

Competency-Based Education Systems: Performance Assessment Using Proficiency Scales

November 5, 2020

Welcome

- Introduce yourselves.
 - Share who you are, where you are from, and one hope you have for this school year.
- Ask and answer questions.
 - Use the chat function to pose questions of our panelists. All attendees are encouraged to respond.
 - We will leave time for our panelists to answer questions.
- Share your learning.
 - Tell your colleagues what you are learning. Use #Aurora2020 on Twitter and mention @Aurora_Inst.
- We are recording and archiving the webinar.
 - The slides and video will be available on aurora-institute.org.

Performance Assessment using Proficiency Scales

Aurora Institute Fall Webinar Series

November 5, 2020

Dr. Robert Marzano, Founder Marzano Academies

Bill Zima – Director of Implementation, Marzano Academies





Learning Targets for Assessment

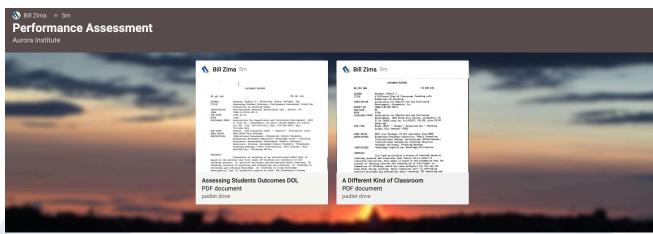
- Understand how Proficiency Scales are designed to make clear what foundational knowledge is needed to be successful in demonstrating understanding.
- Skilled at using a Proficiency Scale to build a Personal Tracking Matrix, a Traditional Test, and an observational checklist.
- Understand how proficiency scales allow us to create numerous valid, reliable, and unidimensional assessments quickly.

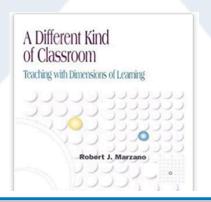


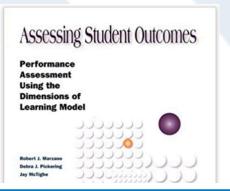


Resources

https://padlet.com/billzima/110520











Poll Time

Mentimeter





Theoretical Framework for Performance Assessment

- Five Dimensions of Learning
- 3-Step Thinking Process



Learning is an active, constructive experience in which the whole is greater than the sum of its parts.

Therefore <u>assessments</u> for and of learning should reflect this holistic approach.

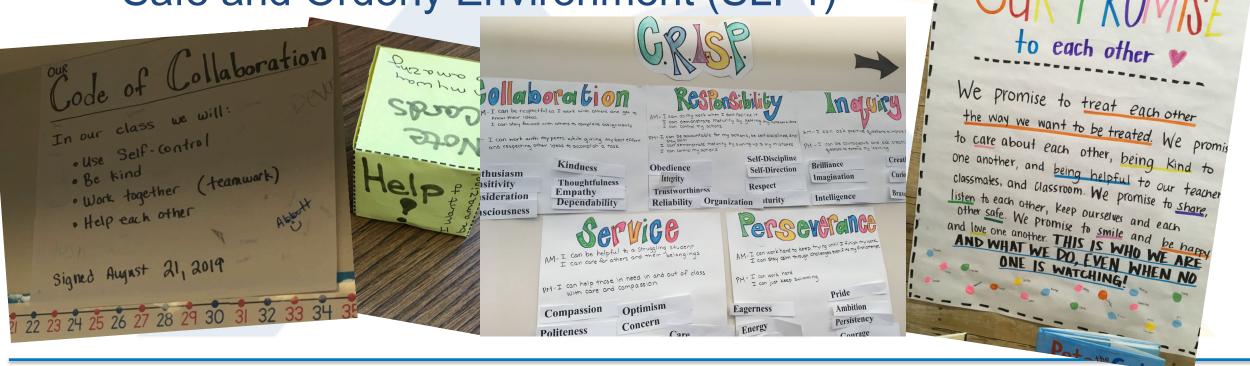






• <u>Dimension 1:</u> Positive Attitudes and perceptions about learning.

