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Dr. Shelley Moore

Our Plan Together

Kick Off – Inclusion: How do we do it?

Session 1 - Strength-based data collection

Session 2 - Designing needs-based classroom support plans

Session 3 - UDL/ Backwards Design

Session 4 - Lesson Design through a UDL lens

Session 5 - Lesson Design through a UDL lens cont. /Inclusive Assessment

Checking in

What stands out from last session?

What are you noticing about your thinking and practice?

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

CURRICULUM & ASSESSMENT DESIGN

Student choice of challenge
Adjustable Curriculum

Student choice of evidence
Adjustable Assessment

Students

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

Adjustable Supports & Strategies

Student choice of tools and actions

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?

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2023

Class Review:	School Team:	Date:

Class Dimensions

Class Identities	Class Interests	Classroom Strengths	Classroom Stretches
Student Perspectives: *Team Perspectives:*	*Student Perspectives:* *Team Perspectives:*	*Student Perspectives:* *Team Perspectives:*	*Student Perspectives:* *Team Perspectives:*

Class Needs

Need:	Need:	**Need:**	**Need:**	**Need:**

Team Goals

Some big questions and/or goals that we have for this class:

Team Reflections & Decisions

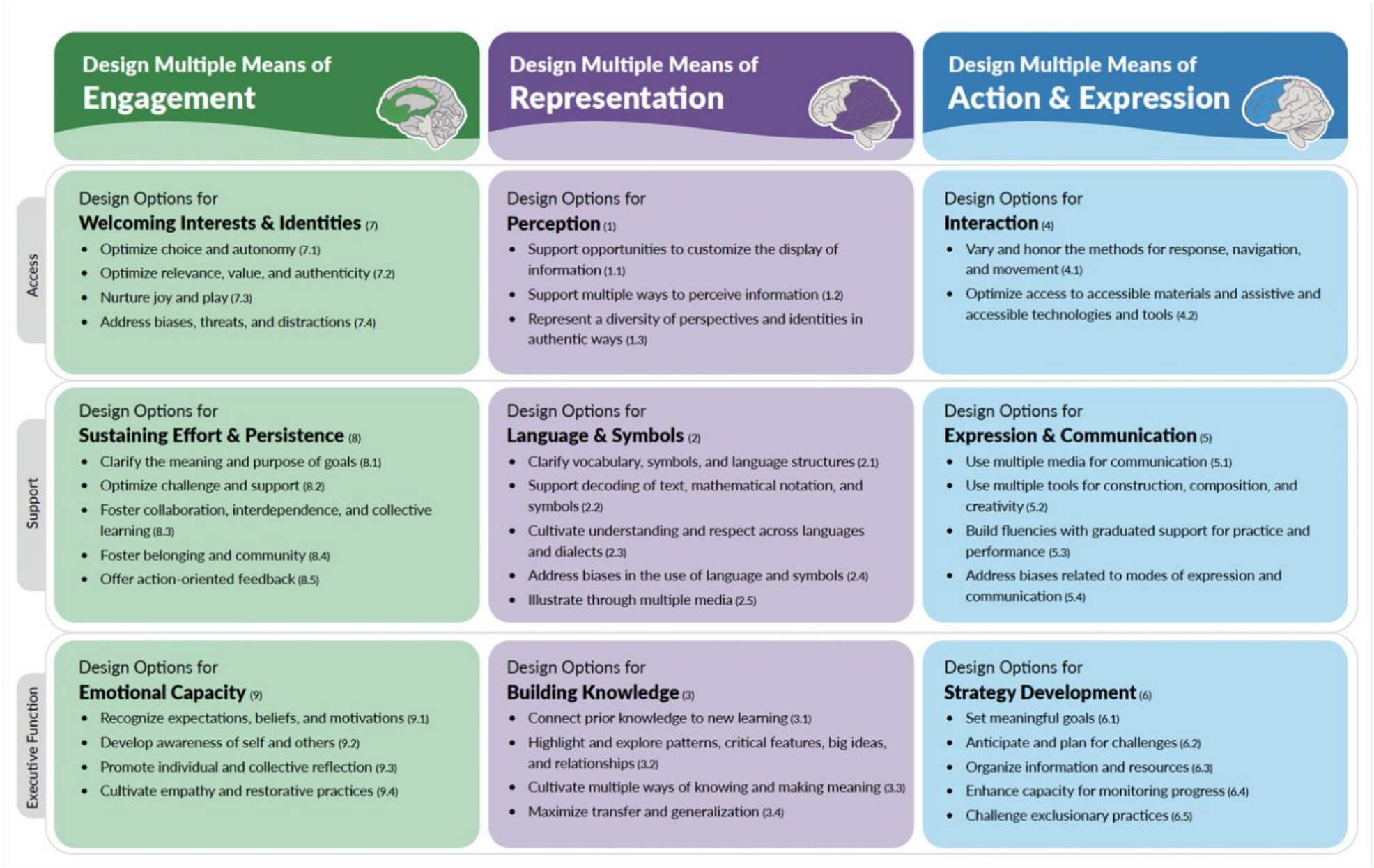
What works well for this class?	What else can we do to reduce barriers for this class?

Collaborative Needs-Based Reflection

Common Needs Based Areas		Students in Mind	Priority	Monitor	N/A
Social-Emotional & Behavioural	Emotional regulation				
	Anxiety, depression & mental health				
	Anger or frustration tolerance				
	Stress management				
	Self-esteem, acceptance & confidence				
	Behavioural regulation				
	Coping skills				
	Trauma or grief				
Executive Functioning	Attention & focus				
	Working memory				
	Impulse control				
	Task initiation				
	Organization				
	Time management				
	Planning & sequencing				
	Flexible thinking				
	Transitioning				
Communication	Receptive communication				
	Expressive communication				
	Social communication				
	Nonverbal communication				
	Oral language				
	Augmented & Alternative Communication (AAC)				

Common Needs Based Areas		Students in Mind	Priority	Monitor	N/A
Curricular Access	Literacy - Decoding				
	Literacy - Comprehension				
	Literacy - Written output				
	Literacy - Oral language/speaking				
	Foundational numeracy				
	Engagement/motivation				
	Understanding information				
	Knowing & using learning strategies				
	Curricular access				
	Curricular challenge/extension				
Self-Determination, Agency & Independence	Self-awareness & advocacy				
	Choice making & goal setting				
	Managing materials & routines				
	Independence/agency				
	Ownership of learning				
Social & Interpersonal	Peer relationships				
	Collaboration & group work				
	Understanding social cues				
	Problem-solving/conflict resolution				
	Belonging & community				
Physical	Mobility				
	Motor skills (fine/gross)				
	Sensory regulation				
	Medical				
	Energy or stamina				
	Eating, feeding, and/or allergies				

See: https://udlguidelines.cast.org/



UDL 3.0 Indicator	What this means in teacher friendly language	What might look like _____	What might look like _____

Class:		**Teaching Team:**	**Year:**
Step 1: Describe the conditions: (e.g. grade, subject area, task etc.)			
Step 2: Determine Priority Needs Area:			
Step 3: What are some high impact UDL 3.0 indicators that would reduce barriers to this priority needs area?	**UDL 3.0 #**	What does this UDL 3.0 indicator mean in these conditions?	
	UDL 3.0 #	What does this UDL 3.0 indicator mean in these conditions?	
	UDL 3.0 #	What does this UDL 3.0 indicator mean in these conditions?	
Step 4: What are some specific tools and actions that reflect UDL indicator (insert UDL number) And that I could teach the whole class?			
Step 5: How could I individualize these strategies to support (describe target student)?			

Design with the End in Mind!

Forward Design

Standardized

Differentiated

Same for Everyone

Activity/Task

- Grade Level Goals
- Adapted Goals
- Modified Goals

Compromises the integrity of evaluation

Backward Design

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Grade Level Goals

- Activity 1
- Activity 2
- Activity 3

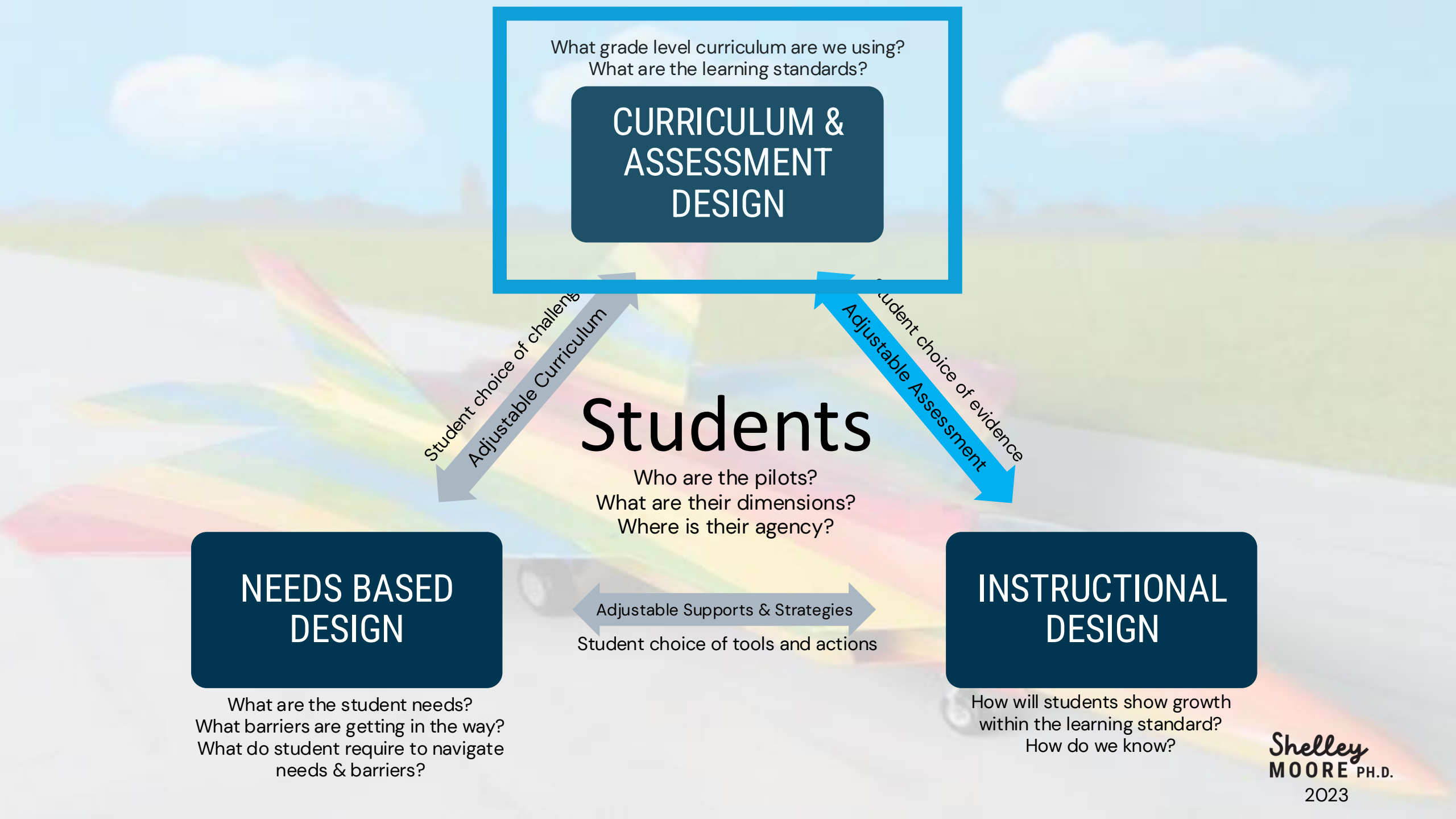
Does not compromise the integrity evaluation

Standards Based

McTigue, 2010

Class:	Subject/Topic(s):	Planning Team:
Competencies:		Unit Guiding Question(s):
Vocabulary to know and use:		

Unit Goals	Curricular Language	Student friendly language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High Impact UDL Strategies

- Benefits all students
- Reducing many barriers at the same time
- Meets multiple needs at the same time
- Small adjustments that make big differences to student learning
- Does not compromise evaluation

What are you already doing?

What is one more thing you could try?

High Impact UDL Strategies in Curricular Design

	Design Multiple Means of Engagement	Design Multiple Means of Representation	Design Multiple Means of Action & Expression
Access	Design Options for **Welcoming Interests & Identities** (7) • Optimize choice and autonomy (7.1) • Optimize relevance, value, and authenticity (7.2) • Nurture joy and play (7.3) • Address biases, threats, and distractions (7.4)	Design Options for **Perception** (1) • Support opportunities to customize the display of information (1.1) • Support multiple ways to perceive information (1.2) • Represent a diversity of perspectives and identities in authentic ways (1.3)	Design Options for **Interaction** (4) • Vary and honor the methods for response, navigation, and movement (4.1) • Optimize access to accessible materials and assistive and accessible technologies and tools (4.2)
Support	Design Options for **Sustaining Effort & Persistence** (8) • Clarify the meaning and purpose of goals (8.1) • Optimize challenge and support (8.2) • Foster collaboration, interdependence, and collective learning (8.3) • Foster belonging and community (8.4) • Offer action-oriented feedback (8.5)	Design Options for **Language & Symbols** (2) • Clarify vocabulary, symbols, and language structures (2.1) • Support decoding of text, mathematical notation, and symbols (2.2) • Cultivate understanding and respect across languages and dialects (2.3) • Address biases in the use of language and symbols (2.4) • Illustrate through multiple media (2.5)	Design Options for **Expression & Communication** (5) • Use multiple media for communication (5.1) • Use multiple tools for construction, composition, and creativity (5.2) • Build fluencies with graduated support for practice and performance (5.3) • Address biases related to modes of expression and communication (5.4)
Executive Function	Design Options for **Emotional Capacity** (9) • Recognize expectations, beliefs, and motivations (9.1) • Develop awareness of self and others (9.2) • Promote individual and collective reflection (9.3) • Cultivate empathy and restorative practices (9.4)	Design Options for **Building Knowledge** (3) • Connect prior knowledge to new learning (3.1) • Highlight and explore patterns, critical features, big ideas, and relationships (3.2) • Cultivate multiple ways of knowing and making meaning (3.3) • Maximize transfer and generalization (3.4)	Design Options for **Strategy Development** (6) • Set meaningful goals (6.1) • Anticipate and plan for challenges (6.2) • Organize information and resources (6.3) • Enhance capacity for monitoring progress (6.4) • Challenge exclusionary practices (6.5)

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High Impact UDL Strategies

4.1: Vary & honour the methods for response, navigation, and movement

5.2: Use multiple tools for construction, composition and creativity

5.3: Build fluencies with graduated support for practice and performance

- **Designing lessons that create opportunities for teaching all students how to show their learning in many ways**
- **Students must show their learning in all ways, but use strongest evidence to evaluate learning standards**
- **Collecting multiple pieces of similar evidence over time to build fluency**

Design with the End in Mind!

