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Assessment Cycle Portfolio

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Stage 1: Setting Objectives for Learning

Formative Assessment *for* Learning Objective:

Students will be able to identify the different states of matter and their changes by participating in a sorting card activity and water experiment.

Formative Assessment *as* Learning Objective:

Students will be able to describe properties of matter by answering independent questions and completing a self-assessment.

Summative Assessment *of* Learning Objective:

Students will be able to develop solutions for the school's kitchen to show their understanding of the states of matter.

Stage 2: Planning Summative Assessment

Standard: 5.5(A) classify matter based on measurable, testable, and observable physical properties, including mass, magnetism, ***physical state (solid, liquid, and gas),*** relative density (sinking and floating using water as a reference point), solubility in water**,** and the ability to conduct or insulate thermal energy or electric energy.

Objective:
Students will be able to develop solutions for the school's kitchen to show their understanding of the states of matter.

Problem-based scenario and task: Students will be presented with the visual that explains that there are three problems that the school cafeteria is experiencing. Problem 1 addresses their comprehension of the law of conservation of mass in which no mass can be created nor destroyed through evaporation. Problem 2 addresses their comprehension of the changes in states of matter which include melting and freezing along with boiling and freezing points. Problem 3 addresses their understanding of changes of matter going through condensation.

Guiding Question:
What happens to particles during changes in states of matter?

Materials:
1. This packet
2. Hot plate
3. Thermometer
4. Salt
5. Water

The school cafeteria needs you!

The school has hired new employees for the school cafeteria. The employees have minimal experience working in a school kitchen. They are encountering three main problems in the kitchen.

Problem 1

There has been a couple of times when the food has been very salty.

Problem 2

Some items are served melted or frozen

Problem 3

Employees are slipping because the kitchen floor is wet, but they don't know where the water is coming from.

Your job is to:

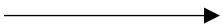
1. Figure out why these problems are happening in the school kitchen.
2. Come up with 3 possible solutions to give to the cafeteria staff.

Step 1: Gather information about ingredients and particles of states of matter.

Part A.
Use your Chromebook to research the temperature at which these items can freeze or melt. Write the temperature in the space next to the item.

Frozen	Melted
Blueberries _____ Strawberries _____ Milk _____ Cookies _____ Peanut Butter _____ Jelly _____	Chocolate _____ Ice cream _____ Jell-O _____

Part B.
Draw what happens to the particles of matter during freezing, melting, evaporation and condensation.

Freezing 	Melting 
Evaporation 	Condensation 

Part C
Investigate the properties of matter for salt with the example below:

Tanya wanted to investigate what would happen to a solution of salt water once water was at a boiling point. She investigated by following the steps below:

1. She had a beaker with 70 grams of water.
2. She added 20 grams of salt and stirred.
3. She added the beaker with the solution to a hot plate and waited for the water to evaporate.
4. She measured the mass of the beaker with salt that didn't evaporate, and it measured 20 grams.

After reading the example above and discussing with your peers, answer the questions below:

1. What happens to the salt and the water in a solution when the water is at a boiling point?
   _____
   _____

2. Does salt change state of matter when it is added to the food?
   _____
   _____

Step 2: Gather data during an interview.
You can gather data by interviewing the kitchen employees to understand how they have been storing foods and cooking food. Please draft 3 questions to ask employees below:

1. _____
2. _____
3. _____

Answers provided by employees:
1._____
_____

2._____
_____

3._____
_____

Discuss the employees' answers with your peers and write your reflections on what exactly is causing the issue.

Problem 1:
_____
_____

Problem 2:
_____
_____

Problem 3:
_____
_____

Step 3
Draft 3 solutions to help the employees in the cafeteria solve problems 1-3.

1._____
_____

2._____
_____

3._____
_____

Step 4: Create a poster outlining 3 solutions for the problems.
The poster should explain the reason why each problem is happening and a solution for each of the problem. These will be presented to the kitchen employees, therefore, quality matters.

You can use the space below to draft your poster.

