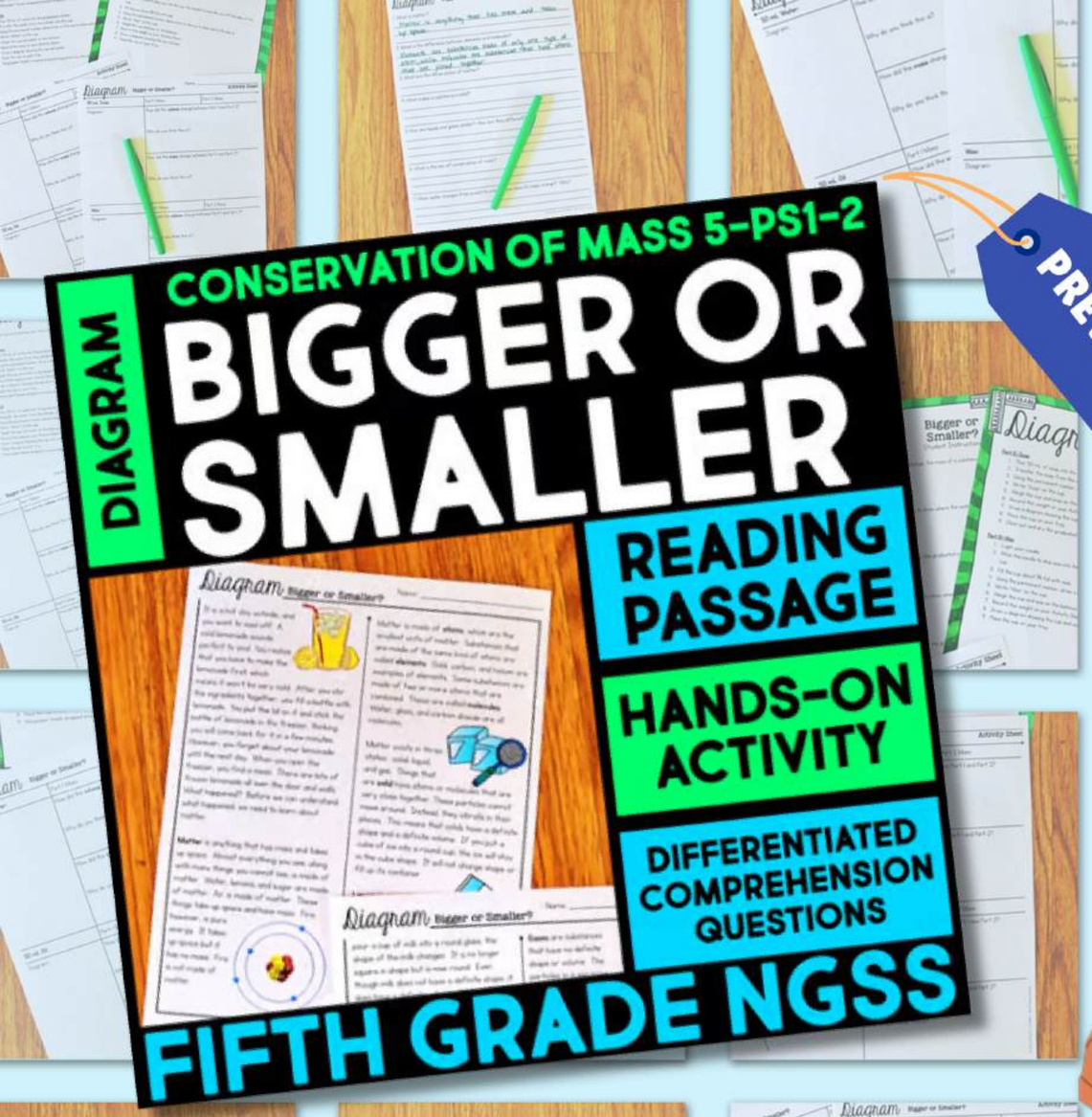


From Solid to Liquid to Gas—
What Really Happens?