Forward Design

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Same for Everyone

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Compromises the integrity of evaluation

Backward Design

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Grade Level Goals

Differentiated

- Activity 1
- Activity 2
- Activity 3

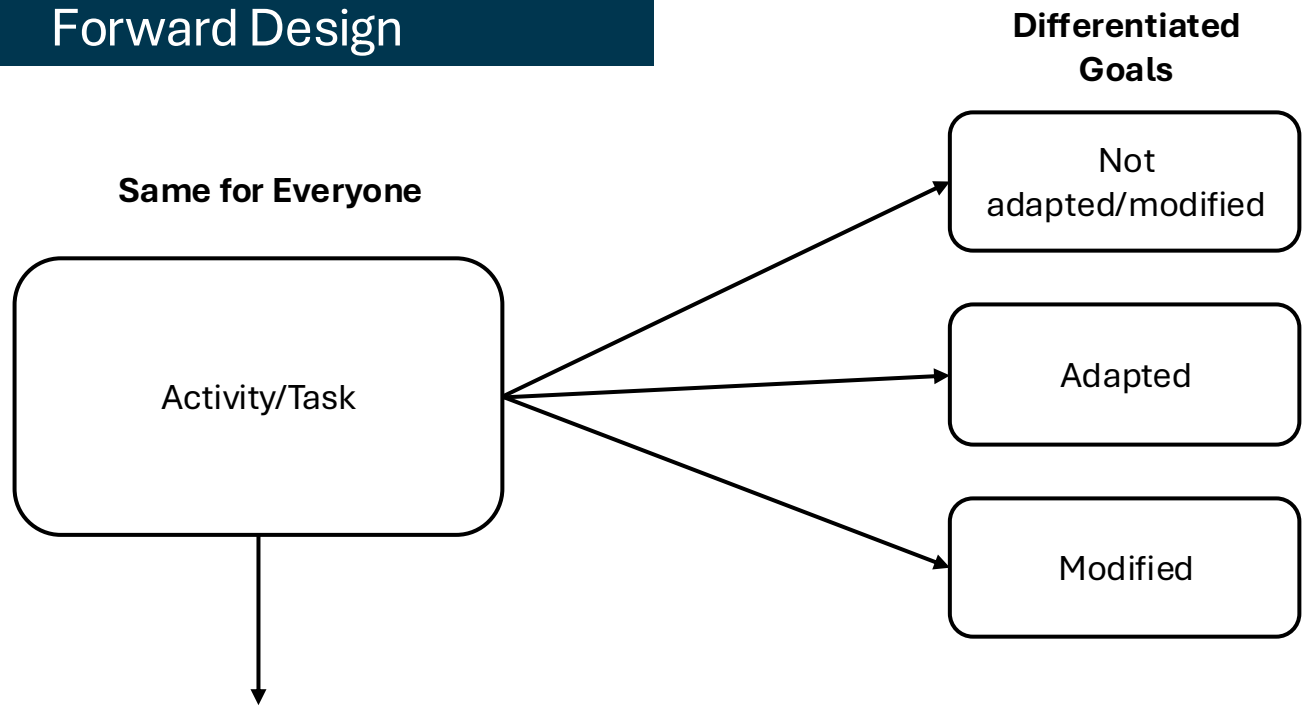
Standards Based

Does not compromise the integrity evaluation

McTigue, 2010

~~Backwards~~ Design

Forward Design

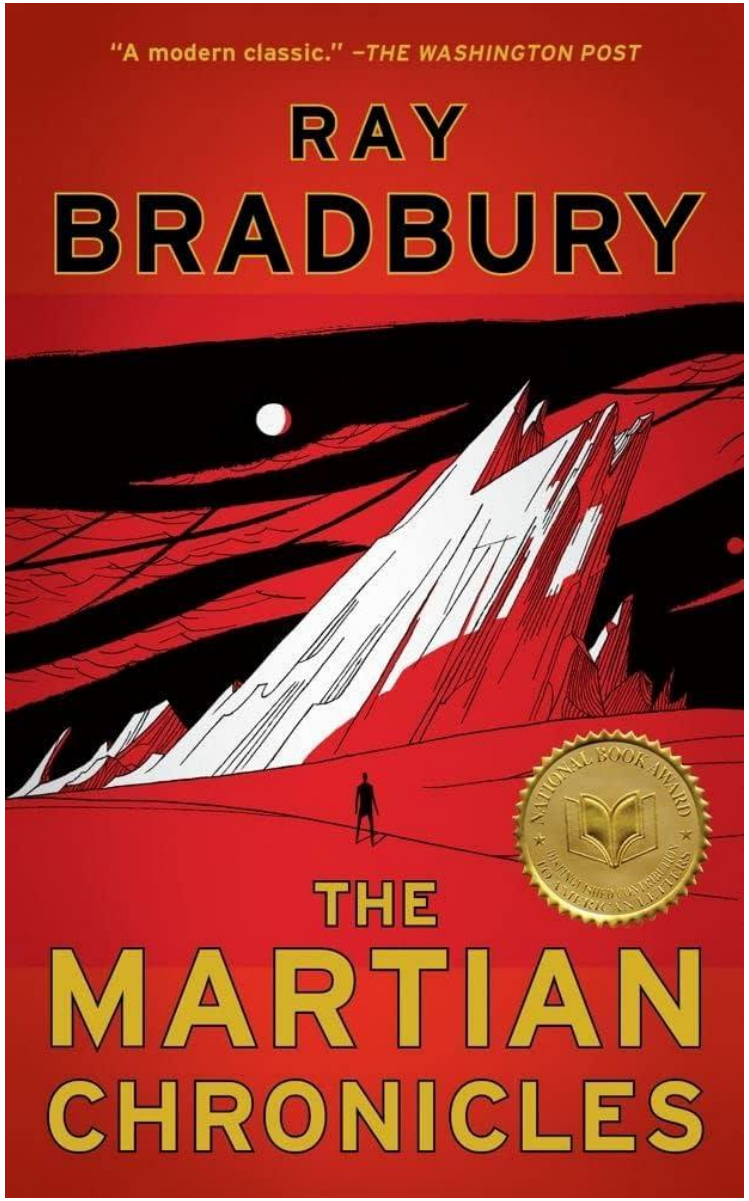


What if the activity or task is the barrier?

McTigue, 2010

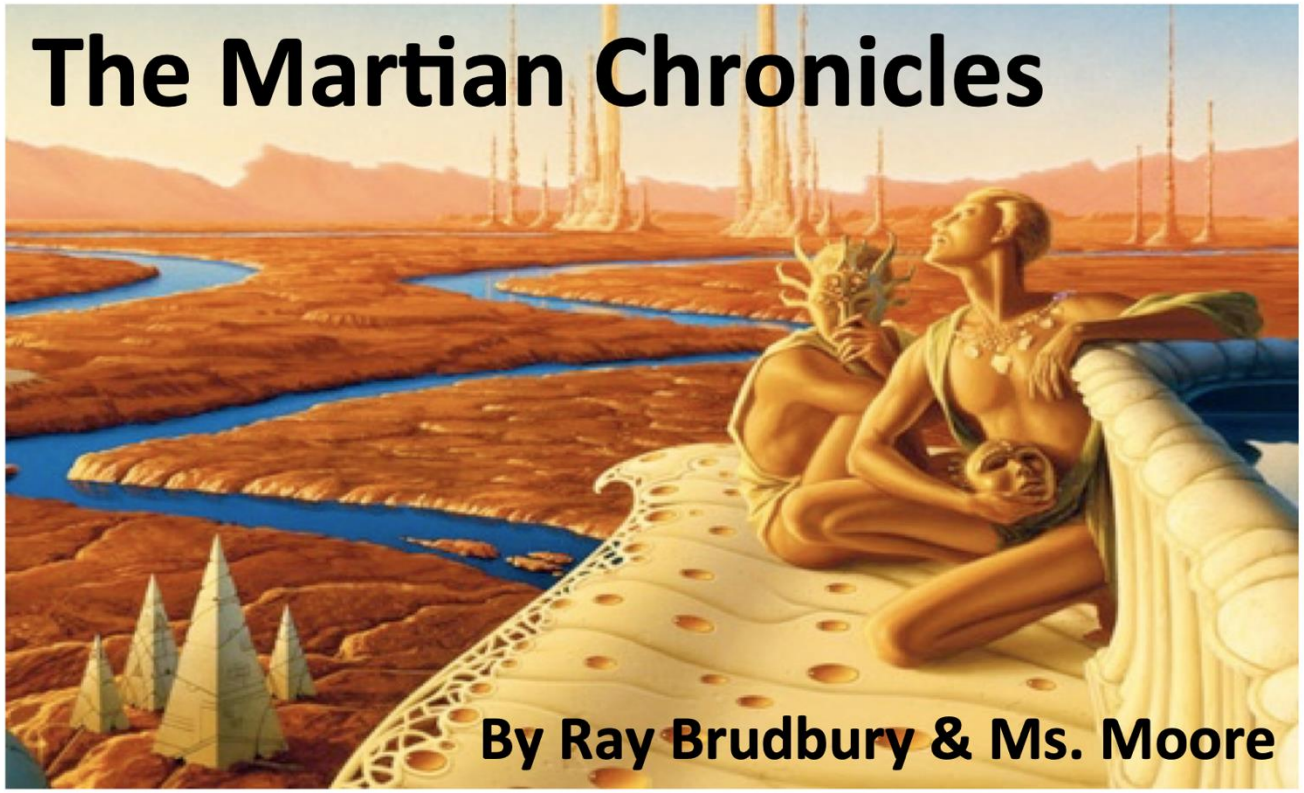
Forward Design Example
Grade 10 English

- Task for all: Read “The Martian Chronicles”



Differentiated Accommodations

- Modified Text/Task:



Words I need to know…

☐	Earth	☐	home
☐	Mars	☐	Y
☐	safe	☐	danger
☐	old	☐	young

This is Earth.

Earth is a planet.

This is Mars.

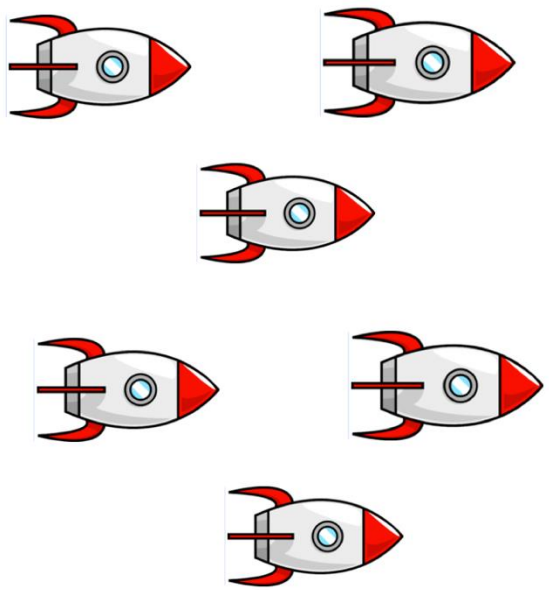
Mars is a planet.

These are Humans.

Humans live on Earth.

These are Martians.

Martians live on Mars.

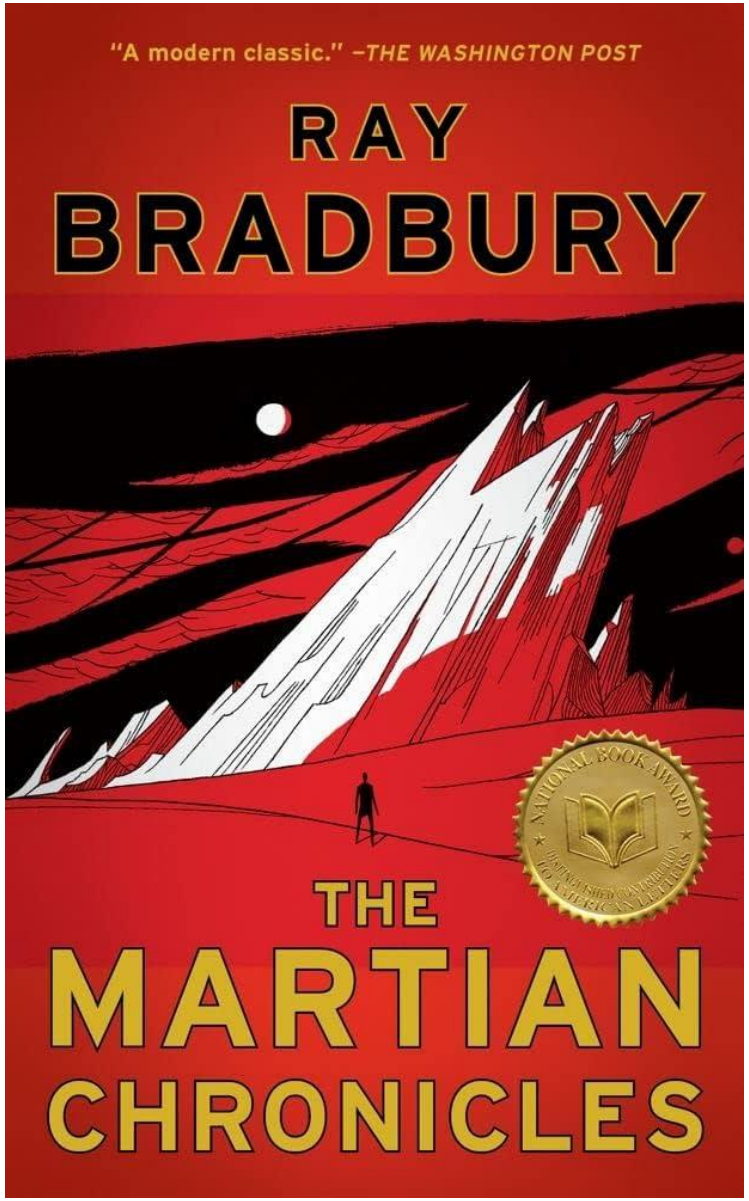


More and more Humans kept coming to Mars.