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Rubric for Summative Assessment *of* Learning

Notes:

Stage 3: Plan & Implement Instruction

Assessment *for* Learning

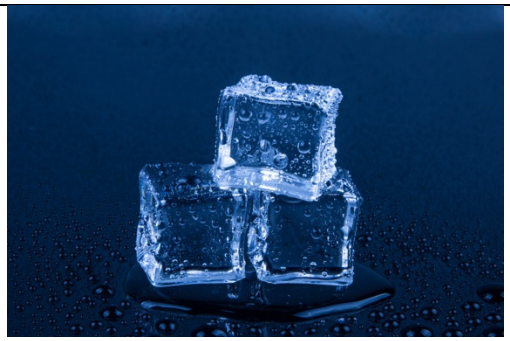
Guiding Questions:

- What happens to particles during changes in states of matter?
- Do particles disappear when they change states of matter?
- How do particles move for each state of matter (liquid, solid, gas)?
- Since gases are invisible, does that mean they don't have any particles?
- Since solids keep their shape, do particles move?
- Do the number of particles change when they change state of matter?
- How does temperature affect the changes of state of matter?
- Does heat have to be added or taken away for this change to happen?

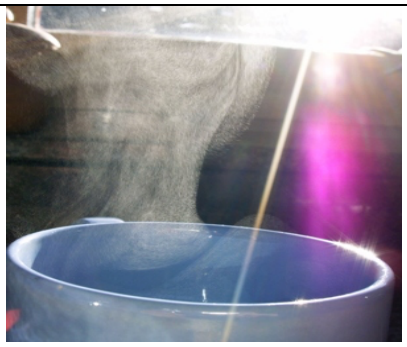
Materials

- Sorting cards
- Laminated paper to place cards on
- Beaker
- Mittens
- Thermometer
- Ice cubes
- Hot plate
- Stopwatch

TASK 1

		
		
	 apricot JELL-O NO artificial sweeteners NO high fructose corn syrup same great taste 80 GELATIN DESSERT	

Solid	Liquid	Gas

		**Liquid to Solid**
		**Liquid to Gas**
Gas to Liquid		
	**Solid to Liquid**	

TASK 2

Evaporation	Condensation	Melting	Freezing

Investigation

Procedure

1. Turn hot plate on to medium heat and set aside. **PLEASE ENSURE THAT IT IS NOT NEAR ANYBODY TO AVOID ANY ACCIDENTS.**
2. Place 4 ice cubes in a beaker.
3. Once hot plate is ready, place beaker with ice cubes in it and wait for 3 minutes.
4. Write/draw observations.
5. Increase the temperature from medium to high and wait for 3 more minutes.
6. Write observations.

Write or draw observations below:

Answer the following questions:

1. What happened to the ice when heat was added to it?
   _____
   _____
2. What changes of matter happened?
   _____
   _____
3. How did the particles of the ice cube change when the state of matter changed?
   _____
   _____
4. What must happen for water to change into ice?
   _____
   _____
5. What will happen to the gas if heat is removed?
   _____
   _____

Draw how the particles look like for the ice cube, liquid water, and steam.

Ice cube	**Water**	**Steam**

Teacher Observation Checklist/Rubric

Student	Students can identify objects state of matter.	Students can use prior knowledge to identify changes in matter.	Student can explain how particles act during changes of matter.	Students can apply their understanding of changes of matter to a real-world scenario.	Teacher Notes
Student A					
Student B					
Student C					
Student D					
Student E					
Student F					
Student G					
Student H					
Student I					
Student J					

Assessment *as* Learning

INDEPENDENT WORK

1. Provide an example of changes of matter below and describe how particles change:

A. Evaporation:

_____
_____

B. Condensation:

_____
_____

C. Melting:

_____
_____

D. Freezing:

_____
_____

2. Draw how particles of matter look in each state of matter.

3. What happens to states of matter when temperature changes?

_____
_____
_____

Assessment *As* Learning Student Self-Assessment

Name: _____

SKILL	Fully	Partially	Not Yet
I can identify the three states of matter			
I can provide an example of each state of matter			
I can explain how particles move for each state of matter			
I can explain what happens to the particles of each state of matter when heat is added or removed.			
I know the difference between evaporation and condensation			
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)			

