



**FREDERICK COUNTY PUBLIC SCHOOLS**  
MARYLAND

# Competency-Based Education

## Scoring Criteria Workshop

Don Weafer  
Senior Associate

Mark Kostin  
Associate Director

**July 10-12, 2017**

# WHO WE ARE



ABOUT

WORK

RESOURCES

PROFICIENCY

EVENTS

NEWS

DONATE



*Keeping my students,  
their histories,  
their dreams  
and their potential  
at the center  
of everything.*

PORTRAIT GALLERY



GLOBAL BEST PRACTICES



Is a **non-profit** support organization based in Portland working nationally with schools, districts and state agencies, providing **coaching**, and developing tools.

# WE BELIEVE

In equitable, personalized, rigorous learning for **all students** leading to readiness for college, careers, and citizenship

That schools must simultaneously attend to **policy, practice, and community engagement**

School improvement is **context-based,**  
not one-size fits all



# Outcomes

(Re)Familiarize ourselves with the elements of a competency-based learning system

# Outcomes

Affirm FCPS graduation competencies and finalize performance standards

# Outcomes

Begin to write scoring criteria and draft a plan to complete these during the fall

# Outcomes

Identify opportunities and gaps between existing curriculum (e.g. courses and learning experiences) and performance standards

# Outcomes

Develop a plan and process for determining how competency might be demonstrated through mastery

# Agenda - Monday

Welcome, Context, Outcomes, Agenda, Norms

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CBE Simplified - Review

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Affirm Grad Competencies + Performance Standards

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Scoring Criteria - Introduction

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Scoring Criteria - Content Area Team Work

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Closing + Next Steps



JULY 10 - 12, 2017



## Presenters

[Mark Kostin](#), Associate Director | Great Schools Partnership

[Don Weafer](#), Senior Associate | Great Schools Partnership

## Materials

### Draft Agenda

- [Ten Principles of Competency-Based Learning](#)
- [FCPS Triangle](#)
- [Assessment Pathways](#)
- [Competencies to Practice](#)
- [Grad Standards Design Guide](#)
- [Performance Indicators: Design Criteria](#)
- [Scoring Criteria: Design Guide](#)
- [Scoring Criteria: Design Protocol](#)
- [Henry County \(GA\) K-12 Competencies, Performance Standards, and Scoring Criteria](#)

# Norms

- Respect differences
- Monitor airtime
- Listen well
- Foster good humor
- Support a culture of possibility
- Honor the time we have together
- Manage technology\*

***What else might you need to do your best work?***

# COMPETENCY-BASED EDUCATION

**Is not** a stand-alone intervention

# COMPETENCY-BASED EDUCATION

**Is** a suite of practices resulting from the thoughtful combination of best practices currently used by expert educators with solid support in the literature

## Research Evidence

1. All learning expectations are clearly and consistently communicated to students and families, including long-term expectations (such as graduation requirements and graduation standards), short-term expectations (such as the specific [learning objectives](#) for a course or other [learning experience](#)), and general expectations (such as the performance levels used in the school's grading and reporting system).
2. Student achievement is evaluated against common [learning standards](#) and performance expectations that are consistently applied to all students regardless of whether they are enrolled in traditional courses or pursuing alternative [learning pathways](#).

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"Clear learning goals help students learn better (Seidel, Rimmele, & Prenzel, 2005). When students understand exactly what they're supposed to learn and what their work will look like when they learn it, they're better able to monitor and adjust their work, select effective strategies, and connect current work to prior learning (Black, Harrison, Lee, Marshall, & Wiliam, 2004; Moss, Brookhart, & Long, 2011). This point has been demonstrated for all age groups, from young children (Higgins, Harris, & Kuehn, 1994) through high school students (Ross & Starling, 2008), and in a variety of subjects—in writing (Andrade, Du, & Mycek, 2010); mathematics (Ross, Hogaboam-Gray, & Rolheiser, 2002); and social studies (Ross & Starling, 2008). The important point here is that *students* should have clear goals. If the teacher is the only one who understands where learning should be headed, students are flying blind. In all the studies we just cited, students were taught the learning goals and criteria for success, and that's what made the difference." —**Brookhart, S. M., & Moss, C. M. (2014, October). Learning targets on parade. *Educational Leadership*, 72(7), 28–33.**

"The most effective teaching and the most meaningful student learning happen when teachers design the right learning target for today's lesson and use it along with their students to aim for and assess understanding. Our theory grew from continuous research with educators focused on raising student achievement through formative assessment processes (e.g., Brookhart, Moss, & Long, 2009, 2010, 2011; Moss, Brookhart, & Long 2011a, 2011b, 2011c). What we discovered and continue to refine is an understanding of the central role that learning targets play in schools. Learning targets are student-friendly descriptions—via words, pictures, actions, or some combination of the three—of what you intend students to learn or accomplish in a given lesson. When shared meaningfully, they become actual targets that students can see and



NEW ENGLAND  
SECONDARY SCHOOL  
CONSORTIUM

# GLOBAL BEST PRACTICES 2<sup>ND</sup> EDITION

*An* Internationally Benchmarked

Self-Assessment Tool  
*for* Secondary Learning



# Competency

is a student's ability to transfer learning in and/or across content areas.

# 10 Principles of Competency- Based Education

# Learning Standards

1. All learning expectations are clearly and consistently communicated to students + families
2. Student achievement is evaluated against common learning standards and performance expectations that are consistently applied to all students

# Assessment Practices

3. All forms of assessment are standards-based and criterion-referenced
4. Formative assessments measure learning progress during the instructional process
5. Summative assessments - which are integrated tasks requiring transfer of knowledge and skills, application, and performance in novel settings - measure a student's level of competency at a specific point in time

# Grading + Reporting

6. Academic progress and achievement are monitored and reported separately from work habits - which are also monitored and reported
7. Academic grades communicate learning progress and achievement
8. Students are given multiple opportunities to improve their work when they fail to meet expected standards.

# Instructional Strategies

9. Students can demonstrate learning progress and achievement in multiple ways
10. Students are given opportunities to make important decisions about their learning

# TURN + TALK

A background image of a ski lift chair with four people riding up a snowy mountain slope under a blue sky. The chair is in the lower right foreground, and the mountain extends into the distance. The text is overlaid on the image.