And more and more they tried to make it look like Earth.

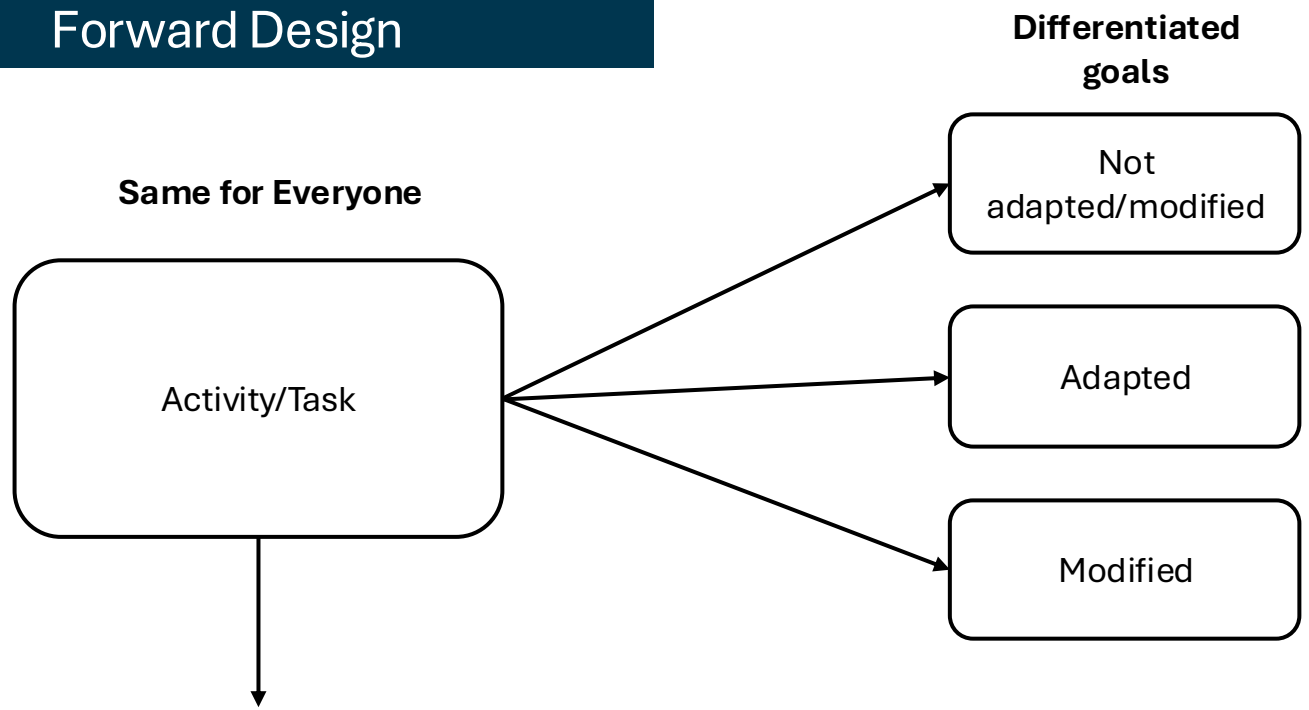
Forwards Design

- A lot of work for one student/ no one else benefits from the resources
- Focus is on task not goals
- The student may be able to meet the goals, just not using this text or doing this task
- The task is evaluated, not the goal
- Reading The Martian Chronicles is not a learning goal
- Compromising evaluation



~~Backwards~~ Design

Forward Design



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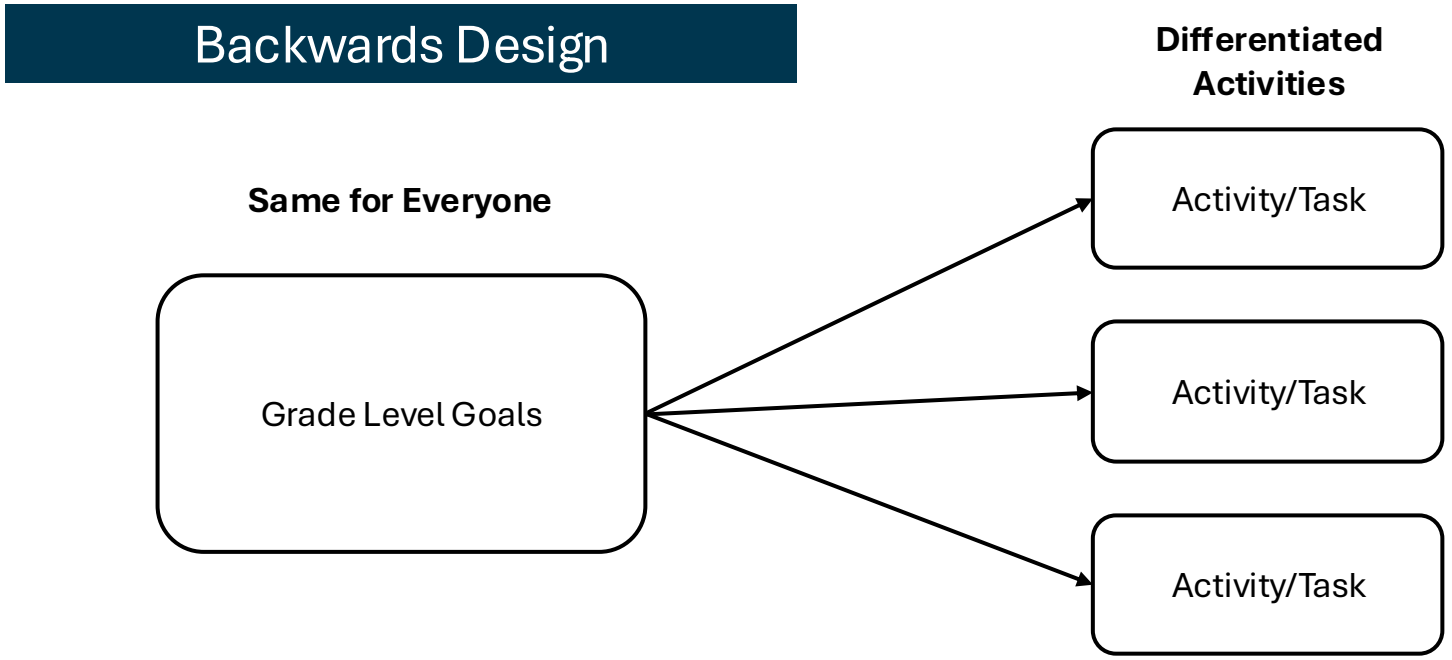
Backwards Design



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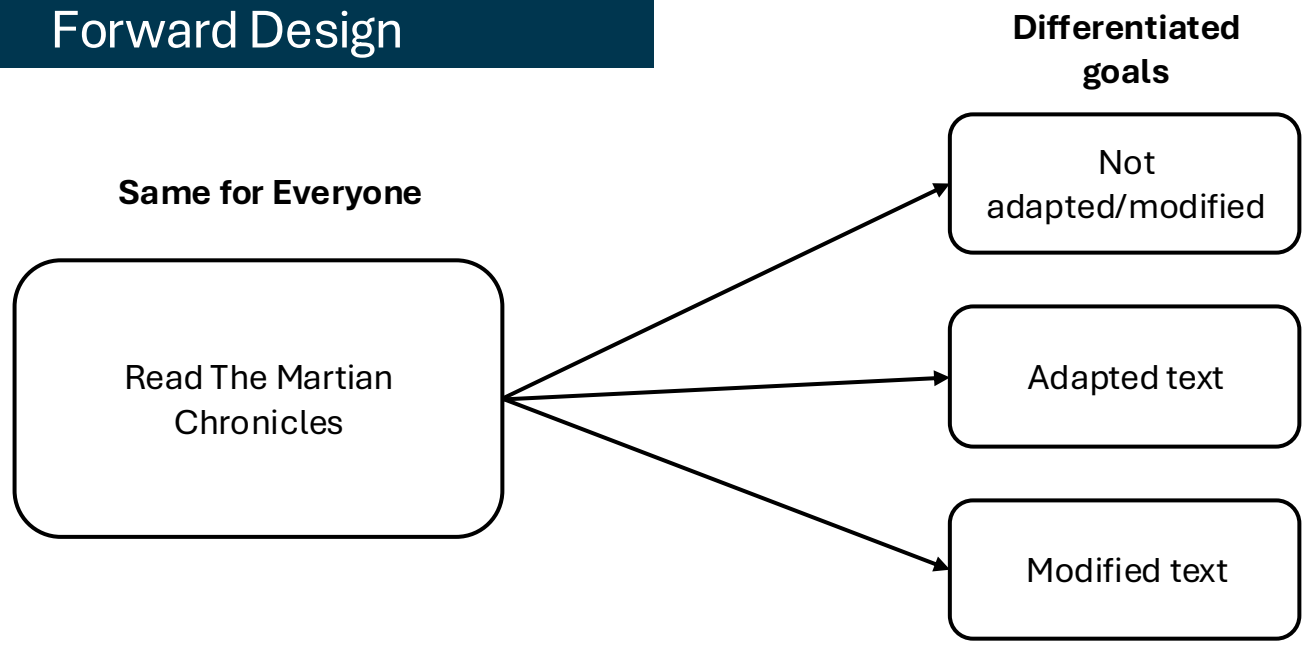

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Backwards Design

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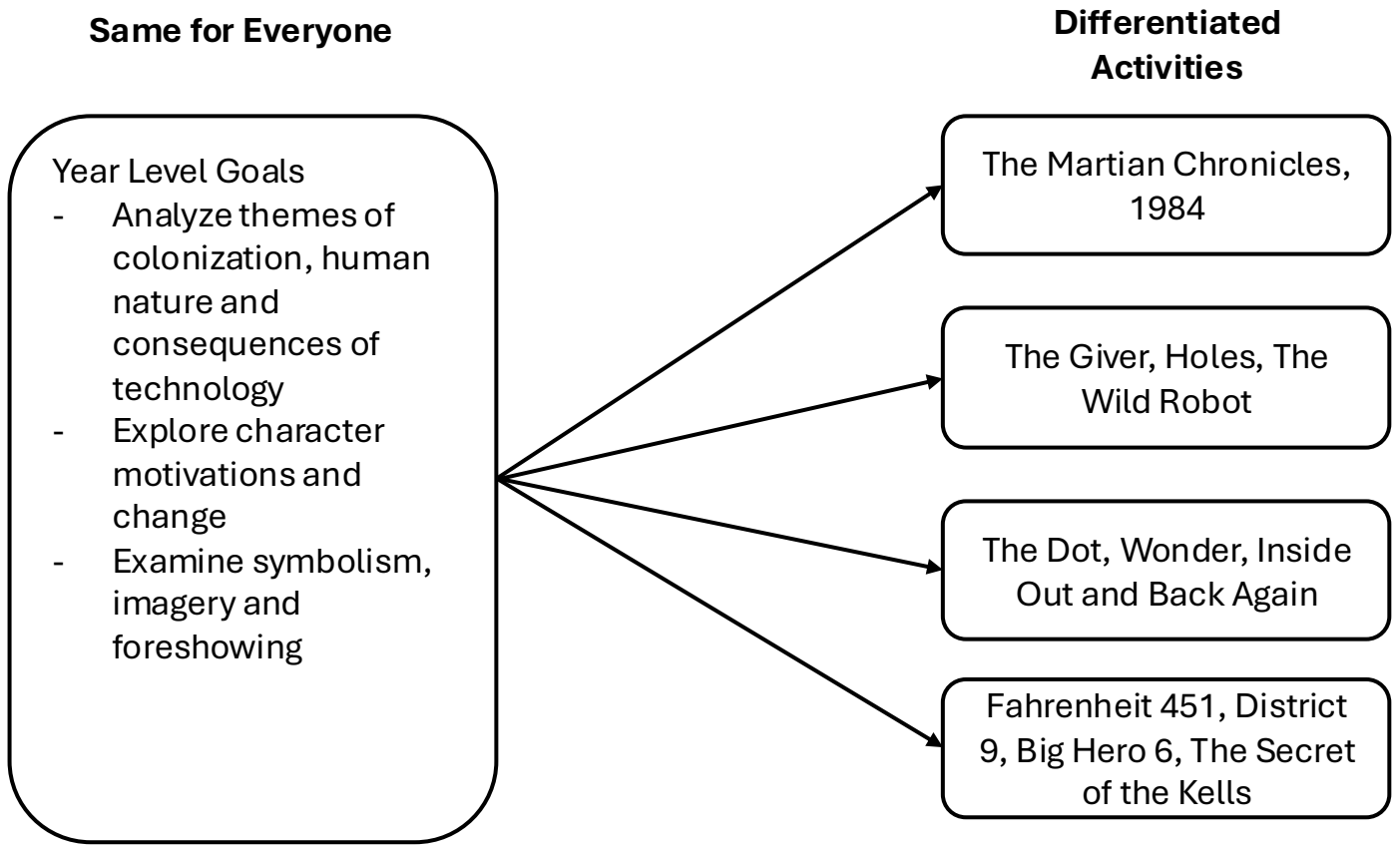
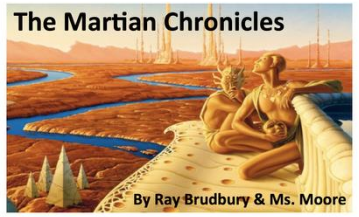


