

Shelley MOORE PH.D.



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What grade level curriculum are we using?
What are the learning standards?

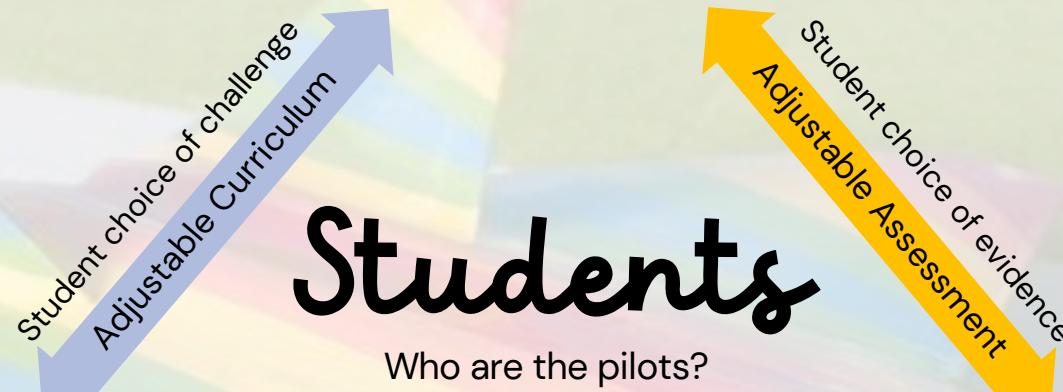
CURRICULUM & ASSESSMENT DESIGN

NEEDS BASED DESIGN

What are the student needs?
What barriers are getting in the way?
What do student require to navigate
needs & barriers?

INSTRUCTIONAL DESIGN

How will students show growth
within the learning standard?
How do we know?



Who are the pilots?
What are their dimensions?
Where is their agency?