Which principle resonates most with you?

Which principle might be the greatest stretch to implement?

# Competency-Based Learning Simplified

A Frederick County Public Schools Learning Model



FREDERICK COUNTY PUBLIC SCHOOLS  
MARYLAND

Graduation Requirement	Reporting Method		Assessment Method
YES	Transcripts and Report Cards	<b>Cross-Curricular Graduation Competencies</b> 5–8 competencies taught in all content areas	<b>Body of Evidence</b> Students demonstrate achievement of competencies through a body of evidence evaluated using common rubrics
YES	Transcripts and Report Cards	<b>Discipline-Specific Graduation Competencies</b> 5–8 competencies for each content area	<b>Verification of Proficiency</b> Students demonstrate achievement of content-area graduation competencies through their aggregate performance on summative assessments over time
NO	Progress Reports	<b>Performance Standards</b> 5–10 standards for each cross-curricular and discipline-specific competency that move students toward proficiency and the achievement of graduation competencies	<b>Summative Assessment</b> Graded summative assessments are used to evaluate the achievement of performance indicators
NO	Teacher Feedback	<b>Learning Objectives</b> Learning objectives guide the design of curriculum units that move students toward proficiency and the achievement of performance indicators	<b>Formative Assessment</b> Ungraded formative assessments are used to evaluate student learning progress



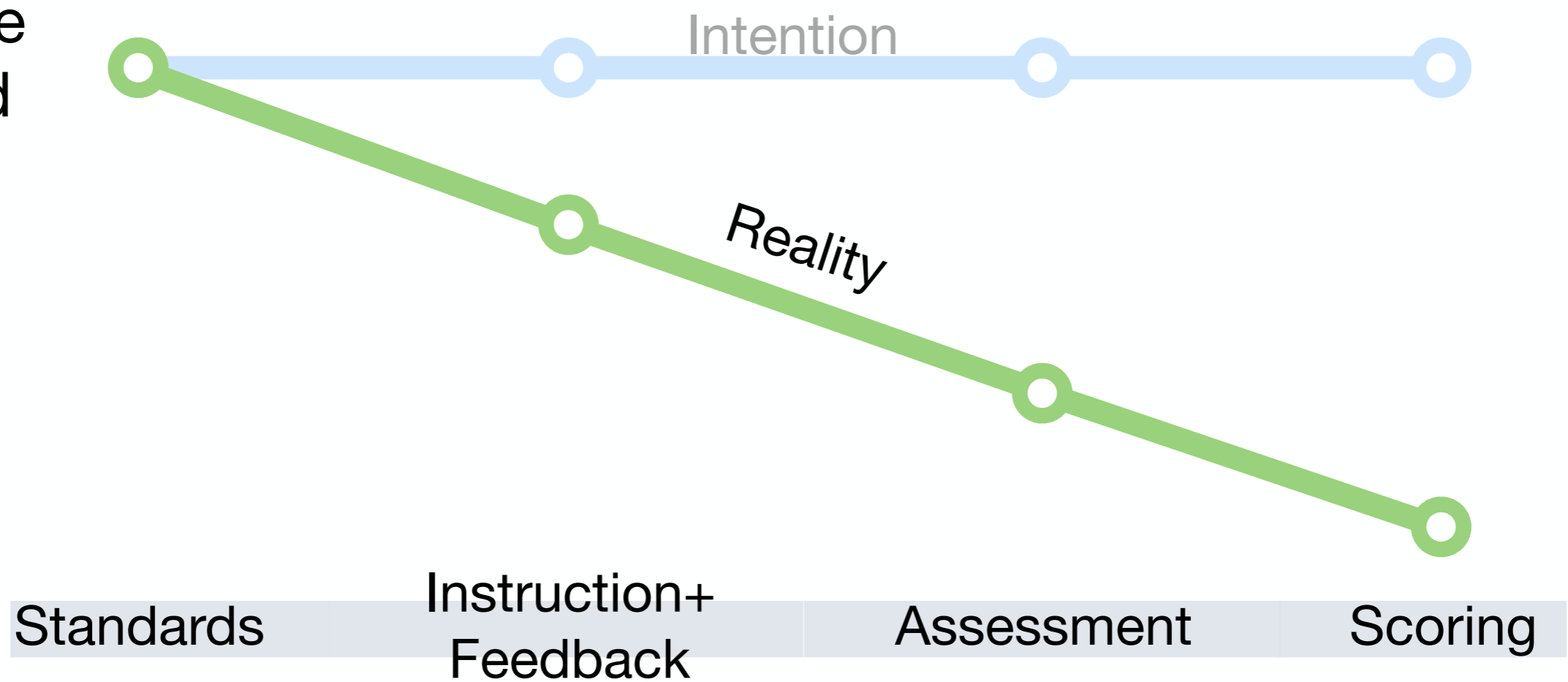
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Competency  
leads to...



