugged into a 120 V wall socket. If the current flowing through it is 5 amps, what is its power rating? (2 marks)

$$V = 120 \text{ volts} \quad P = I \times V$$

$$I = 5 \text{ amps} \quad P = (5 \text{ amps})(120 \text{ volts})$$

$$P = ? \quad P = 600 \text{ watts}$$

5. How much energy is being used if a refrigerator with a power rating of 1300 watts runs for 24 hours? (2 marks)

$$P = 1300 \text{ watts} \quad E = P \times t$$

$$T = 24 \text{ hours or } 86400 \text{ s} \quad E = (1300 \text{ watts})(86400 \text{ s})$$

$$E = ? \quad E = 112320000 \text{ Joules or } 112320 \text{ Kilojoules}$$

6. Identify and give a brief description of two uses for artificial satellites. (2 marks)

Communication – telephones or computers

***Observation – weather forecasting, follow ships at sea, monitor soil quality,
and track forest fires***

GPS – determine the location of a person on Earth

Remote Sensing – sensing heat