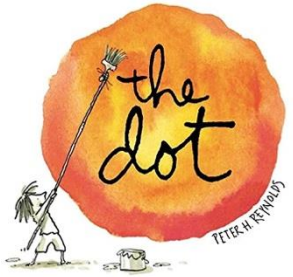
McTigue, 2010

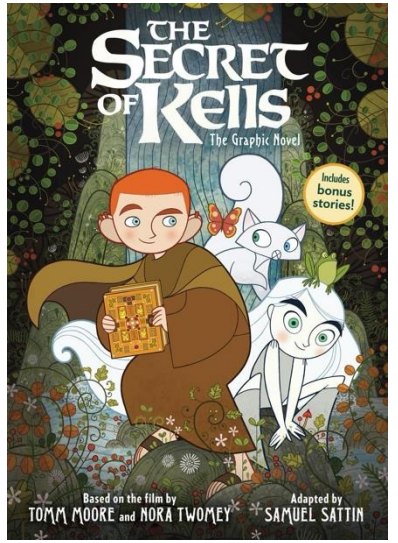
FIRM Goals, FLEXIBLE means

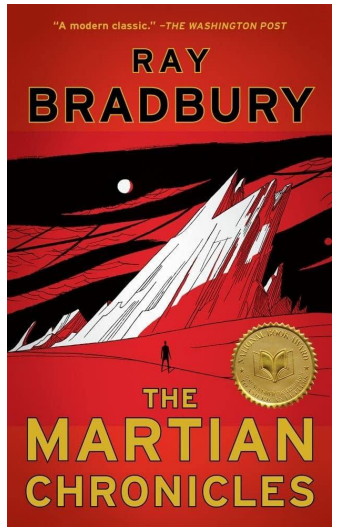
Grade Level Learning Standards

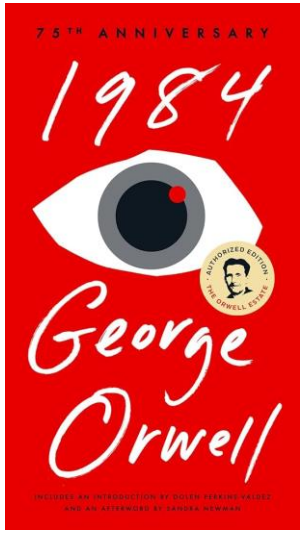
- Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts
- Recognize and identify the role of personal, social, and cultural contexts, values, and perspectives in texts
- Literary elements
- Rhetorical devices

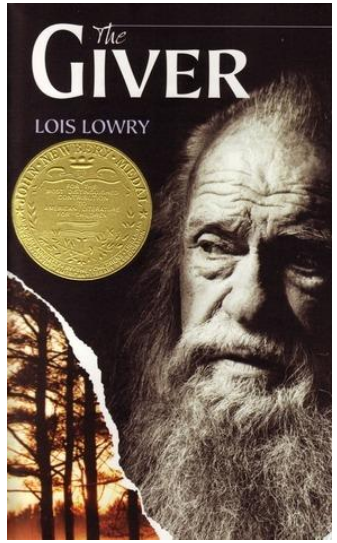












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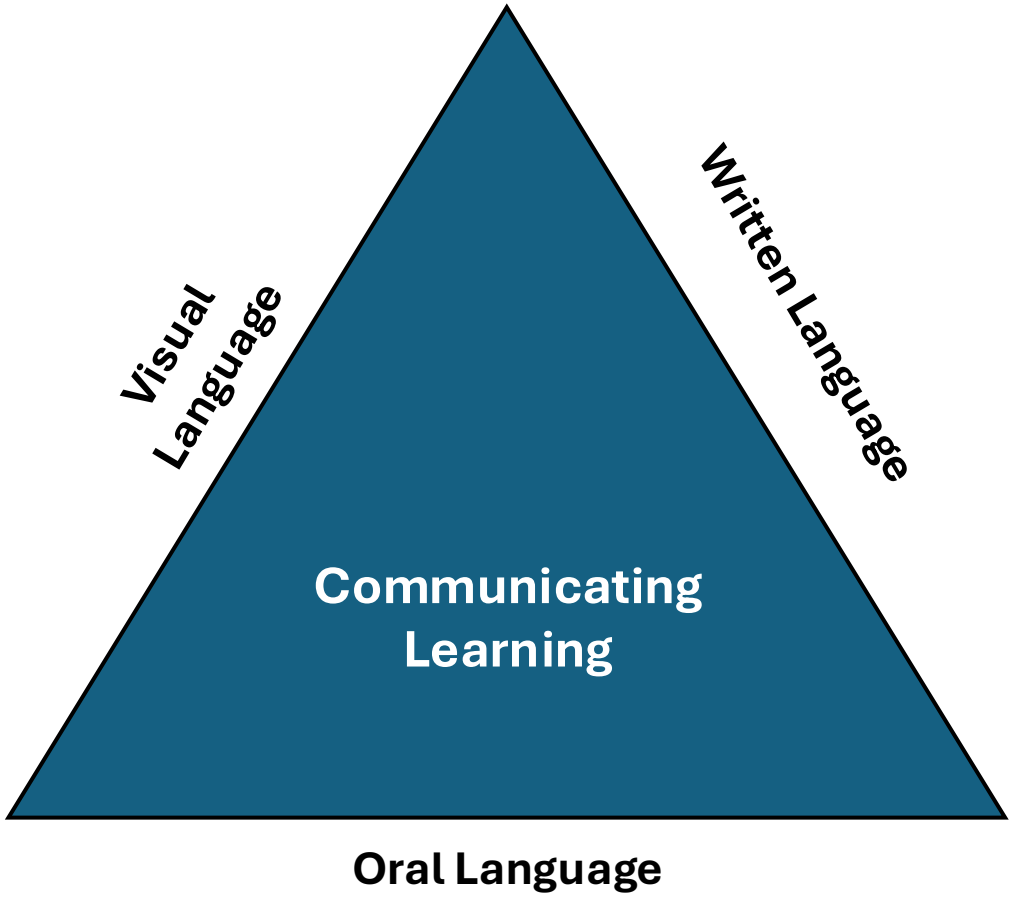
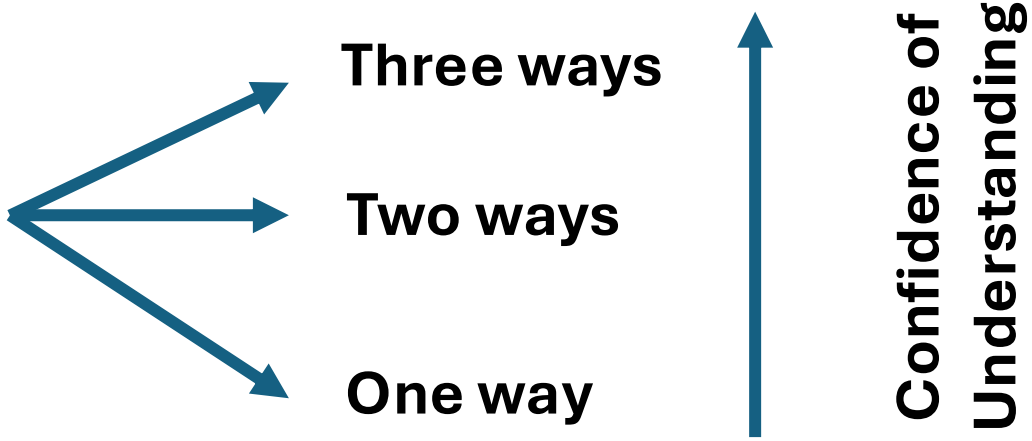
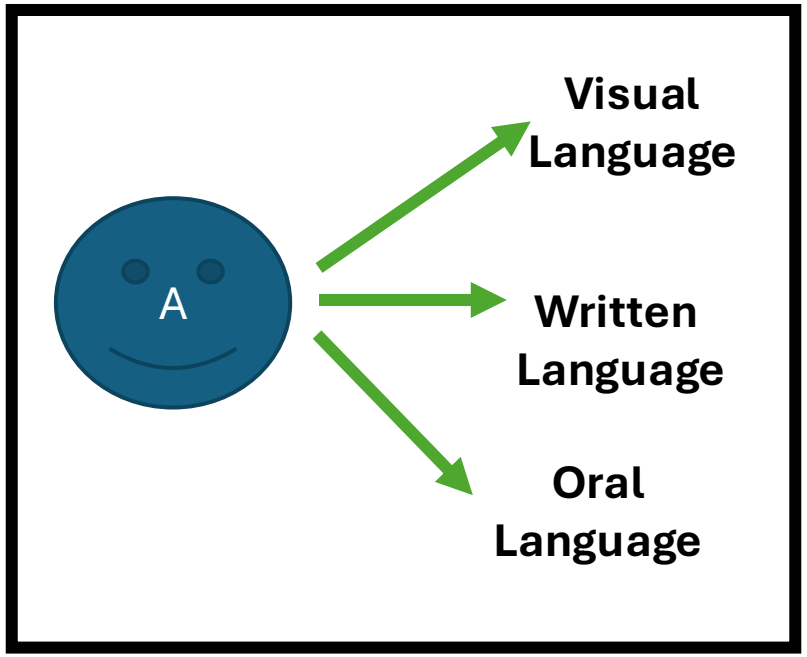
How do student show what they know?





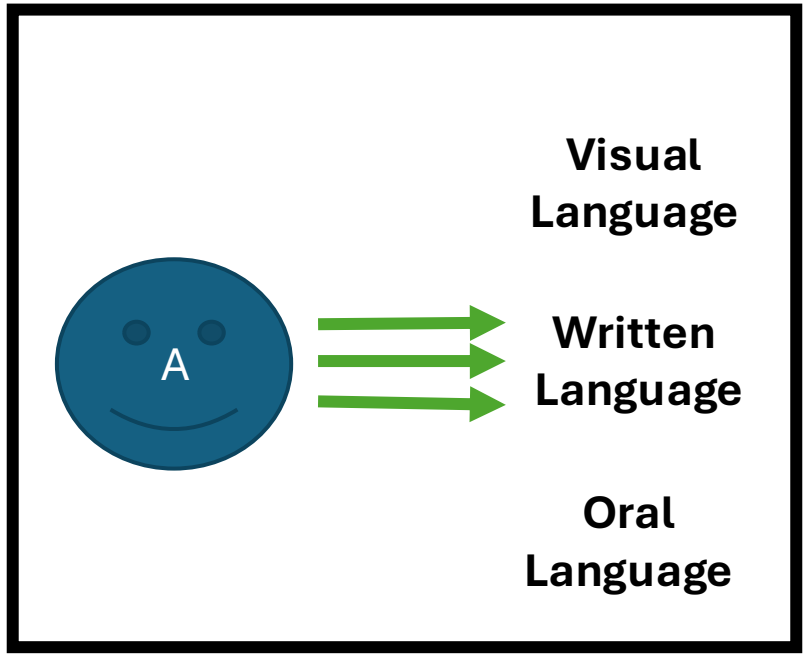
All Languages (in literacy) are Treated Equal!



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



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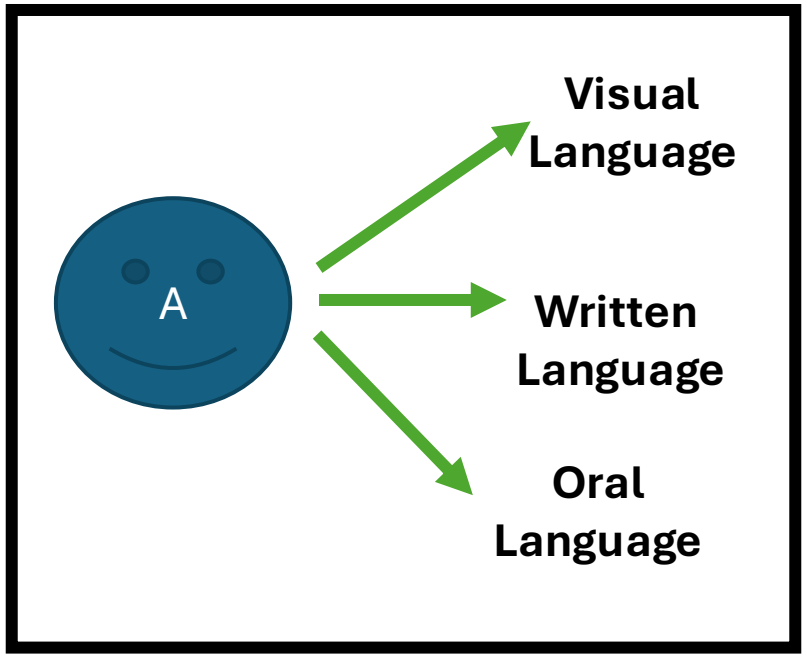

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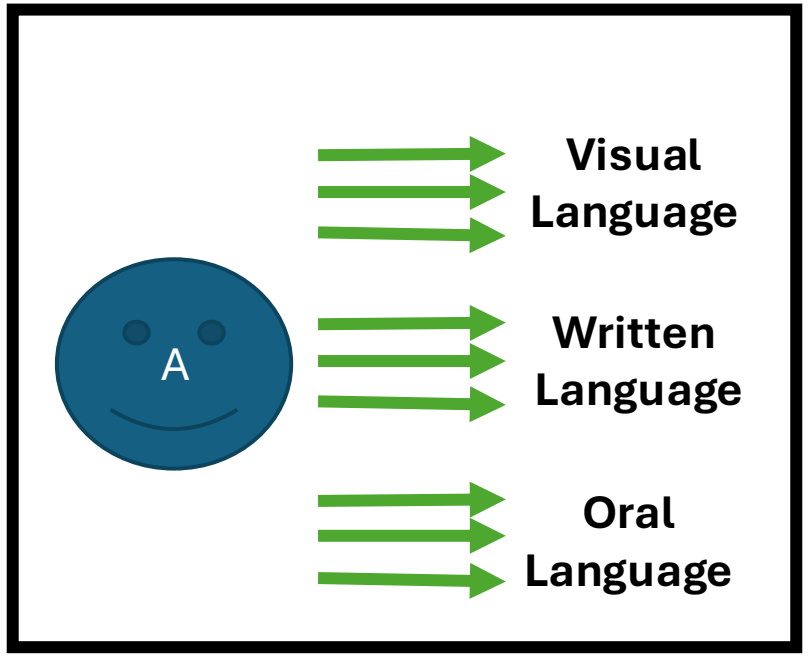