Forward Design

Same for Everyone

Activity/Task

Standardized Evaluation

Differentiated

Grade Level Goals

Adapted Goals

Modified Goals

Compromises the integrity of evaluation

Backward Design

Same for Everyone

Grade Level Goals

Differentiated

Activity 1

Activity 2

Activity 3

Does not compromise the integrity evaluation

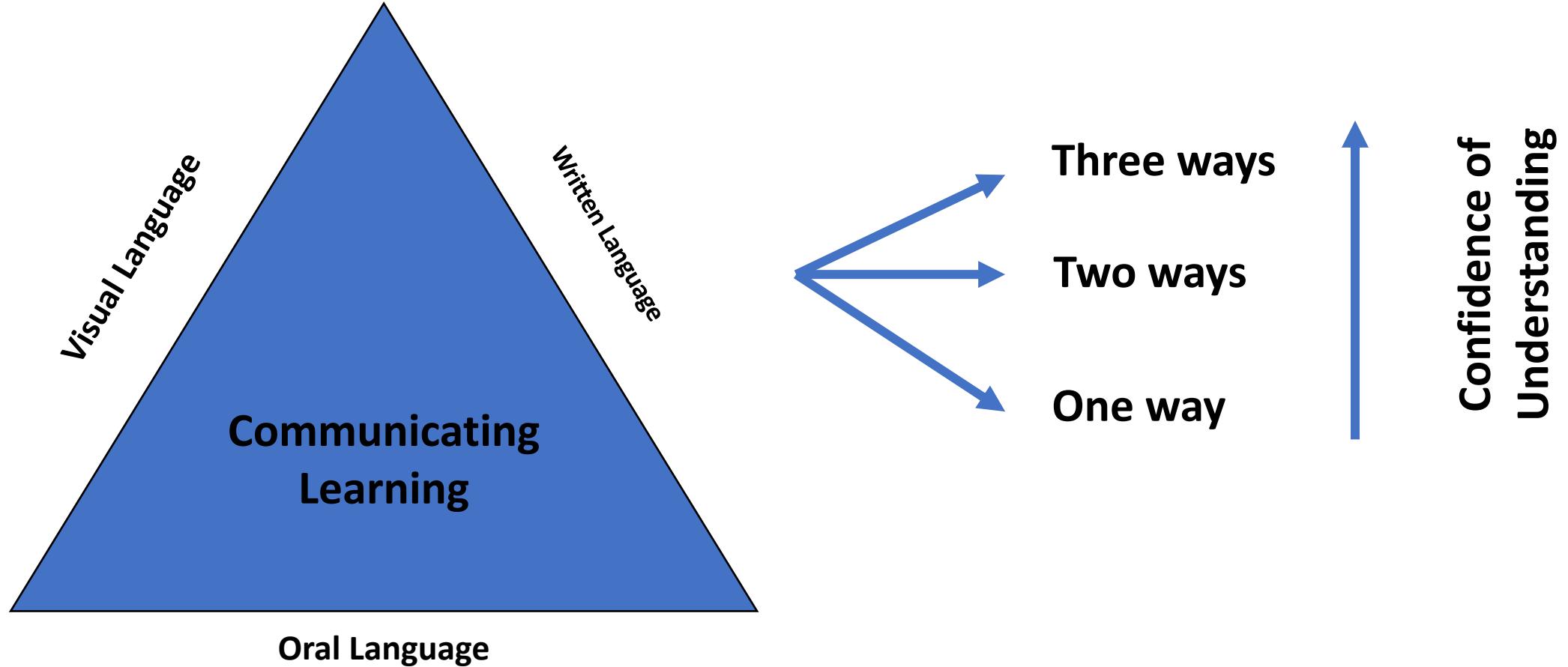
Standards Based Evaluation

Grade:	Subject Area: Science	Strand/Topic:
	Learning Standard: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells	<p>Unit Guiding Question(s):</p> <p>What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do?</p> <p>How are the structures of DNA and the structures of proteins related?</p> <p>How can I use evidence to explain how the structure of DNA impacts that structure of proteins?</p> <p>How are the structure of proteins and related to the essential functions of life?</p> <p>What is the role the systems of specialized cells?</p>
Key Vocabulary: theories and laws, evidence, natural world, structure of DNA , DNA , proteins , essential functions of life , life , systems of specialized cells , organisms		
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language
Science and Engineering Practices (skills)	Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past , present , future .	<p>I can explain using evidence that there are theories and laws that describe the natural world</p> <ul style="list-style-type: none"> - I know what evidence is - I know what science and theories and laws* are - I know what the natural world is
Disciplinary Core Ideas (knowledge)	<p>Disciplinary Core Ideas LS1.A: Structure and Function</p> <p>☐ Systems of specialized cells within organisms help them perform the essential functions of life.</p> <p>☐ All cells contain genetic information in the form of DNA molecules. Genes are regions in the DNA that contain the instructions that code for the formation of proteins, which carry out most of the work of cells.</p>	<p>I know that the systems of specialized cells inside organisms perform essential functions of life</p> <ul style="list-style-type: none"> • I know what systems of specialized cells are • I know what organisms are • I know what the essential* functions of life are <p>I know that cells have genetic information in DNA molecules I know that genes are parts of DNA that are instructions for how proteins are formed I know how cells work</p>
Crosscutting Concepts (Big Idea)	Structure and Function ☐ Investigating or designing new systems or structures requires a detailed examination of the properties of different materials , the structures of different components , and connections of components to reveal its function and/or solve a problem .	I understand that structures are made of many different components that are connected and have specific functions.

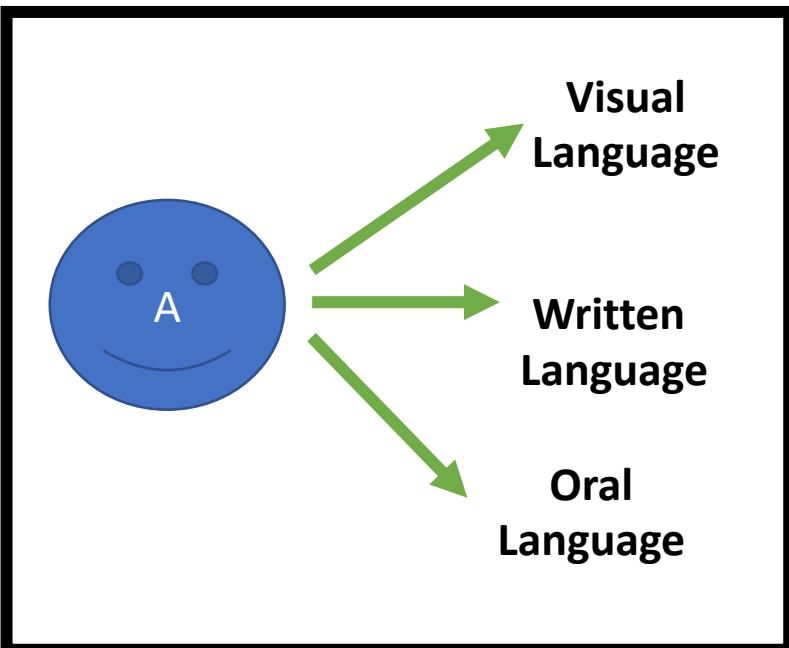
Name:	Date:	
Performance Expectation: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells		
Important words to know and use: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms		
I still need support	Learning Goals	I need some challenge
	<ul style="list-style-type: none"> • I can explain using evidence that there are theories and laws that describe the natural world • I know that the systems of specialized cells inside organisms perform essential functions of life • I know that cells have genetic information in DNA molecules • I know that genes are parts of DNA that are instructions for how proteins are formed • I know how cells work • I understand that structures are made of many different components that are connected and have specific functions. 	