Stage 4: Assessment Data Collection & Analysis

a. Formative Assessment *FOR* Learning-raw data

Student	Students can identify objects state of matter.	Students can use prior knowledge to identify changes in matter.	Student can explain how particles act during changes of matter.	Students can apply their understanding of changes of matter to a real-world scenario.	Teacher Notes
Jeremy Rosales	Yes	Somewhat – Struggles to identify states of matter for condensation	Somewhat- Struggled to explain condensation and states that particles disappear during evaporation.	Somewhat- Struggled to explain condensation of water	Student struggles to identify how temperature affects particle movement during evaporation and condensation.
Rolando Flores	Yes	Yes	yes	Yes	Very clear on state changes and how particles move as they change.
Ayonie Sheppard	Yes	No	Somewhat Struggled to explain fast or slow movement of particles	No	Struggles to understand the movement of particles for each state of matter and when heat is involved.
Perla Garcia	Yes	Somewhat- struggles with identifying condensation	Somewhat-states that particles disappear during evaporation	Somewhat-Struggles with condensation	Has a good idea of the movement of particles but gets confused when asked about condensation.
Johanna Balderas	Yes	Somewhat-Struggles with condensation	Yes- knows that particles move slow or fast.	Somewhat-Struggles with condensation	Has a good idea of movement of particles but gets confused when asked about condensation.
Zaiden Tate	Yes	Yes	Yes	Yes	Very clear on state changes and how particles move as they change.
Isaac Jimenez	Yes	Yes	Yes	Yes	Very clear on state changes and how particles move as they change.
Austin Robles	Yes	Yes	Yes	Yes	Very clear on state changes and how particles move as they change.
Iker Quintana	Yes	Somewhat-Struggles with condensation	Somewhat-student knows particles move different but not exactly how	Somewhat-student states water disappears during evaporation	Student struggles to identify how temperature affects particle movement during evaporation and condensation.
Antonio Martinez	Yes	Somewhat-struggles with condensation	Yes	Yes	Has a good idea of movement of particles but gets confused when asked about condensation.

Based on teacher observations and guiding questions during sorting and experimentation.

a. Formative Assessment for Learning- Data Analysis

Initial Data Setup

Student	Was student able to identify examples of states of matter?	Was student able to use prior knowledge to identify changes in matter?	Was student able to explain how particles act during state changes?	Was student able to apply their understanding of changes of matter to the real-world scenario?
Jeremy Rosales	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student struggled to explain how particles move when they go through condensation. Student also states that particles disappear when they evaporate	Student struggles to explain what happens to particles and states of matter during condensation of water.
Rolando Flores	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.
Ayonie Sheppard	Student is able to identify state of matter for all objects	Student is not able to identify the states of matter associated with evaporation and condensation	Student knows that particles move either faster or slower when changes of state happen but is unable to explain in what specific change this happens in.	Student is not able to explain how particles move as water changes state of matter during condensation and evaporation.
Perla Garcia	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student states that particles disappear during evaporation.	Student struggles to explain what happens to particles and states of matter during condensation of water.
Johanna Balderas	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student is able to explain how particles act during all changes of matter	Student struggles to explain what happens to particles and states of matter during condensation of water.
Zaiden Tate	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.
Isaac Jimenez	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.
Austin Robles	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.
Iker Quintana	Student is able to identify state of matter for all objects	Student struggles to idnetify states of matter associated with condensation	Student knows that particles move either faster or slower when changes of state happen but is unable to explain in what specific change this happens in.	Student is not able to explain how particles move as water changes state of matter during condensation and evaporation.
Antonio Martinez	Student is able to identify state of matter for all objects	Student struggles to idnetify states of matter associated with condensation	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.

Was successful at accomplishing activity tasks
Initially had difficulty but with partner or teacher assistance was able to accomplish.
Was not able to complete the entire activity of tasks successfully.

Teacher Observations- Based on sorting activity and lab
Snipets to answer questions

