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How can we inclusively plan for, teach, and assess all students in a diverse classroom?

Session 1: Determining Learning Standards using Backwards Design

Session 2: Developing asset based learning continuums

Session 3: Inclusive lesson design reflecting UDL

Session 4: Inclusive and standards based assessment

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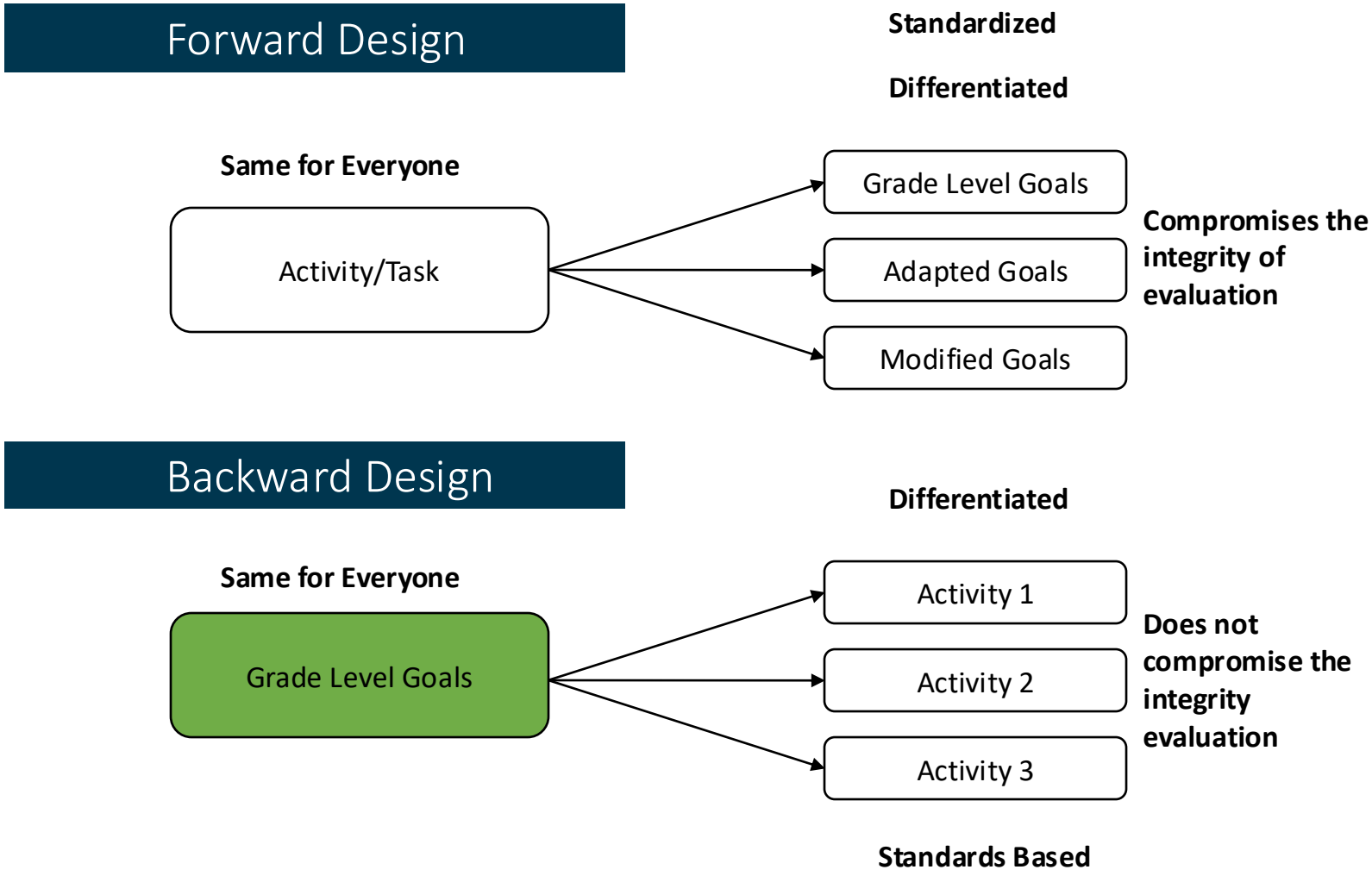
UBD: Determining the Learning Standard



