

Important Concepts . . .

Preview Review



Science

Grade 8 TEACHER KEY

W1 - Quiz

Important Concepts of Grade 8 Science

W1 - Lesson 1	Mass, Volume, and Density
W1 - Lesson 2	Solubility and Saturation Points
W1 - Lesson 3A.....	Viscosity, Flow Rate, and Buoyancy
W1 - Lesson 3B.....	Simple Machines
W1 - Lesson 4	Gears, Mechanical Advantage, Speed Ratios, and Efficiency
W1 - Lesson 5	Hydraulics and Pneumatics
W1- Quiz	
W2 - Lesson 1	The Role of Cells within Living Things, Cells-Tissue-Organ System
W2 - Lesson 2	The Microscope
W2 - Lesson 3	Body Systems Part 1
W2 - Lesson 4	Body Systems Part 2
W2 - Lesson 5	Problems Associated with Body Systems
W2 - Quiz	
W3 - Lesson 1	Transmission and Absorption of Light
W3 - Lesson 2	Reflection and Refraction of Light
W3 - Lesson 3A.....	Vision and Lenses
W3 - Lesson 3B..	Water in its Various States Affects Earth's Landforms and Climate
W3 - Lesson 4	Adaptations to Aquatic Ecosystems
W3 - Lesson 5	Water Quality
W3 - Quiz.....	

Materials Required

Textbook:
*Science in
Action 8*

Science Grade 8

Version 5

Preview/Review W1 - Quiz TEACHER KEY

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Preview/Review Concepts for Grade Eight Science

TEACHER KEY



W1 - Quiz

W1 - Quiz

Total ___ / 19

Formulas: $D = \frac{m}{v}$ $MA = \frac{OF}{IF}$ $p = \frac{F}{A}$ $SR = \frac{ID}{OD}$ $Efficiency = \frac{MA}{SR} \times 100\%$

Show your work wherever you are problem solving.

1. Fill in each blank with a term from the following list. Not all terms will be used. (7 marks)

pneumatics

solubility

solute

driven gear

unsaturated

mass

weight

hydraulics

saturated

driving gear

solvent

Mass

- a. If someone tries to add more sugar to a solution but they cannot get it to mix in, the solution is said to be ***saturated***.
- b. ***Mass*** is the measure of the amount of matter in an object.
- c. In soft drinks, water is the ***solvent***, and the flavouring is the ***solute***.
- d. When using multiplying gears, the ***driving*** gear will have more teeth than the ***driven*** gear.
- e. ***Hydraulics*** use a confined liquid to transmit force.

2. What is the density of a rectangular object with a mass of 50 g and dimensions of 10 cm × 8 cm × 2 cm? (4 marks)

$$\text{Vol} = 10 \times 8 \times 2 \text{ cm}^3 = 160 \text{ cm}^3$$

$$D = \frac{m}{v} = \frac{50 \text{ g}}{160 \text{ cm}^3} = 0.31 \text{ g/cm}^3$$

3. How can the solubility of a solute in a particular solvent be increased? (1 mark)

Heat the solution.

4. Which is more viscous – water or syrup? Explain. (2 marks)

Syrup – it pours more slowly.

5. Imagine a first class lever with an attached 5.0 kg load 1.0 m from the fulcrum. How far from the fulcrum, on the other side would you attach a 10.0 kg load to balance the lever? (2 marks)

0.5 m

6. What is the mechanical advantage of a system where the input force is 2000N and the output force is 50,000 N? (2 marks)

$$MA = \frac{OF}{IF} = \frac{50\,000 \text{ N}}{2\,000 \text{ N}} = 25$$

7. In a hydraulic system, how does the pressure at the input location compare to the pressure at the output location? (1 mark)

Pressure is the same at all points in a hydraulic system.