# Alignment in a Traditional Model

Cognitive Demand



# Alignment in a Competency-Based Model

Cognitive Demand



Standards

Assessment  
Design

Demonstration

Scoring  
Criteria

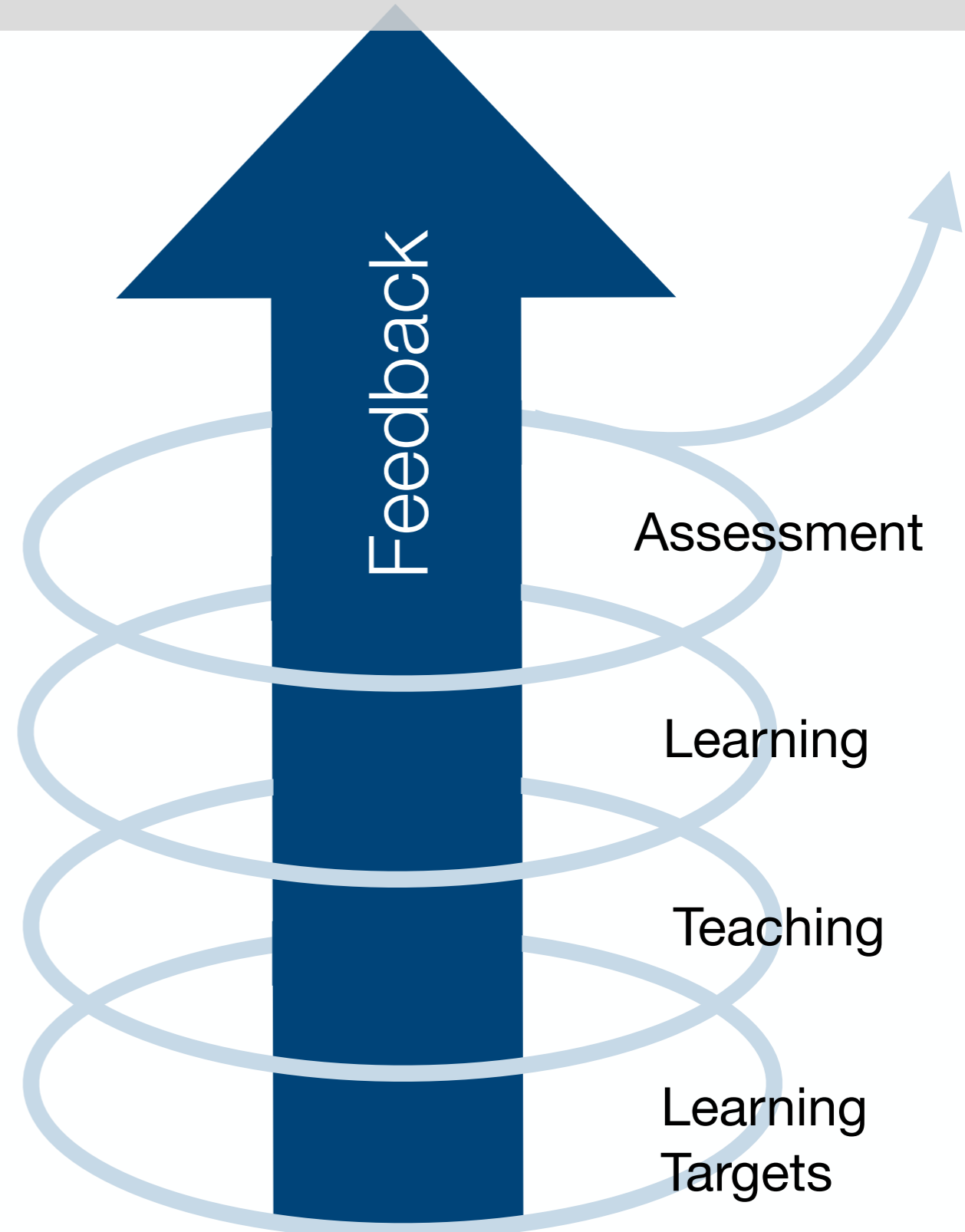
Instruction+  
Feedback

Scoring

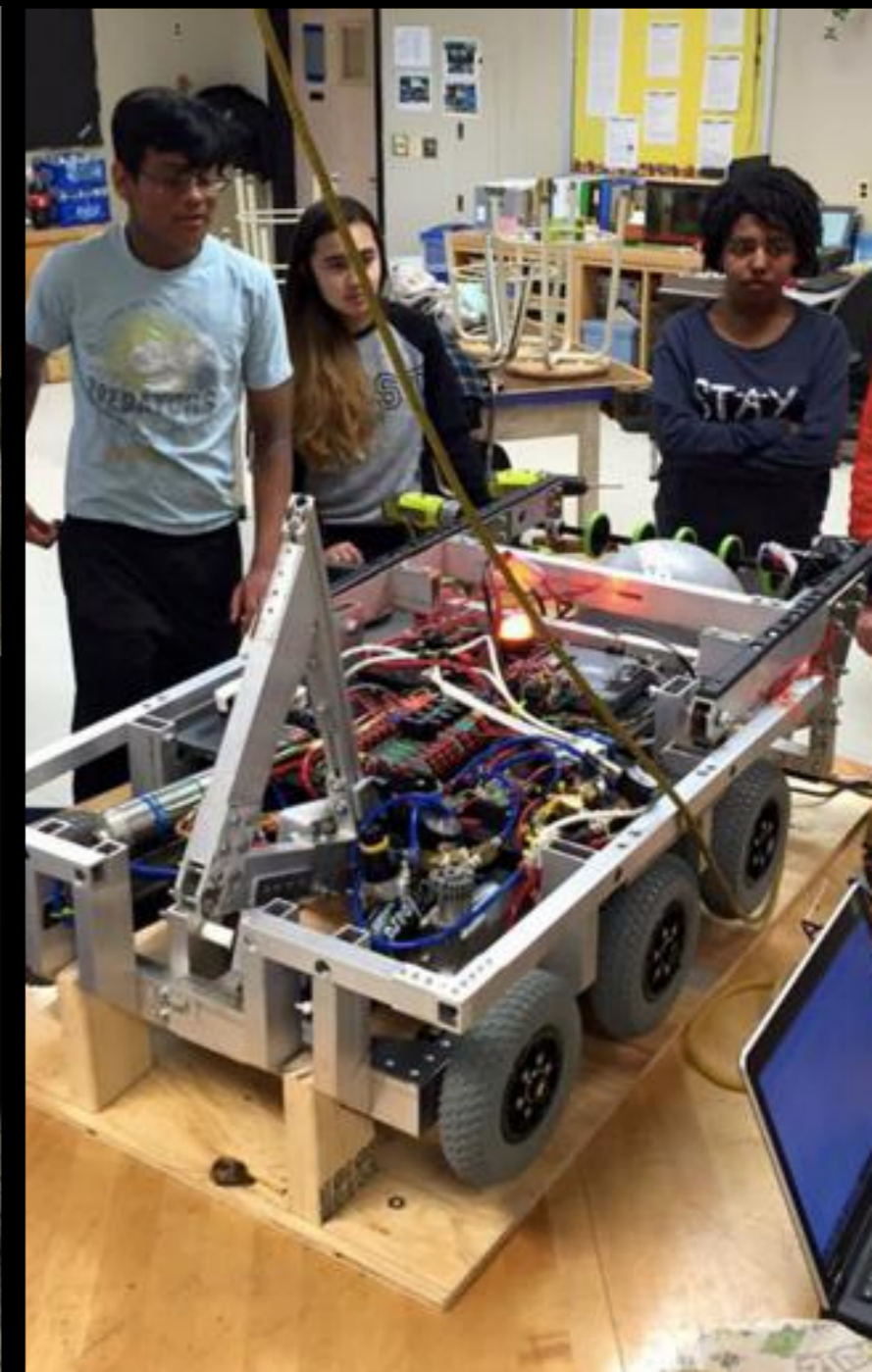


# Feedback

- ▶ Clear
- ▶ Actionable
- ▶ Corrective

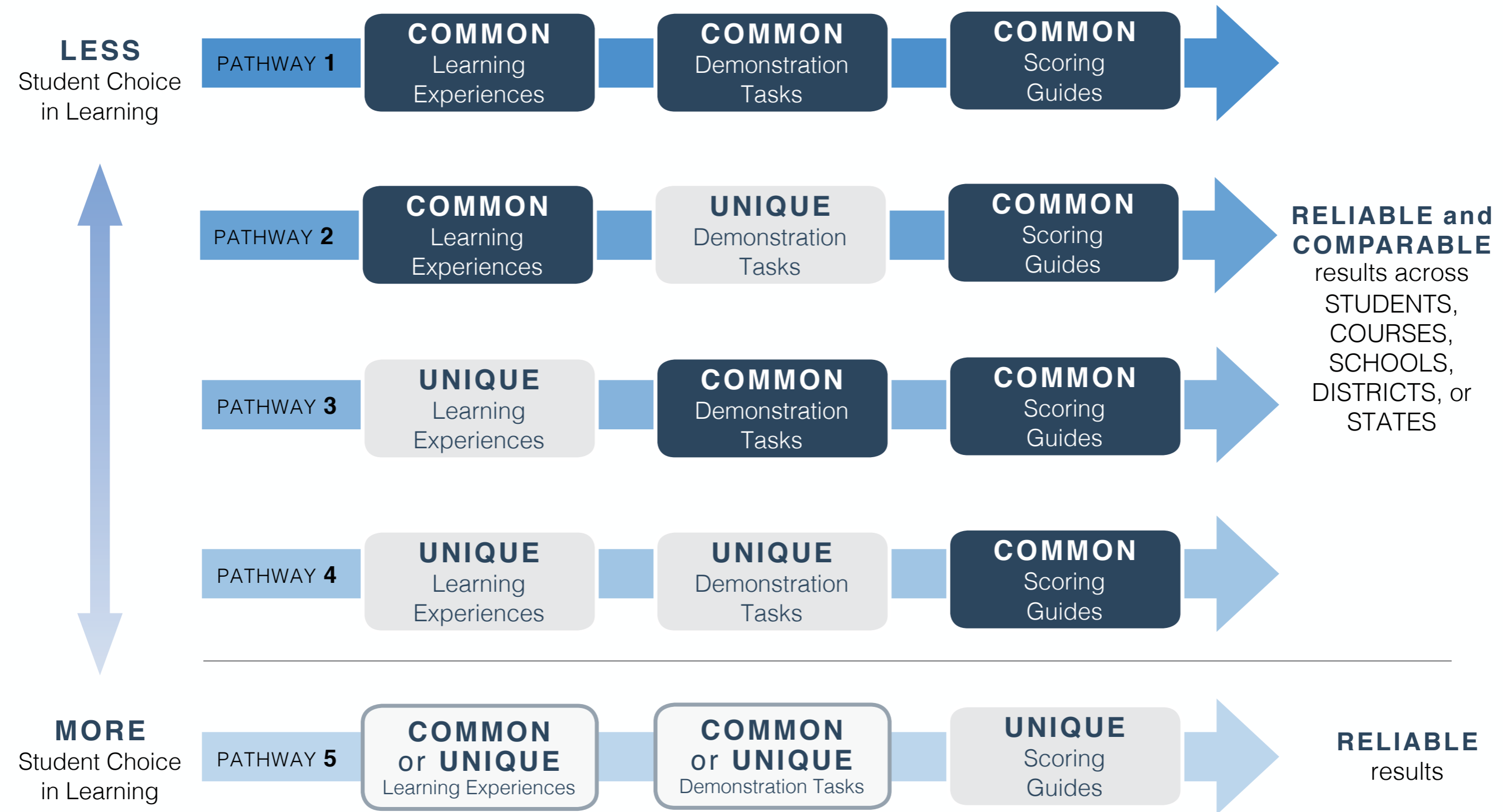


# Personalization



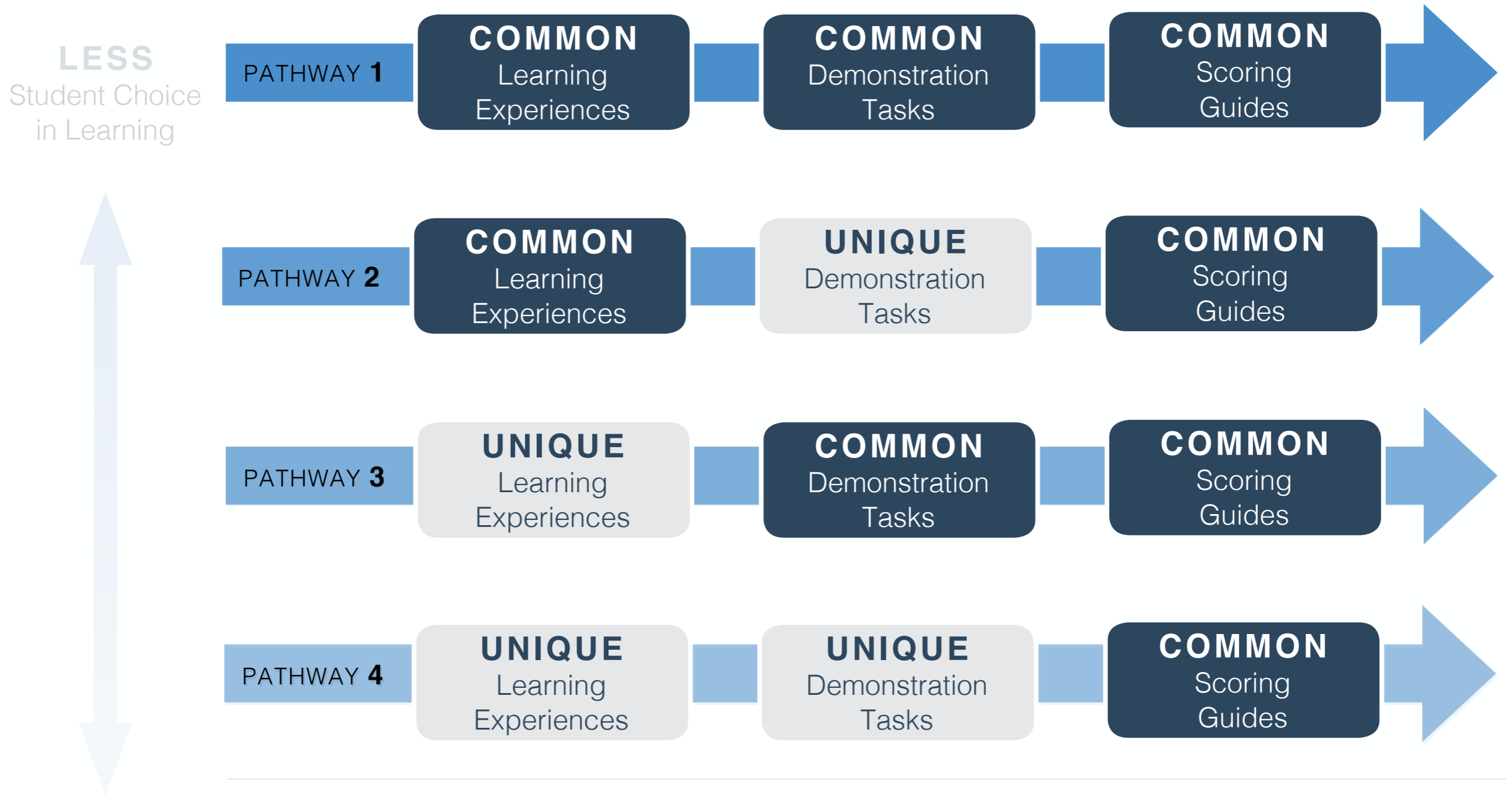
# Assessment Pathways Simplified

A Great Schools Partnership Learning Model



# Assessment Pathways Simplified

A Great Schools Partnership Learning Model



# Competency-Based Learning Simplified

A Frederick County Public Schools Learning Model



FREDERICK COUNTY PUBLIC SCHOOLS  
MARYLAND

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# A Graduation Competency Is...