5TH GRADE

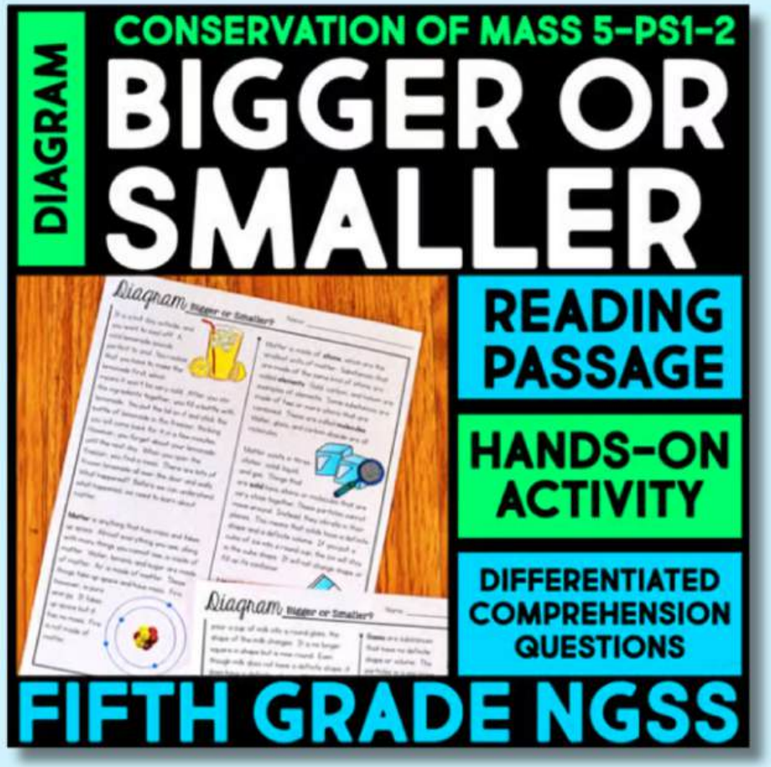
DIAGRAM

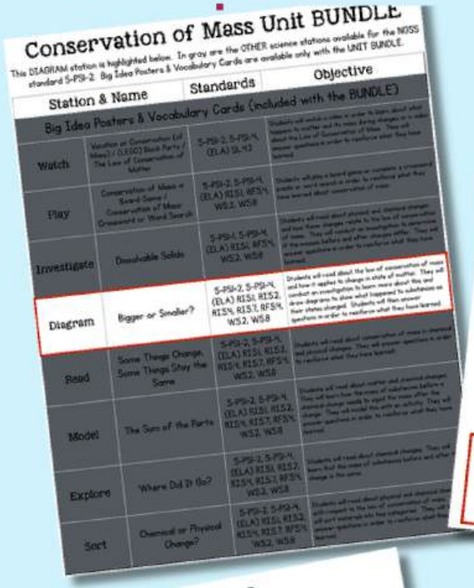
BIGGER OR SMALLER

CONSERVATION OF MASS

KEEP SCROLLING TO SEE WHAT'S INSIDE!

ACTIVITY OVERVIEW




Conservation of Mass Unit BUNDLE

This DIAGRAM station is highlighted below. In gray are the OTHER science stations available for the NGSS standard 5-PS1-2 Big Idea Posters & Vocabulary Cards are available only with the UNIT BUNDLE.

Station & Name	Standards	Objective
Big Idea Posters & Vocabulary Cards (included with the BUNDLE)		
Watch — Matter and Its Interactions (at Mesa) / (LEGO) Block Party / The Law of Conservation of Matter	5-PS1-2, 5-PS1-4, (ELA) SL.4.5	
Play — Conservation of Mass a Board Game / Conservation of Mass Crossword or Word Search	5-PS1-2, 5-PS1-4, (ELA) RI.5.1, RF.5.4, W.5.2, W.5.8	
Investigate — Dissolvable Solids	5-PS1-3, 5-PS1-4, (ELA) RI.5.1, RF.5.4, W.5.2, W.5.8	
Diagram — Bigger or Smaller?	5-PS1-2, 5-PS1-4, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about the law of conservation of mass and how it applies to change in state of matter. They will conduct an investigation to learn more about this and draw diagrams to show what happened to substances as their states changed. Students will then answer questions in order to reinforce what they have learned.
Read — Some Things Change, Some Things Stay the Same	5-PS1-2, 5-PS1-4, (ELA) RI.5.1, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about conservation of mass in chemical and physical changes. They will answer questions in order to reinforce what they have learned.
Model — The Sum of the Parts	5-PS1-2, 5-PS1-4, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about matter and chemical changes. They will learn how the mass of substances before a chemical change needs to equal the mass after the change. They will model this with an activity. They will answer questions in order to reinforce what they have learned.
Explore — Where Did It Go?	5-PS1-2, 5-PS1-4, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about chemical changes. They will learn that the mass of substances before and after a change is the same.
Sort — Chemical or Physical Change?	5-PS1-2, 5-PS1-4, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about physical and chemical changes. They will research to learn the law of conservation of matter and sort materials into their categories. They will answer questions in order to reinforce what they have learned.


Science Stations Overview

This is a general overview of all science stations in each UNIT BUNDLE.

Watch a Video
At this station, students will watch a video relevant to the topic and answer questions. You have the option of using the included worksheet with questions or using the task cards and having students respond in their science journals.