Student	Was student able to identify the objects state of matter?	Was student able to use prior knowledge to identify changes in matter?	Was student able to explain how particles act during state changes?	Was student able to apply their understanding of changes of matter to the real-world scenario?	Snipet 1	Snipet 2	Snipet 3	Snipet 4
Jeremy Rosales	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student struggled to explain how particles move when they go through condensation. Student also states that particles disappear when they evaporate	Student struggles to explain what happens to particles and states of matter during condensation of water.	Student is able to identify various examples for liquids solids and gases.	Student claims that condensation changes from a solid to liquid	Student states particles move faster during condensation and particles dissapear during evaporation	Student claims temperature doesn't affect the change of state of matter in condensation
Rolando Flores	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.
Ayonie Sheppard	Student is able to identify state of matter for all objects	Student is not able to identify the states of matter associated with evaporation and condensation	Student knows that particles move either faster or slower when changes of state happen but is unable to explain in what specific change this happens in.	Student is not able to explain how particles move as water changes state of matter during condensation and evaporation.	Student is able to identify various examples for liquids solids and gases.	Student claims that condensation changes states from solid to liquid and evaporation liquid to nothing.	Student explains that particles of matter move slower when heat is added.	Student claims temperature doesn't affect the change of state of matter in condensation.
Perla Garcia	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student states that particles disappear during evaporation.	Student struggles to explain what happens to particles and states of matter during condensation of water.	Student is able to identify various examples for liquids solids and gases.	Student claims that condensation changes from a solid to liquid	Student claims that particles disappear during evaporation.	Student claims temperature doesn't affect the change of state of matter in condensation.
Johanna Balderas	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student is able to explain how particles act during all changes of matter	Student struggles to explain what happens to particles and states of matter during condensation of water.	Student is able to identify various examples for liquids solids and gases.	Student doesn't know how condensation ended with a liquid state.	Student can explain the movement of particles for all changes of matter	Student claims temperature doesn't affect the change of state of matter in condensation.
Zaiden Tate	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.
Isaac Jimenez	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.
Austin Robles	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.
Iker Quintana	Student is able to identify state of matter for all objects	Student struggles to idnetify states of matter associated with condensation	Student knows that particles move either faster or slower when changes of state happen but is unable to explain in what specific change this happens in.	Student is not able to explain how particles move as water changes state of matter during condensation and evaporation.	Student is able to identify various examples for liquids solids and gases.	Student doesn't know how condensation ended with a liquid state.	Student explains that particles of matter move slower when heat is added.	Student is able to explain changes in matter for water.
Antonio Martinez	Student is able to identify state of matter for all objects	Student struggles to idnetify states of matter associated with condensation	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student doesn't know how condensation ended with a liquid state.	Student can explain the movement of particles for all changes of matter	Student claims that particles of water move faster for both evaporation and condensation.

Teacher Observations
Create Categories

Student	Was student able to identify the objects state of matter?	Was student able to use prior knowledge to identify changes in matter?	Was student able to explain how particles act during state changes?	Was student able to apply their understanding of changes of matter to the real-world scenario?	Snipet 1	Snipet 2	Snipet 3	Snipet 4	Categories
Jeremy Rosales	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student struggled to explain how particles move when they go through condensation. Student also states that particles disappear when they evaporate	Student struggles to explain what happens to particles and states of matter during condensation of water.	Student is able to identify various examples for liquids solids and gases.	Student claims that condensation changes from a solid to liquid	Student states particles move faster during condensation and particles dissapear during evaporation	Student claims temperature doesn't affect the change of state of matter in condensation	Can abe successful with identifying properties for changes in matter with no help.
Rolando Flores	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.	Need minor intervention to indentify how particles move when temperature changes.
Ayonie Sheppard	Student is able to identify state of matter for all objects	Student is not able to identify the states of matter associated with evaporation and condensation	Student knows that particles move either faster or slower when changes of state happen but is unable to explain in what specific change this happens in.	Student is not able to explain how particles move as water changes state of matter during condensation and evaporation.	Student is able to identify various examples for liquids solids and gases.	Student claims that condensation changes states from solid to liquid and evaporation liquid to nothing.	Student explains that particles of matter move slower when heat is added.	Student claims temperature doesn't affect the change of state of matter in condensation.	Needs intervention to understand condensation changes from gas to liquid.
Perla Garcia	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student states that particles disappear during evaporation.	Student struggles to explain what happens to particles and states of matter during condensation of water.	Student is able to identify various examples for liquids solids and gases.	Student claims that condensation changes from a solid to liquid	Student claims that particles disappear during evaporation.	Student claims temperature doesn't affect the change of state of matter in condensation.	Needs intervention to understand how gas particles move faster from a liquid to gas during evaporation.
Johanna Balderas	Student is able to identify state of matter for all objects	Student struggles to identify states of matter associated with condensation	Student is able to explain how particles act during all changes of matter	Student struggles to explain what happens to particles and states of matter during condensation of water.	Student is able to identify various examples for liquids solids and gases.	Student doesn't know how condensation ended with a liquid state.	Student can explain the movement of particles for all changes of matter	Student claims temperature doesn't affect the change of state of matter in condensation.	
Zaiden Tate	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.	
Isaac Jimenez	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.	
Austin Robles	Student is able to identify state of matter for all objects	Student is able to identify states of matter associated with changes of matter	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student can identifies all changes correctly.	Student can explain the movement of particles for all changes of matter	Student is able to explain changes in matter for water.	
Iker Quintana	Student is able to identify state of matter for all objects	Student struggles to idnetify states of matter associated with condensation	Student knows that particles move either faster or slower when changes of state happen but is unable to explain in what specific change this happens in.	Student is not able to explain how particles move as water changes state of matter during condensation and evaporation.	Student is able to identify various examples for liquids solids and gases.	Student doesn't know how condensation ended with a liquid state.	Student explains that particles of matter move slower when heat is added.	Student is able to explain changes in matter for water.	
Antonio Martinez	Student is able to identify state of matter for all objects	Student struggles to idnetify states of matter associated with condensation	Student is able to explain how particles act during all changes of matter	Student is able to explain all changes of matter happening with water.	Student is able to identify various examples for liquids solids and gases.	Student doesn't know how condensation ended with a liquid state.	Student can explain the movement of particles for all changes of matter	Student claims that particles of water move faster for both evaporation and condensation.	