McTigue, 2010

Backwards Design Using Arizona Math Curriculum

Grade:	Subject Area:	Strand/Topic:	
Learning Standard:		Teacher Provocation Questions:	Student Generated Questions
Key Vocabulary:			

Learning Goals	Possible Access Points (accessible version of grade level)	Curricular Language	Student Friendly Language	
			What do students need to know? (I know…)	What to students need to do? (I can…)

Backwards Design Using Arizona Math Curriculum

Grade: 5	Subject Area: Math	Strand/Topic: Number and Operations - Fractions	
Learning Standard: 5.NF.A Use equivalent fractions to add and subtract fraction		**Unit Guiding Question(s):** **What is an equivalent fraction?** **How can we use equivalent fractions to add and subtract fractions?**	**Student Generated Questions:**

Key Vocabulary: fraction, equivalent fraction, add, subtract, denominator, mixed number, strategies, understand, word problem, problem, solution, show my thinking, estimate, solve, pictorial, abstract, concrete

Learning Goals	Possible Access Points (accessible version of grade level)	Curricular Language	Student Friendly Language	
			What do students need to know? (I know…)	What to students need to do? (I can…)
5.NF.A.1	• Adding • Subtracting • Sharing • Fractions with like denominators • Benchmark fractions ½, ¼	Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators	I know what a fraction is I know what a denominator is I know what an equivalent fraction is I know how to find an equivalent fraction I know why equivalent fractions can help me add and subtract fractions I know what a mixed number is I know how to turn a mixed number into a fraction	I can find an equivalent fraction I can use an equivalent fraction to add and subtract fractions when the denominators are not the same I can add and subtract fractions with there are mixed numbers
5.NF.A.2	• Visual problems (not word based) • Word problem that use indicators above	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators by using a variety of representations, equations and visual models to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers	I know some strategies to help me understand word problems I know how to show my thinking in different ways I know what it means to estimate and how estimation help me understand and solve problems I know if a solution makes sense	I can solve word problems where I need to add and subtract fractions and the denominators are not the same I can show how I solve problems in different ways (pictorial, abstract, concrete) I can estimate to help me make sense of word problems I can think about the problem to see if a solution makes sense

Evidence of Learning: Choose your Challenge

Start Here

Go as far as you can in the time allotted

Series Guiding Question: How can we inclusively plan for, teach and assess students in a diverse classroom?

- **I understand** that students are diverse and that planning for them requires anticipating variability rather than homogeneity
- **I know** that Backwards Design is an inclusive planning framework, connected to UDL that identifies learning standards and sub standards that allows for task differentiation which will increase opportunities for students to engage, understand, and show evidence of their learning
- **I can** identify the grade level learning standards and sub standards in a curricular unit
- **I am** inclusive and believe that ALL students, regardless of their ability, can access grade level curriculum

Task: Backwards Design Unit Planning		**Time: Before the next session (Nov. 6, 2024)**	**Supports & Strategies**
I NEED to…	• Find one person to collaborate with and choose a curricular unit that you will be teaching/supporting this fall		• Choice of collaborative partner/group • Choice of curricular area to use • Choice of task challenge On Series Dashboard • Access to session handouts • Access to examples • Access to planning template
I MUST…	• Identify the learning standards/ sub standard in the unit you have chosen by looking at the curricular documents • Highlight the important words that students will need to know and use in this unit • Underline the words that could be substituted for a more student friendly option		
I CAN…	• Practice translating the learning standards/ sub standards into student friendly learning statements using the stems (I know…, I can…, I understand…, or I am…)		
I COULD…	• Develop some student friendly and provoking guiding questions that can organize the learning standard/sub standards into an inquiry		
I can TRY to…	• Identify corresponding literacy and/or numeracy standards that could be drawn into this unit		

How can we inclusively plan for, teach, and assess all students in a diverse classroom?

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Session 2: Developing asset based learning continuums

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Series Guiding Question:

How can we inclusively plan for, teach, and assess all students in a diverse classroom?