Read a Passage
Students read a short passage about the topic and answer questions about the information in the passage. You have the option of using the included worksheet with questions or using the task cards and having students respond in their science journals.

Play a Video Game
Students play a game and answer questions about the experience. You have the option of using the included worksheet with questions or using the task cards and having students respond in their science journals.

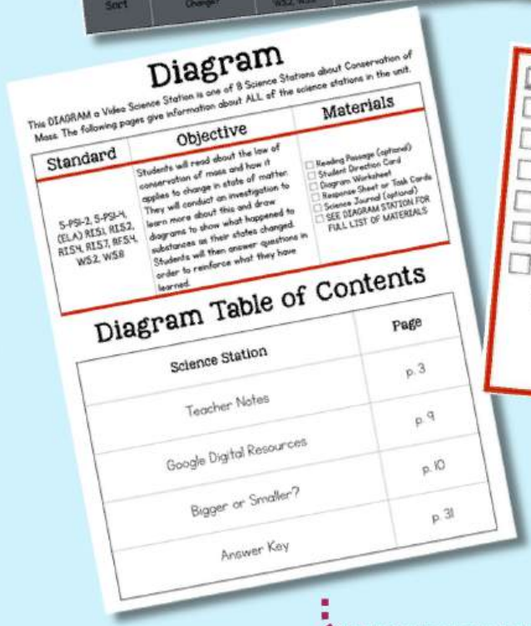
Create a Model
Students use materials to illustrate the science concept and answer questions. You have the option of using the included worksheet with questions or using the task cards and having students respond in their science journals.

Investigate
Students use materials to investigate the science topic by following directions and recording results. Students answer questions about the investigation.

Explore
Students create a sample and manipulate it using the new science concepts they have learned. Students answer questions based on the effects.

Draw a Diagram
Students draw and label a diagram specific to certain requirements. Students then explain how their diagram meets the requirements.

Sort
Students sort cards into groups or put them in a specific order. Students record the sort and then describe their reasoning.


Diagram

This DIAGRAM a Video Science Station is one of 8 Science Stations about Conservation of Mass. The following pages give information about ALL of the science stations in the unit.

Standard	Objective	Materials
5-PS1-2, 5-PS1-4, (ELA) RI.5.1, RI.5.2, RI.5.4, RI.5.7, RF.5.4, W.5.2, W.5.8	Students will read about the law of conservation of mass and how it applies to change in state of matter. They will conduct an investigation to learn more about this and draw diagrams to show what happened to substances as their states changed. Students will then answer questions in order to reinforce what they have learned.	☐ Reading Passage (optional) ☐ Student Direction Card ☐ Diagram Worksheet ☐ Response Sheet or Task Cards ☐ Science Journal (optional) ☐ SEE DIAGRAM STATION FOR FULL LIST OF MATERIALS

Diagram Table of Contents

Science Station	Page
Teacher Notes	p. 3
Google Digital Resources	p. 9
Bigger or Smaller?	p. 10
Answer Key	p. 31

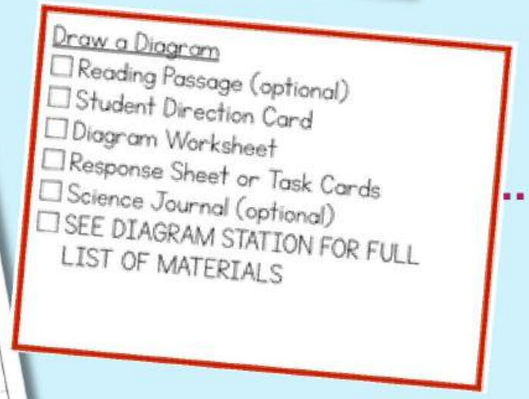

Draw a Diagram
- ☐ Reading Passage (optional)
- ☐ Student Direction Card
- ☐ Diagram Worksheet
- ☐ Response Sheet or Task Cards
- ☐ Science Journal (optional)
- ☐ SEE DIAGRAM STATION FOR FULL LIST OF MATERIALS

Table of Contents

Science Station Overview

Materials Checklist

Table of Contents / Teacher's Notes

WHAT'S INCLUDED
DIAGRAM SCIENCE STATION

- Teacher Notes
- **Student Text** in two formats
- Student **Instructions**
- **Activity Sheets** for observation
- Differentiated **Questions**
- Answer Key
- Google Form™
- Google Slides™