Safe and Orderly Environment (SLI-1)







- **Dimension 2:** Acquiring and integrating knowledge
 - Cumulative Review (SLI-7)
 - Knowledge Maps (SLI-8)
- Dimension 3: Extending and Refining Knowledge
 - Cognitive Analysis Skills (SLI-10)
- Dimension 4: Using Knowledge Meaningfully.
 - Plan units so student have the opportunity to use knowledge meaningfully.
 - Knowledge Utilization skills (SLI-10)





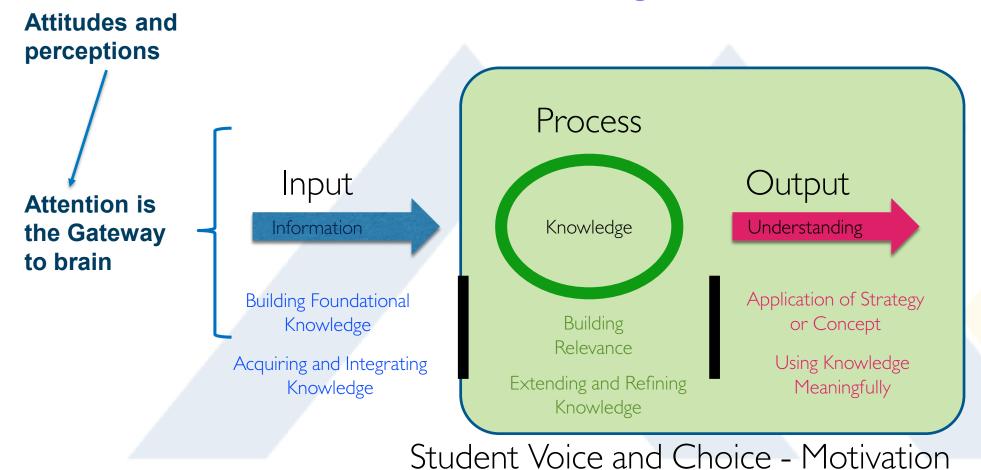
Cognitive Zone Essay Process Output Input **Attention is** Poster the Gateway Facts Information Knowledge Understanding P_{lay} **Nocabulary** to brain 1 Paper Building **Building Foundational** Application of Strategy Relevance or Concept Knowledge Extending and Refining Using Knowledge Acquiring and Integrating Knowledge Knowledge Meaningfully

Student Voice and Choice - Motivation

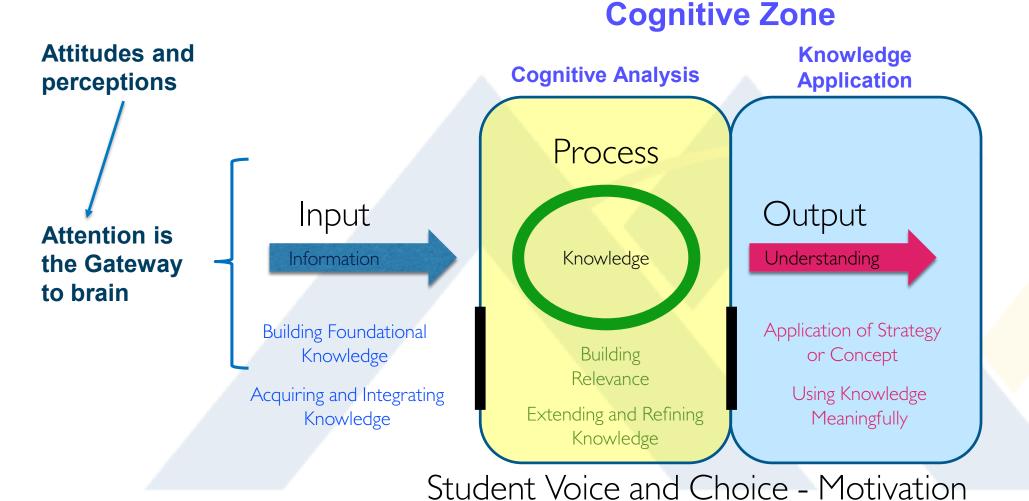




Cognitive Zone







Dimensions 3 and 4

Cognitive Analysis Skills

- Comparing
- Classifying
- Analogical Reasoning
- Analyzing Perspectives
- Constructing Support
- Analyzing Inferences
- Analyzing errors
- Generating mental images