Session 2 goals:

- **I understand** that students are diverse and that planning for them requires anticipating variability rather than homogeneity
- **I know** that Learning Continuums are an inclusive planning strategy, connected to UDL that provides a scaffold of a learning standard and/or a sub standard that allows for choice of complexity which will increase opportunities for students to engage, understand, and show evidence of their learning
- **I can** identify the concept of a grade level learning standard and/or sub standard in a curricular unit, and add on complexity
- I can derive an accessible entry point to a grade level concept that can be accessible for any learner in a grade level classroom
- **I am** inclusive and believe that ALL students, regardless of their ability, can access grade level curriculum

How can we inclusively plan for, teach, and assess all students in a diverse classroom?

Nov. 6: Developing asset based learning continuums

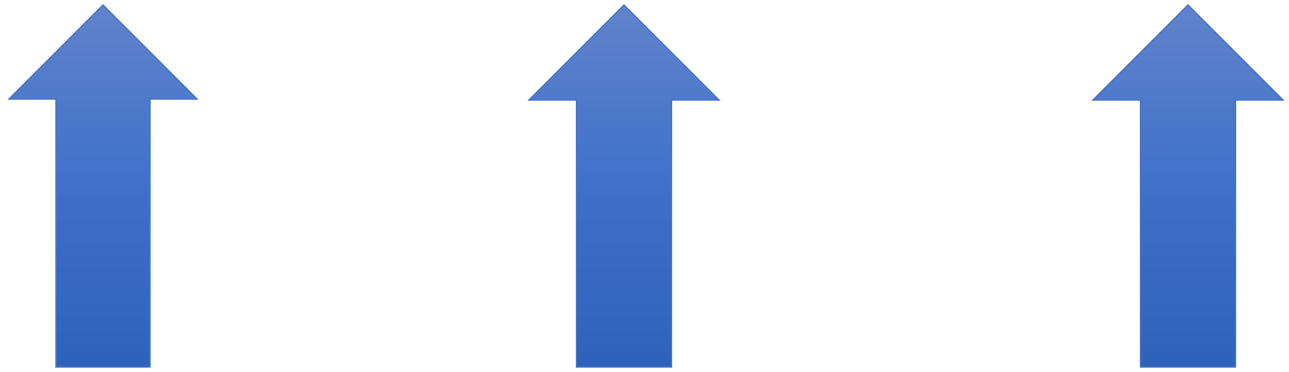
Shelley MOORE PH.D.

Asset Based Rubric

- Learning maps/ learning continuum/ learner progressions
- Task neutral/ standards based
- Same entry point/ multiple exit points
- Start from access (what is essential/conceptual), add on challenge
- Students can have a role in choosing their challenge
- Different from a traditional rubric

Rubrics vs. Learning Continuum

	deficit	deficit	Most complex description
Grade Level Learning Standard			



THE SCRUMPTIOUS RUBRIC REFERENCE

BARELY HANGING ON

The customer wants a refund. Bread alone is not a sandwich. It's like you gave the bread and pop out just to show you were listening.

Translation: You only did the small stuff to suffice turning it in. The artwork is missing all important details and signs of understanding or perseverance.

NEEDS SOME UMPH

Your sandwich disappoints the customer. There's no flavor and not enough meat, if any at all. About the only thing great is the Citrus Drop.

Translation: You are missing important details within your artwork. Expectations are not met. Improvement is needed and lack of understanding is present.

GETS THE POINT

Your sandwich met expectations. It has flavor but nothing too exciting. You included the meat but gee, a side of chips would be nice.

Translation: Your artwork meets expectations, you went as far as the requirements expected and you used what knowledge you had to do so.

RIGHT ON!

Your sandwich went beyond expectations. You threw in some extra flavor and tomatoes and surprised the customer with a side of chips.

Translation: Your artwork exceeds all expectations; you used creativity, went beyond the basic requirements and showed obvious understanding.