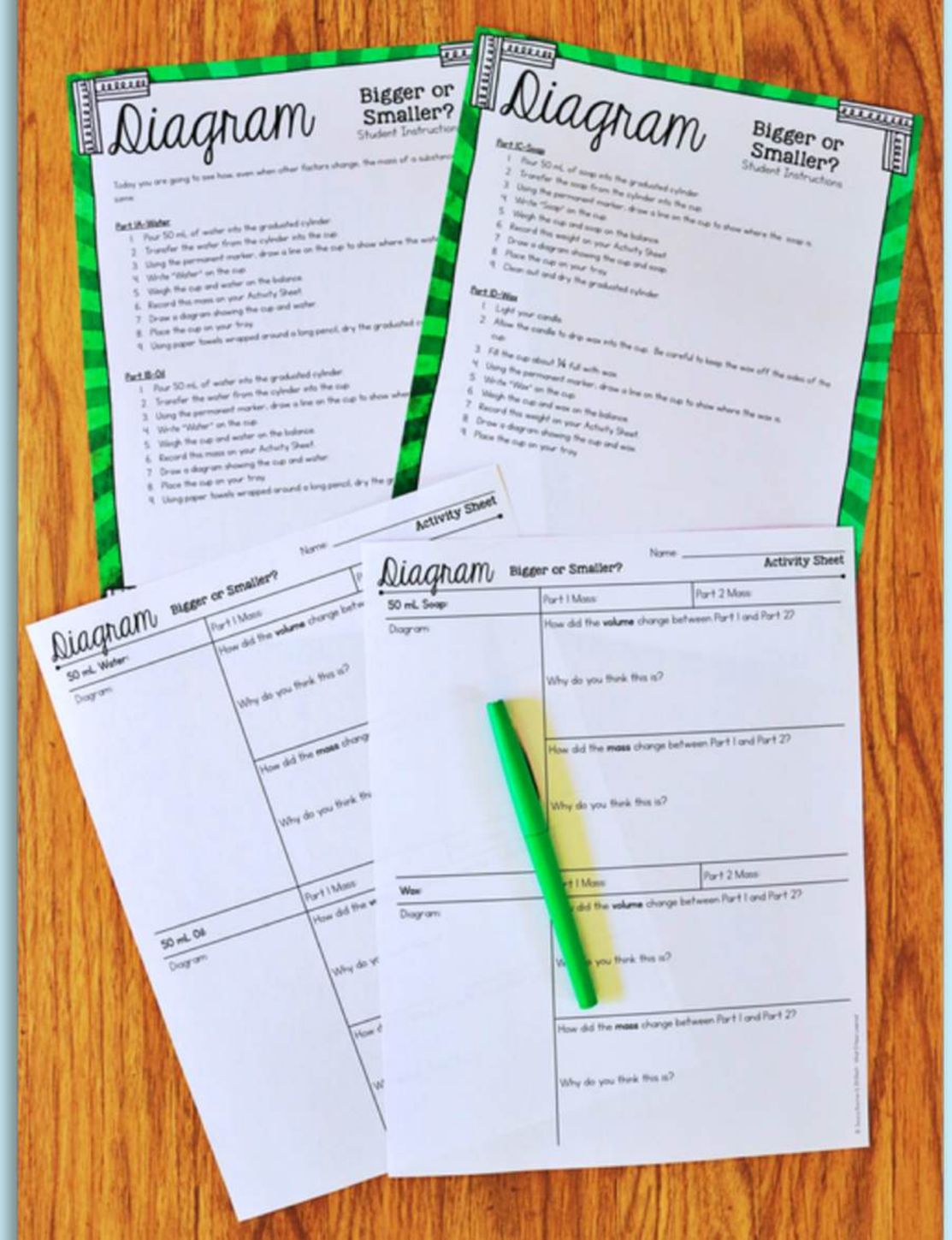
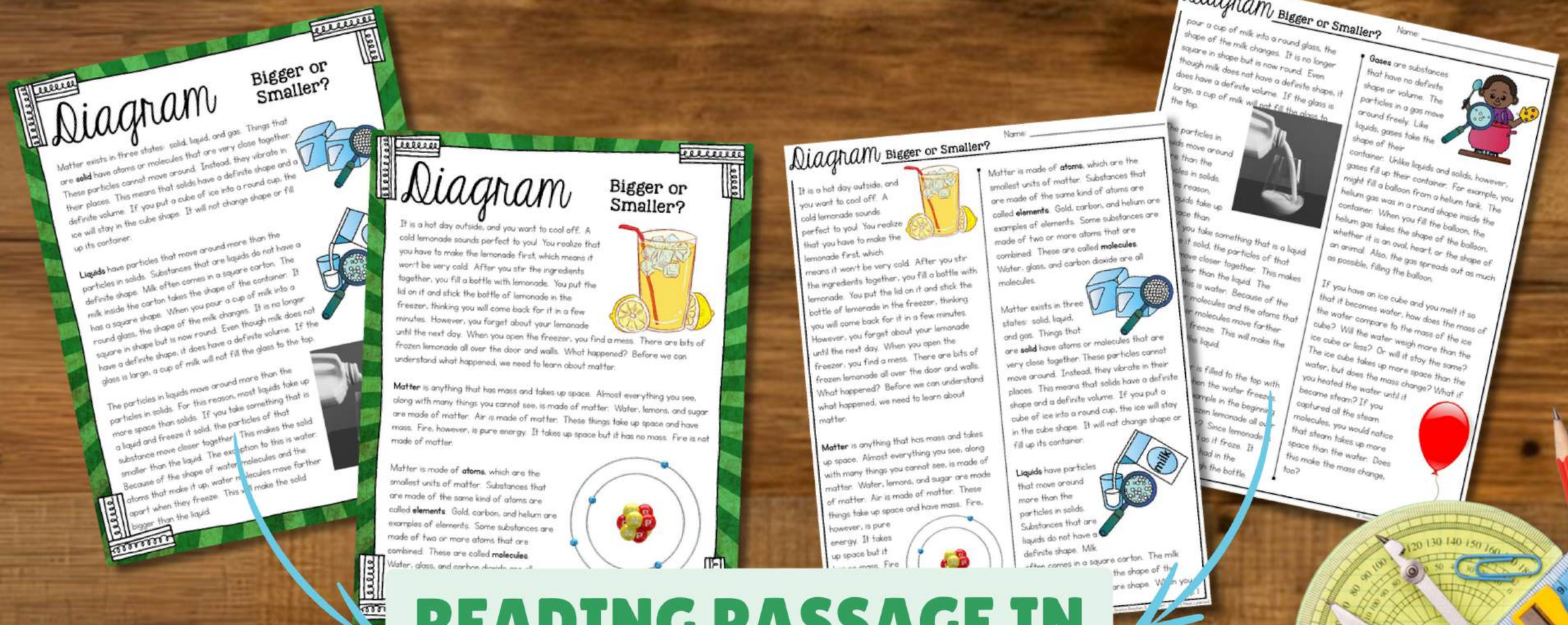