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A standard that focuses instruction on the most foundational, enduring, and leveraged concepts and skills within a discipline.



# A Performance Standard

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Describes or defines what students need to know and be able to do to demonstrate mastery of a graduation competency.



# A Performance Standard

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Is measurable.



# A Performance Standard

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Students can demonstrate their performance over time.



# A Performance Standard

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The aggregation of proficiency on these performance standards measures whether a student has met the graduation competency.



# Learning Objectives Are...

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The component parts of a performance standard - that is, the performance standard has been broken down into a series of progressive steps and digestible chunks.



# Social Studies Competency 1: History

Utilize a variety of sources to demonstrate and apply knowledge of, analyze, and evaluate major eras, enduring themes, turning points and historic influences to analyze the forces of continuity and change in the community, the state, the United States and the world.

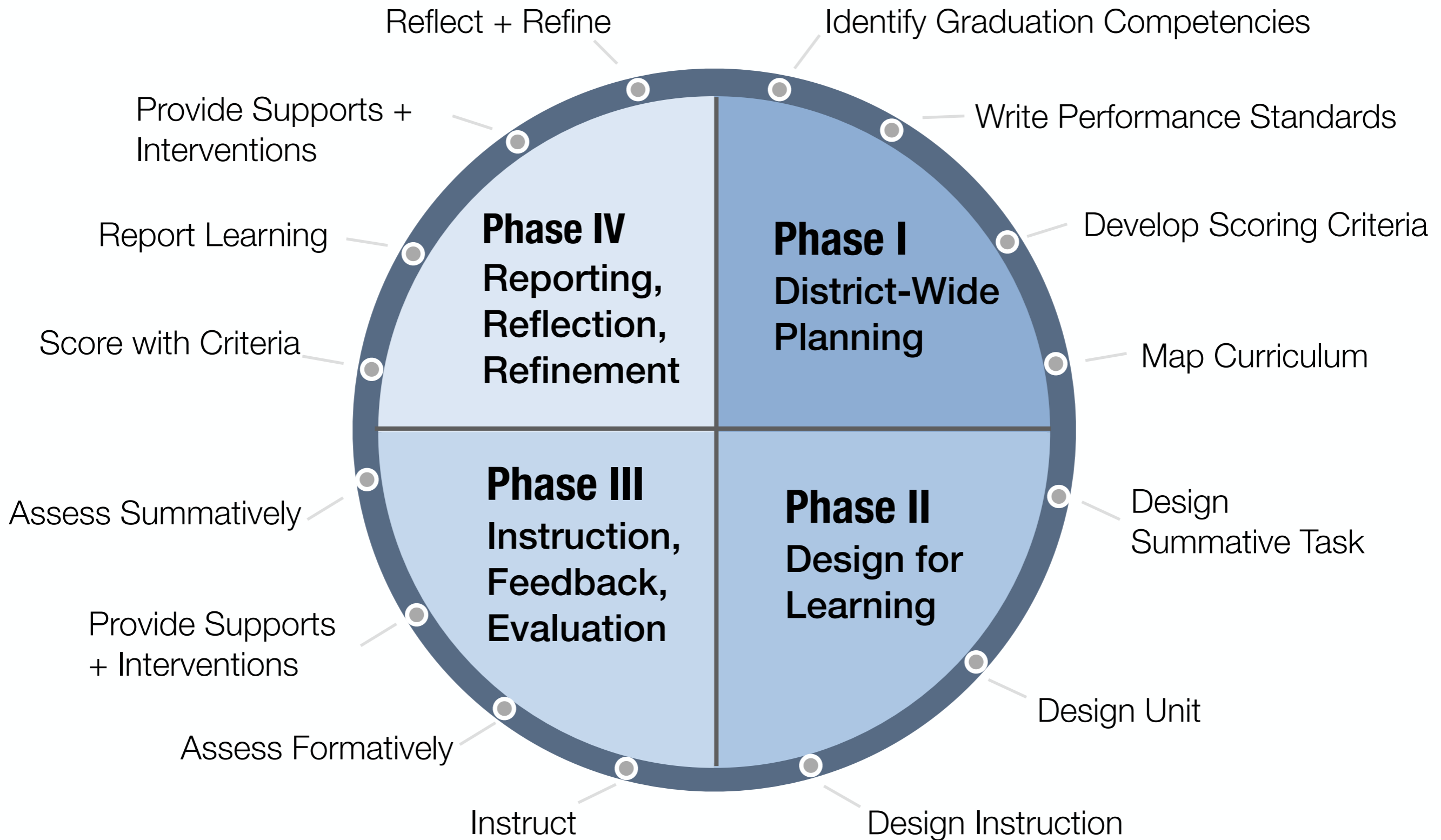
<b>K-2</b>	<b>3-5</b>	<b>6-8</b>	<b>9-12</b>
Compare and contrast life changes of over specific historical time periods to life today	Compare, contrast, and explain life changes in specific historical time periods to life today.	Evaluate effectiveness and impact of historical events and developments as examples of change and/or continuity.	Analyze change and continuity in historical eras.