Name:	Date:
Performance Expectation: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells	
Important words to know and use: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms	
Learning Goals	Evidence of Learning
<ul style="list-style-type: none"> I can explain using evidence that there are theories and laws that describe the natural world 	
<ul style="list-style-type: none"> I know that the systems of specialized cells inside organisms perform essential functions of life I know that cells have genetic information in DNA molecules I know that genes are parts of DNA that are instructions for how proteins are formed I know how cells work 	
<ul style="list-style-type: none"> I understand that structures are made of many different components that are connected and have specific functions. 	

How do student show what they know?



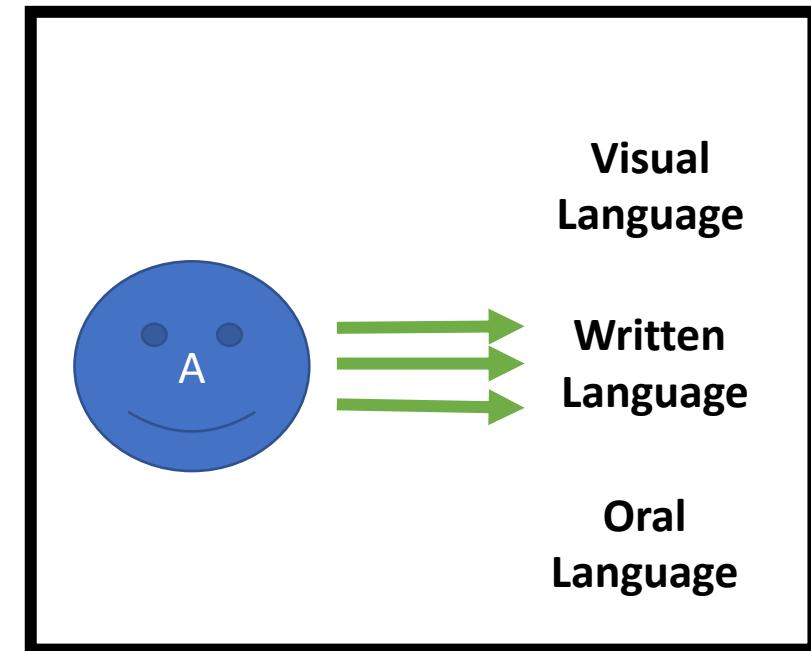
All Languages (in literacy) are Treated Equal!



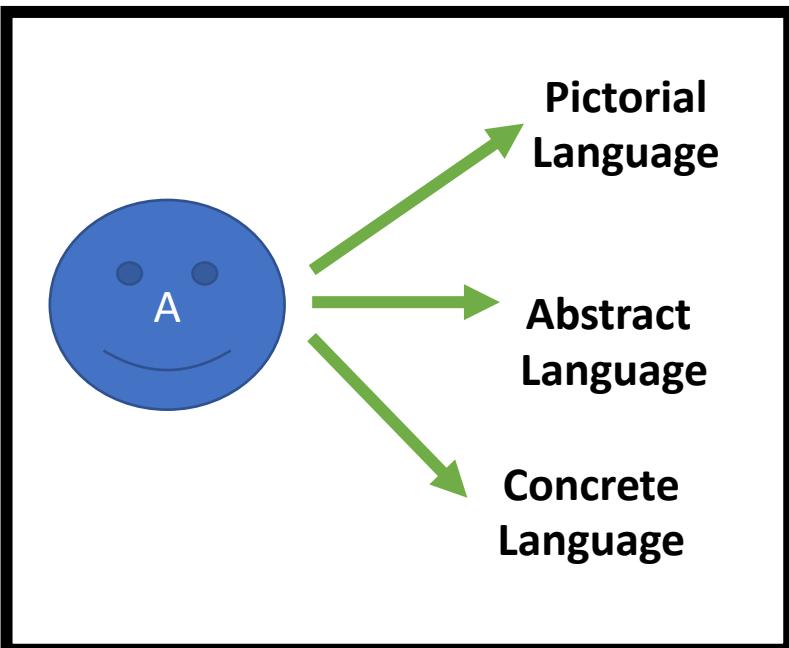
The **MORE WAYS** students can demonstrate learning, the more confident we are of meeting a goal