b. Formative Assessment AS Learning-raw data

Based on student self-assessment

Name: Jeremy Rosales			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**x**		
I can provide an example of each state of matter		**X**	
I can explain how particles move for each state of matter		**X**	
I can explain what happens to the particles of each state of matter when heat is added or removed.		**X**	
I know the difference between evaporation and condensation		**x**	
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)		**x**	

Name: Rolando Flores

SKILL	Fully	Partially	Not Yet
I can identify the three states of matter	x		
I can provide an example of each state of matter	x		
I can explain how particles move for each state of matter	x		
I can explain what happens to the particles of each state of matter when heat is added or removed.	x		
I know the difference between evaporation and condensation	x		
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)	x		

Name: Ayonie Sheppard			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter		**x**	
I can provide an example of each state of matter		**x**	
I can explain how particles move for each state of matter			**x**
I can explain what happens to the particles of each state of matter when heat is added or removed.			**x**
I know the difference between evaporation and condensation			**x**
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)			**x**

Name: Perla Garcia			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**x**		
I can provide an example of each state of matter		**x**	
I can explain how particles move for each state of matter		**x**	
I can explain what happens to the particles of each state of matter when heat is added or removed.		**x**	
I know the difference between evaporation and condensation			**x**
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)		**x**	

Name: Johanna Balderas			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**X**		
I can provide an example of each state of matter	**X**		
I can explain how particles move for each state of matter		**x**	
I can explain what happens to the particles of each state of matter when heat is added or removed.	**x**		
I know the difference between evaporation and condensation		**x**	
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)		**x**	

Name: Zaiden Tate			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**x**		
I can provide an example of each state of matter	**x**		
I can explain how particles move for each state of matter	**x**		
I can explain what happens to the particles of each state of matter when heat is added or removed.	**x**		
I know the difference between evaporation and condensation		**x**	
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)	**x**		

Name: Isaac Jimenez			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**X**		
I can provide an example of each state of matter	**x**		
I can explain how particles move for each state of matter	**x**		
I can explain what happens to the particles of each state of matter when heat is added or removed.	**x**		
I know the difference between evaporation and condensation	**x**		
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)	**x**		

Name: Austin Robles			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**X**		
I can provide an example of each state of matter	**x**		
I can explain how particles move for each state of matter	**x**		
I can explain what happens to the particles of each state of matter when heat is added or removed.		**x**	
I know the difference between evaporation and condensation		**x**	
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)	**x**		

Name: Iker Quintana			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**x**		
I can provide an example of each state of matter	**x**		
I can explain how particles move for each state of matter	**x**		
I can explain what happens to the particles of each state of matter when heat is added or removed.		**x**	
I know the difference between evaporation and condensation		**x**	
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)		**x**	

Name: Antonio Martinez			
SKILL	**Fully**	**Partially**	**Not Yet**
I can identify the three states of matter	**x**		
I can provide an example of each state of matter	**x**		
I can explain how particles move for each state of matter		**x**	
I can explain what happens to the particles of each state of matter when heat is added or removed.	**x**		
I can explain the difference between evaporation and condensation		**x**	
I can describe real life examples for each change of matter. (freezing, melting, condensation, evaporation)	**x**		

