Introduction to Properties of Matter Assessment

Student Name: _____	**Class:** _____
Student ID: _____	**Date:** _____

Assessment Details

Duration: 45 minutes	**Total Marks:** 100
Topics Covered:	• Properties of Solids, Liquids, and Gases • States of Matter • Everyday Objects in Each State of Matter

Instructions to Students:

1. Read all questions carefully before attempting.
2. Show all working out - marks are awarded for method.
3. Write your answers in the spaces provided.
4. If you need more space, use the additional pages at the end.
5. Time management is crucial - allocate approximately 1 minute per mark.

Section A: Multiple Choice Questions [20 marks]

Question 1 **[2 marks]**

What is the main characteristic that distinguishes a solid from a liquid?

A) Shape

B) Volume

C) Weight

D) Color

Question 2 **[2 marks]**

Which of the following is an example of a gas?

A) Water

B) Air

C) Chair

D) Book

Question 3 **[2 marks]**

What happens to the particles of a substance when it changes from a solid to a liquid?

A) They get closer together

B) They stay the same distance apart

C) They move farther apart

D) They disappear

Section B: Short Answer Questions [40 marks]

Question 4 **[8 marks]**

Describe the main differences between a solid and a liquid. Provide an example of each.

Question 5 **[8 marks]**

Explain why a gas can fill a container, but a solid cannot.

Section C: Diagram Labeling [10 marks]

Question 6 **[10 marks]**

Label the different parts of the diagram below.

Section D: Sorting Activity [30 marks]

Question 7 **[30 marks]**

Sort the following objects into three categories: solid, liquid, and gas.

- Water
- Air
- Chair
- Book
- Oil
- Helium

Solid	Liquid	Gas

Marking Guide

Section 1: Multiple Choice Questions

- Question 1: 2 marks
- Question 2: 2 marks
- Question 3: 2 marks

Section 2: Short Answer Questions

- Question 4: 8 marks
- Question 5: 8 marks

Section 3: Diagram Labeling

- Question 6: 10 marks

Section 4: Sorting Activity

- Question 7: 30 marks

Implementation Guidelines

The assessment will be administered in a 45-minute class period. The teacher will introduce the assessment and explain the instructions for each section. The students will then complete each section, and the teacher will collect the assessments at the end of the class period.

Differentiation Options

To cater to diverse learners, the following differentiation options can be implemented:

- For students with learning difficulties: Provide extra time to complete the assessment, offer one-on-one assistance during the assessment, and use visual aids to support the diagram labeling and sorting activity sections.
- For English language learners: Provide a word bank with key vocabulary related to the properties of matter, offer a graphic organizer to help students organize their thoughts during the short answer questions, and allow students to use a dictionary or online resources to look up unfamiliar words.
- For gifted and talented students: Provide additional challenges, such as asking students to design an experiment to demonstrate the properties of a specific state of matter, offer a more complex sorting activity, and encourage students to research and present on a real-world application of the properties of matter.

Bloom's Taxonomy Alignment

The assessment is aligned with Bloom's Taxonomy, as it requires students to:

- Remember: Recall the basic properties of solids, liquids, and gases
- Understand: Explain the differences between states of matter
- Apply: Identify and describe everyday objects in each state of matter
- Analyze: Sort objects into categories based on their properties
- Evaluate: Justify their answers and provide examples to support their reasoning

Multiple Intelligence Approaches

The assessment incorporates multiple intelligence approaches, including:

- Visual-Spatial: Diagram labeling and sorting activity
- Linguistic: Short answer questions and multiple choice questions
- Logical-Mathematical: Sorting activity and multiple choice questions
- Interpersonal: Students can work in pairs or small groups to complete the sorting activity

Clear Success Criteria

The success criteria for this assessment include:

- Students can identify and describe the basic properties of solids, liquids, and gases
- Students can explain the differences between states of matter
- Students can recognize and provide examples of everyday objects in each state of matter
- Students can apply their knowledge to real-world situations

Evidence Collection Methods

The assessment will provide evidence of student learning through:

- Multiple choice questions
- Short answer questions
- Diagram labeling
- Sorting activity

Feedback Opportunities

The assessment provides opportunities for feedback, including:

- Immediate feedback during the assessment, such as checking answers and providing guidance
- Feedback after the assessment, such as reviewing student work and providing comments
- Feedback during future lessons, such as using the assessment results to inform instruction and adjust the curriculum as needed