Knowledge Application Skills

- Problem Solving
- Decision Making
- Experimental Inquiry
- Investigating
- Inventing
- Systems Analysis





- Dimension 5: Productive Habits of Mind
 - Mental habits to help individuals learn whatever they want when they need to.
 - Metacognitive Skills (SLI-10)
 - Agency (SLI-2):
 - Perceived ability of the individual, based upon their capacity, to control their lives.





Dimension 5

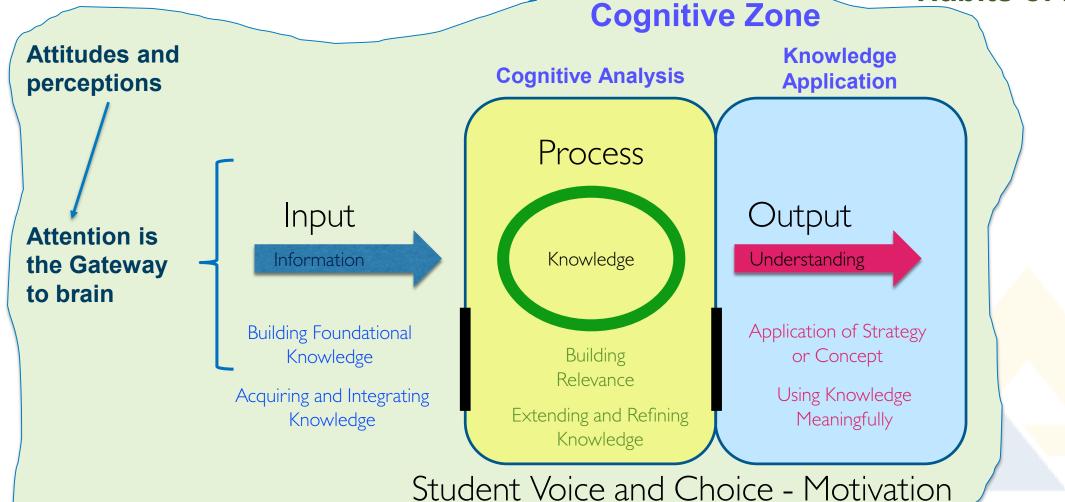
Metacognitive Skills

- Staying focused when answers and solutions are not immediately apparent
- Pushing the limits of one's knowledges and skills.
- Generating and pursuing one's own standards for performance
- Seeking incremental steps
- Seeking accuracy
- Seeking clarity
- Resisting Impulsivity
- Seeking cohesions and coherence
- Setting goals and making plans
- Growth mindset thinking





Metacognitive – Habits of mind







Goal based on the Theory:

Assessment should encourage learners to use knowledge in unique and interesting ways and develop the metacognitive skills necessary for agency.

Pathway: Performance Assessment





Think

"Classroom assessment must be viewed from a new paradigm that allows it to be used to its full potential as a tool for feedback."

~ Robert Marzano

The New Art and Science of Classroom Assessment

Learning:





Improve Performance





Performance Assessment

Variety of tasks and situations in which students are given opportunities to demonstrate their understanding of a concept or execution of a strategy by thoughtfully applying knowledge, skills, and habits of mind in a variety of contexts.

- Occur over time
- Tangible product or observable performance
- Self-evaluation and revision
- Reveal degrees of proficiency based on established, public scoring criteria





- Criterion for effective performance assessments:
 - 1. Need extended time
 - 2. Require students to construct new knowledge.
 - Articulate a unique position and defend it.