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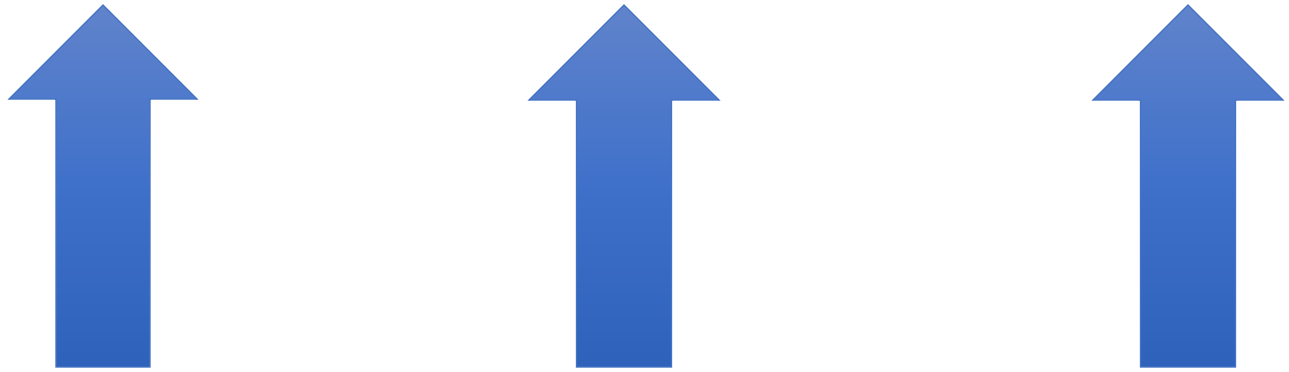
Inclusive Education: it's not more work, it's different work!

