



The City School

PAF Chapter

Prep Section

Science

Class – 7

2nd Term

Worksheets for Intervention Classes

Classifying Plants and Animal

Q1. Suggest what is meant by ‘classifying’?

Q2. What does Linnaeus mean by distinguishing the ‘similar’ from the ‘dissimilar’?
Give an example from the garden hierarchy.

Q3. Which of your two names (first name and surname) is equivalent to the genus and which to the species?

Q4. Compare and contrast the following types of seed producing plants:

1. Gymnosperms
2. Angiosperms

Q5. Use the following table to compare between flowering and non – flowering plants.

	Flowering	Non-flowering
Do they have a stem?		
Do they have roots?		
Do they have leaves?		
Do they have flowers?		
Examples		

Q5-Fill in the missing words:

1. _____, _____ and _____ all lay eggs.
 2. Only _____ feed their babies with milk.
 3. Gills are found only in _____ and _____.
 4. _____ has hard shells on their eggs.
 5. _____ is the transfer of the male _____ grain from the _____ to the stigma of the female pistil. Pollination may occur by means of the _____ or by _____ such as _____.
- Self-pollination – pollination within the _____.
- Cross-pollination – pollination with _____ plant

Q6- Choose the correct answer.

1- Which one of the following is an invertebrate?

A Whale B-starfish C-salmon

2- Mammals reproduce by..

A-eggs B-birth C-seed

3-What helps the fish to breathe underwater?

A-fins B-scales C-gills

4-What are the two ways flowering plants allow for pollination?

A. Wind B. Animals C People










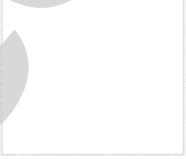
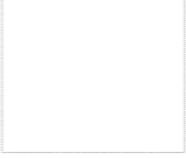

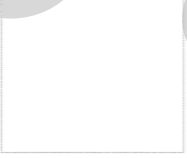




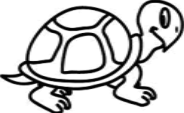



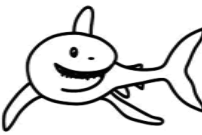





Q7- Which of the following statements is true.

A- Reptiles are invertebrates.

B- B- Fins and tail helps the fish to breathe.

C- Starfish are not vertebrates because they do not have a backbone.

Vertebrate Groups

mammals	birds	fish	reptiles	amphibians
				
				
				
 cat	 duck	 elephant	 alligator	 turtle
 salamander	 snake	 frog	 shark	 pufferfish
 chicken	 dolphin	 clown fish	 toad	 penguin

Particle model of matter

Q1. Encircle the correct answer

1. These substances can change from solid to vapors form directly without melting
 - a) Iodine
 - b) Dryice
 - c) Ammonium chloride
 - d) All of the above
2. The particles in a solid can
 - a) Not move
 - b) Vibrate on their fixed positions
 - c) Move constantly and randomly
3. Physical change can bring about the change in
 - a) The nature of a substance
 - b) The state of a substance
 - c) Both of the above
4. Diffusion is the movement of particles from an area of
 - a) Higher concentration to lower concentration
 - b) lower concentration to higher concentration
5. This gas is poisonous and brown in colour
 - a) nitrogen
 - b) carbon dioxide
 - c) Bromine

Q2. Choose the name of the scientist from the box given below and write with his work.

Democritus	Aristotle	John Dalton	Robert Brown	Albert Einstein
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Scientist	His work in the development of Particle Model of Matter.
	Observed some pollen grains suspended in water were constantly moving about randomly in all directions
	Suggested that matter is made up of small discrete particles which are like little solid balls
	Explained that the dead pollen grains were moving because they were being bombarded by the moving water particles
	Hypothesized that matter is made up of tiny discrete particles called "atoms" which are too small to be seen
	Hypothesized that matter has a continuous composition that can be broken down into smaller and smaller pieces

Q3. Define the following terms.

1) Diffusion:

2) Brownian motion:

3) Sublimation:

4) Density:

5) The particle model of matter:

Atoms molecules and ions

Q1. (a) Differentiate between:

Atom	Ion
Molecule of element	Molecule of compound

b) For the following elements, write down the symbols of their atoms and ions.

Name of the element	symbol of its atom	symbol of its ion
Sodium		
Aluminium		
Chlorine		
calcium		

Determine the number of atoms in the following chemical formulas.