1. Identify the Measurement Topic(s) and Proficiency Scale(s).



Measurement Topics and Proficiency Scales

Rewrite standards to Measurement Topics that are assessed multiple times at the school level or district level to determine the most accurate scores for individual students.

Then Build a Proficiency Scale for each Measurement Topic to show progression of learning from not knowing, to knowing, to understanding.





Measurement Topics and Proficiency Scale

A teacher should be able to transform a well-designed proficiency scale into multiple assessments (parallel assessment) on a specific topic.

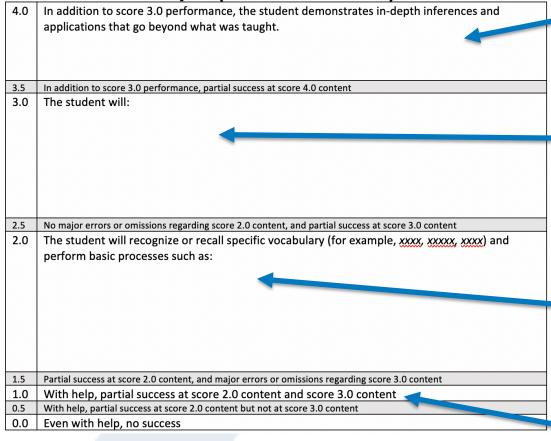
~ Bob Marzano, Making Classroom Assessments Valid and Reliable, p. 28





Measurement Topics and Proficiency Scale

Measurement Topic (Level - Content)



Exceeding Topic:

Application of knowledge at a higher cognitive level

Measurement Topic:

What we want learners to understand or skillfully execute without error when applying the foundational knowledge.

Foundational Knowledge: What do learners need to know or be able to do to demonstrate they understand or can execute the Measurement Topic

With Help:

No new content





- 1. Identify the Measurement Topic(s) and Proficiency Scale(s).
- 2. Structure the task around a cognitive analysis skill and a knowledge application skill.
- 3. Write a first draft of performance task





History Measurement Topic:

Explain significant aspects of US involvement in World War II



Cognitive Analysis Skill:
Comparing



Knowledge Application Skill
Decision Making



Proficiency Scale

US Involvement in World War II (6–12 US History)

- The student will:

 Compare the nature and legacy of US involvement in World War II with that of World War I (for example, compare the extent and cost of US participation, the resulting level of American international economic and political influence, and changes in US perceptions of its role in the world after each world war).
- 3.5 In addition to score 3.0 performance, partial success at score 4.0 content
- 3.0 The student will:

AWWII2—Explain significant aspects of US involvement in World War II (for example, explain the mobilization of American society, the impact of US contributions to the Allied war effort, and US justifications for such actions as the internment of Japanese Americans, the strategic bombing of Axis cities, and the atomic bombings of Hiroshima and Nagasaki).

- 2.5 No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
- 2.0 **AWWII2**—The student will recognize or recall specific vocabulary (for example, *Allied powers*, *Axis powers*, *Battle of Guadalcanal*, *Battle of Iwo Jima*, *Battle of Midway*, *Battle of Okinawa*, *Battle of the Bulge*, *D-Day*, *European theater*, *Four Freedoms speech*, *Hiroshima*, *home front*, *internment of Japanese Americans*, *Manhattan Project*, *Nagasaki*, *Operation Torch*, *Pacific theater*, *Rosie the Riveter*, *strategic bombing*, *Women Airforce Service Pilots [WASP]*) and perform basic processes such as:
 - Identify the principal theaters of US operations in World War II (for example, Europe, the Pacific, North Africa).
 - Describe the course of World War II (for example, major campaigns and battles, shifts in momentum and turning points).
 - Describe the ideas and leadership of Franklin D. Roosevelt during World War II (for example, the ideas expressed in the Four Freedoms speech, the executive order allowing for the internment of Japanese Americans, wartime fireside chats, diplomacy among Allied leaders).
 - Describe US government policies during World War II (for example, internment of Japanese Americans, war bonds, rationing).
 - Describe the diverse contributions of American men and women during World War II (for example, service as military personnel and auxiliaries, medical and relief work, industrial work done by women).
 - Describe the human, material, and financial costs of World War II.