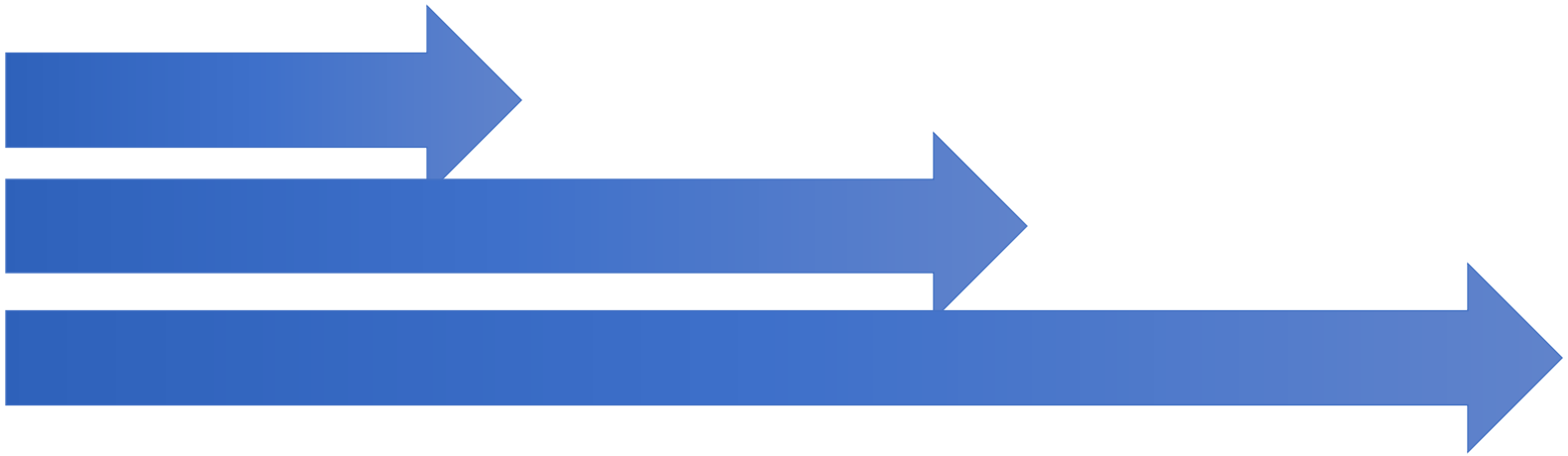
Rubrics vs. Learning Continuum

	deficit	deficit	Most complex description
Grade Level Learning Standard			

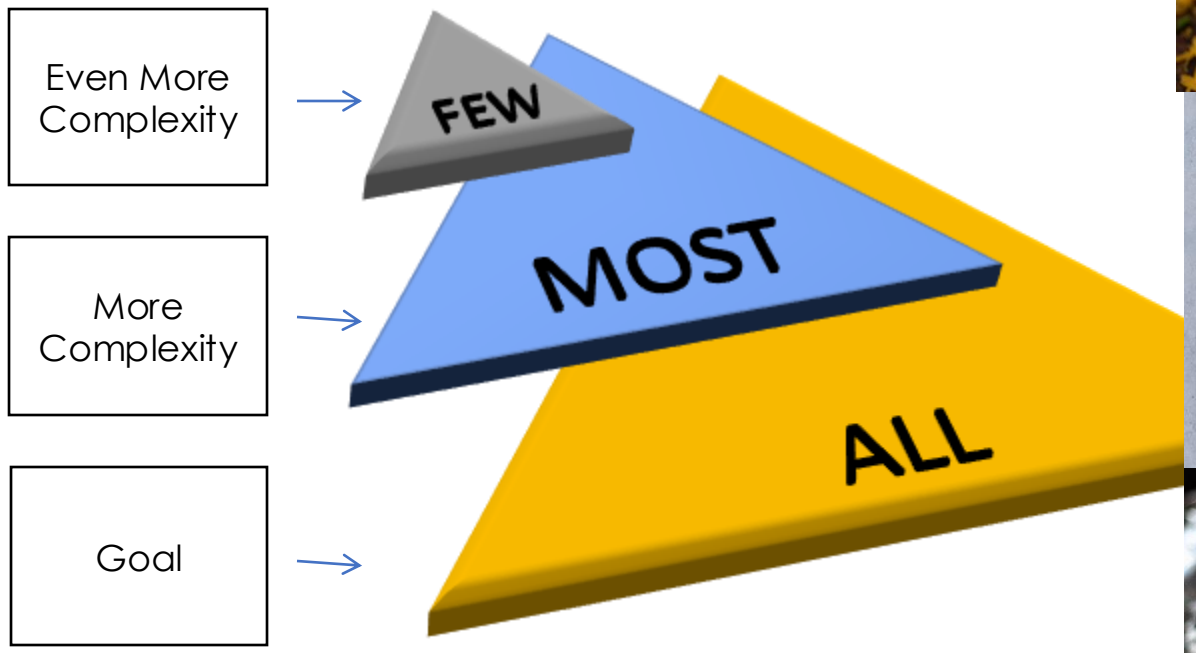


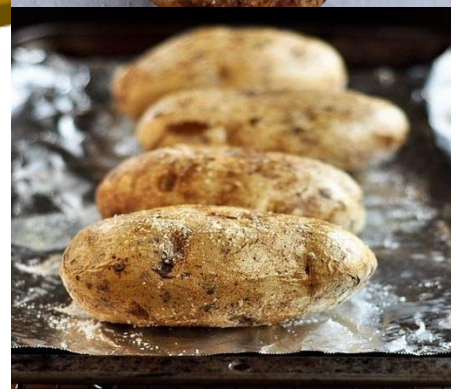
Rubrics vs. Learning Continuum

	Essential	More complex	More complex
Grade Level Learning Standard			



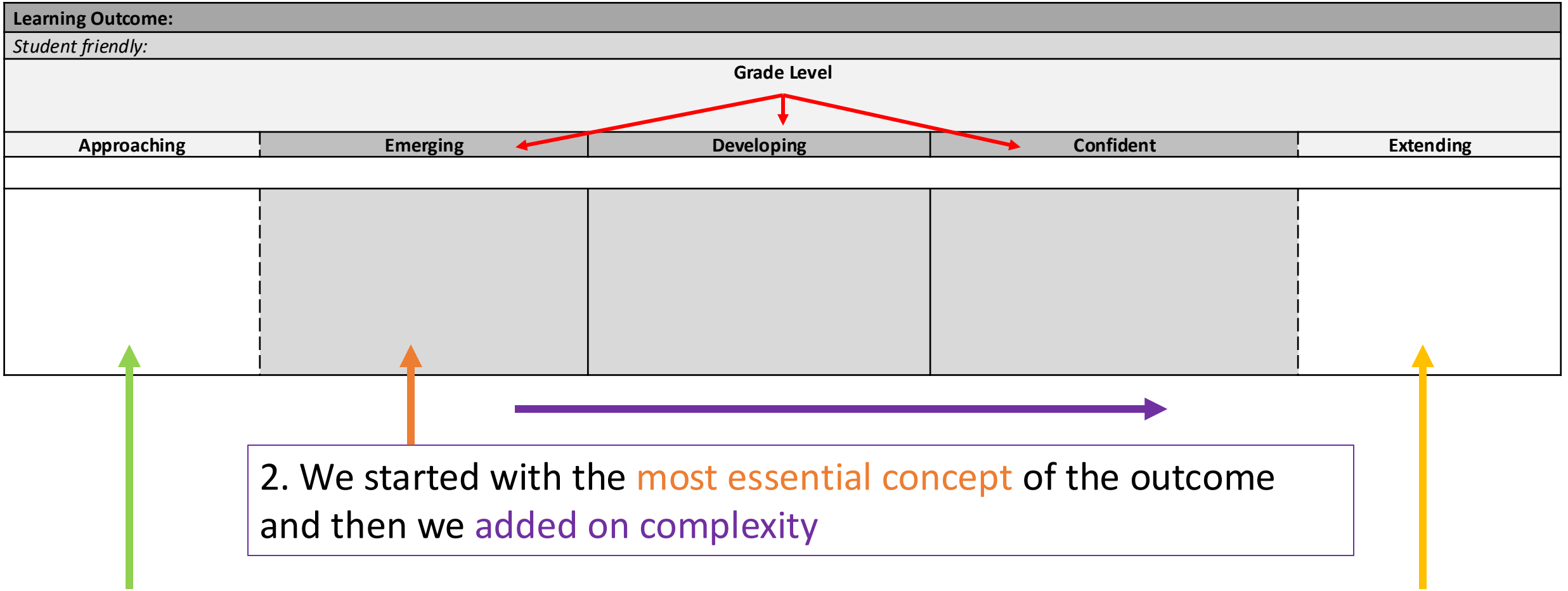
Planning Pyramid





Our Co-Planning Journey: Learning Continuums

1. Using the elaborations for each learning outcome, we constructed a grade-level scaffold in *student friendly language*



2. We started with the most essential concept of the outcome and then we added on complexity

3. We extended the grade level scaffold to include an access point and challenge point

Course/Subject/Grade(s): Math 8				Planning Team:		
Unit Guiding Question: What are statistics? How do I understand statistics? How can I use statistics to understand and respond to a local issue?						
Learning Standards		**Approaching – IE/ IEP**	**Emerging - 2**	**Developing – 3**	**Confident – 3.5**	**Extending - 4**
I know **statistics** vocabulary and what these terms mean		I know where there are statistics in my life or statistics that describe my life/ community I know mean, median, mode & range and how they are connected	I know what statistics are and why they are useful I know that statistics tell a story	I know what these terms represent and communicate Measures of central tendency Standard deviation	I know I know what these terms represent and communicate Confidence interval Z-scores distributions	I know how the terms in statistics are connected and influence each other
