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DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for Science

Quarter 1

Lesson

3

Learning Activity Sheet for Science 7
Quarter 1: Lesson 3 (Week 3)
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LEARNING ACTIVITY SHEET 1

Learning Area:	Science	**Quarter:**	1
Lesson No.:	1	**Date:**	
Lesson Title/ Topic:	**States of Matter and Particle Arrangement through Diagrams**		
Name:		**Grade & Section:**	

I. Activity No. 1: Express it Out! (20 minutes)

II. Objective(s):

a. Develop a deeper understanding of particle arrangement and movement in different states of matter (solid, liquid, gas) through various ways of expression.

III. Materials Needed:

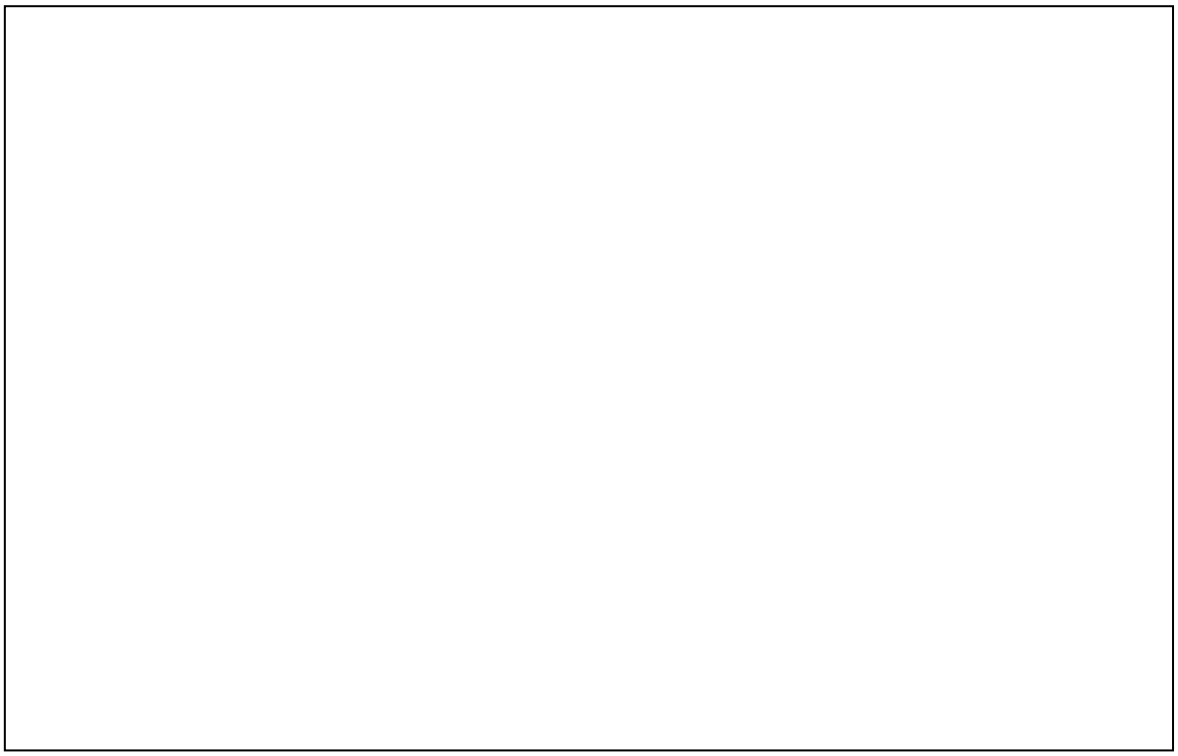
a. Pencils
b. Colored pencils or markers (optional)
c. Drawing paper