b. Formative Assessment AS Learning-Data Analysis

1. Checklist collected data

Student	Able to identify the three states of matter	Able to provide an example of each state of matter	Able to explain how particles move for each state of matter	Able to explain movement of particles when heat is added	Able to explain the difference between evaporation and condensation	Able to describe real-life examples of changes of matter
Jeremy Rosales	demonstrated	somewhat demonstrated	somewhat demonstrated	somewhat demonstrated	somewhat demonstrated	somewhat demonstrated
Rolando Flores	demonstrated	demonstrated	demonstrated	demonstrated	demonstrated	demonstrated
Ayonie Sheppard	somewhat demonstrated	somewhat demonstrated	not demonstrated	not demonstrated	not demonstrated	not demonstrated
Perla Garcia	demonstrated	somewhat demonstrated	somewhat demonstrated	somewhat demonstrated	not demonstrated	somewhat demonstrated
Johanna Balderas	demonstrated	demonstrated	somewhat demonstrated	demonstrated	somewhat demonstrated	somewhat demonstrated
Zaiden Tate	demonstrated	demonstrated	demonstrated	demonstrated	somewhat demonstrated	demonstrated
Isaac Jimenez	demonstrated	demonstrated	demonstrated	demonstrated	demonstrated	demonstrated
Austin Robles	demonstrated	demonstrated	demonstrated	somewhat demonstrated	somewhat demonstrated	demonstrated
Iker Quintana	demonstrated	demonstrated	demonstrated	somewhat demonstrated	somewhat demonstrated	somewhat demonstrated
Antonio Martinez	demonstrated	demonstrated	somewhat demonstrated	demonstrated	somewhat demonstrated	demonstrated
	90%	70%	50%	50%	20%	50%

2a-Identify the states of matter	
Student	**Able to identify the three states of matter**
Jeremy Rosales	demonstrated
Rolando Flores	demonstrated
Ayonie Sheppard	somewhat demonstrated
Perla Garcia	demonstrated
Johanna Balderas	demonstrated
Zaiden Tate	demonstrated
Isaac Jimenez	demonstrated
Austin Robles	demonstrated
Iker Quintana	demonstrated
Antonio Martinez	demonstrated

2b. Provide example for each state	
Student	**Able to provide an example of each state of matter**
Jeremy Rosales	somewhat demonstrated
Rolando Flores	demonstrated
Ayonie Sheppard	somewhat demonstrated
Perla Garcia	somewhat demonstrated
Johanna Balderas	demonstrated
Zaiden Tate	demonstrated
Isaac Jimenez	demonstrated
Austin Robles	demonstrated
Iker Quintana	demonstrated
Antonio Martinez	demonstrated

2c- Explain how particles move	
Student	**Able to explain how particles move for each state of matter**
Jeremy Rosales	somewhat demonstrated
Rolando Flores	demonstrated
Ayonie Sheppard	not demonstrated
Perla Garcia	somewhat demonstrated
Johanna Balderas	somewhat demonstrated
Zaiden Tate	demonstrated
Isaac Jimenez	demonstrated
Austin Robles	demonstrated
Iker Quintana	somewhat demonstrated
Antonio Martinez	somewhat demonstrated

2d-Explain particle movement with heat	
Student	**Able to explain movement of particles when heat is added**
Jeremy Rosales	somewhat demonstrated
Rolando Flores	demonstrated
Ayonie Sheppard	not demonstrated
Perla Garcia	somewhat demonstrated
Johanna Balderas	demonstrated
Zaiden Tate	demonstrated
Isaac Jimenez	somewhat demonstrated
Austin Robles	somewhat demonstrated
Iker Quintana	somewhat demonstrated
Antonio Martinez	demonstrated

2e-Explain difference evaporation/condensation	
Student	**Able to explain the difference between evaporation and condensation**
Jeremy Rosales	somewhat demonstrated
Rolando Flores	demonstrated
Ayonie Sheppard	not demonstrated
Perla Garcia	not demonstrated
Johanna Balderas	somewhat demonstrated
Zaiden Tate	somewhat demonstrated
Isaac Jimenez	demonstrated
Austin Robles	somewhat demonstrated
Iker Quintana	somewhat demonstrated
Antonio Martinez	somewhat demonstrated

2f-Describe real-life changes of matter

Student	**Able to describe real-life examples of changes of matter**
Jeremy Rosales	somewhat demonstrated
Rolando Flores	demonstrated
Ayonie Sheppard	not demonstrated
Perla Garcia	somewhat demonstrated
Johanna Balderas	somewhat demonstrated
Zaiden Tate	somewhat demonstrated
Isaac Jimenez	demonstrated
Austin Robles	demonstrated
Iker Quintana	somewhat demonstrated
Antonio Martinez	demonstrated

Stage 5: Assessment Data Collection & Analysis

a. Summative Assessment of Learning- raw data

Name: Student A

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:

- Student was able to explain what happens to particles during freezing and melting but couldn't explain what happens to particles in evaporation and condensation.
- Student was able to explain that water evaporated but mentioned salt disappeared too.
- Students' solution to one problem was to check the temperature for storage.