Context:

President Harry Truman has requested that you serve in w White House task force. The goal is to decide how to force the unconditional surrender of Japan yet provide for a secure postwar world.





How to Construct Performance Assessments Assignment:

As a committee, you are trying to decide whether to drop the bomb. Identify the alternatives you are considering and the criteria you are using to make the decision. Explain the values that influenced the selection of the criteria and the weights you placed on each.

Explain your decision has helped you better understand this statement: "War forces people to confront inherent conflicts of values.





- 1. Identify the Measurement Topic(s) and Proficiency Scale(s).
- 2. Structure the task around a cognitive analysis skill and a knowledge application skill.
- 3. Write a first draft of performance task
- 4. Identify Metacognitive Skills





To capture the Metacognitive Skill, the history teacher has the students reflect prior to beginning the unit:

Before you begin, establish a clear goal and write it down. Then write a plan for accomplishing this goal.



Setting goals and making plans





- 1. Identify the Measurement Topic(s) and Proficiency Scale(s).
- 2. Structure the task around a cognitive analysis skill and a knowledge application skill.
- 3. Write a first draft of performance task
- 4. Identify Metacognitive Skills
- 5. Identify how they will present information





Present your conclusions in at least two of the following ways:

- A written report
- A letter to the President following the completion of the committee meeting
- An article written Time Magazine
- A mock interview
- A newscast.





Other Assessments While they work on PA

- Traditional Tests
- Probing Questions
- Demonstrations
- Observations
- Quick Group Assessments
- Student Self-Assessments
- Student Generated Assessments
- Capstone Projects

Assess More and Test Less

Probing Discussion

- They are used to find where a student is within Proficiency Scale. (Dynamic Assessment)
- How much scaffolding a student requires.
- Recorded directly as a proficiency scale score.



Probing Discussion Example

US Involvement in World War II (6–12 US History)

4.0	The student will:
	Compare the nature and legacy of US involvement in World War II with that of World War I (for
	example, compare the extent and cost of US participation, the resulting level of American
	international economic and political influence, and changes in US perceptions of its role in the
	world after each world war).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will:
	AWWII2—Explain significant aspects of US involvement in World War II (for example, explain
	the mobilization of American society, the impact of US contributions to the Allied war effort,
	and US justifications for such actions as the internment of Japanese Americans, the strategic
	bombing of Axis cities, and the atomic bombings of Hiroshima and Nagasaki).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
2.0	AWWII2—The student will recognize or recall specific vocabulary (for example, Allied powers,
	Axis powers, Battle of Guadalcanal, Battle of Iwo Jima, Battle of Midway, Battle of Okinawa,
	Battle of the Bulge, D-Day, European theater, Four Freedoms speech, Hiroshima, home front,
	internment of Japanese Americans, Manhattan Project, Nagasaki, Operation Torch, Pacific
	theater, Rosie the Riveter, strategic bombing, Women Airforce Service Pilots [WASP]) and
	perform basic processes such as:
	• Identify the principal theaters of US operations in World War II (for example, Europe, the
	Pacific, North Africa).
	• Describe the course of World War II (for example, major campaigns and battles, shifts in
	momentum and turning points).
	• Describe the ideas and leadership of Franklin D. Roosevelt during World War II (for example,
	the ideas expressed in the Four Freedoms speech, the executive order allowing for the
	internment of Japanese Americans, wartime fireside chats, diplomacy among Allied leaders).
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	example, service as military personnel and auxiliaries, medical and relief work, industrial work
	done by women).
	Describe the human, material, and financial costs of World War II.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 content and score 3.0 content
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Probing Discussion Questioning Template

Us Involvement in World War II 6-12 Created 10/12/2019 Bill Zima

Score 2.0 Prompts

- Vocabulary:
 - o Describe the Allied Powers?
 - o Describe the Axis Powers?
 - o Describe the Manhattan Project?
 - O What is Nagasaki?
 - What is the Hiroshima?
 - 0 ...
- Identify the principal theaters of US operations during World War II.
- Describe US policies during World War II.