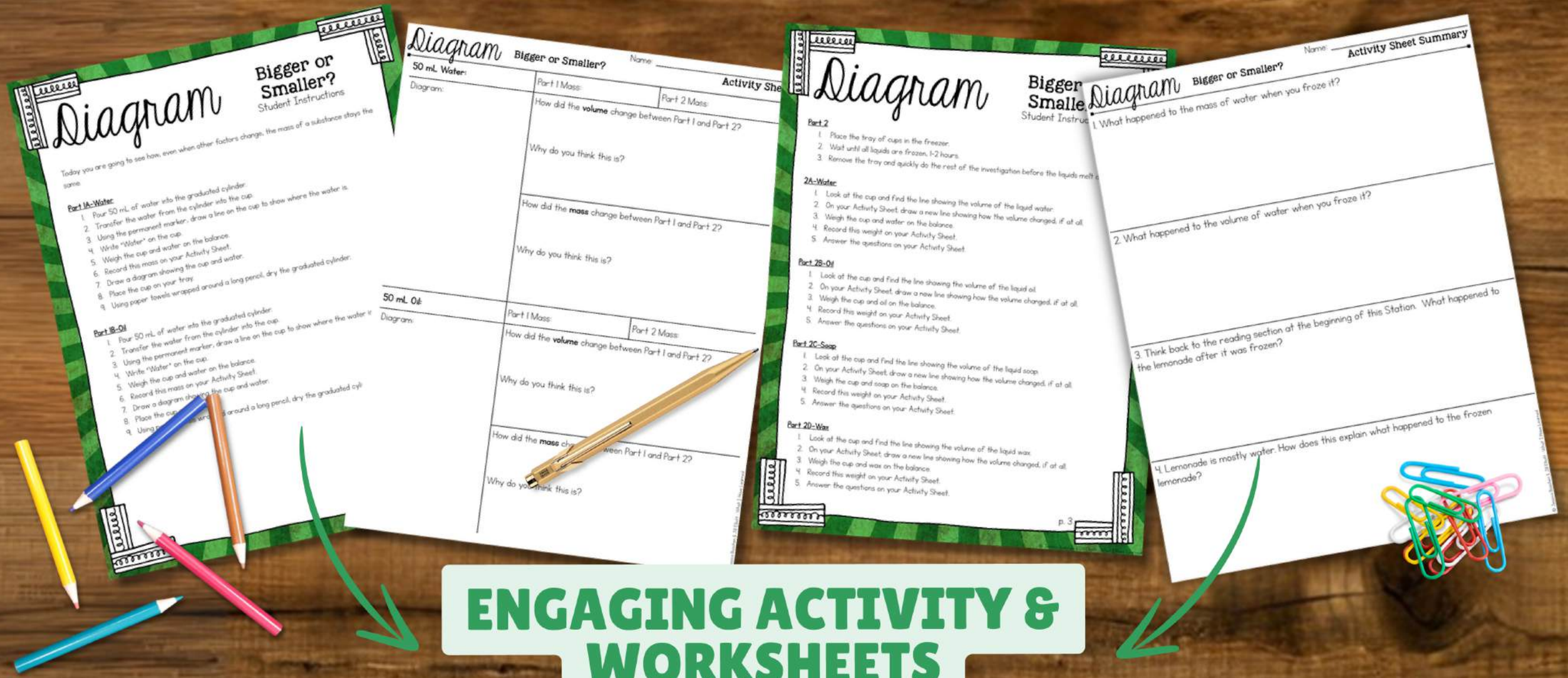