Instead of

The **NUMBER OF TIMES**, a student can show their learning in one way, the more confident we are of meeting a goal



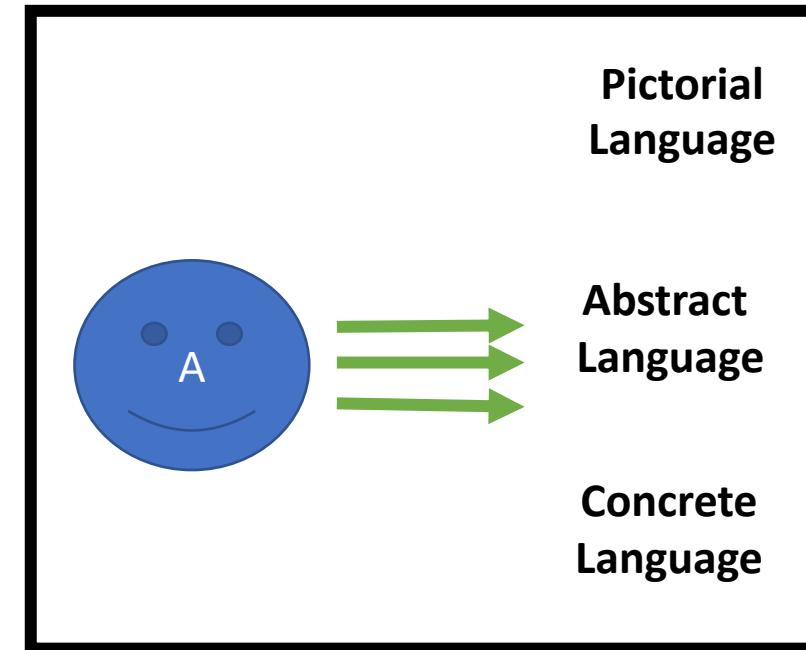
All Languages (in numeracy) are Treated Equal!



The **MORE WAYS** students can demonstrate learning, the more confident we are of meeting a goal

Instead of

The **NUMBER OF TIMES**, a student can show their learning in one way, the more confident we are of meeting a goal



Grade: 9	Subject Area: Science	Strand/Topic:
	<p>Learning Standard: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells</p>	<p>Unit Guiding Question(s):</p> <p>What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do?</p> <p>How are the structures of DNA and the structures of proteins related?</p> <p>How can I use evidence to explain how the structure of DNA impacts that structure of proteins?</p> <p>How are the structure of proteins and related to the essential functions of life?</p> <p>What is the role the systems of specialized cells?</p>
<p>Key Vocabulary: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms</p>		
Learning Goals	Curricular Language What do Students need to Know and Do?	Student Friendly Language
Science and Engineering Practices (skills)	<p>Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past, present, future.</p>	<p>I can explain using evidence that there are theories and laws that describe the natural world</p> <ul style="list-style-type: none"> - I know what evidence is - I know what science and theories and laws* are - I know what the natural world is
Disciplinary Core Ideas (knowledge)	<p>Disciplinary Core Ideas</p> <p>LS1.A: Structure and Function</p> <p>☐ Systems of specialized cells within organisms help them perform the essential functions of life.</p> <p>☐ All cells contain genetic information in the form of DNA molecules. Genes are regions in the DNA that contain the instructions that code for the formation of proteins, which carry out most of the work of cells.</p>	<p>I know that the systems of specialized cells inside organisms perform essential functions of life</p> <ul style="list-style-type: none"> • I know what systems of specialized cells are • I know what organisms are • I know what the essential* functions of life are <p>I know that cells have genetic information in DNA molecules</p> <p>I know that genes are parts of DNA that are instructions for how proteins are formed</p> <p>I know how cells work</p>
Crosscutting Concepts (Big Idea)	<p>Structure and Function</p> <p>☐ Investigating or designing new systems or structures requires a detailed examination of the properties of different materials, the structures of different components, and connections of components to reveal its function and/or solve a problem.</p>	<p>I understand that structures are made of many different components that are connected and have specific functions.</p>