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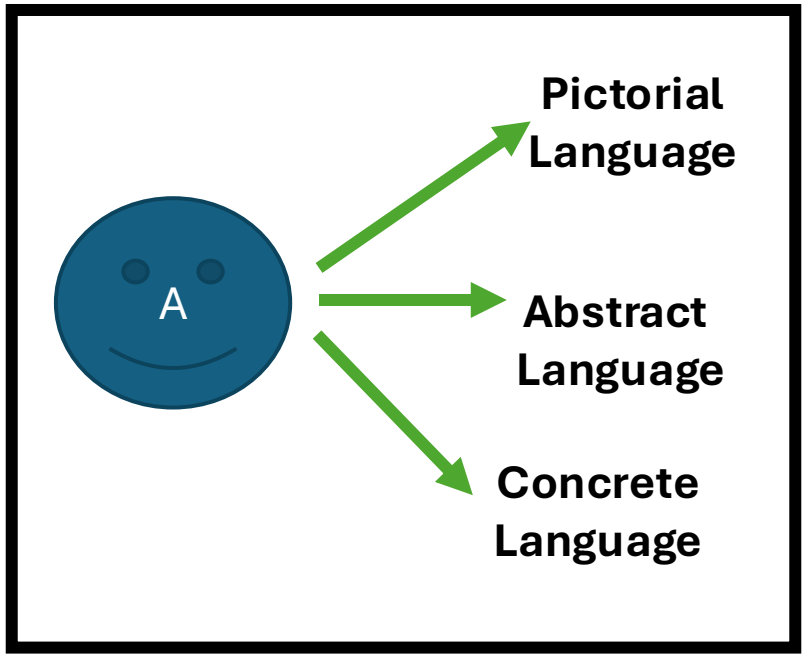

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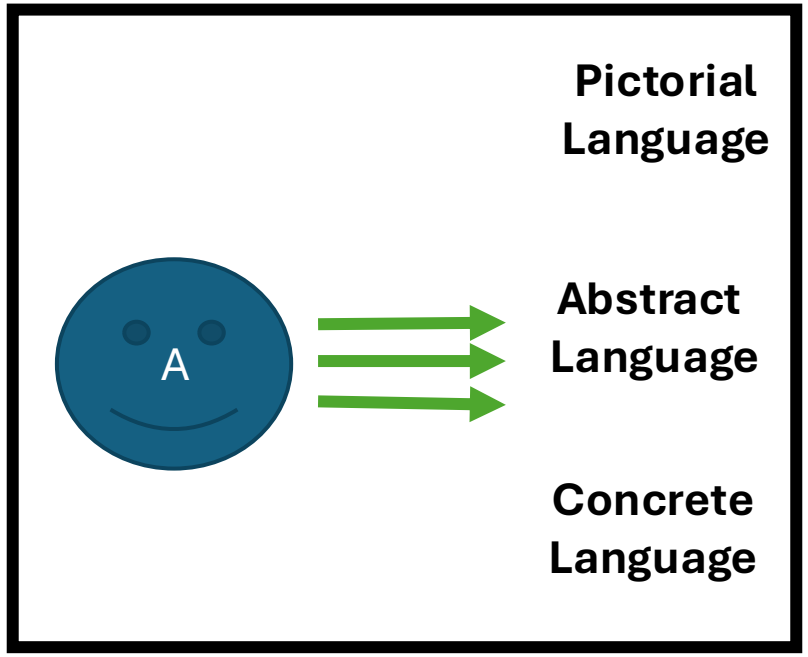

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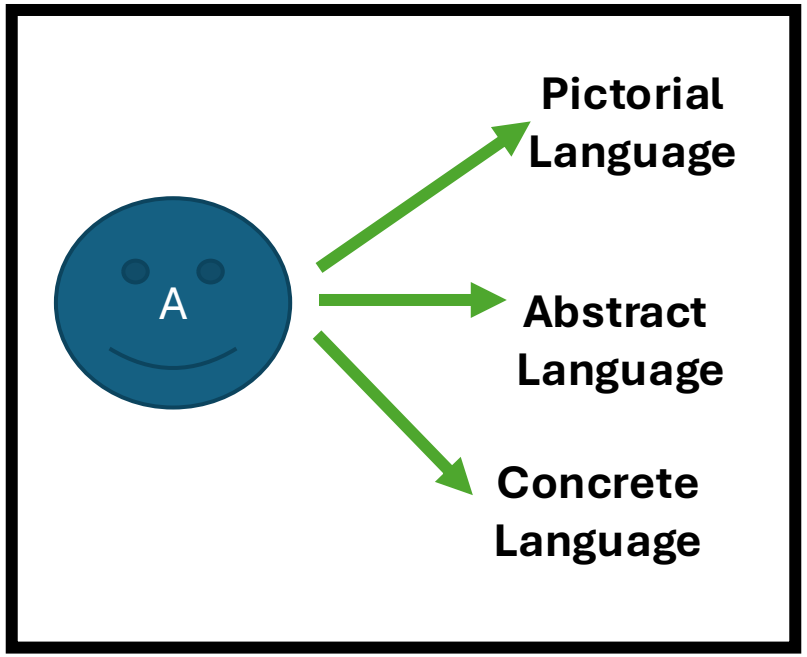

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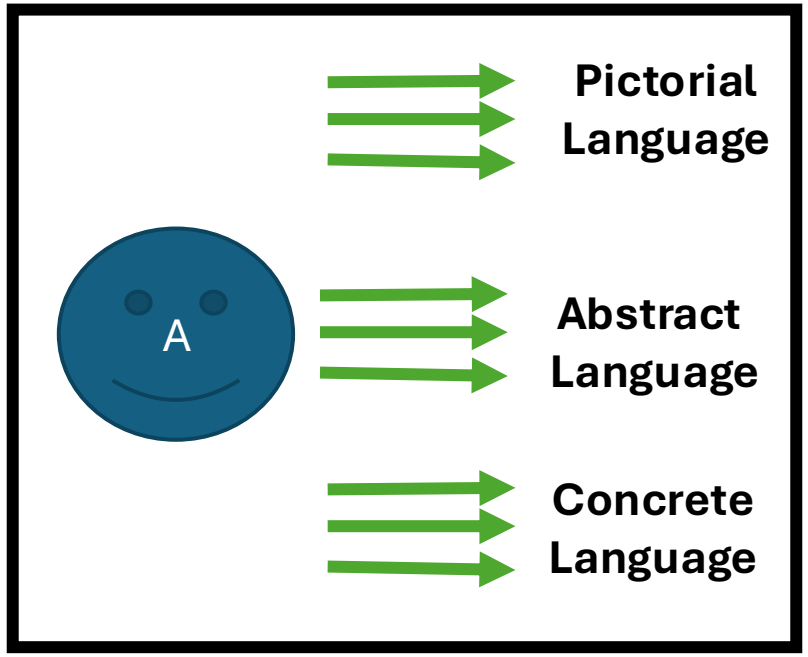


Learning Standards/ Outcomes	Assessment Tasks to Capture Learning	Differentiation of Evidence			
		Written	Oral	Kinesthetic	Visual

Class: Grade 8	Subject Area(s): ELA/Social Studies	Planning Team: J & S & Team NT
Big Idea(s): Exploration, expansion, and colonization had varying consequences for different groups Exploring stories and other texts helps us understand ourselves and make connections to others and to the world I can understand that different cultures and communities have different perspectives		**Unit Guiding Question(s):** How do the narratives of exploration and colonization reflect the diverse perspectives the cultures and communities involved? How can stories from multiple perspectives help us to better understand ourselves and how we connect to others?
Vocabulary to know and use (content): narratives, exploration, expansion, colonization, interactions, exchange, ideas, arts, cultures, civilizations, perspectives, past, present, people, places, issues, events, values, worldviews, beliefs, time and place, cause, influence, decisions, actions, events, short term, long term, consequences, story, oral tradition, local Indigenous perspectives, points of view, sources, viewpoints		**Vocabulary to know and use (skills & competencies):** compare, explain/describe, understand, critical thinking, reflective thinking

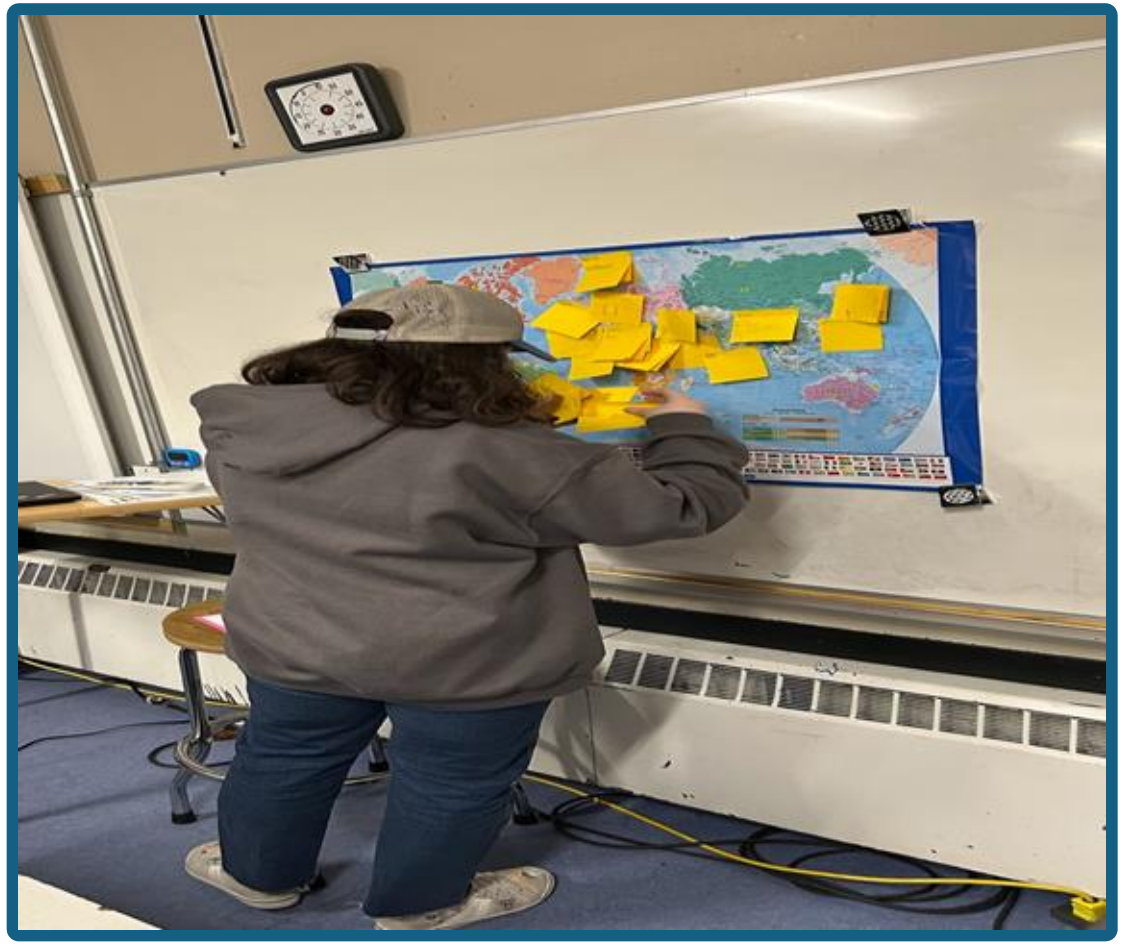
Unit Goals	Curricular Language	Student friendly language
Content Goal:	interactions and exchanges of resources, ideas, arts, and culture between and among different civilizations	I know how different civilizations interacted and exchanged goods and ideas
Content Goal:	exploration, expansion, and colonization	I know what exploration, expansion and colonization is
Curricular Competency Goal: SS - Perspective	Explain different perspectives on past or present people, places, issues, or events, and compare the values, worldviews, and beliefs of human cultures and societies in different times and places	I can explain different perspectives of different cultures and communities over time
Curricular Competency Goal: SS- Cause & Consequence	Determine which causes most influenced particular decisions, actions, or events, and assess their short-and long-term consequences	I can explain the causes and consequences of decisions, actions, or events
Curricular Competency Goal: ELA - Comprehend & Connect	Recognize and appreciate the role of story, narrative, and oral tradition in expressing local Indigenous perspectives, values, beliefs, and points of view	I can appreciate the story and oral traditions of (local) Indigenous Peoples
Curricular Competency Goal: ELA - Comprehend & Connect	Synthesize ideas from a variety of sources to build understanding	I can gather and find themes from many different source to help me understand
Curricular Competency Goal: ELA – Create & Communicate	Exchange ideas and viewpoints to build shared understanding and extend thinking	I can share ideas and viewpoints to help myself and others understand and stretch our thinking
Key Competency Goal: Critical & Reflective Thinking	Critical and Reflective Thinking (1-3)	

Learning Standards	Tasks and Activities to show Learning	Differentiation of Evidence			
		Written	Oral	Kinesthetic	Visual
1. I know how different civilizations interacted and exchanged goods and ideas	• Creating a Timeline • LS: 6	X			
2. I know what exploration, expansion and colonization is	• Event worksheet activity • LS: 3	X			
3. I can explain different perspectives of different cultures and communities over time	• Quick write • LS: 4, 7	X			
4. I can explain the causes and consequences of decisions, actions, or events	• Quick write • LS: 2, 3	X			
5. I can appreciate the story and oral traditions of (local) Indigenous Peoples	• Read article/comprehension questions • LS: 1, 2, 4, 6, 7	X			
6. I can gather and find themes from many different sources to help me understand	• Unit test: M/C, short answer • LS: 1, 2, 3, 4, 5	X			
7. I can share ideas and viewpoints to help myself and others understand and stretch our thinking					
8. I can be a critical thinker					

Learning Standards	Tasks and Activities to show Learning	Differentiation of Evidence			
		Written	Oral	Kinesthetic	Visual
1. I know how different civilizations interacted and exchanged goods and ideas	• Creating a Timeline • LS: 6	X		X	X
2. I know what exploration, expansion and colonization is	• Locating of key events on timeline • LS: 3	X		X	X
3. I can explain different perspectives of different cultures and communities over time	• Questioning Post-it note activity • LS: 3, 4, 7, 8		X	X	X
4. I can explain the causes and consequences of decisions, actions, or events	• Quick write • LS: 4, 7	X			
	• Quick write/ Whole class 3 column chart • LS: 2, 3	X	X		
5. I can appreciate the story and oral traditions of (local) Indigenous Peoples	• See/Think/Wonder • LS: 1, 2, 4, 7, 8	X	X		X
6. I can gather and find themes from many different sources to help me understand	• Jigsaw Reading Activity • LS: 1, 2, 4, 6, 7	X	X		
7. I can share ideas and viewpoints to help myself and others understand and stretch our thinking	• Comparing perspectives Venn diagram • LS: 3, 5, 8	X			X
8. I can be a critical thinker	• Unit test: M/C, short answer • LS: 1, 2, 3, 4, 5	X			