# Science Competency 2: Matter

Analyze structures, properties, and changes of matter.

K-2	3-5	6-8	9-12
Sort objects by observable properties .	Measure, compare and contrast the basic properties of solids, liquids and gases.	Develop models to describe the atomic composition of simple molecules and extended structures. .	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.

# From Competencies to Practice



**Break**

# In Content Teams

- ▶ Affirm graduation competencies
- ▶ Finalize performance standards
- ▶ If complete: begin to generate a map of existing learning opportunities (i.e. performance standards vs. courses, etc.)

**Lunch**

# Questions

# Scoring Criteria

- Scoring criteria describe, in clear and precise terms, the characteristics of each stage of achievement along a proficiency continuum — from not meeting to exceeding a specific learning standard.

- Once schools have articulated scoring criteria for each of the learning objectives students are expected to meet, teachers can then assemble rubrics for assessing student work using a selection of appropriate scoring criteria.

# Scoring Criteria and Assessment

<b>Performance Standard</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Formulate a long-term personal health plan, incorporating decision-making and goal-setting strategies</b>	I don't understand the value of having goals for my own health.	I understand that personal health goals are important.	I make goals related to my health.	I value making goals related to my health.

# Scoring Criteria and Assessment

<b>Performance Standard</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Formulate a long-term personal health plan, incorporating decision-making and goal-setting strategies</b>	I have no goals for my health	I have two goals for my health	I have three goals for my health	I have four or more goals for my health

# Scoring Criteria and Assessment

<b>Performance Standard</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Formulate a long-term personal health plan, incorporating decision-making and goal-setting strategies</b>	I can list goals I have for my own health	I can explain ways I could reach a goal I set for my own health	I can create a plan to meet specific and measurable short term and long term health goals	I can adapt my plan and evaluate my progress so I can continue to positively impact my personal health

# Scoring Criteria and Assessment

- What do you notice about imagining assessments for those types of scoring criteria?
- How does the language used in the scoring criteria impact the types of assessments you imagined?

# Importance of Scoring Criteria

“...if I don’t look carefully at the types of thinking required by the standard, I most likely will miss teaching and assessing at the **appropriate level of rigor.**”

- Jan Chappuis (2014)

# Importance of Scoring Criteria

## Assumptions

Educators have developed professional learning groups, a culture of professional reflection, and routines that enable the regular review of student work

# Key Agreements

**Consistency in Structure**

Levels of proficiency are named and consistently applied throughout the school within the common scoring scale (*i.e. Does not meet, Partially meets, Meets, Exceeds or 1, 2, 3, 4*)

**Common Phrasing**

Phrases defining each level of proficiency are structured in a similar manner

For example, phrases all begin with an active verb, “I can,” “Students are able to”

# Crafting Scoring Criteria

## Design Guide

- Scoring criteria illustrate increasingly complex cognitive demand
- Scoring criteria are task-neutral
- Scoring criteria focus on the quality of student work
- Scoring criteria emphasize student assets

Traits of Scoring Criteria	Weaker Statements	Stronger Statements
Is the criteria <b>task neutral</b> ?	<p>lists tasks or elements specific to this assessment</p> <p>ex: Analyzes the Articles of Confederation and Constitution for similarities and differences</p>	<p>can be applied to a variety of assessments and tasks</p> <p>ex: Analyzes primary source documents independently and in relation to other primary source documents</p>
Do the criteria use a <b>clear taxonomy of thinking skills</b> ? Does the <b>level of thinking expressed in the “meets” match that of the Performance Indicator</b> ?	<p>uses verbs not included on taxonomies of thinking (such as understands)</p> <p>uses verbs from different level of thinking than that of the Performance Indicator to describe “meets” work</p>	<p>applies the levels of thinking in a chosen taxonomy (Bloom’s, Webb’s, etc.) consistently</p>
Are <b>all elements of the Performance Indicator</b> included?	<p>leaves out elements of the Performance Indicator</p>	<p>includes all elements of the Performance Indicator</p>
Do the criteria describe <b>complexity and quality</b> rather than frequency?	<p>emphasizes only frequency rather than cognitive demand</p> <p>ex: criteria include use of rarely, never, frequently, 1,2,3, etc.</p>	<p>describes what a student knows and is able to do at each level of proficiency</p>
Do the criteria <b>describe the complexity and quality positively</b> ?	<p>at “partially meets” or “does not meet” levels, describes only deficiencies in student work rather than what a student can do.</p>	<p>describes what a student includes and does at each level of proficiency</p>

# Designing Scoring Criteria

## Using the Design Guide

Performance Standard	Initiating	Developing	Proficient	Exceeds
Students will be able to read and evaluate credible and sufficient materials and resources (CCSS.ELA.RH 11-12.2, 3; WHST 11-12.8)	I can identify the main idea and supporting details of materials and resources	I can summarize the main idea from materials and resources	I can analyze relevant materials and resources to draw evidence in support of a claim	I can determine where the text leaves matters uncertain based on author's purpose

Are the scoring criteria:

- **Task neutral?**
- Aligned with the **level of cognitive demand** in the Indicator?
- Include **all elements** of the Performance Standard
- Describing **complexity** rather than frequency?
- Describing **what students can do** rather than deficiencies?