Grade: 9	Subject Area: Science	Strand/Topic:
	<p>Learning Standard: HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells</p>	<p>Unit Guiding Question(s):</p> <p>What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do?</p> <p>How are the structures of DNA and the structures of proteins related?</p> <p>How can I use evidence to explain how the structure of DNA impacts that structure of proteins?</p> <p>How are the structure of proteins and related to the essential functions of life?</p> <p>What is the role the systems of specialized cells?</p>

Key Vocabulary: theories and laws, evidence, natural world, **structure of DNA**, **DNA**, **proteins**, **essential functions of life**, **life**, **systems of specialized cells**, organisms

Learning Goals	Curricular Language What do Students need to Know and Do?	Summative Task: The Cell-tastic voyage: Exploring the Wonders of Cellular Structures and Functions			
		Visual/pictorial/concrete (observations)	Written/abstract (products)	Oral language/presentations (conversations)	
Science and Engineering Practices (skills)	Construct an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past, present, future .	<ul style="list-style-type: none"> I can explain using evidence that there are theories and laws that describe the natural world 	hands-on demonstration	Written experimental plan	experimental design as part of an adventurous quest
Disciplinary Core Ideas (knowledge)	<p>Disciplinary Core Ideas</p> <p>LS1.A: Structure and Function</p> <p>Systems of specialized cells within organisms help them perform the essential functions of life.</p> <p>All cells contain genetic information in the form of DNA molecules. Genes are regions in the DNA that contain the instructions that code for the formation of proteins, which carry out most of the work of cells.</p>	<ul style="list-style-type: none"> I know that the systems of specialized cells inside organisms perform essential functions of life I know that cells have genetic information in DNA molecules I know that genes are parts of DNA that are instructions for how proteins are formed I know how cells work 	3D model of a cell	infographic or poster	a virtual tour
Crosscutting Concepts (Big Idea)	<p>Structure and Function</p> <p>Investigating or designing new systems or structures requires a detailed examination of the properties of different materials, the structures of different components, and connections of components to reveal its function and/or solve a problem.</p>	<ul style="list-style-type: none"> I understand that structures are made of many different components that are connected and have specific functions. 	Visual reflection	Written reflection	Oral reflection

Name:

Date:

Performance Expectation: HS-LS1-1. Construct an explanation based on evidence for how the **structure of DNA** determines the **structure of proteins** which carry out the **essential functions of life** through **systems of specialized cells**

Goals	My evidence of learning	Showing my Learning			I Need Support	I Need Challenge
	Activities/ tasks	written	oral	visual		
• I can explain using evidence that there are theories and laws that describe the natural world						
• I know that the systems of specialized cells inside organisms perform essential functions of life • I know that cells have genetic information in DNA molecules • I know that genes are parts of DNA that are instructions for how proteins are formed • I know how cells work						
• I understand that structures are made of many different components that are connected and have specific functions .						

1. Standards based vs. standardized curriculum

Kristine Nannini YoungTeacherLove

Standards Based Grading

...helps teachers:

In the traditional grade book, Katie and her parents would see her grades and think she is getting by just fine.

But standards based grading reveals that she has not completely mastered the standards.