Score 3.0 Prompts

- Explain the significant aspects of the decision to use "The Bomb" on Japanese cities.
- Explain the significance of the Manhattan Project.
- ..

Score 4.0 Prompts

- Compare the nature and legacy of US involvement in World War II with that of World War I.
- ...





Demonstration/Presentation/Observation

- Demonstration
 - Confirmation or verification of a certain level of a skill, strategy, or a process
- Presentation
 - Similar to a demonstration but involves an audience
- Observation
 - Unobtrusive assessment since it is done in the normal flow of instruction.





Demonstration / Presentation / Observation

US Involvement in World War II (6–12 US History)

4.0	The student will:
4.0	Compare the nature and legacy of US involvement in World War II with that of World War I (for
	example, compare the extent and cost of US participation, the resulting level of American
	international economic and political influence, and changes in US perceptions of its role in the
	world after each world war).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will:
5.0	AWWII2—Explain significant aspects of US involvement in World War II (for example, explain
	the mobilization of American society, the impact of US contributions to the Allied war effort,
	and US justifications for such actions as the internment of Japanese Americans, the strategic
	bombing of Axis cities, and the atomic bombings of Hiroshima and Nagasaki).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
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Scale 1.0	Scale 2.0	Scale 3.0	Scale 4.0
I can show what I know with	I have the foundational knowledge.	I learned the foundational knowledge and can apply it.	I can apply the knowledge is a more complex way
# of prompts	Manhattan Project Allied Powers Axia Parters Nagasaki Hiroshima Enola Gay The Bomb	Explain the significant aspects of the decision to use "The Bomb" on Japanese cities. Evidence:	Compare the nature and legacy of US involvement in World War II with that of World War I. Evidence:





Exit Ticket

US Involvement in World War II (6–12 US History)

	involvement in viola via in (6 12 66 instery)
4.0	The student will:
	Compare the nature and legacy of US involvement in World War II with that of World War I (for
	example, compare the extent and cost of US participation, the resulting level of American
	international economic and political influence, and changes in US perceptions of its role in the
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Exit Ticket:

In the story, Three Bats for Brandon, what lessons did the main character learn in order to change?





Name:

Class/Course:

Learning Target:					Input Resources	Evidence
Target:	1 DEPENDENT	2 FOUNDATION	3 PROFICIENT	4 ADVANCED		
	I can show what I know with help	I know the foundational parts	I apply the knowledge I acquired	I can use what I learned in a new way		



	1					,
Learning					Input Resources	Evidence
I understand what it means to be Focused, Respectful, Responsible	1 DEPENDENT I can show what I know with help	2 FOUNDATION AL I know the foundational parts	3 PROFICIENT I learned the foundational parts and complex parts and can apply them	4 ADVANCED I can use what I learned in a new way		
I know what it means to be Focused.					Three Kinds of Focus: (Video) Attention is like a Muscle (Video) What Helps Kids Focus Better (article) Dictionary.com	Complete "What does it mean section" on Personal Code of Conduct for Focused.
I know what it means to be Respectful.					Respect Explain (Video) Sesame Street Explains respect (Video) Amazing Kids of Character (Video)	Complete "What does it mean section" on Personal Code of Conduct for Respectful





			<u>Dictionary.com</u>	
I know what it means to be Responsible.			Amazing Kids of Character (Video) Teaching your Child to be Responsible and Independent. (video) Dictionary.com	Complete "What does it mean section" on Personal Code of Conduct for Responsible
I know examples of being Focused in my life			Use your notes and definitions from the focused section above.	Complete "Examples in my Life" on Personal Code of Conduct for Focused
I know examples of being Respectful in my life			Use your notes and definitions from the Respectful section above.	Complete "Examples in my Life" on Personal Code of Conduct for Respectful
I know examples of being Responsible in my life			Use your notes and definitions from the Responsible section above.	Complete "Examples in my Life" on Personal Code of Conduct for Responsible
I understand what it means to be Focused, Respectful, Responsible				Completed contract portion of the Code of Conduct and received the sign-off from Mr. Zima or Mr. Baker.