## PURPOSE

To draft descriptions of levels of proficiency for each performance indicator that:

- illustrate increasingly complex cognitive demand;
- are task-neutral;
- focus on the quality of student work; and
- emphasize student assets.

<b>Time</b>	Two hours or more for the first graduation standard and associated performance indicators; approximately one to two hours for each of the remaining graduation standards
<b>Roles</b>	Facilitator, timekeeper, notetaker
<b>Materials</b>	<i>Design Guide for Developing Scoring Criteria</i> , graduation standards and performance indicators, taxonomy guide (e.g., Bloom's revised taxonomy or Webb's Depth of Knowledge), chart paper and markers or laptop and projector
<b>Reference Materials</b>	<i>Proficiency-Based Learning Simplified</i> graphic and <i>Assessment Pathways Simplified</i> graphic

# Designing Scoring Criteria

## Process

### **Step One:**

#### **Unpack the Performance Standard**

What skills and knowledge does this Performance Standard describe?

# Designing Scoring Criteria

## Skills + Knowledge Review

### 9/10 Fiction/Non Fiction

Performance Standard	I Can..	Need to Know
<b>c.</b> Determine or clarify the meaning of word and phrases as they are used in the text, including figurative, connotative, and technical meanings; analyze the impact of specific word and phrase choices on meaning and tone (4, Language 4,5)	<ul style="list-style-type: none"><li>• I can figure out precisely what an author means by each word in a text.</li><li>• I can tell the difference between when an author intends a word to be understood literally and when an author is using a words as part of a figure of speech.</li><li>• I can analyze how the author's word choices affect his or her meaning or tone.</li></ul>	<ul style="list-style-type: none"><li>• parts of speech</li><li>• sentence structure</li><li>• context clues, parallel text, footnotes</li><li>• the tools of figurative language (similes, metaphors, personification)</li><li>• vocabulary; connotation/ denotation, figurative</li><li>• tone</li></ul>

# Designing Scoring Criteria Process

## Step Two:

### Describe Proficiency

Describe the **level of cognitive demand** that will be met at each level of proficiency within this performance standard.

Craft a statement describing student work that “meets” expectations for that particular performance standard.

# Avoid Terms

## Focused on Frequency

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- **Frequently**
- **Reliably**
- **Rarely**
- **Never**

# Use Terms

## **Focused on Cognitive Demand**

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- **Create**
- **Evaluate**
- **Explain**
- **Describe**

# Classroom Observation Bloom's Taxonomy Level Reference Chart

	LEVELS + DEFINITIONS	SAMPLE QUESTIONS	SAMPLE ACTIONS	SAMPLE PRODUCTS
HIGHER-ORDER COGNITION	<b>CREATING</b> Putting new elements together to form a coherent or functional whole; reorganizing elements into new patterns and structures	How would you design... What would happen if... How could you think differently about...	Hypothesizing Designing Constructing	Story Poem Film Multimedia Project Song Painting Sculpture
	<b>EVALUATING</b> Making judgments based on criteria or standards	How would you justify your position? What data support your conclusions? How would you prioritize the evidence?	Testing Critiquing	Debate Report Investigation Conclusion Verdict
	<b>ANALYZING</b> Breaking down material into its constituent parts and determining how the parts relate to one another and to an overall structure and purpose	What are the pros and cons? How do the parts fit together?	Differentiating Parsing Deconstructing	Survey Database Graph/Chart Spreadsheet Outline
LOWER-ORDER COGNITION	<b>APPLYING</b> Carrying out and using a procedure in a given situation	What actions will lead to the result? What could happen next? Which events could not have happened?	Executing Implementing	Experiment Illustration Demonstration Interview Journal
	<b>UNDERSTANDING</b> Constructing meaning from instructional messages, including oral, written, and graphic communication	Can you outline? Can you clarify? What is the main idea?	Clarifying Categorizing Summarizing Matching Explaining	Explanation Definition Recitation Collection
	<b>REMEMBERING</b> Retrieving relevant knowledge from long-term memory	How many? Who was it that? How would you recognize? When did this happen? Can you describe?	Recognizing Recalling	Worksheet List Reproduction

Churches, Andrew. Bloom's Taxonomy, Blooms Digitally. Tech & Learning. (2008)

Adapted from Anderson, L.W. and Krathwohl, D. (Ed.), (2001). A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of educational objectives, complete edition. New York: Longman.

Curriculum Institute. Bloom's Critical Thinking Cue Question. (2012). CurriculumInstitute.org.

NOTE: Sample products are illustrative purposes only—they are not intended to be an observation checklist. Observers should not make recording decisions based on the presence or absence of these sample products, but rather on the level of cognition students are utilizing.



# Designing Scoring Criteria Process

## **Step Three:**

### **Describe Levels of Proficiency**

Craft statements that describe what a student CAN do above and below “meets”

# Designing Scoring Criteria

## Example

### **Health Education Graduation Competency 5- ADVOCACY, DECISION-MAKING AND GOAL-SETTING SKILLS:**

Demonstrate the ability to use interpersonal communication and advocacy skills; make decisions; and set goals to enhance personal, family and community health.

<b>Performance Standard</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Formulate</b> a long-term personal health plan, incorporating decision-making and goal-setting strategies	I can <b>list</b> goals I have for my own health.	I can <b>explain</b> ways I can reach a goal I set for my own health.	I can <b>create</b> a plan to meet immediate and long-term health goals.	I can <b>adapt</b> my plan and <b>evaluate</b> my progress so I can continue to positively impact my personal health.

# Designing Scoring Criteria

## Example

**Science Graduation Competency:** PHYSICAL SCIENCES: STRUCTURE/PROPERTIES OF MATTER, FORCES, AND INTERACTIONS: Understand and analyze matter, reactions and physical systems as demonstrated through the integration of scientific and engineering practices and cross-cutting concepts (PS 1 + PS 2)

Performance Standard	1	2	3	4
<b>Use</b> the periodic table as a model to <b>predict</b> the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. (HS-PS1-1)	Student is able to <b>locate</b> an element on the periodic table.	Student is able to <b>locate</b> an element on the periodic table, <b>identify</b> its basic properties, and <b>determine</b> the number of electrons in the outermost energy level.	Student is able to use the periodic table to accurately <b>predict</b> relative physical and chemical properties of elements. Student is able to <b>describe</b> the relationship between the pattern of electrons and other characteristics of that element	Student is able to <b>analyze</b> observed relative physical and chemical properties of elements and <b>classify</b> them appropriately in the periodic table.