Give quality feedback

Traditional Grade Book

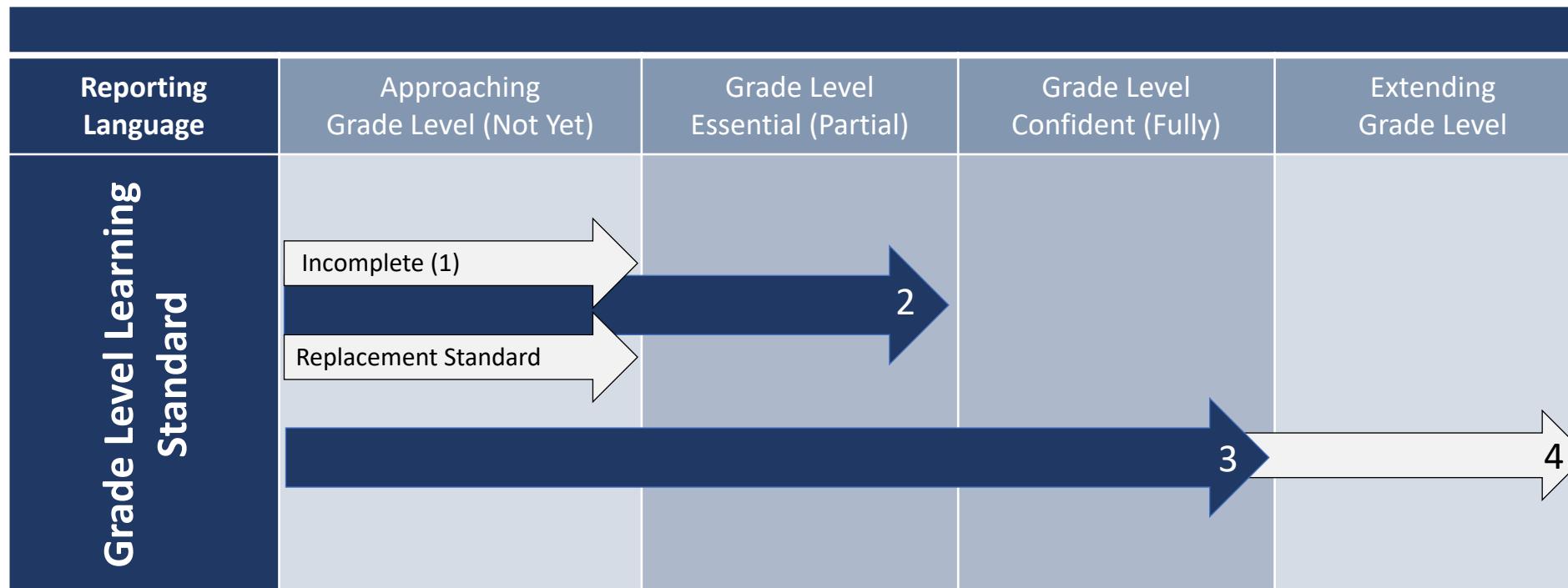
Name	Homework	Quiz 1	Quiz 2	Chapter 2 Test
Katie	90%	88%	82%	80%
Joe	60%	75%	88%	70%
Sara	10%	90%	98%	100%
John	100%	50%	60%	54%

Standards Based Grade Book

Standard 1: Use parenthesis, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	Standard 2: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.	Standard 3: Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.	
Katie	4	2	2
Joe	2	3	1

A red arrow points from the 'Traditional Grade Book' table to the 'Standards Based Grade Book' table, highlighting the shift from a focus on overall average scores to a focus on individual mastery of specific standards.

An Additive Continuum of Proficiency



Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

***Description:** can include but are not limited to written, oral, pictorial, and kinesthetic

Standards Based Grade Book (NGSS)														
Learning Standard/ Performance Expectation													Evaluation	
	Student 1 (IEP)				Student 2				Student 3					
Possible Evidence of Learning	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Total	Out of
Reporting Language	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4	%	Letter Grade
Evaluation														4-Point
Student 1 (IEP)														
Student 2														
Student 3														
Student 4														
Student 5														
Student 6														

Standards Based Grade Book (NGSS)

Learning Standard/ Performance Expectation	5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen												Evaluation							
	Science and Engineering Practices				Disciplinary Core Ideas				Crosscutting Concepts				Total	Out of	%	Letter Grade	4-Point			
Possible Evidence of Learning																				
Reporting Language	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending								
Evaluation	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4								
Student 1 (IEP)	•				•				•	•			3	3*	100%	A*	4*			
Student 2	•	•			•	•			•	•			7.5	12	63%	D	2.5			
Student 3	•	•	•	•	•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			
Student 4			•	•	•	•	•	•	•	•			IE	12						
Student 5	•	•	•	•	•	•					•		IE	12						
Student 6	•	•	•		•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			

Student 1 (IEP)

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



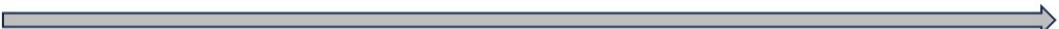
Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

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Standards Based Grade Book (NGSS)																				
Learning Standard/ Performance Expectation	5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen												Evaluation							
	Science and Engineering Practices				Disciplinary Core Ideas				Crosscutting Concepts				Total	Out of	%	Letter Grade	4-Point			
Possible Evidence of Learning																				
Reporting Language	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending								
Evaluation	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4								
Student 1 (IEP)	•				•				•	•			3	3*	100%	A*	4*			
Student 2	•	•			•	•			•	•			7.5	12	63%	D	2.5			
Student 3	•	•	•	•	•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			
Student 4			•	•	•	•	•	•	•	•			IE	12						
Student 5	•	•	•	•	•	•					•		IE	12						
Student 6	•	•	•		•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			