DIAGRAM: READING PASSAGE



READING PASSAGE IN TWO FORMATS

ENGAGING ACTIVITY & WORKSHEETS



ENGAGING ACTIVITY & WORKSHEETS

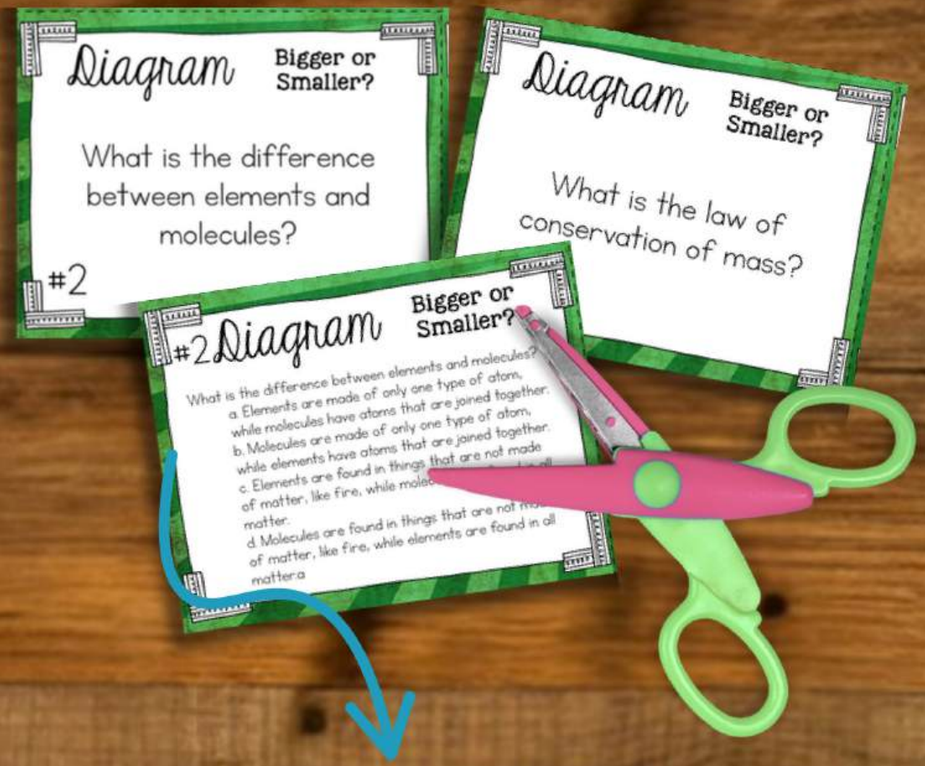
DIFFERENTIATED QUESTIONS



SHORT ANSWER



FILL-IN-THE BLANK



TASK CARDS: SHORT ANSWER & MULTIPLE CHOICE

Diagram — Bigger or Smaller? — Student Instructions

Today you are going to see how, even when other factors change, the mass of a substance stays the same.

Part 1A-Water

1. Pour 50 mL of water into the graduated cylinder.
2. Transfer the water from the cylinder into the cup.
3. Using the permanent marker, draw a line on the cup to
4. Write "Water" on the cup.
5. Weigh the cup and water on the balance.
6. Record this mass on your Activity Sheet.
7. Draw a diagram showing the cup and water.
8. Place the cup on your tray.
9. Using paper towels wrapped around a long pencil

Part 1B-Oil

1. Pour 50 mL of water into the graduated cyl
2. Transfer the water from the cylinder into t
3. Using the permanent marker, draw a line o
4. Write "Water" on the cup.
5. Weigh the cup and water on the balance.
6. Record this mass on your Activity Sheet.
7. Draw a diagram showing the cup and w
8. Place the cup on your tray.