Long	Term Learni	ng Target	**		Sub target(s)	Sub target(s) of Long Term Learning Target:			
	I can explaii impeachmen		ess and purp	oose of	the Cor ★ I can e	 ★ I can explain why the founders included impeachment in the Constitution. ★ I can examine previous impeachment events and make relevant connections to the context of today. 			
				Im	peachment Goal Calend	ar			
Level (2, 3, or 4)	Assignment Title	Date Started	Goal date to finish assignment	Date Completed	Habit Learning Target/ Daily Goal (student created)	Self Assessment of LT 1-4	Evidence & Score: Link to assignment, reflection, assessments, etc.	Next Steps/ Goal: What do I need to do to reach the next level?	
2	Ch 8 Sec 2 Pg 257	1/14/20-	7	1/14/20	cross times	3		Finish tonight start new tomorrow.	
2	Read 3 Sum article	1/15/20	>	1/15/20	constant mercy.	4		Start VISUA!	
7	VISUAI KP	1/15/20	->1/16/20	1/16/20	to get kinished	3.5		3 process	



Project Calendar										
Project Name: Animal Architects	3	Begin Date: 10/1/2020								
		End Date: 11/2/2020								
Monday	Tuesday	Wednesday	Thursday	Friday						
		Week 1	•							
Inquiry Starter Introduce Learning Targets Introduce Final Product Exit ticket for Beginning Stage reflection	relationships in word problem (Sec. 3.2)		Sci: Physical and Behavioral traits Math: Identify Proportional relationships in word problems (Sec, 3.2) ELA: Continue Describe common informational text structures; Introduce signal words.	Sci: Quiz over what was covered. Cont Physical and Behavioral traits Math: Cont. identify Proportional relationships in word problems (Sec, 3.2) ELA: Why descriptive is right for our project (get exit ticket) Math: Quiz. Final worksheet sec. 3.2						
		Week 2								
Sci: Heritable and acquired traits ELA: Identify if short pieces used the descriptive format Math: - write equations to show relationships	Sci: Why traits are advantageous ELA: Research — methods for finding source Math: - write equations to show proportional relationships	Sci: Cont. Why traits are advantageous ELA: Research – using credible and accurate sources Math: - write equations final worksheet	Sci: 3-tier assessment ELA: Writing good research questions Math: Review for assessment	Sci: Introduce Project details and let students complete 2-week action plan. ELA: Practice writing good research questions Math: 3-tier assessment on proportional relationships						
	Week 3									





What we discussed

- There are other ways to gather evidence that do not include pen and paper tests: Probing Discussions, Demonstrations, Personal Tracking Matrices.
- You use the preponderance of evidence to determine a student's summative score.
- Performance assessments should include explicit instruction and assessment of Cognitive analysis skills, knowledge application skills, and metacognitive skills.

Thank you

Questions:



Dr. Bob Marzano – robert.marzano@marzanoacademies.org

Bill Zima – bill.zima@marzanoacademies.org







One-Minute Survey: https://www.surveymonkey.com/r/Aurora 11-5

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Symposium Webinar Series

- 1. Straight Outta COVID-19: Designing for Equity | November 9, 2020 | 3 pm ET
- 2. Deeper Competency-Based Learning: Making Equitable, Student-Centered, Sustainable Shifts | November 10, 2020 | 2 pm ET
- 3. Designing Engaging, Purposeful, Rigorous Tasks for Remote and In-Person Learning | November 12, 2020 | 2 pm ET
- 4. Supporting the Learner Throughout Their Competency-Based Journey: Examining Tech Standards | November 17, 2020 | 2 pm ET

https://aurora-institute.org/events-webinars/

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www.aurora-institute.org



communications@aurora-institute.org



(703) 752-6216