Student 2 – 63%

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

***Description:** can include but are not limited to written, oral, pictorial, and kinesthetic

Standards Based Grade Book (NGSS)																				
Learning Standard/ Performance Expectation	5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen												Evaluation							
	Science and Engineering Practices				Disciplinary Core Ideas				Crosscutting Concepts				Total	Out of	%	Letter Grade	4-Point			
Possible Evidence of Learning																				
Reporting Language	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending								
Evaluation	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4								
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Student 2	•	•			•	•			•	•			7.5	12	63%	D	2.5			
Student 3	•	•	•	•	•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			
Student 4			•	•	•	•	•	•	•	•			IE	12						
Student 5	•	•	•	•	•	•					•		IE	12						
Student 6	•	•	•		•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			

Student 3 – 92%

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

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Standards Based Grade Book (NGSS)

Learning Standard/ Performance Expectation	5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen												Evaluation							
	Science and Engineering Practices				Disciplinary Core Ideas				Crosscutting Concepts				Total	Out of	%	Letter Grade	4-Point			
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Reporting Language	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending								
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Student 1 (IEP)	•				•				•	•			3	3*	100%	A*	4*			
Student 2	•	•			•	•			•	•			7.5	12	63%	D	2.5			
Student 3	•	•	•	•	•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			
Student 4			•	•	•	•	•	•	•	•			IE	12						
Student 5	•	•	•	•	•	•					•		IE	12						
Student 6	•	•	•		•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			

Student 3 – 92%

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

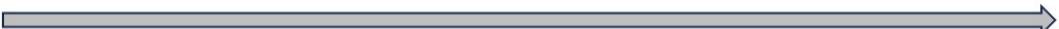
***Description:** can include but are not limited to written, oral, pictorial, and kinesthetic

Standards Based Grade Book (NGSS)

Learning Standard/ Performance Expectation	5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen												Evaluation							
	Science and Engineering Practices				Disciplinary Core Ideas				Crosscutting Concepts				Total	Out of	%	Letter Grade	4-Point			
Possible Evidence of Learning																				
Reporting Language	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending								
Evaluation	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4								
Student 1 (IEP)	•				•				•	•			3	3*	100%	A*	4*			
Student 2	•	•			•	•			•	•			7.5	12	63%	D	2.5			
Student 3	•	•	•	•	•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			
Student 4			•	•	•	•	•	•	•	•			IE	12						
Student 5	•	•	•	•	•	•					•		IE	12						
Student 6	•	•	•		•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			

Student 4 – IE

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

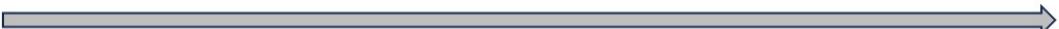
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Standards Based Grade Book (NGSS)

Learning Standard/ Performance Expectation	5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen												Evaluation							
	Science and Engineering Practices				Disciplinary Core Ideas				Crosscutting Concepts				Total	Out of	%	Letter Grade	4-Point			
Possible Evidence of Learning																				
Reporting Language	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending	Approaching/ Access Point	Emerging/ Essential	Developing	Extending								
Evaluation	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4	IE/IEP	2.5	3	4								
Student 1 (IEP)	•				•				•	•			3	3*	100%	A*	4*			
Student 2	•	•			•	•			•	•			7.5	12	63%	D	2.5			
Student 3	•	•	•	•	•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			
Student 4			•	•	•	•	•	•	•	•			IE	12						
Student 5	•	•	•	•	•	•					•		IE	12						
Student 6	•	•	•		•	•	•	•	•	•	•	•	11	12	92%	A-	3.67			

Student 5 – IE

Next Generation Science Standards (NGSS)		
Subject Area: Science	Strand: Matter and Its Interactions	Grade: 5
Performance Expectation: 5-PS1-1 Students can develop a model to describe that matter is made of particles too small to be seen		Guiding Unit Question: How do we know that something exists if we cannot see it?
Unit Vocabulary (Content): properties, structures, scale, proportion, quantity, models, particles, bulk matter,		Unit Vocabulary (Skills): make, observe



Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices	I can make a model to help me understand an idea by:	following/participating in creating a model	planning and creating a model	creating a model to solve a problem	Adjusting or revising a model I have created
Disciplinary Core Ideas	I know that matter is made up of particles that are too small to see by: I know that models can help us see particles that are too small to see by:	describing what matter is describing that there are different states of matter describing examples of different kinds of matter in the world	describing what bulk matter is describing that matter (that I can see) is made up of tiny particles (that are too small to see) describing examples of models that help to observe particles that are too small to see	describing how collecting many tiny particles can help us observe how matter takes up space describing which part of the model is bulk matter, and which part of the model is particles	describing the relationship between matter and particles using the model to describe the relationship between matter and how particles move when they are collected
Crosscutting Concepts	I know that objects in the world can be very large and very small by:	describing objects in the world that are very small and very large	describing what microscopic and macroscopic is and examples of each in the world	describing what is similar and what is different between microscopic and macroscopic objects in the world	describing what scale is and how it helps us understand microscopic and macroscopic objects