IV. Instructions:

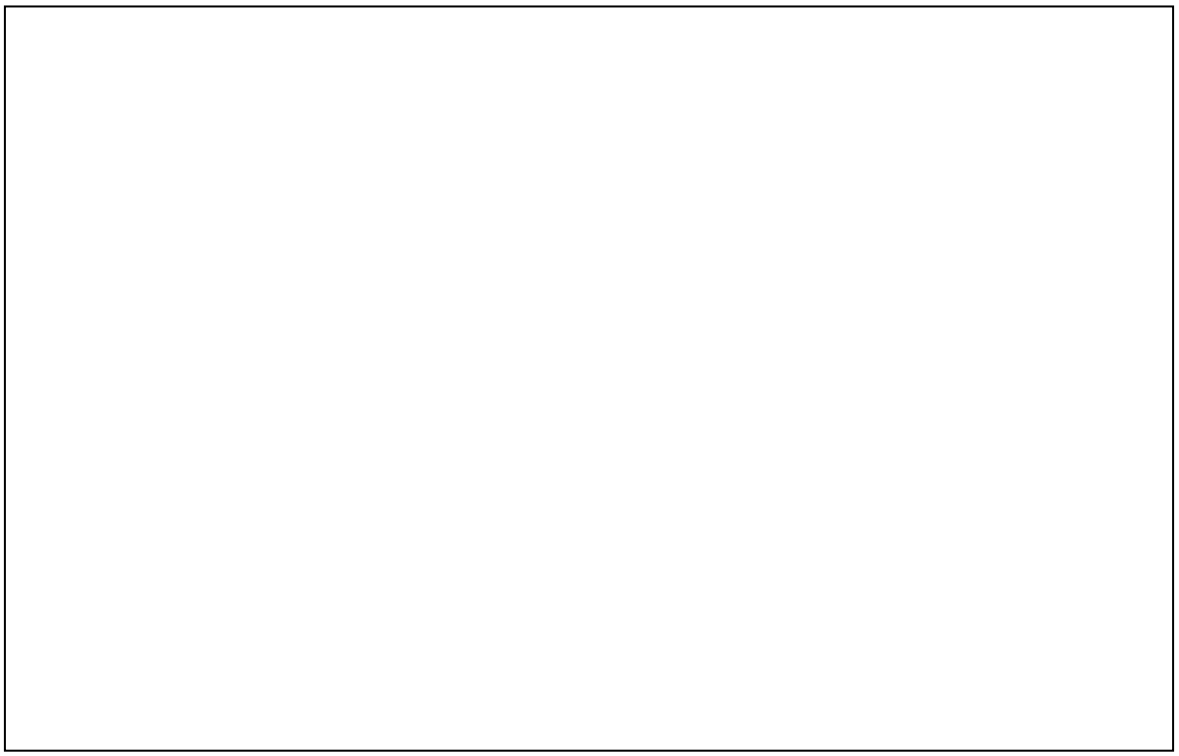
Part 1. Draw it out!
For each state of matter, create a drawing that uses an analogy to represent the arrangement and movement of particles. For example, for solids, think of a crowded place where people are packed close together with limited movement.

A. Solid

B. Liquid



c. Gas



Part 2. Reflecting on the Analogy

How does your analogy scene represent the way particles are arranged in that state of matter?

A. Solid

B. Liquid

C. Gas

V. Extended Practice:

Think of what happens to a gas if you further increase the temperature. Are you familiar with plasma? How can you create a plasma? What do you call the process of making plasma? Write your answer below.

LEARNING ACTIVITY SHEET 2

Learning Area:	Science	**Quarter:**	1
Lesson No.:	2	**Date:**	
Lesson Title/ Topic:	**Changes of State: Solid to Liquid to Gas**		
Name:		**Grade & Section:**	

I. Activity No. 2: Melting and Evaporation in Focus! (15 minutes)

II. Objective(s):

a. Observe wax and water undergoing a transition from a solid to a liquid state as they melt and evaporate under heat.
b. Demonstrate understanding of phase change specifically from solid → liquid → gas.

III. Materials Needed:

- Paraffin wax (or any other type of wax)
- Heat-resistant container or saucepan
- Heat source (e.g., stove or hot plate)
- Water
- Safety goggles
- Gloves (optional, but recommended for handling hot objects)

IV. Instructions:

Part A. Observing Melting and Evaporation

Melting Demonstration

1. Place a small amount of paraffin wax in a heat-resistant container or saucepan.
2. Heat the container over a heat source (e.g., stove or hot plate) and observe as the wax begins to melt.

Evaporation Observation

1. Pour a small amount of water into a shallow dish or tray.
2. Place the dish in a well-ventilated area or near a window.
3. Observe and feel as the water slowly evaporates over time, forming water vapor in the air.

Observations:

Melting (Include your hypothesis on how melting happened)

Evaporations (Include your hypothesis on how evaporation happened)

Part B.

1. Think of another example of melting and evaporation happening every day. Explain how it happens.

    a. Melting

    _____

    _____

    _____

    _____

    b. Evaporation

    _____

    _____

    _____

    _____

2. Through a diagram or illustration, show the process of melting and evaporation.

V. Extended Practice

List down applications of melting and evaporation. Explain how these processes help us in our daily lives.