- | | | | |
|---------------------------------|-------|---|-------|
| 1. NaCl | _____ | 11. $\text{Cu}(\text{NO}_3)_2$ | _____ |
| 2. H_2SO_4 | _____ | 12. KMnO_4 | _____ |
| 3. KNO_3 | _____ | 13. H_2O_2 | _____ |
| 4. CaCl_2 | _____ | 14. H_3PO_4 | _____ |
| 5. C_2H_6 | _____ | 15. $(\text{NH}_4)_3\text{PO}_4$ | _____ |
| 6. $\text{Ba}(\text{OH})_2$ | _____ | 16. Fe_2O_3 | _____ |
| 7. NH_4Br | _____ | 17. $\text{NaC}_2\text{H}_3\text{O}_2$ | _____ |
| 8. $\text{Ca}_3(\text{PO}_4)_2$ | _____ | 18. $\text{Mg}(\text{C}_2\text{H}_3\text{O}_2)_2$ | _____ |
| 9. $\text{Al}_2(\text{SO}_4)_3$ | _____ | 19. Hg_2Cl_2 | _____ |
| 10. $\text{Mg}(\text{NO}_3)_2$ | _____ | 20. K_2SO_3 | _____ |

Simple chemical reactions

Q1. Choose the best answer

1. A chemical formula shows

- a) The number of atoms in a molecule
- b) The number of atoms in an element
- c) The number of atoms in a compound
- d) The number and kinds of atoms in a molecule

2. Which of the following substances consist of two different kinds of atoms chemically combined together?

- a) Fe
- b) KOH
- c) KCl

3. Molecules of an element are made up of

- a) 2 atoms of the same element and 2 atoms of another element
- b) atoms of the same element
- c) atoms of 2 different elements

4. Which of the following instruments can be used to look at atoms?

- a) binoculars
- b) compound microscope
- c) electron microscope

5. These are pure substances

- a) mixtures
- b) elements and compounds
- c) only elements

Q2. Chemical reactions are of different types. Write one word equation for each of the following types of chemical reaction.

i) Combination reaction:

ii) Decomposition reaction:

iii) Combustion reaction;

iv) Which gas is given off when Methane burns in air?

Reversible and irreversible changes

Q1. Choose the best answer.

- 1. Scientific word used for burning is**
 - a) combustion
 - b) compatible
 - c) combustible
- 2. When Magnesium burns in air, it forms a white solid called**
 - a) Magnesium carbonate
 - b) Magnesium oxide
 - c) Magnesium hydroxide
- 3. Natural gas, a fossil fuel is made up mostly of the compound called**
 - a) Carbon dioxide
 - b) methane
 - c) metal
- 4. A chemical reaction in which a substance breaks down into two or more simple substances is called**
 - a) decomposition
 - b) combination
 - c) combustion
- 5. Formation of ice from water is due to**
 - a) Cooling
 - b) Freezing
 - c) Melting

Q2. Differentiate and give examples.

Physical change	Chemical change

Energy resources

Q1. Choose the best answer

- 1. Substances that burn and release energy are called**
 - a) fuels
 - b) fossil fuels
 - c) fossils
- 2. When the air holes of a Bunsen burner are closed it gives out**
 - a) Luminous flame
 - b) Non-luminous flame
 - c) No flame at all
- 3. Crude oil extracted from the ground is a sticky black liquid, different substances are separated from it by a process called**
 - a) decomposition
 - b) distillation
 - c) fractional distillation
- 4. The 3 R's means**
 - a) Read, write, reduce
 - b) Reduce, reuse, recycle
 - c) Road, rail, roam
- 5. To use energy and avoid wasting it is called**
 - a. Conversion of energy
 - b. Conservation of energy
 - c. Diversion of energy

Q2. (a) Name the fossil fuels. Why are they called as non-renewable resources of energy?

(b) Why is the Sun, the main source of almost all the energy resources on the earth?

(c) Describe Geothermal energy.

Electrical circuits

1. In an electrical motor electrical energy is converted into
 - a) Heat and light energy
 - b) Sound and light energy
 - c) Sound and mechanical energy
2. In an electrical bulb, electrical energy is converted into
 - a) Heat and light energy
 - b) light and mechanical energy
3. When a battery is used up and goes "flat" what is used up? Is it
 - a) energy
 - b) voltage
 - c) current
 - d) mass
4. In a parallel circuit when more "resistors" are added, its resistance
 - a) decreases
 - b) increases
 - c) remains the same
5. In a closed circuit electrical current flows from
 - a) negative to positive terminal
 - b) positive to negative terminal
 - c) none of the terminal

Q2. (a) Sarah went out in darkness, she tried to switch on her torch but it did not work. Write the possible faults in her torch, which stopped it from working.

1. _____
2. _____
3. _____
4. _____

(b) Draw a series circuit and a parallel circuit using symbols.

Series circuit

Parallel circuit

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