

Lesson Plan

Teacher: Altair Marie T. Maculas

Name of School: Sd Harapan Prestasi

I. Objectives

General:

- At the end of the term, the student is expected to understand the Particle Theory and its relationship to the Properties of Matter and Changes of State.

Specific Objectives

At the end of the lesson, the student is expected to:

- Comprehend the properties of solids, liquids, and gases.
- Sort out the different states of substance along with the different physical properties.
- Integrate the arrangement of motion of the particles change.

II. Subject Matter Class: Grade 8 Strength:

a) Roll:

b) Present:

Date: September 1, 2023

Period: 9:00-9:40 AM

Duration: 40 min

Subject: Particle Theory: Properties and States of Matter

Unit: IV Chapter 4.2

Topic: How Does the Particle Theory Explain the Properties of Matter and the Changes of State?

References:

- Ho, P. L. (2020). *Science Ahead International: Lower Secondary Student Book*. Marshall Cavendish Education.
- I am Mr. Mood. (2019, Jun 6) *Solid, Liquid, Gas (States of Matter Song)*. [Video]. YouTube. <https://youtu.be/tmdWY-SMnwc?si=ZHbAeEGvF50M-NIz>
- Learning Junction. (2020, May 29) *States of Matter Video for kids| Four states of matter | Bose-Einstein condensates |*. [Video]. YouTube. <https://youtu.be/8zrbvWgJk?si=tFiG26NazTf9yUPX>
- Let's Talk Science. (2020, December 14). *Introduction to the Particle Theory of Matter*. Website. <https://www.canva.com/design/DAFs7QL1O8w/Ak5qwUbk35Bo3mqaxNa2bw/edit>
- RUMPUS! (2023, January 12) *SCIENCE KS2 - States of Matter - Freezing & Melting*. [Video]. YouTube. <https://youtu.be/-22MBCKD-I0?si=wR2wpKi2Z6bgmxCG>

Learning Competencies: The student is expected to understand the Particle Theory and its relationship to the Properties of Matter and Changes of State.

III. Teaching Aids

- PowerPoint Presentation
- Projector Screen
- Extension Cord
- Speakers
- Projector

Materials Needed

- Student Nametags
- Prizes for Recitation
- Rock or anything solid
- Water Bottle with water
- A balloon (transparent if possible)

IV. Introduction

The Particle Theory of Matter assists us in understanding how matter behaves. It also helps us understand why various types of matter have varied characteristics. It contains several essential concepts:

Everything is made up of small particles. These particles are either single atoms or groupings of atoms known as molecules.

Tr: How does the Particle Theory Explain the Properties of Matter and the Changes of State?

St: Me, Miss!

Tr: Very good. Care to explain?

How does the Particle Theory Explain the Properties of Matter and the Changes of State?

V. Methodology

Specifications	Content	Learning Experience	Evaluation
Preparation	Greetings, Prayer, Attendance	Tr. Greetings, Grade 8! Let us start our day, with a prayer. Teacher picks a student to lead the prayer. Tr. How is everyone today? As I check your attendance, instead of saying present, give an emotion (only one) that represents what you're feeling today.	
Review	Previous Lesson: Particle Theory	Tr. What are the properties of solids, liquids, and gases? Anyone? St. I do! Tr. Very well, give one example.	
Motivation	Solid, Liquid, Gas (States of Matter Song)	Tr. Moving on, is everyone up for another lesson? Another day of learning! But, before that, it's rap time! Solid, Liquid, Gas (States of Matter Song): https://youtu.be/tmdWY-SMnwc?si=Z9fGXcfioIPx dnEw Tr. Now that we have a gist of what we're	

		going to discuss about...	
Recalls	Solid, Liquid, Gas Table	Tr. But first, let us watch a video about the said topic. Teacher plays the video: https://youtu.be/8zrbvxWgJk?si=4G43l8FAhfelbfP6 Teacher shows the table of the States of Matter and compares. Tr. What do you observe?	Recitation
Discussion	Properties of Solids, Liquids and Gases	Tr. The table shows the particles in solids, liquids, and gases are arranged differently and move differently. These explain why different states of a substance have different physical properties, even though the particles are of the same type.	Learners listen after each explanation.
Recalls/Interprets	What Happens to Particles During Changes of State	Tr. When matter changes state, does the type or size of the particles change? Teacher makes the students recite, taking note of their answers. Tr. Very well then...let me show you a video depicting the Four States of Matter. I will be discussing the 1st two, which is melting and freezing. Teacher makes the students watch a video: https://youtu.be/-22MBckD-I0?si=9YGObQ1miGozl1oJTr.	Recitation, let students point at each nucleotide

Generalization	Melting and Freezing	Tr. When a solid is heated the particles gain energy and vibrate faster. On further heating, the particles gain more energy. The attractive forces between them are unable to hold them together in fixed positions. The particles are no longer in their fixed positions. The solid had changed into a liquid. This process is called, melting. Tr. When a liquid is cooled, the particles lose energy and move closer. Furthermore, cooling the particles lose more energy and move closer together. The attractive forces between them become stronger as they come closer. The attractive forces between particles are strong enough to hold them in fixed positions. The liquid has changed into a solid. This process is called freezing.	Learners listen after each explanation.
Application	Melting and Freezing	The students will be playing a game called (they will be divided into three groups, 3:4:3), "Melting or Freezing" The Teacher will flash questions on the screen, while the students guess if it involves Melting or Freezing.	Recitation

Evaluation	Particle Theory Explain the Properties of Matter and the Changes of State: Going Back to the Objectives	Tr. To evaluate your learnings, all of you should know how to... Teacher presents the same Solid, Liquid, Gas Table, except, some parts are left blank. The students will be answering via gmail (sending it to their teacher), make sure to number it 1-10. The last three items will be for the essay part, answering, "What is the difference of Freezing and Melting?" Both will be submitted to the teacher's gmail.	
Assignment	Task: Have an advance reading for the next topic: Boiling and Condensation		