Diagram — Bigger or Smaller? — Student Instructions

Part 1C-Soap

1. Pour 50 mL of soap into the graduated cylinder.
2. Transfer the soap from the cylinder into the cup.
3. Using the permanent marker, draw a line on the cup to show where the soap is.
4. Write "Soap" on the cup.
5. Weigh the cup and soap on the balance.
6. Record this weight on your Activity Sheet.
7. Draw a diagram showing the cup and soap.
8. Place the cup on your tray.
9. Clean out and dry

uated cylinder.

to the cup. Be careful to k

e a line on the cup to show

ce.

Sheet.

wax.

p. 2

Diagram — Bigger or Smaller? — Student Instructions

Part 2

1. Place the tray of cups in the freezer.
2. Wait until all liquids are frozen, 1-2 hours.
3. Remove the tray and quickly do the rest of the investigation before the liquids melt again.

2A-Water

1. Look at the cup and find the line showing the volume of the liquid water.
2. On your Activity Sheet, draw a new line showing how the volume changed, if at all.
3. Weigh the cup and water on the balance.
4. Record this weight on your Activity Sheet.
5. Answer the questions on your Activity Sheet.

Part 2B-Oil

1. Look at the cup and find the line showing the volume of the liquid oil.
2. On your Activity Sheet, draw a new line showing how the volume changed, if at all.
3. Weigh the cup and oil on the balance.
4. Record this weight on your Activity Sheet.
5. Answer the questions on your Activity Sheet.

Part 2C-Soap

1. Look at the cup and find the line showing the volume of the liquid soap.
2. On your Activity Sheet, draw a new line showing how the volume changed, if at all.
3. Weigh the cup and soap on the balance.
4. Record this weight on your Activity Sheet.
5. Answer the questions on your Activity Sheet.

Part 2D-Wax

1. Look at the cup and find the line showing the volume of the liquid wax.
2. On your Activity Sheet, draw a new line showing how the volume changed, if at all.
3. Weigh the cup and wax on the balance.
4. Record this weight on your Activity Sheet.
5. Answer the questions on your Activity Sheet.

p. 3





Diagram — Bigger or Smaller? — Activity Sheet Summary

Name: _____

1. What happened to the mass of water when you froze it?

It stayed the same.

2. What happened to the volume of water when you froze it?

It got bigger.

3. Think back to the re… of this Station. What happened to the lemonade after it wa…

It exploded all over the inside…

4. Lemonade is mostly water. How does t… ppened to the frozen lemonade?

Water expands when it freezes. Since the … the force of the expanding water made the bottle explode.

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Diagram — Bigger or Smaller?

What is the difference between elements and molecules?

#2

#2 Diagram — Bigger or Smaller?

What is the difference between elements and molecules?

a. Elements are made of only one type of atom, while molecules have atoms that are joined together.
b. Molecules are made of only one type of atom, while elements have atoms that are joined together.
c. Elements are found in things that are not made of matter, like fire, while molecules are found in all matter.
d. Molecules are found in things that are not made of matter, like fire, while elements are found in all matter.a

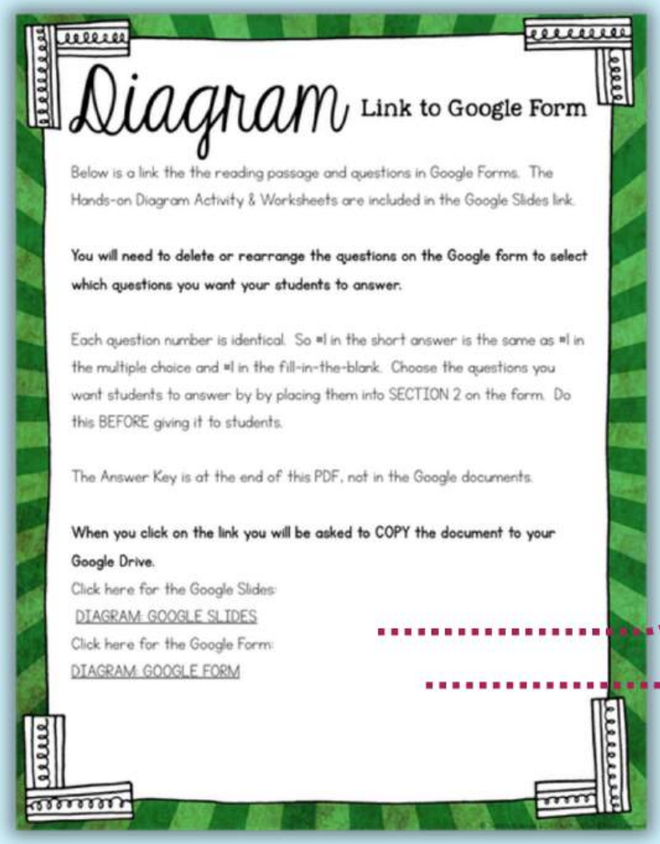
#6 Diagram — Bigger or Smaller?