# Designing Scoring Criteria

## Example

**Math Graduation Competency 2- ALGEBRA:** Interpret, represent, create and solve algebraic expressions.

Performance Standard	1	2	3	4
Students will be able to <b>interpret</b> the structure of expressions.	I can <b>define</b> an expression.	I can <b>identify</b> the individual parts of an expression.	I can <b>examine</b> an expression and <b>justify</b> conclusions about the meanings of the different parts according to the context of the problem.	I can <b>create</b> an expression and <b>justify</b> conclusions about the meaning of all the different parts according to the context of the problem.

# Designing Scoring Criteria

## Example

**Graduation Competency 6- HISTORY:** Apply and demonstrate knowledge of major eras, enduring themes, turning points and historic influences to analyze the forces of continuity and change in the community, the state, the United States and the world.

Performance Standard	1	2	3	4
<b>Use</b> evidence to <b>analyze</b> interpretations of historical events based on different perspectives	I can <b>state</b> different points of view of an historical event.	I can <b>contrast</b> different points of view of an historical event, citing general evidence to support my point.	I can <b>compare</b> and <b>contrast</b> interpretations of historical events from different points of view, using specific evidence to support my point.	I can <b>critique</b> different points of view regarding an historical event, using specific, convincing evidence to support my point.

# WRITING SCORING CRITERIA

## Process

Choose one content area graduation competency and performance standard

- **STEP 1:** Unpack the performance standard
- **STEP 2:** Define proficiency (Meets)
- **STEP 3:** Develop statements above and below “meets”

Use the Scoring Criteria Design Guide to reflect on your work

# Creating a Rubric for a Summative Assessment

Performance Standard	Emerging	Developing	Proficient	Exceeds
Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms (HS-PS1-1)	Student is able to locate an element on the periodic table	Student is able to locate an element on the periodic table, identify its basic properties, and determine the number of electrons in the outermost energy level.	Student is able to use the periodic table to accurately predict relative physical and chemical properties of elements. Student is able to describe the relationship between the pattern of electrons and other characteristics of that element.	Student is able to analyze observed relative physical and chemical properties of elements and classify them appropriately in the periodic table.
Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron state of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. (HS-PS-1-2)	Student is able to determine the outcome of a simple chemical reaction.	Student is able to determine the outcome of a simple chemical reaction and explain it in relation to the element's location on the periodic table	Student is able to use their knowledge of the periodic table to predict the outcome of simple chemical reactions. Student is able to explain the outcomes by explicitly referencing the periodic table and its inherent patterns.	Student is able to compare the results of different chemical reactions and explain the differences in outcomes by explicitly referencing the periodic table and its inherent patterns such as outermost electrons, trends, and properties of reactants.
B. Use evidence and logic appropriately in communication	Recognize ideas, concepts, problems, or varied perspectives related to a topic or concept but does not use reasoning to generate a clear claim.	Student includes information from several sources and analyzes or compares the information from these sources.	Analyze and integrate carefully selected evidence from diverse sources and incorporate the relevant pieces into the finished work, analyzing or comparing the information from these sources	Apply evidence in a novel or unfamiliar situation to design a model or solution.

# Creating a Rubric for a Summative Assessment

Performance Standard	Emerging	Developing	Proficient	Exceeds
Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms (HS-PS1-1)	Student is able to locate an element on the periodic table.	Student is able to locate an element on the periodic table, identify its physical and chemical properties, and determine the relationship between the element's location on the periodic table and its physical and chemical properties.	Student is able to use the periodic table to accurately predict relative physical and chemical properties of elements. Student is able to determine the relationship between the pattern of electrons and other characteristics of that element.	Student is able to analyze observed relative physical and chemical properties of elements and classify them appropriately in the periodic table.
Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron state of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. (HS-PS-1-2)	Student is able to determine the outcome of a simple chemical reaction.	Student is able to determine the outcome of a simple chemical reaction, identify the element's location on the periodic table, and explain the outcome by explicitly referencing the periodic table and its inherent patterns.	Student is able to use their knowledge of the periodic table to predict the outcome of simple chemical reactions. Student is able to explain the outcomes by explicitly referencing the periodic table and its inherent patterns.	Student is able to compare the results of different chemical reactions and explain the differences in outcomes by explicitly referencing the periodic table and its inherent patterns such as outermost electrons, trends, and properties of reactants.
B. Use evidence and logic appropriately in communication	Recognize ideas, concepts, problems, or relationships related to a topic or concept but does not use reasoning to generate a clear claim.	Student includes information from several sources and compares the information from these sources.	Analyze and integrate carefully selected evidence from diverse sources into the finished work, analyzing or comparing the information from these sources.	Use evidence in a novel or unfamiliar situation to design a model or solution.

# Questions?



# In Content Teams

- ▶ Finalize performance standards
- ▶ Work on scoring criteria

JULY 10 - 12, 2017



## Presenters

[Mark Kostin](#), Associate Director | Great Schools Partnership

[Don Weafer](#), Senior Associate | Great Schools Partnership

## Materials

### Draft Agenda

- [Ten Principles of Competency-Based Learning](#)
- [FCPS Triangle](#)
- [Assessment Pathways](#)
- [Competencies to Practice](#)
- [Grad Standards Design Guide](#)
- [Performance Indicators: Design Criteria](#)
- [Scoring Criteria: Design Guide](#)
- [Scoring Criteria: Design Protocol](#)
- [Henry County \(GA\) K-12 Competencies, Performance Standards, and Scoring Criteria](#)

# End of day reflection

- ▶ One thing I learned...
- ▶ One question I still have...



482 Congress Street, Suite 500  
Portland, ME 04101  
207.773.0505  
[greatschoolspartnership.org](http://greatschoolspartnership.org)

# THANK YOU

Don Weafer  
Senior Associate

[dweafer@greatschoolspartnership.org](mailto:dweafer@greatschoolspartnership.org)

Mark Kostin  
Associate Director

[mkostin@greatschoolspartnership.org](mailto:mkostin@greatschoolspartnership.org)