

HOÀNG THỊ LÂM DUNG – TRẦN THỊ LAN

STEAM SERIES FUN WITH SCIENCE



NHÀ XUẤT BẢN GIÁO DỤC VIỆT NAM

5

UNIT 1

STATES OF MATTER

Let's learn!



I. Listen, point and read.   

matter

things that have mass
and occupy space

non-matter

energy and abstract concepts

Living things

matter

Non-living things



human



flower



giraffe



water



ring



bottle

Non-matter



sound



reflection



energy



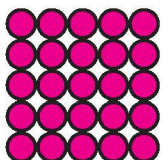
shadow

Matter is made of tiny particles and can exist as:



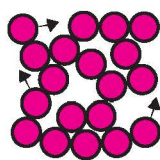
Solid

closely packed
and arranged in a
regular pattern,
stable and not
move much



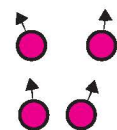
Liquid

closely packed and
not arranged in a
regular pattern, move
freely



Gas

loosely packed
and far apart,
move freely



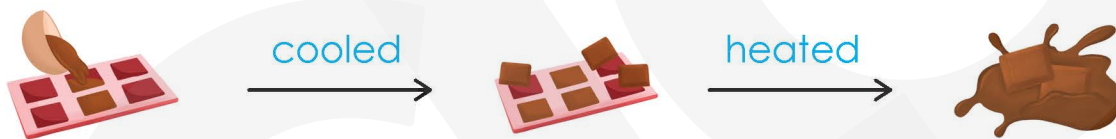
States of matter	Properties of particles	Example
Solid	a definite shape a definite volume	ice, glass, pencil, coin
Liquid	no definite shape a definite volume	milk, juice, oil, glue, water, rain
Gas	no definite shape no definite volume	smoke, tornado, steam, carbon dioxide, fume

II. Listen and read.

Transformation of states of matter

When things are heated or cooled, they will change their original states into other temporary or permanent states of matter.

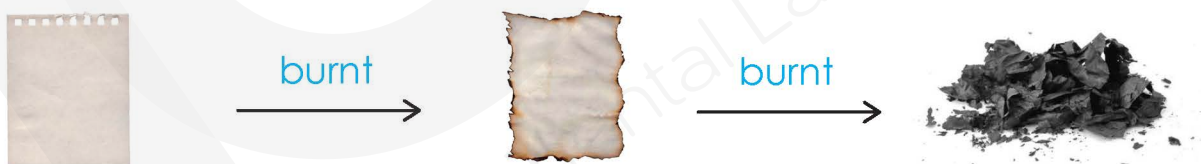
Example: Temporary change of chocolate.



Temporary change of water.



Permanent change of paper.



Let's practice!

I. Tick (✓) in the box.

Example:



matter



non-matter

1.



matter



non-matter

2.



matter



non-matter

3.



matter



non-matter

II. Write solid/ liquid/ gas in the box.



Example:



gas

1.



2.



3.



III. Circle the correct transformation of the matter and write "heated" or "cooled".

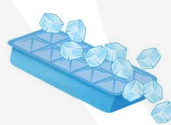
A B



Example:



cooled



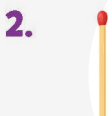
A. temporary

B. permanent



A. temporary

B. permanent



A. temporary

B. permanent



A. temporary

B. permanent

Hands-on activity!



COLOR PATTERN IN MELTING ICE



Step 1: Add some drops of food coloring into a cup of water.



Step 2: Place 2 ice balls on 2 plates.

Step 3: Sprinkle some salt on an ice ball and use a dropper to add some drops of colored water on the salt. Repeat this process 4 times. Leave the other ice ball untouched.



Step 4: Observe how the ice balls melted and answer questions in the handout.

Hold the flashlight behind the ice balls to see the melting pattern light up.

Let's memorize!

- Matter is anything that **has mass** and **occupies space**.
- Matter is made of **tiny particles**.
- There are three states of matter: solid, liquid and gas.
 - Solid has definite shape and volume.
 - Liquid has no definite shape and a definite volume.
 - Gas has no definite shape and volume.
- When things are heated or cooled, they will change their original state into other **temporary** or **permanent states of matter**.