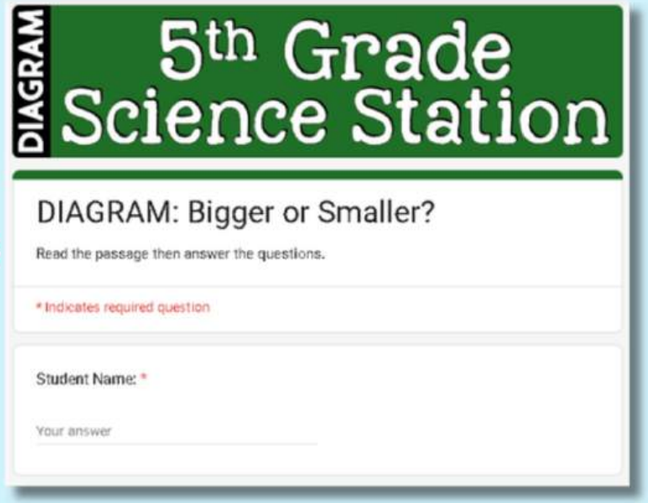
What makes a substance a liquid?

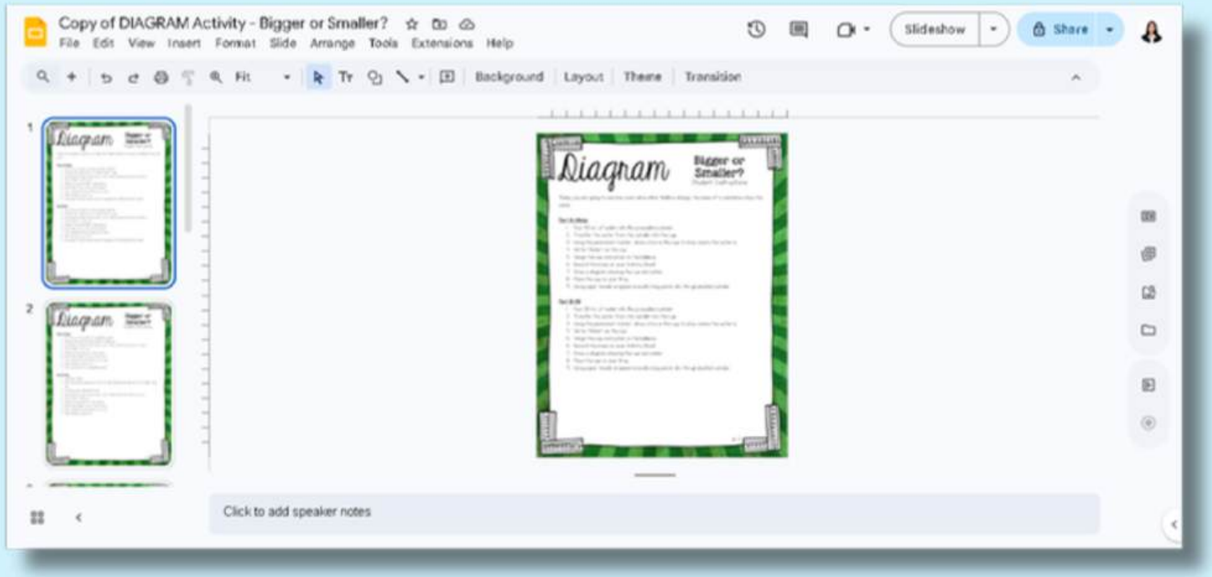
a. Has a definite shape
b. Has a definite volume
c. Both a and b
d. Neither a nor b



DIGITAL VERSIONS







DIGITAL VERSIONS

- ✔ Google Sheet with Activity & Directions
- ✔ Google Form with Reading & Questions

Answer keys provided

YOU WILL LOVE THIS BECAUSE



Visual Learning at Its Best

Students draw and model changes, making abstract concepts concrete.



Time-Saving for Teachers

Ready-to-use materials, teacher notes, and answer keys reduce prep time while keeping lessons engaging, standards-aligned, and purposeful.



Balanced Learning Approach

Combines reading, creating, and reflecting so students learn science content while developing problem-solving and critical thinking skills.

TEACHERS LOVE IT!

My students loved using this activity!

CherieR B.

Thank you for the resource! It was a great help for my virtual classroom.

Stacey Clements





My passion is making learning accessible to all students.
I love scaffolding learning, breaking down the concepts and building them up so that students can see the connections.
I love figuring out the small components that build up to the big ideas and helping students see it all.



teach MATH | teach SCIENCE | teach READING | teach WRITING

What I have LEARNED