- **Melting**

- **Evaporation**

LEARNING ACTIVITY SHEET 3

Learning Area:	Science	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	**Changes of State: Gas to Liquid to Solid**		
Name:		**Grade & Section:**	

I. Activity No. 3: Condensation and Freezing in Focus! (25 minutes)

II. Objective(s):

a. Observing the process of melting ice cubes when subjected to a heat source.
b. Witnessing the freezing of liquid water into ice when exposed to cold temperatures.

III. Materials Needed:

- Ice cubes
- Tray or container
- Freezer or cold environment (for freezing)
- Hot Liquid water
- Shallow container with lid
- Safety precautions (such as gloves for handling cold and hot objects)

IV. Instructions:

Part A: Freezing

1. Observe the liquid water and ice cubes placed side by side in the freezer/cold environment.

2. Notice the differences between the two states of water.

Answer these questions:

1. Discuss the process of freezing and how it transforms liquid water into solid ice. Write answers below.

2. Write down or draw the change that happens as liquid water turns into ice.

Part B. Condensation

1. Prepare a shallow dish or tray filled with hot/warm water.
2. Place the dish in a cool area or near a window where condensation is likely to occur.
3. Cover the tray/dish.
4. Ensure safety precautions are followed, such as handling hot water with care.
5. Watch as the warm water begins to evaporate, releasing water vapor into the air.
6. Note the gradual buildup of water droplets on the lid.

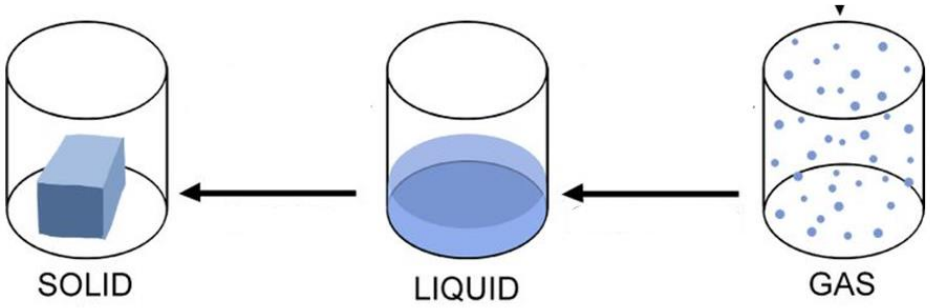
Answer these questions:

1. Talk about how condensation occurs when warm, moist air meets cooler surfaces. Explain how this leads to the formation of water droplets on those surfaces.

2. Consider the role of temperature in condensation and how it affects the transition of water vapor into liquid droplets.

Part C. Concept of Freezing and Condensation

I. Complete the illustration below. Write the phase change term above the arrow.



II. List down 3 examples of or instances of freezing and condensation in the environment.

1. Freezing
    1. _____
    2. _____
    3. _____

2. Condensation
    1. _____
    2. _____
    3. _____

V. Synthesis/Extended Practice/Differentiation (if needed):

Imagine a roadmap that shows steps in a process. A flowchart uses boxes and arrows to visually represent these steps. It helps us understand how things happen, one step at a time.

Building Your Flowchart:

You'll need a piece of paper, a pencil.

1. Start with the Cause: Draw a box at the top of your paper (on the next page) and label it "Cold Object (ice, cold can)". This is what triggers the whole process.
2. The Chilling Effect: Draw an arrow pointing downwards from the "Cold Object" box. Label the next box "Lowers Temperature of Surrounding Air". This shows how the cold object cools down the air around it.
3. Branching Out: Now comes the exciting part! From the "Lowers Temperature of Surrounding Air" box, draw two separate arrows.
4. Freezing: For one arrow, draw a box at the end and label it "Freezing (liquid to solid)". This path shows what happens if the cold object is a liquid (like water). The lower temperature causes it to freeze and turn into a solid (like ice).
5. Condensation: For the other arrow, draw a different box at the end and label it "Condensation (water vapor to liquid)". This path shows what happens if there's moisture (water vapor) in the surrounding air. The cold air makes the water vapor condense, changing from a gas to a liquid, which forms those tiny water droplets we see as fog!

   * You may use different colors for the arrows to distinguish the freezing and condensation paths.
6. Discuss your flow chart.

Your flow chart here:

Discussion of flow chart: