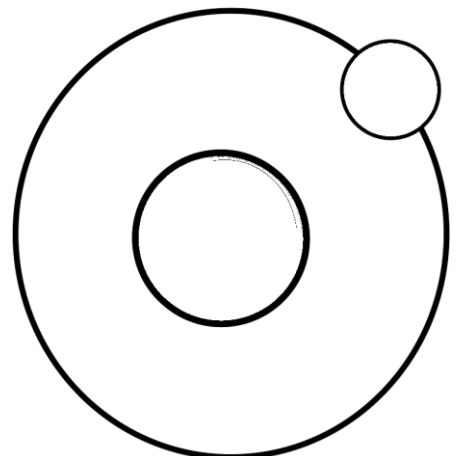
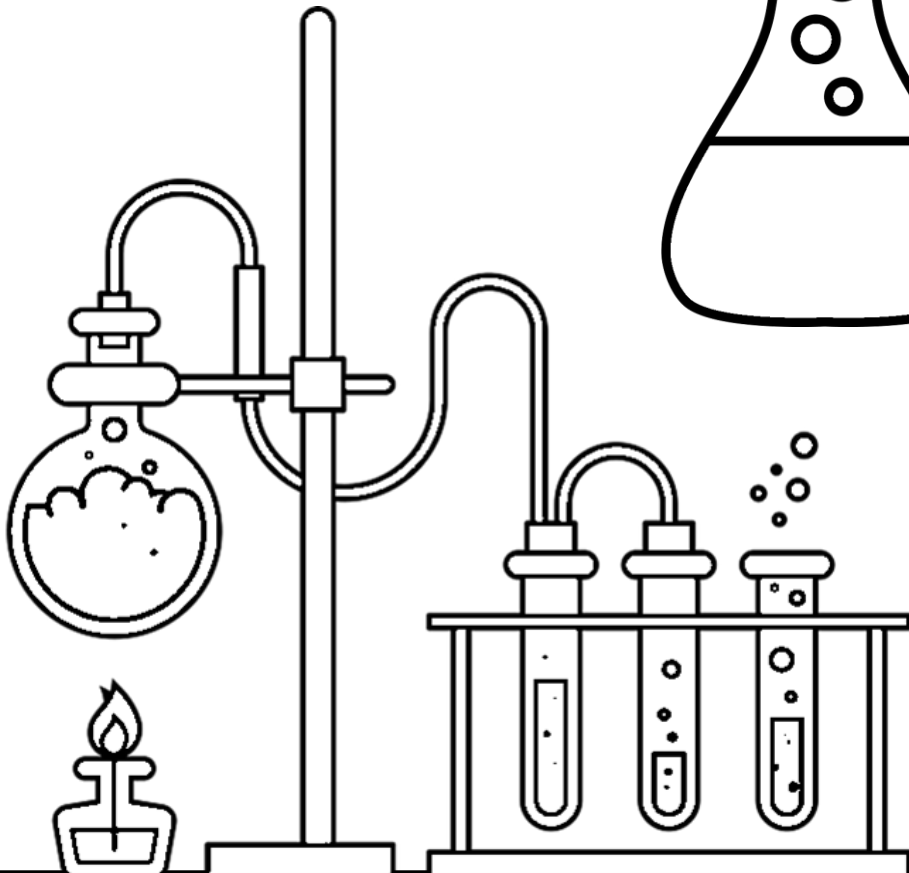
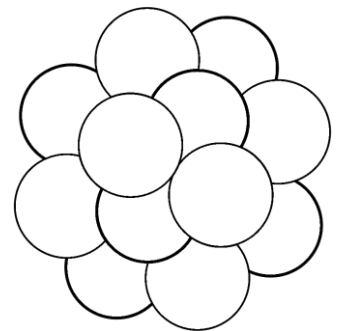
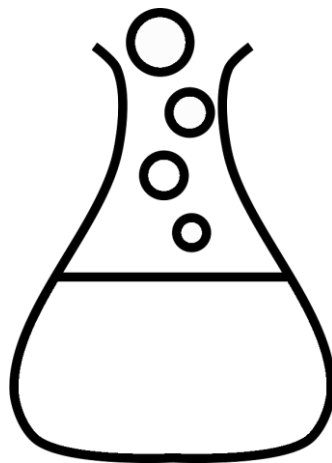
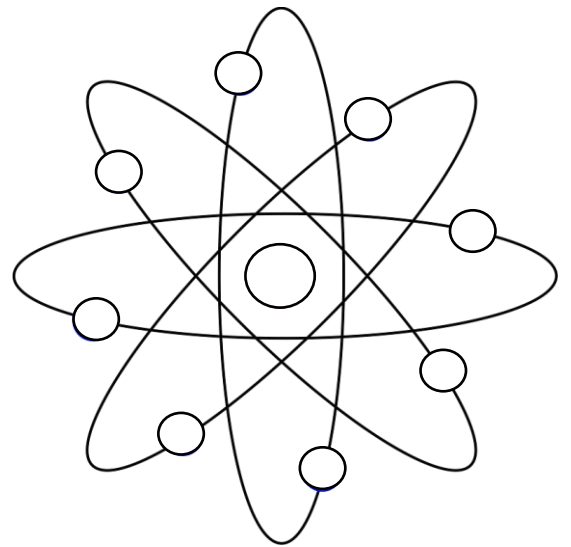
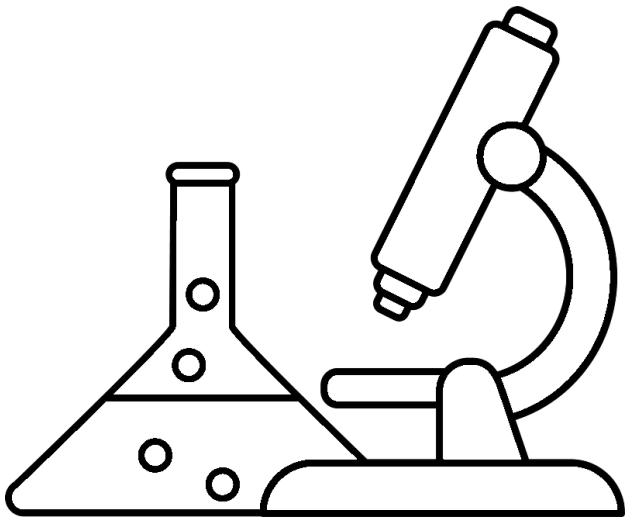