Curricular Competencies	I can **estimate reasonably**	I can estimate I can estimate rational numbers I can use a variety of operations	I can defend an estimation I can determine a reasonable estimate I can use a strategy to help me estimate reasonably (benchmark)	I can be aware of and use multiple strategies to help me estimate reasonably I can choose a strategy that works for me	I can choose a strategy that is most strategic and efficient	I can mentally use a variety of strategies and operations to create a reasonable estimate
	I can identify the **problem** I can come up with possible **solutions** to a problem	I can use a math tool following a model	I can identify the problem I can use a strategy to solve a problem I can use math tools I can find a possible solution and describe my process	I can use a variety of strategies to solve a problem I know which math tools to use I can adjust my strategies and math tools if my solution doesn't make sense	I can choose the most efficient strategy and math tools to solve a problem I can justify my solution	I can integrate solutions and adjust depending on the task
	I can identify and solve a problem connected to my **local community**	I can find/identifying statistics in my life	I can notice and understand what statistics are telling me in my daily life I can describe how perspectives (diverse /indigenous) can change how statistics are presented	I can wonder about statistics I can describe what is the story (perspective) that specific statistics are presenting	I can pose inquiry questions into statistics I can consider and describe other perspectives (diverse /indigenous) and possible stories are presenting	I can use statistics to inform and shape mine/others' opinions
	I can identify the math **concept** we are working with	I can show my learning in one way I can follow a model	I can explain my mathematical argument I can explain my thinking in many ways (oral, written, visually) I can integrate technology I can identify that data can be interpreted to form different opinion/ stories	I can explain my mathematical argument by integrating oral, visual and written ways I can recognize bias/others I can question data by understanding the intent/perspectives behind why statistics are presented	I can consider an audience when explaining my mathematical argument	I can anticipate consequences and responses in my explanation
	I can **connect** math concepts to each other, myself and the world	I can find ways that I use math in my life	I can connect mathematical concepts to help us better understand ourselves and our daily life	I can connect mathematical concepts to the world around us (news, traditional practices, media) I can connect mathematical concepts to other curricular areas/concepts	Using mathematical concepts to form an argument in support of an issue or an opinion	I can connect mathematical concepts to concepts in social justice

