

*Important Concepts . . .*

# Preview Review



***Science***

***Grade 9***

***W3 - 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 W3 - Quiz

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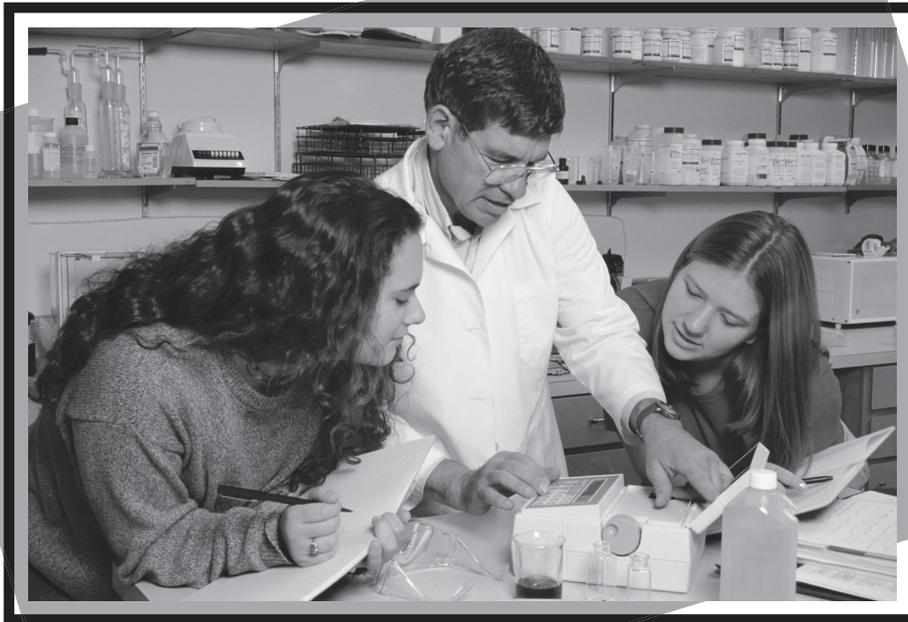
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# Preview/Review Concepts for Grade Nine Science



*W3 - Quiz*



**W3 - Quiz**

/ 30 marks

This quiz should take approximately 20 minutes to complete.

**Part I: Multiple Choice**

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

- \_\_\_\_\_ 1. A group of individuals of the same species that live in a certain place is a
- A. community
  - B. ecosystem
  - C. population
  - D. niche
- \_\_\_\_\_ 2. Bacteria split exactly in two during this asexual reproductive process called
- A. budding
  - B. spore production
  - C. vegetative reproduction
  - D. binary fission
- \_\_\_\_\_ 3. Spaghetti is classified as a type of nutrient called
- A. protein
  - B. carbohydrate
  - C. lipid
  - D. nucleic acid
- \_\_\_\_\_ 4. The movement of water from a high concentration to a low concentration across a semipermeable membrane is known as
- A. diffusion
  - B. osmosis
  - C. active transport
  - D. intake
- \_\_\_\_\_ 5. An increase in concentration of a chemical as it moves up the food chain is called
- A. photolysis
  - B. decomposition
  - C. contamination
  - D. biomagnification

## Part II: Matching

Match the following words to their definitions. (8 marks)

### Words

- A. continuous variation
- B. discrete variation
- C. artificial selection
- D. active transport
- E. organic compound
- F. inorganic compound
- G. chromosome
- H. gene
- I. macronutrient
- J. micronutrient
- K. purebred
- L. dispersion

### Definitions

- \_\_\_\_\_ structure in which DNA is arranged and along which genes are located
- \_\_\_\_\_ nutrients that organisms need in large amounts
- \_\_\_\_\_ a complex molecule that contains carbon
- \_\_\_\_\_ the movement of molecules from a low concentration to a high concentration requiring the addition of energy
- \_\_\_\_\_ the scattering of a substance away from its source
- \_\_\_\_\_ a plant or animal that has ancestors with the same form of a trait
- \_\_\_\_\_ differences in characteristics that have a range of form (for example, height of adults)
- \_\_\_\_\_ the process in which humans select individuals to reproduce

**Part III: Written Response**

- 1. State one main purpose of asexual reproduction and one of sexual reproduction. Name one type of sexual and one type of of asexual reproduction. (4 marks)

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- 2. How many chromosomes do humans have in each cell in their bodies? Where did these chromosomes come from? (2 marks)

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- 3. Body builders must eat the right kind of nutrient to build muscle. What type of nutrient do they have to eat? (1 mark)

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Give an example of a food that contains this nutrient. (1 mark)

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4. Identify two factors that determine whether or not an airborne pollutant is found five miles from the source or 100 miles from the source. (2 marks)

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5. Answer the following questions dealing with acids.

- a. Explain how you could identify if a solution was an acid by using litmus paper. (1 mark)

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- b. What is the pH of an acid? Give an example of a common household substance that is acidic. (1 mark)

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- c. How can an acid can be neutralized? (1 mark)

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- d. Identify one end product of the reaction of an acid and a base. (1 mark)

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6. Explain briefly how the addition of fertilizers to a lake can contribute to the winterkill of fish. (3 marks)

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