Creating a Collaborative Visual Timeline

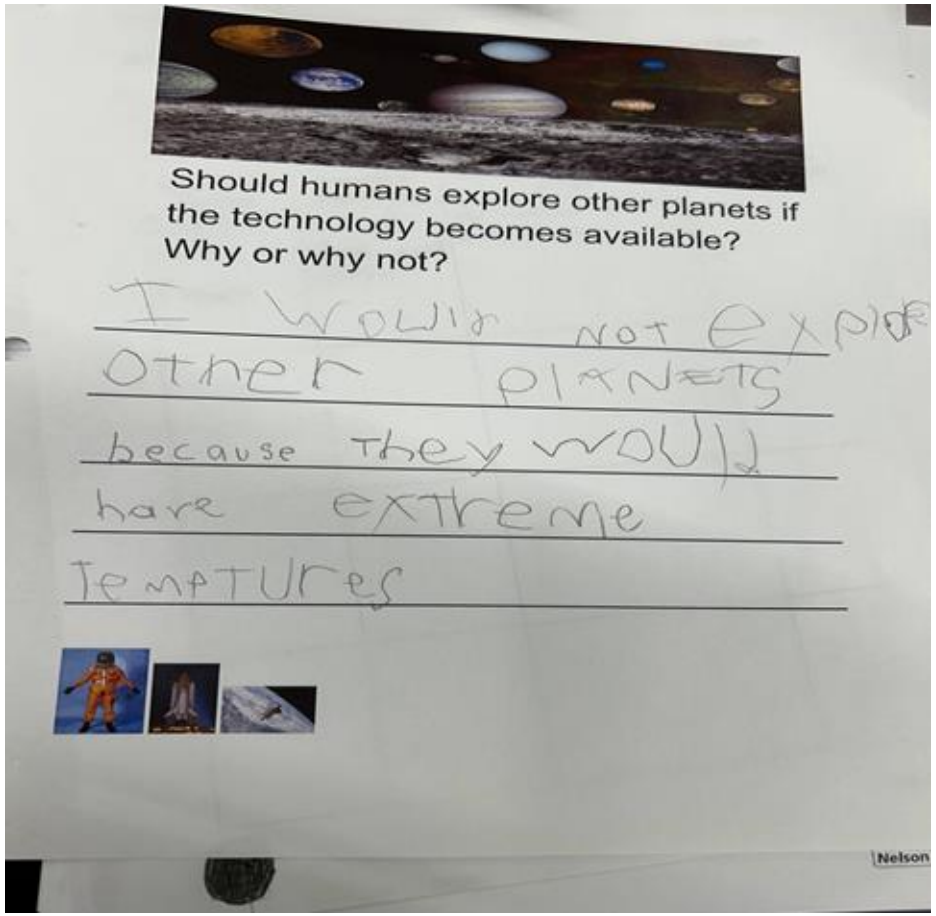
Next, they identified the locations by placing their sticky notes on a world map.

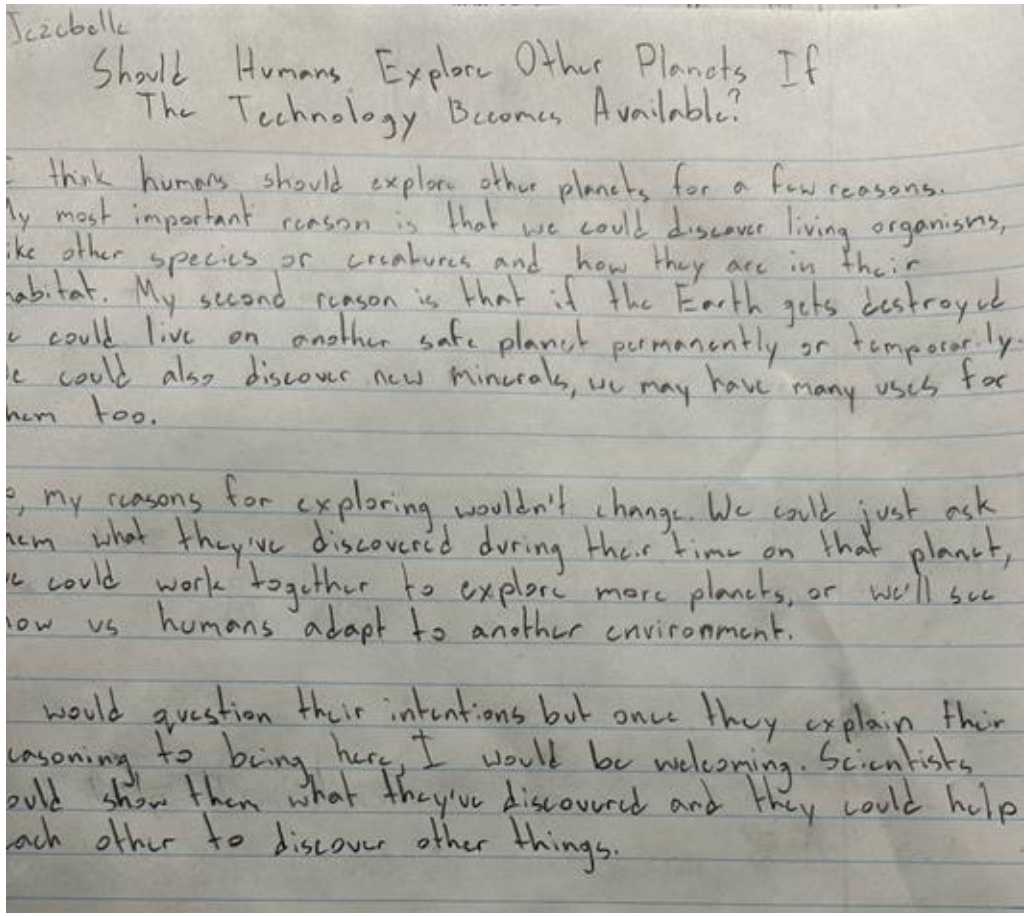


Questions/Comments:

- ★ Do we have the whole story?
- ★ Whose stories are missing?
- ★ Why are they missing?
- ★ How can we fill in the missing pieces? Who can we ask? Where can we look?
  - Talk to Elders
  - Change our research focus to “Indigenous stories”
- ★ Everyone’s <u>perspective</u>

Activity: Quick Write
Should humans explore other planets if the technology become available? Why or why not?





Learning Standards	Tasks and Activities to show Learning	Differentiation of Evidence			
		Written	Oral	Kinesthetic	Visual
1. I know how different civilizations interacted and exchanged goods and ideas	• Creating a Timeline • LS: 6	X		X	X
2. I know what exploration, expansion and colonization is	• Locating of key events on timeline • LS: 3	X		X	X
3. I can explain different perspectives of different cultures and communities over time	• Questioning Post-it note activity • LS: 3, 4, 7, 8		X	X	X
4. I can explain the causes and consequences of decisions, actions, or events	• Quick write • LS: 4, 7	X			
	• Quick write/ Whole class 3 column chart • LS: 2, 3	X	X		
5. I can appreciate the story and oral traditions of (local) Indigenous Peoples	• See/Think/Wonder • LS: 1, 2, 4, 7, 8	X	X		X
6. I can gather and find themes from many different sources to help me understand	• Jigsaw Activity • LS: 1, 2, 4, 6, 7	X	X		
7. I can share ideas and viewpoints to help myself and others understand and stretch our thinking	• Comparing perspectives Venn diagram • LS: 3, 5, 8	X			X
8. I can be a critical thinker	• Unit test: M/C, short answer • LS: 1, 2, 3, 4, 5	X			

Learning Standards/ Outcomes	Assessment Tasks to Capture Learning	Differentiation of Evidence			
		Written	Oral	Kinesthetic	Visual

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

CURRICULUM & ASSESSMENT DESIGN

Student choice of challenge

Adjustable Curriculum

Student choice of evidence

Adjustable Assessment

Students

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

NEEDS BASED DESIGN

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

Adjustable Supports & Strategies

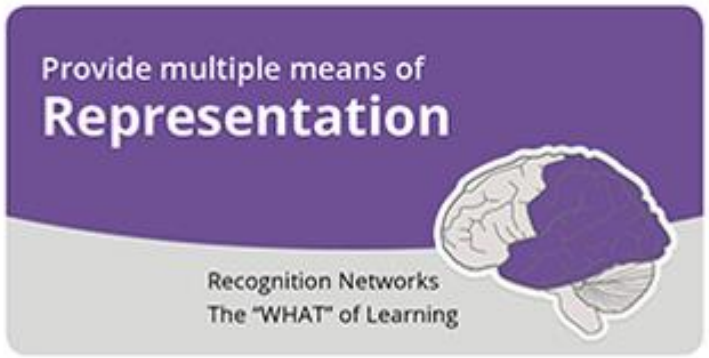
Student choice of tools and actic s

INSTRUCTIONAL DESIGN

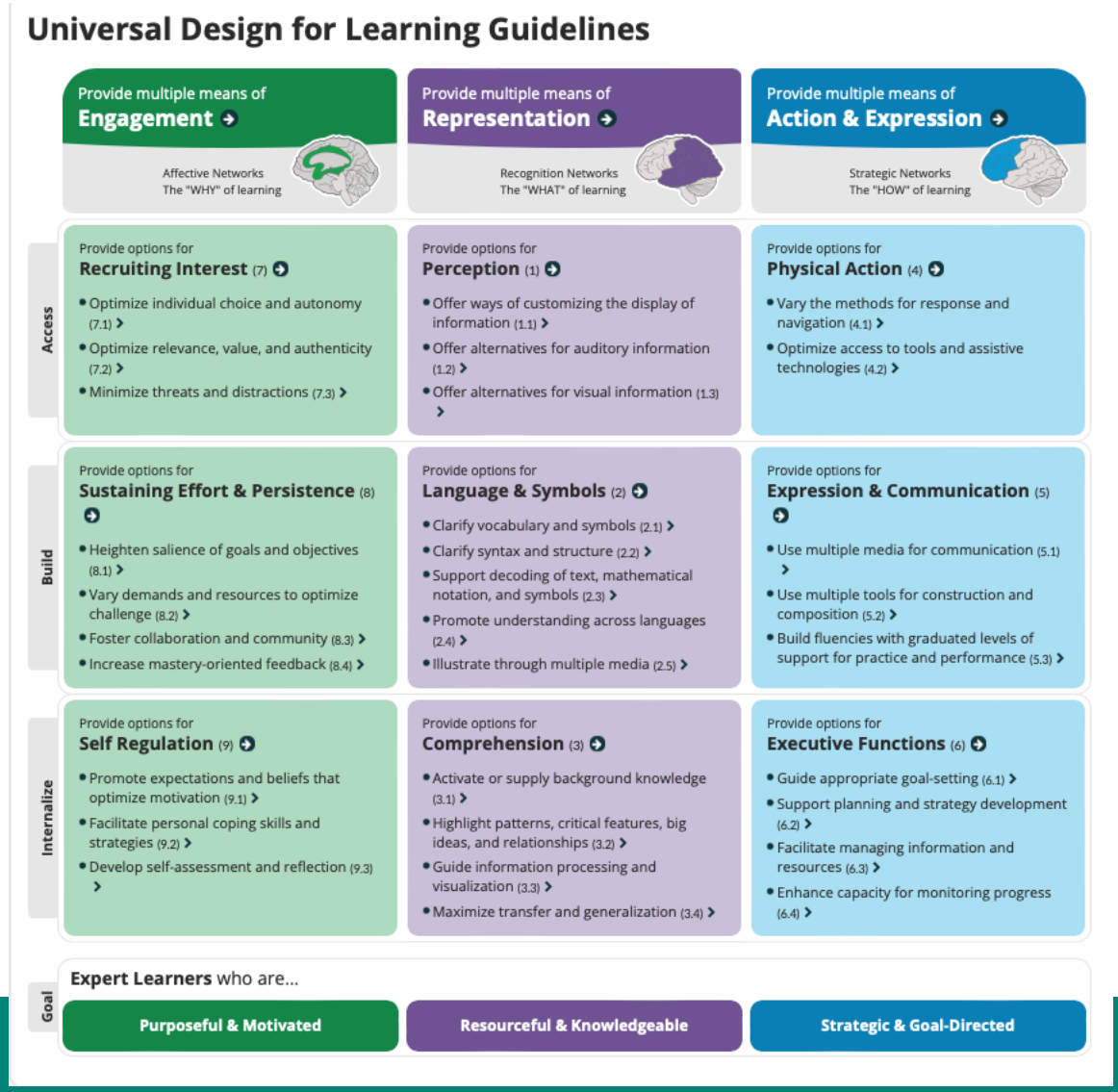
How will students show growth within the learning standard?
How do we know?