Learning Continuums

1. Choose a Learning Standard and translate it into student friendly language

Learning Outcome:			
Student friendly:			
Approaching (Access Point – 1)	**Essential (2)**	**Confident (3)**	**Extending (4)**

2. Start with determining the most essential concept of the standard and then add on complexity

3. Extend the grade level standard to include an access point and challenge point

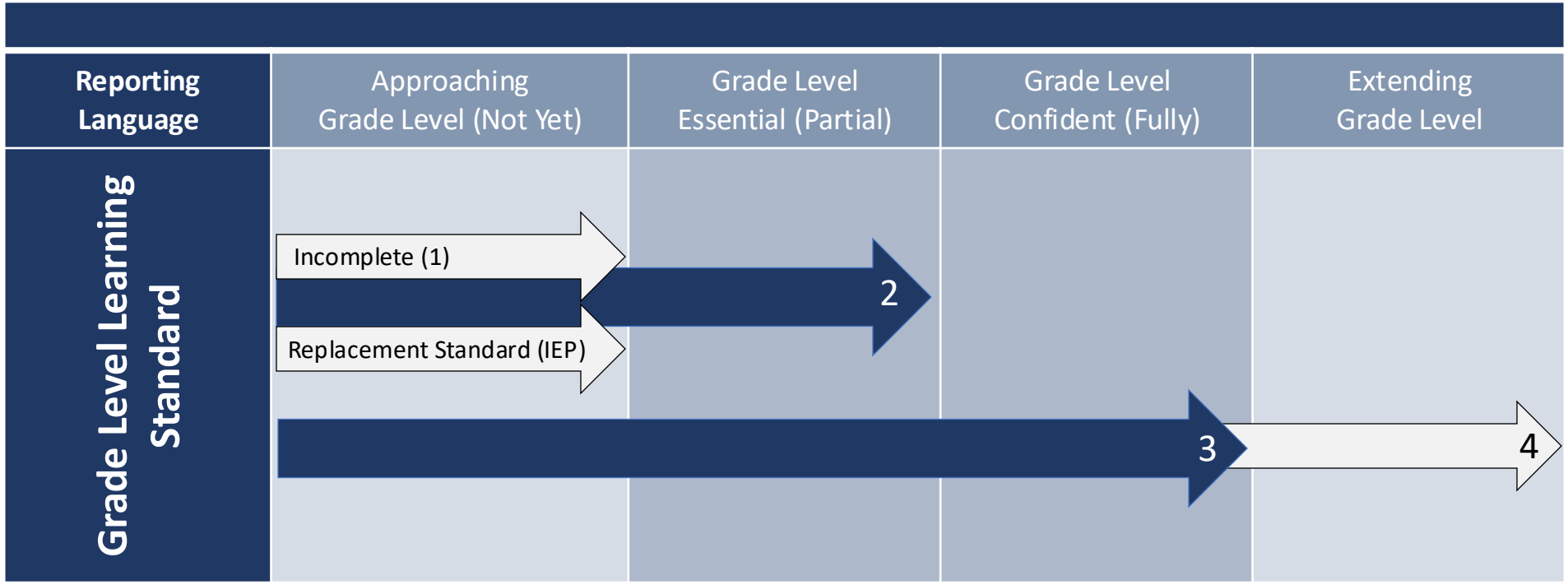
S, Moore, 2024

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**

An Additive Continuum of Proficiency



S, Moore, 2024

Backwards Design Using Arizona Math Curriculum

Grade: 5	Subject Area: Math	Strand/Topic: Number and Operations - Fractions	
Learning Standard: 5.NF.A Use equivalent fractions to add and subtract fraction		**Unit Guiding Question(s):** **What is an equivalent fraction?** **How can we use equivalent fractions to add and subtract fractions?**	**Student Generated Questions:**
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5.NF.A.2	• Visual problems (not word based) • Word problem that use indicators above	Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators by using a variety of representations, equations and visual models to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers	I know some strategies to help me understand word problems I know how to show my thinking in different ways I know what it means to estimate and how estimation help me understand and solve problems I know if a solution makes sense	I can solve word problems where I need to add and subtract fractions, and the denominators are not the same I can show how I solve problems in different ways (pictorial, abstract, concrete) I can estimate to help me make sense of word problems I can explain why a solution makes sense

Additive Learning Continuum: Arizona Math 5

Learning Standard: : 5.NF.A Use equivalent fractions to add and subtract fraction

GUIDING QUESTIONS: **What is an equivalent fraction? How can we use equivalent fractions to add and subtract fractions?**

Approaching	Essential	Confident	Extending
• I know what a fraction is • I know what a denominator is • I know what an equivalent fraction is • I can add and subtract fractions with like denominators	• I know how to find an equivalent fraction • I can find an equivalent fraction using benchmark fractions • I know why equivalent fractions can help me add and subtract fractions • I can use an equivalent fraction to add and subtract fractions when the denominators are not the same (benchmarks) • I know what a mixed number is • I know how to turn a mixed number into a fraction	• I can find an equivalent fraction • I can use an equivalent fraction to add and subtract fractions when the denominators are not the same • I can add and subtract fractions with there are mixed numbers	• I can add or subtract fractions with unlike denominators using the strategy of the least common denominator (LCD) • I can add or subtract fractions by converting fractions into an improper fraction and then converting back into mixed numbers
• I can follow a model strategy to solve a math problem using fractions	• I can solve word problems where I need to add and subtract fractions, and the denominators are not the same (using benchmarks) • I can show how I solve problems in one ways (pictorial, abstract, concrete) • I know some strategies to help me understand word problems • I know what it means to estimate and how estimation help me understand and solve problems • I know if a solution makes sense	• I can solve word problems where I need to add and subtract fractions, and the denominators are not the same • I can show how I solve problems in another ways (pictorial, abstract, concrete) • I can estimate to help me make sense of word problems • I can explain why a solution makes sense	• I can show how I solve problems in any way (pictorial, abstract, concrete)

Evidence of Learning: Choose your Challenge

Start Here

Go as far as you can in the time allotted

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- **I understand** that students are diverse and that planning for them requires anticipating variability rather than homogeneity
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- **I can** derive an accessible entry point to a grade level concept that can be accessible for any learner in a grade level classroom
- **I am** inclusive and believe that ALL students, regardless of their ability, can access grade level curriculum

Task: Backwards Design Unit Planning		**Time: Before the next session (Jan 22, 2024)**	**Supports & Strategies**
I NEED to…	• Identify the learning standards/ sub standard in the unit you have chosen by looking at the curricular documents		• Choice of collaborative partner/group • Choice of curricular area to use • Choice of task challenge On Series Dashboard • Access to session handouts • Access to examples • Access to planning template
I MUST…	• Determine the most important and essential concept or ides in each standard • Add on another level of complexity		
I CAN…	• Extend for access • Extend for challenge		
I COULD…	• Practice translating the learning standards/ sub standards into student friendly learning statements using the stems (I know…, I can…, I understand…, or I am…)		
I can TRY to…	• Try to create another learning standard		

Series Guiding Question:

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Session 2 goals:

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