NAME: \_\_\_\_\_

# ELEMENTS AND COMPOUNDS



Name: \_\_\_\_\_

# The Particle Theory Of Matter

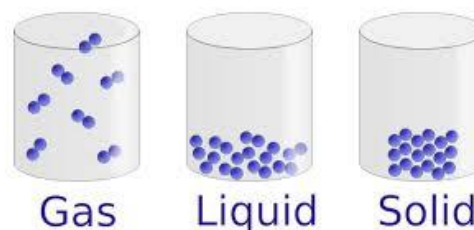
## Matter

Matter is anything that has mass and takes up space. All matter can be classified as either a pure substance or a mixture. All matter is made up of tiny particles. The study of matter and its changes is called chemistry.

## The Particle Theory

Matter can be classified according to its physical characteristics. The particle theory of matter helps to explain the physical characteristics of matter.

1. Everything is made of particles
2. There are spaces between the particles
3. Particles are attracted to each other
4. Temperature affects the speed at which particles move
5. Particles are always moving because they have kinetic energy
6. There are different kinds of particles, but all particles of one substance are identical

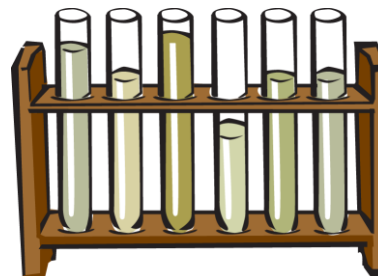


## Solids

In solid form particles are close together. The particles are very strongly attracted to each other. They are locked in a pattern and vibrate in place. Solids have a fixed shape and volume. The spaces between the particles are small.

## Liquids

In liquid form, particles are slightly farther apart. Particles are less attracted to each other and are able to slide past each other. The spaces between the particles are larger than in a solid.



## Gas

In gas form, particles are far apart and can move in any direction because the attraction forces between them are weak. Gases have no fixed shape and no fixed volume. They expand to fill their container.

Name: \_\_\_\_\_

7

# Particle Theory Questions

## True or False

Circle whether the statement is true or false

1) All matter is made of particles	True	False
2) Temperature affects how fast particles move	True	False
3) In solid matter, particles are further apart	True	False
4) When matter heats up, the atoms move slower	True	False
5) In gases, the particles expand and fill their container	True	False

## Questioning

What questions do you have after reading the information?

1)	
2)	
3)	

## Explain

List the properties of each state of matter

State of Matter	Properties of the State of Matter
Solid	
Liquid	
Gas	

# Particle Theory

## Particle Theory

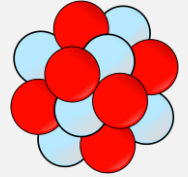
The **particle theory** states that all matter is made up of tiny particles that are constantly moving. The speed the particles move depends on which state of matter they are in.

### Solids

Particles in solids are held tightly together. They are strongly attracted to each other, meaning they move slowly. These particles vibrate instead of move, but they are not still.

### Liquids

Particles in liquids are fairly close together with some attraction between them. They move around in all directions, but they can't move too far because they are attracted to the particles near them.

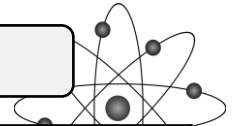


### Gases

Particles in gases have hardly any attraction between them. They move rapidly in all directions. They collide with each other and the walls of the container they are in.

## Fill in the Blanks

Fill in the blanks using words from the word bank



### Word Bank

Small	Particles	State	Moving	Matter
Gas	Solid	Liquid	Stronger	Weakest

All things we can touch are made up of \_\_\_\_\_. Particles are \_\_\_\_\_ compounds that make up \_\_\_\_\_. The particle theory states that small particles are \_\_\_\_\_ constantly. They move faster based on which \_\_\_\_\_ of matter they are in. Particles in \_\_\_\_\_ have the strongest attraction and particles in \_\_\_\_\_ have the \_\_\_\_\_. Particles in \_\_\_\_\_ are fairly close together. The \_\_\_\_\_ the attraction, the less the particles will move, like in solids.

## Part 2

Add particles (dots) to the beakers to represent which state of matter it is



Gas



Liquid



Solid