Name: Student B

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:

Students' solutions included having one employee in the cafeteria assigned to check the temperatures weekly, providing the cooks with a presentation explaining that salt does not disappear if water is evaporated, and also use a presentation to explain to employees that water condensates when it changes from hot to cold.

Name: Student C

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:
Student needs intervention to make critical connections from content knowledge to real-world scenarios.

Name: Student D

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:

- Student still had trouble explaining how particles move during condensation.
- Student could identify that salt does not disappear during evaporation but could not relate it to the problem-based learning scenario.
- Student provided 2 possible solutions to the problem.

Name: Student E

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:

- Student still has trouble explaining what happens to the particles during condensation.
- Student was able to explain that salt does not disappear that was probably causing the food to be salty when lunch employees cook.
- Student was not able to provide a solution for the water on the floor that is being caused by condensation.

Name: Student F

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:
Student was not able to connect the law of conservation of matter to the problem-based scenario provided.

Name: Student G

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:

Student can describe what happens to particles during condensation but was not able to explain how condensation relates to the problem of water in the cafeteria kitchen.

Name: Student H

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:

Students solutions included orientation for cafeteria employees to explain how foods can change of state based on temperature, using less salt when cooking, and having a towel handy to wipe off excess of water during condensation.

Name: Student I

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:

Student was able to explain how particles move and change based on temperature exposed to but was not able to connect the information to the scenario provided.

Name: Student J

Criteria	Not Met	Developing	Accomplished	Exemplary
Student can explain what happens to particles of matter as it goes through 4 changes: evaporation, melting, freezing, condensation.	Student was not able to explain what happens to particles in any of the 4 changes.	Student was able to explain what happens to particles in 1 out of 4 changes of matter.	Student was able to explain what happens to particles in 2 out of 4 changes of matter	Student was able to explain what happens to particles in 3 or 4 changes of matter.
Student can explain the law of conservation of mass with the saltwater example.	Student was not able to explain the law of conservation of mass with the saltwater example.	Student was able to somewhat explain the saltwater example.	Student was able to proficiently explain the saltwater example but not how it relates to the problem in the kitchen.	Student was able to explain the saltwater example and how it relates to the problem in the cafeteria.
Student can develop solutions for the problem provided.	Student was not able to develop a solution for the 3 problems.	Student was able to develop 1 out of 3 solutions.	Student was able to develop 2 out of 3 solutions.	Student was able to develop 3 out of 3 solutions.

Notes:
Student was able to explain condensation but not how it related to the scenario provided in which water in the kitchen was coming from condensation when cooking.

a. Summative Assessment of Learning- Data Analysis

Explain Particle Movement

Student Name	Not Met	Developing	Accomplished	Exemplary
Student A			1	
Student B				1
Student C		1		
Student D				1
Student E				1
Student F				1
Student G				1
Student H				1
Student I				1
Student J				1
Total	**0**	**1**	**1**	**8**

Explain Law of Conservation

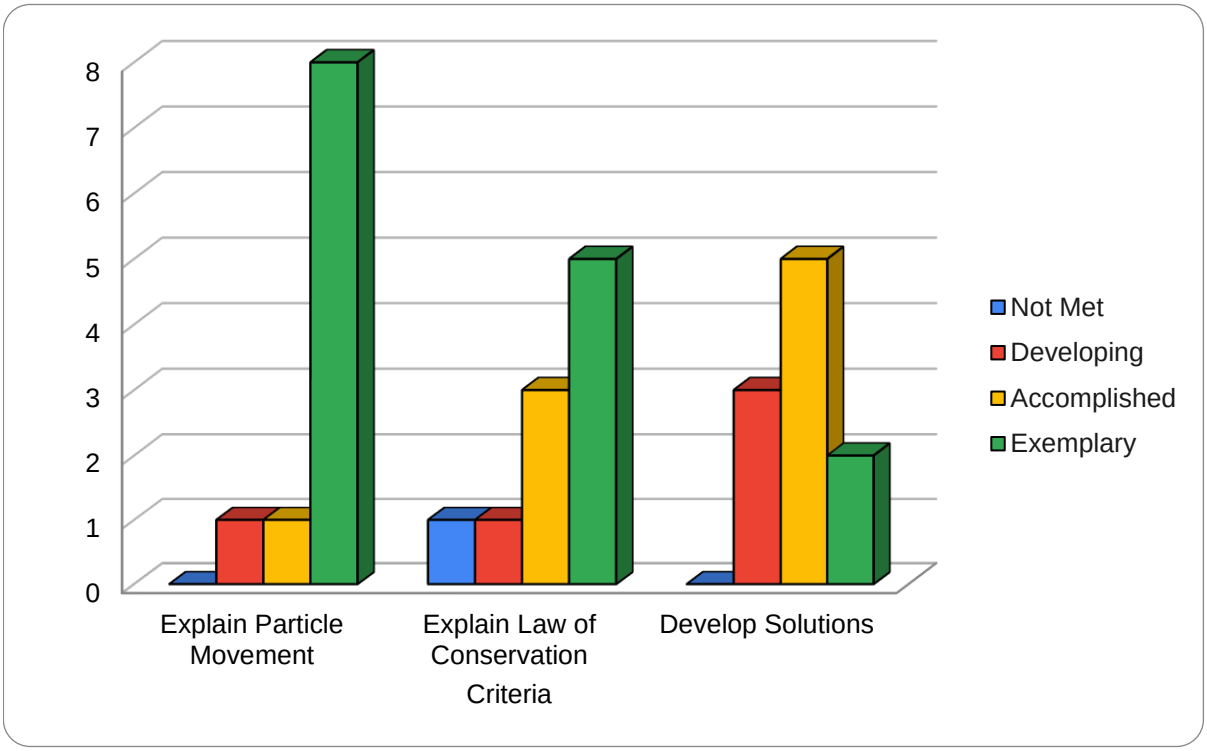
Student Name	Not Met	Developing	Accomplished	Exemplary
Student A		1		
Student B				1
Student C	1			
Student D			1	
Student E				1
Student F			1	
Student G				1
Student H				1
Student I			1	
Student J				1
Total	**1**	**1**	**3**	**5**

