

The National Orthodox School

Science Worksheet// **Unit 4 /Atoms and molecules**

**Grade: 5 (A+B)**

Name : Date: / 11 / 2023

# **Part A: Structure of an atom**

1. Draw four protons in the nucleus of the atom.

label them with their charge.

1. Draw two neutrons in the nucleus of the atom.
2. Draw two electrons in the first energy level

and label them with their charge.

4. Circle the correct answer.

1- All matter is made up of atoms.

1. True b.False

2. What particle is found in the nucleus and has no charge?

1. Electron
2. Neutron
3. Proton
4. Atom

3. The atomic particle with a negative electrical charge is the .

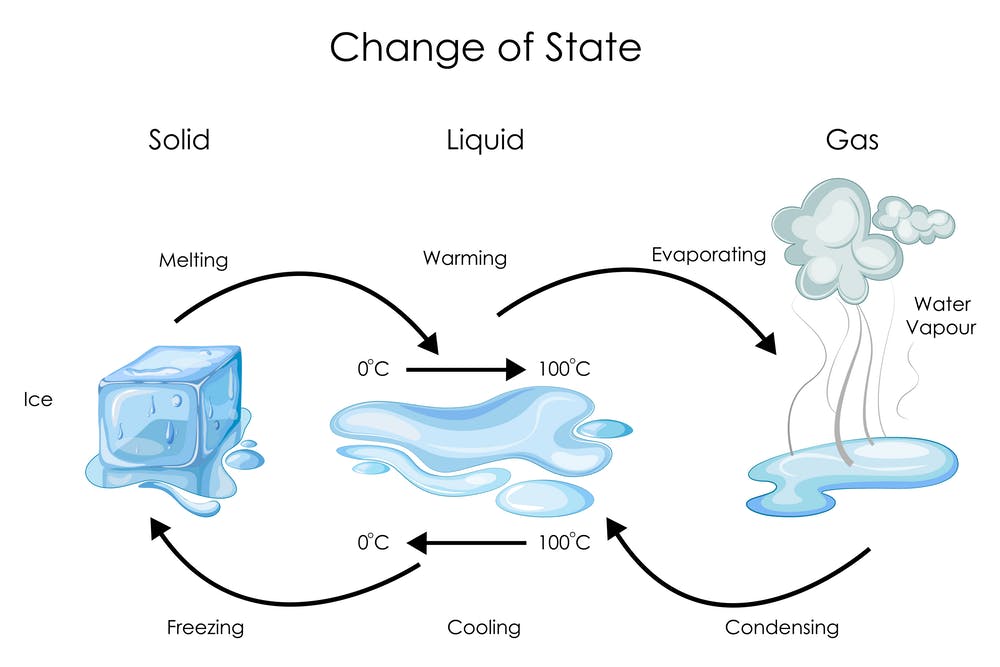
1. proton
2. neutron
3. electron
4. ion

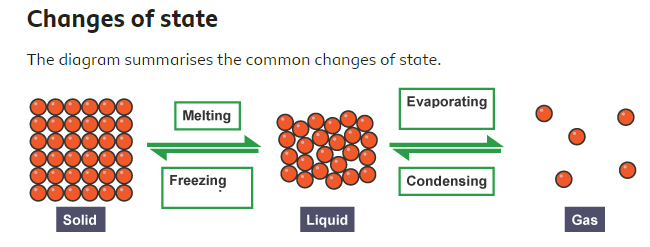
# **Part B: States of matter**

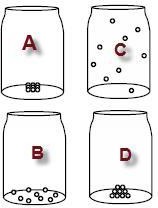
Matter can be found in three forms or states.

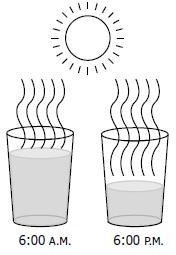
|  |  |  |  |
| --- | --- | --- | --- |
| **Property** | **Solid** | **Liquid** | **Gas** |
| **Shape** | fixed | Don’t have fixed shape | Don’t have fixed shape |
| **Particles arrangement** | Very close to each other.  Particles are tightly packed.  :Screen shot 2013-10-02 at 11.57.25 AM.png | Not very close to each other.  Particles are slightly packed.  :Screen shot 2013-10-02 at 11.57.33 AM.png | Particles are very far away from each other  :Screen shot 2013-10-02 at 11.57.41 AM.png |
| **Movement of molecules** | vibrate | Move around each other and can flow | Move quickly in all directions and spread |
| **Examples** |  |  |  |

* **Matter can change its state by heating or cooling.**





Answer the following questions:-

1. The circles in the bottles represent the same particles of matter. Which pattern of particles represents a gas in a bottle?
2. When an ice cream is left out of a freezer, the ice cream will change from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The process shown would be classified as \_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. A gas has no fixed\_\_\_\_\_\_\_\_\_\_ and no fixed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

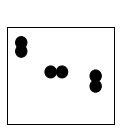
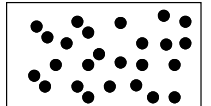
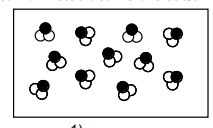
5. Water vapor is water in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ state of matter.

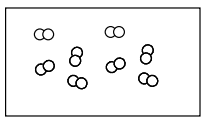
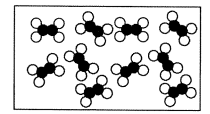
# **Part C: Elements and Compounds**

Remember that an **element** is made up of **only one kind** **of atom**.

A **compound** consists of **two or more elements.**

Classify each of the pictures below by writing **Element** or **Compound**





2- Classify each of the following as elements (E), compounds (C)

\_\_\_\_\_\_\_\_\_\_ Sugar (C6H12O6)

\_\_\_\_\_\_\_\_\_\_ Air

\_\_\_\_\_\_\_\_\_\_ Water (H2O)

\_\_\_\_\_\_\_\_\_\_\_ Iron (Fe)