Shelley M RE PH.D.
2023

Connecting UDL to Lesson Design

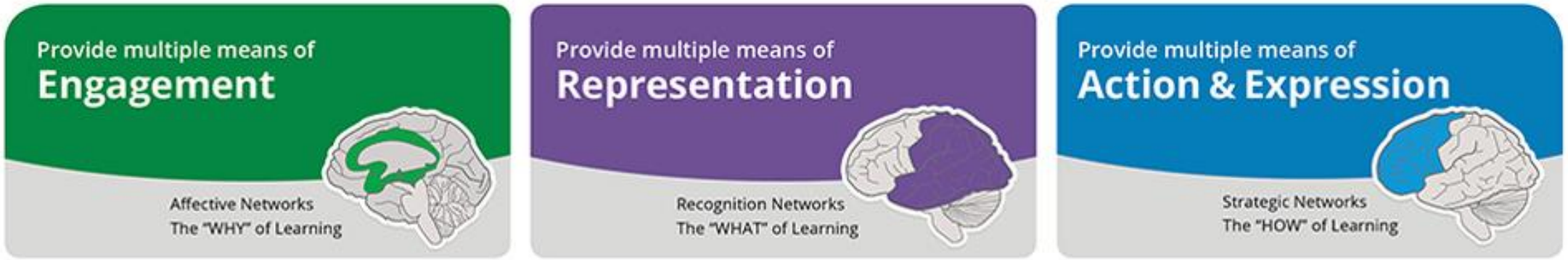


Universal Design for Learning: The Ramp for Learning



Universal Design for Learning: Lesson Design

Mini Lesson



Connecting Phase **Processing Phase** →

Transforming & Personalizing Phase

Guiding Unit Question:

Lesson Goal(s):

Date

Connecting Activity:

Additional supports & strategies to ensure students meet the "ALL"

Mini Lesson:

Processing Task:

I need to…	I must…	I can…	I could…	I can try to…
Access	All	Most	Few	Challenge

Transforming & Personalizing Activity:

This is lesson creates evidence for:

Universal Design for Learning: Lesson Design

Example Lessons

- Grade 8 Humanities
- Grade 11/12 Industrial Design

Grade: 8	Subject Area(s): English Language Arts	Planning Team:	
Big Idea: Questioning what we hear, read, and view contributes to our ability to be educated and engaged citizens.		**Unit Guiding Question(s): As an active citizen, how can I educate myself about important social justice topics? As an active citizen, how can I educate others about important social justice topics?**	
	Curricular Language	**Student Friendly Language**	**Possible Lesson Activities & Assessment Tasks**
Content Goal	oral language features and strategies	**I know strategies to help me be a confident speaker** I know how to use speaking strategies to help communicate my thinking	• Watch different TED talks to co-create criteria and determine strategies of a confident speaker (looks like, sounds like, feels like) • Students perform a TED talk about a social justice topic meaningful to them using oral language strategies
Content Goal	elements of visual and graphic texts	I know strategies to help me use visuals to share my thinking I know how to use visuals and graphics to help communicate my thinking	• Watch different TED talks to co-create criteria and determine how speakers use visuals to share their message (looks like, sounds like, feels like) • Students perform a TED talk about a social justice topic meaningful to them visual strategies
Curricular Competency Goal: Comprehend and connect (reading, listening, viewing)	Construct meaningful personal connections between self, text, and world	I can make connections between myself, texts and the world	• Watch TED talks that reflects a social justice topic reflective of the world and connects to them personally
	Synthesize ideas from a variety of sources to build understanding	I can find patterns between ideas from a different sources and texts to build understanding	• Research for their own TED talk includes multiple sourcesand texts and their talk includes ideas that connect sourcees together
Curricular Competency Goal: Create and communicate (writing, speaking, representing)	Use writing and design processes to plan, develop, and create engaging and meaningful literary and informational texts for a variety of purposes and audiences	I can use writing to plan, develop, and create engaging and meaningful oral texts for an audience	• Co creating criteria using graphic organizers • Create a speech or plan a speech using writing about a social justice topic important to them • Practice speech including feedback and self assessment • Hold TED talk event speech with an audiences
	Assess and refine texts to improve their clarity, effectiveness, and impact according to purpose, audience, and message	I can reflect on feedback and revise my writing and speaking so it makes sense, and communicates my message in an effective way	• Using co created criteria, reflect on feedback and self assess to improve and practice TED talk for final event • Practice speech in front of different audiences and audience sizes

Guiding Unit Question: As an active citizen, how can I educate myself about important social justice topics? As an active citizen, how can I educate others about important social justice topics?

Lesson Goal(s):
I know strategies to help me be a confident speaker
I know strategies to help me use visuals to share my thinking

Date

Connecting Activity: discussion and pre teaching of new vocabulary

Mini Lesson: Watch a TED talk, look for what the speaker does to be a confident

Processing Tasks: Co-construct criteria (what do confident speakers look like and sound like, what does it feel like to watch them)

I Need to…	I Must…	I Can…	I Could…	I Can Try to…
Choose a Ted Talk and watch it. Figure out what the the speaker's message is	List what the speaker does to keep you engaged. What does it look like, sound like feel like?	Follow the same process with another TED talk and compare the speakers	Give feedback to one of the speakers on what they do well, and one thing that you think they could improve on	Respond to one of the TED talks with a connection, a question or an opinion about their message

Supports & Strategies

- Proximity to N, scribe, strategic group members, check in, reassurance, redirection to prompts, task break down,
- Strategic locations, groups of 2 or 3, translated videos,
- Visuals, vocab review,
- Modeling, interesting ted talk,
- Pre teach vocabulary
- power point/ document camera
- Interesting ted talks
- Youth speakers
- Not too long videos
- About relevant issues

Transforming & Personalizing Activity: Exit slip – If you were going to make a POWERFUL Ted Talk, what are something you would do? What would be a topic you would talk about?

As an active citizen, how can I educate myself about important social justice topics?

As an active citizen, how can I educate others about important social justice topics?

Moore, 2025

Goals for Today:

I know strategies to help me be a confident speaker

I know strategies to help me use visuals to share my thinking

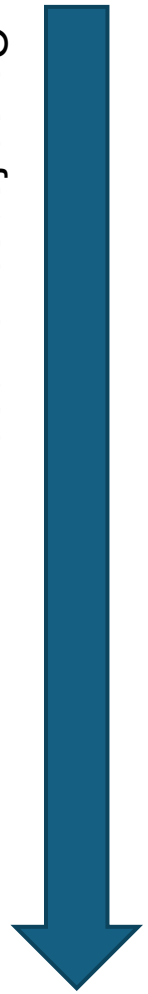
Learning Goals

I know strategies to help me be a confident speaker

I know strategies to help me use visuals to share my thinking

Start here!

Go as far as you can



I NEED to
- choose a QR code, watch the TED talk
- notice what the message of this TED talk is

I MUST
- notice what this TED talk LOOKS like
- notice what this TED talk SOUNDS like
- notice what this TED talk FEELS like

I CAN
- analyze another QR code and compare speakers

I COULD
- offer some feedback to the TED speaker

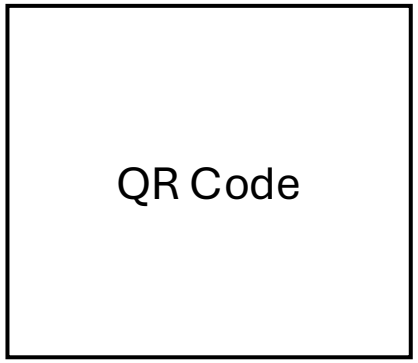
I CAN TRY TO
- make a connection, question or opinion about the Ted Talk

Supports & Strategies Available

- Choice to work alone or in pairs
- Choice of Ted Talk
- Subtitles/translations available
- One person can be the writer
- One person can be the speaker
- Choice of Challenge
- Choice of where to go (hallway, next door, classroom)

Shelley Moore, Lake Trail Middle, 2018

What strategies do TED talk speakers use to share their thinking and help them feel confident?

Title of TED Talk	What is the message?	What does the Speaker look like?	What does the speaker sound like?	What are you feeling when you watch the speaker?
Under the Table 				
 QR Code				

Shelley Moore, 2018

TED Talks Names of group members: _____

Title	What is the **message** of this TED Talk?	What does this TED talk **look** like?	What does this TED talk **sound** like?	What does this TED talk **feel** like?
Under the Table (Paste QR code here)	Inclusive Education – students in all classroom – everyone can learn	Red dot →stay in one place Dressed up Formal – stage lighting – but room was dark gestures pictures/visuals Colours – red not a script	funny jokes not just read conversational natural some "umms" are ok story	passionate inspiring Knowledgable connected
(Paste QR code here)				

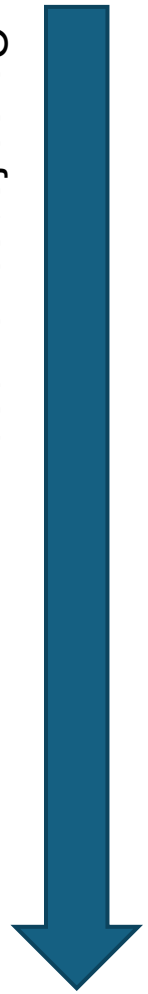
Learning Goals

I know strategies to help me be a confident speaker

I know strategies to help me use visuals to share my thinking

Start here!

Go as far as you can



I NEED to
- choose a QR code, watch the TED talk
- notice what the message of this TED talk is

I MUST
- notice what this TED talk LOOKS like
- notice what this TED talk SOUNDS like
- notice what this TED talk FEELS like

I CAN
- analyze another QR code and compare speakers

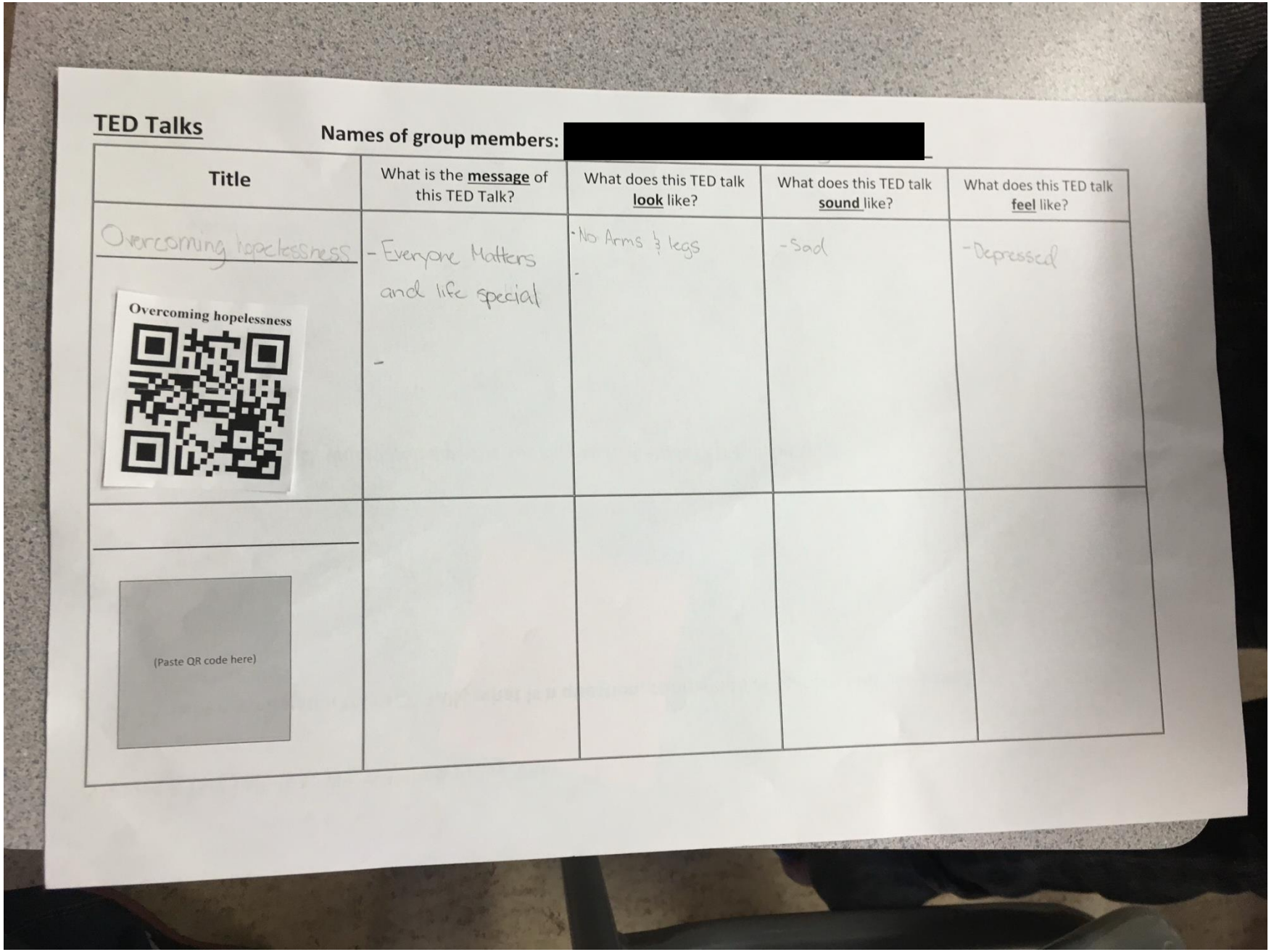
I COULD
- offer some feedback to the TED speaker