Develop Solutions

Student Name	Not Met	Developing	Accomplished	Exemplary
Student A		1		
Student B				1
Student C		1		
Student D			1	
Student E			1	
Student F			1	
Student G			1	
Student H				1
Student I		1		
Student J			1	
Total	**0**	**3**	**5**	**2**

Analysis

Criteria	Not Met	Developing	Accomplished	Exemplary
Explain Particle Movement	0	1	1	8
Explain Law of Conservation	1	1	3	5
Develop Solutions	0	3	5	2



Stage 6: Making Instructional Decisions

a. Implementing Change in Current Lesson or Unit

Since I am not teaching this year, most of my adjustments were guided by class readings and feedback provided by the professor. Although I couldn't directly observe student performance, I drew upon insights from students I taught last year to make my revisions.

A significant modification I implemented throughout the assessment cycle involved the summative assessment activity. In my initial balanced assessment plan, I included a performance-based task requiring students to construct a concept map detailing various properties of matter. However, upon reflection, I realized that this approach primarily assessed student performance rather than their depth of understanding of the topic.

Fortunately, the new problem-based activity used during the assessment of learning allowed me to observe how students can apply the knowledge they've acquired to a specific scenario.

Another significant modification I made was to the rubrics and checklists utilized for all assessments. After consulting various readings from the class book, I came to understand that rubrics for both assessment for and as learning don't need to be as complex as I initially assumed. I simplified the process by creating checklists that enabled me to identify specific indicators of mastery during instruction. The revised rubrics and checklists also facilitated students' increased awareness of their understanding of concepts through metacognition. Additionally, the rubric used for the assessment of learning enabled me to assess student comprehension rather than solely concentrating on assigning a grade

b. Reflective Practitioner Change

The diverse assessments used throughout stages of instruction opened my eyes to the various ways students can demonstrate understanding by accommodating to their needs and shifting away from the practice of solely assigning grades. This experience will enable me to integrate more checklists and rubrics into my instruction, facilitating the collection of data to identify student progress and necessary instructional adjustments. I plan to use checklists with specific objectives and key points during instruction just like the one created in assessment for learning. Initially, I will introduce them in lessons aligned with historically challenging objectives for students to master. After mastering this approach, I aim to expand their use across my instruction to pinpoint misconceptions and identify students requiring additional assistance.
Additionally, I would like to incorporate more student self-assessments just like the one used for assessment as learning, during my instruction. I realized that I don't incorporate any self-awareness assessments to my students, and this could be a way to hold them more accountable for their learning and identifying where they need extra help with. This approach could potentially empower students to advocate for themselves when they require assistance and demonstrate to them that I am invested in their learning experience.

Overall, this experience has offered me multiple examples of how to assess student comprehension beyond just assigning grades, which has been my usual practice. I intend to incorporate more qualitative methods for tracking student understanding to pinpoint areas of growth for both my students and me.