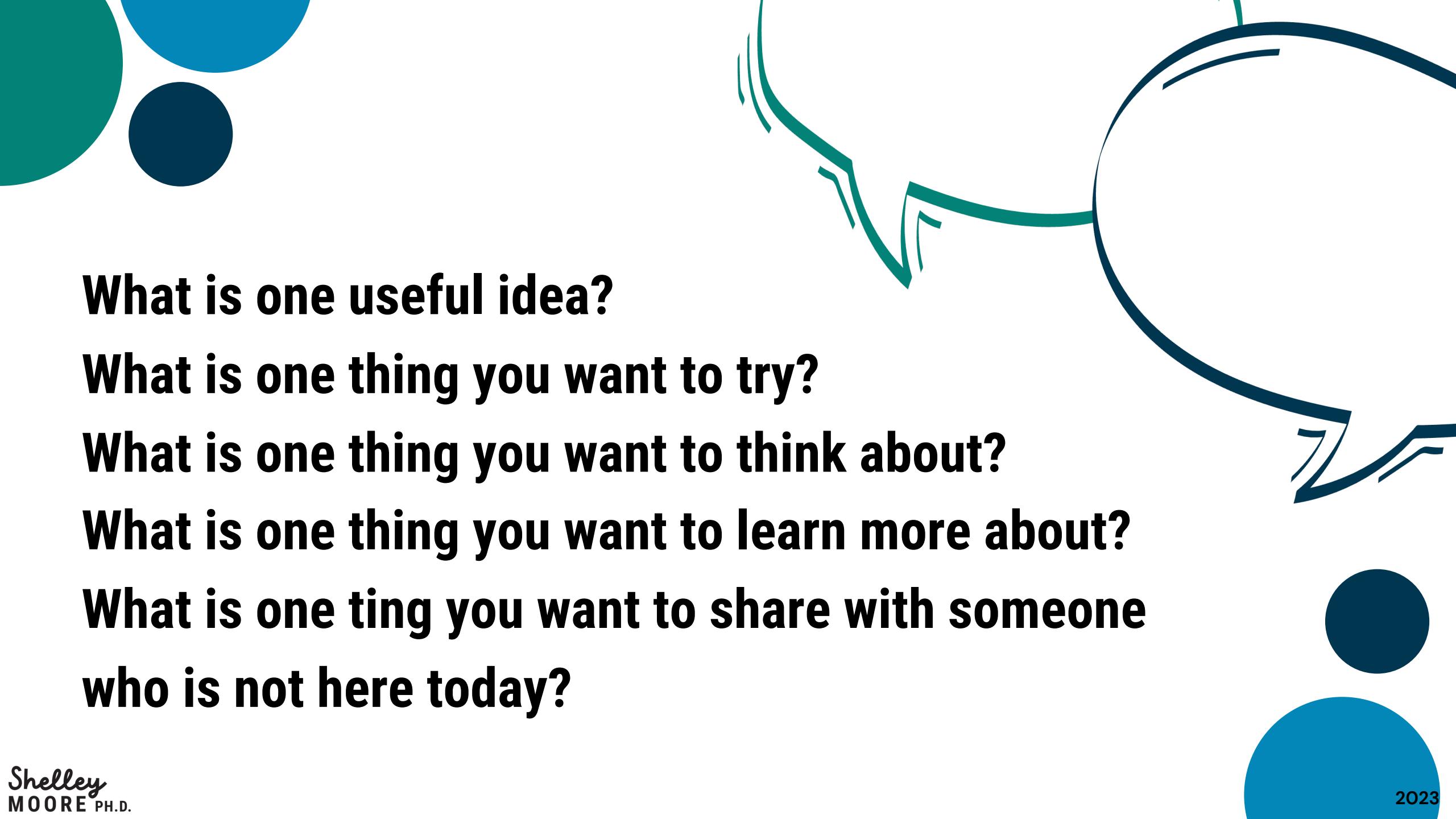
***Description:** can include but are not limited to written, oral, pictorial, and kinesthetic

Student 5 – with evidence

9/12

75%

3.0



What is one useful idea?

What is one thing you want to try?

What is one thing you want to think about?

What is one thing you want to learn more about?

**What is one thing you want to share with someone
who is not here today?**

Shelley MOORE PH.D.



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