I CAN TRY TO
- make a connection, question or opinion about the Ted Talk

Supports & Strategies Available

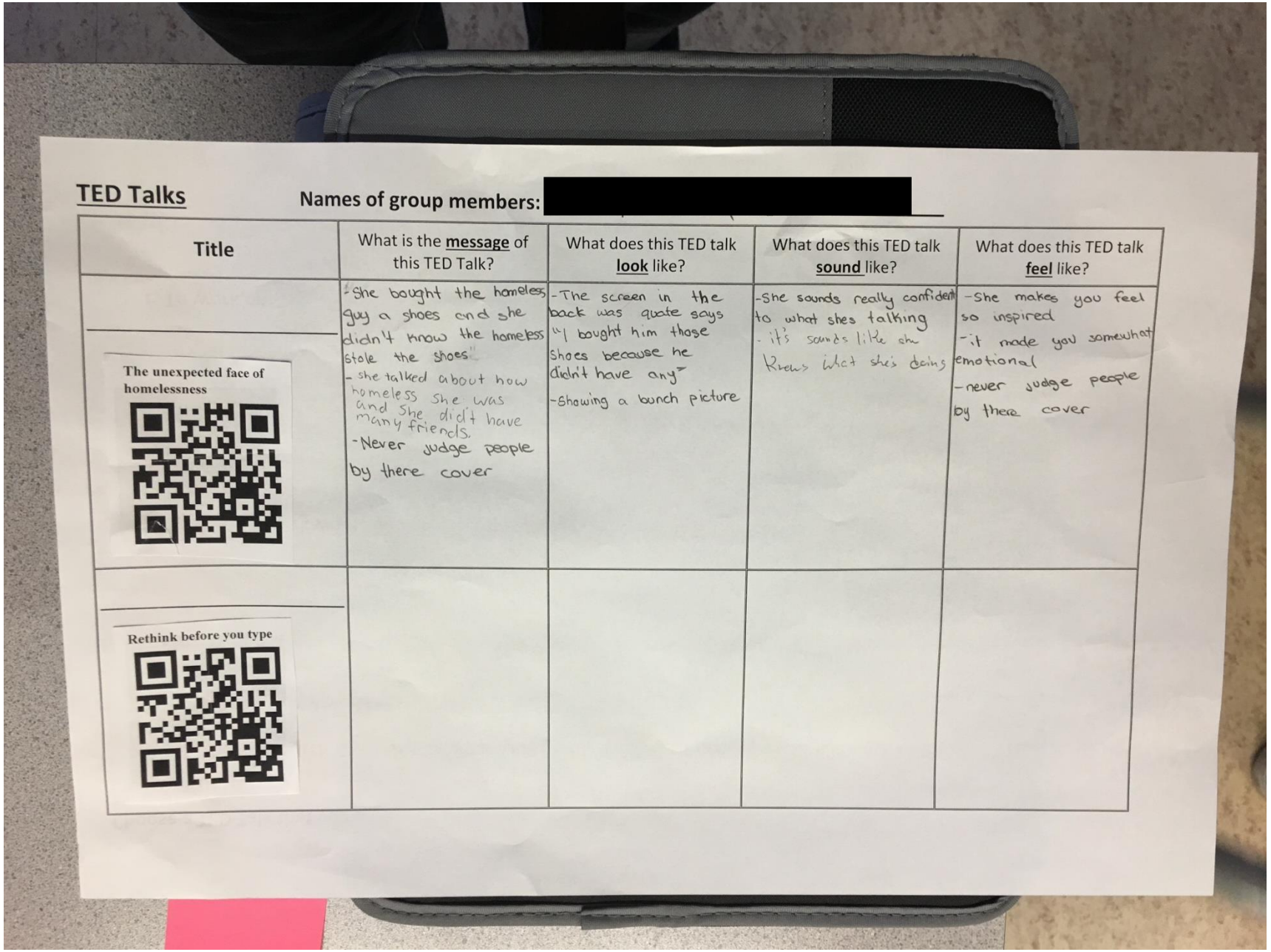
- Choice to work alone or in pairs
- Choice of Ted Talk
- Subtitles/translations available
- One person can be the writer
- One person can be the speaker
- Choice of Challenge
- Choice of where to go (hallway, next door, classroom)

Shelley Moore, Lake Trail Middle, 2018



TED Talks **Names of group members:** [redacted]

Title	What is the **message** of this TED Talk?	What does this TED talk **look** like?	What does this TED talk **sound** like?	What does this TED talk **feel** like?
Overcoming hopelessness Overcoming hopelessness	- Everyone Matters and life special -	- No Arms & legs -	- Sad	- Depressed
(Paste QR code here)				



TED Talks **Names of group members:** [redacted]

Title	What is the **message** of this TED Talk?	What does this TED talk **look** like?	What does this TED talk **sound** like?	What does this TED talk **feel** like?
The unexpected face of homelessness	-She bought the homeless guy a shoes and she didn't know the homeless stole the shoes. - she talked about how homeless she was and she didn't have many friends. -Never judge people by there cover	-The screen in the back was quote says "I bought him those shoes because he didn't have any" -Showing a bunch picture	-She sounds really confident to what shes talking - it's sounds like she knows what she's doing	-She makes you feel so inspired -it made you somewhat emotional -never judge people by there cover
Rethink before you type				

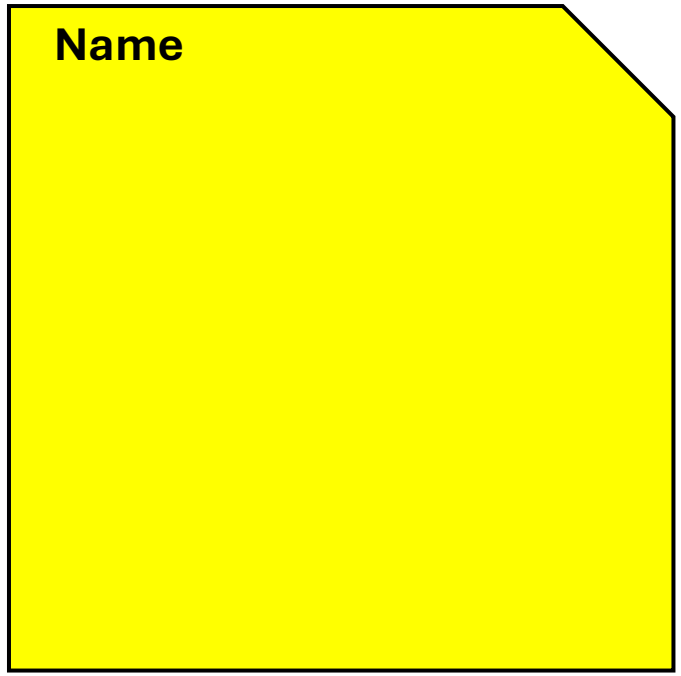
TED Talks **Names of group members:** _____

Title	What is the **message** of this TED Talk?	What does this TED talk **look** like?	What does this TED talk **sound** like?	What does this TED talk **feel** like?
Rethink before you type 	Rethink about what you say How we need to think what we say, what we do, or post	visuals young relavant red dot Presentable Dark room easy to focus	young smart calming clapping cheering clearly speaking	inspiring astonishing life changing upsetting
(Paste QR code here)				

Exit Slip – Choose one

1. If you were going to make a POWERFUL Ted Talk, what are some things you would do?

2. What would be a topic you would talk about?



Shelley Moore, Lake Trail Middle, 2018

Universal Design for Learning: Lesson Design

What did you notice about this lesson?
What are you wondering about this lesson?

Universal Design for Learning: Lesson Design

Example Lessons

- Grade 8 Humanities
- Grade 11/12 Industrial Design

Backward Design Unit Planning Template

Grade: 11/12	**Subject Area(s): Industrial Design**	**Planning Team: Ryan & Westview**
Big Idea: Personal design interests require the evaluation and refinement of skills		Unit Guiding Question(s): How can we **work together**, to **refine** our **design skills**?
Content Goal	I know relation of **structure** and **power** to **motion**	I know that **power** will effect **motion** I know that a structure will change based on the power and motion that is needed
Content Goal	I know **power** and **torque**	I know how power and torque effect each other
Content	I know **friction** and **traction**	I know how friction and traction effect each other
Curricular Competency Goal	I can *Understanding context*	I can describe why we are building a trebuchet
Curricular Competency Goal	I can define by make decisions about premises and constraints that define the design space, and identify criteria for success	I can identify a design problem and suggest possible ideas or solutions for success I can suggest ideas within **constraints** (price, size, time etc.)
Curricular Competency Goal	I can define by Determining whether an activity is collaborative or self-directed	I can decide if it is best to work with a group, a partner or alone – based on the activity/ task
Curricular Competency Goal	I can prototype by Choose a form for prototyping and develop a plan that includes key stages and resources	I can make a **plan** to create a **prototype** that includes the steps and the **materials** that I/we will need
Curricular Competency Goal	I can Individually or collaboratively identify and assess skills needed for design interests	**I can be a part collaborative decision to choose the final design**
Curricular Competency Goal	I can make by Identify appropriate tools, technologies, materials, processes, cost implications, and time needed	I can choose the right **tools** and materials for the job I can choose the right tools and materials within constraints (e.g. price, time, space)
Curricular Competency Goal	I can Create design, incorporating feedback from self, others, and results from testing of the prototype	I can receive **constructive feedback** from myself, others and my results and using it to make the design better

Moore, 2025

Guiding Unit Question: How can we **work together**, to **refine** our **design skills**?

Lesson Goal(s): I can be a part of a **collaborative** decision to choose a final design

Date

Connecting Activity: What is a trebuchet?
Provocation and discussion about vocabulary

Mini Lesson: Introduce goals of the unit

Processing Tasks: Self reflect on our strengths and stretches to determine our group members and make a group decision

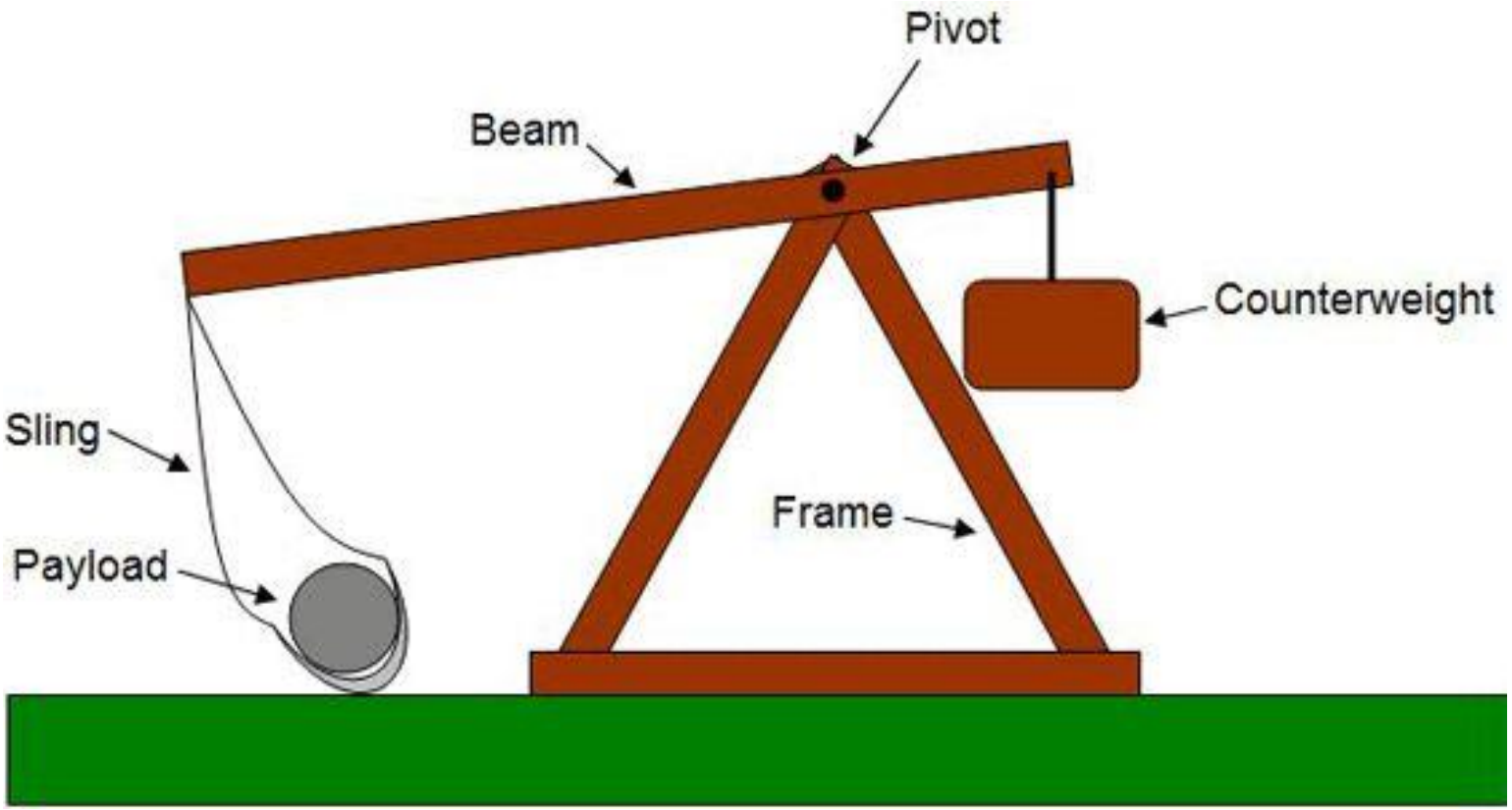
I Need to…	**I Must…**	**I Can…**	**I Could…**	**I Can Try to…**
Know what a trebuchet is, how they work and what their parts are	Reflect on your own strengths and stretches iin this class	Talk to other students who compliment your stregnths & strtchees nad to create a working group	As a group make a descision together about what part of theee trebuchet you want to build	Justify your decision as to why this part is a good fit for the skills of your group

Transforming & Personalizing Activity: How will your strengths support you in in this group design project?

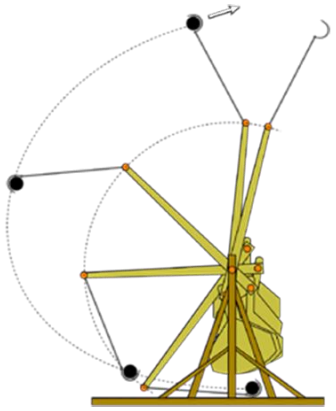
Supports & Strategies
- visuals, background knowledge oof Trebuchets, hands on activity, help student to be aware of their strengths (confidence), choice, graphic organizers, pre teach vocabulary

Evidence of Learning Created
Student Self reflection
Group's decision making and justification organizer, photos

What is a **Trebuchet?**



How can we **work together**, to **refine** our **design skills**?



Backwards Design Plan

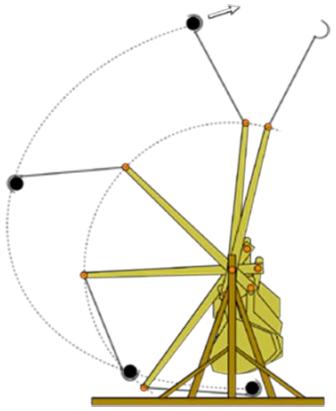
Goals for this Unit: What do we need to **know**?

I know that **power** will affect **motion**

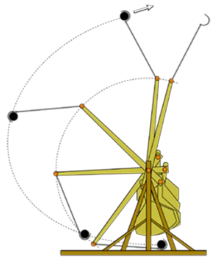
I know that a **structure** will change based on the **power** and **motion** that is needed

I know how **power** and **torque** effect each other

I know how **friction** and **traction** effect each other



Backwards Design Plan
Goals for this Unit: What do we need to **do**?



I can identify a design problem and suggest possible ideas or solutions for success

I can suggest ideas within **constraints** (price, size, time etc.)

I can decide if it is best to work with a group, a partner or alone – based on the activity/ task

I can make a plan to create a **prototype** that includes the steps and the materials that I/we will need

I can be a part **collaborative** decision to choose the final design

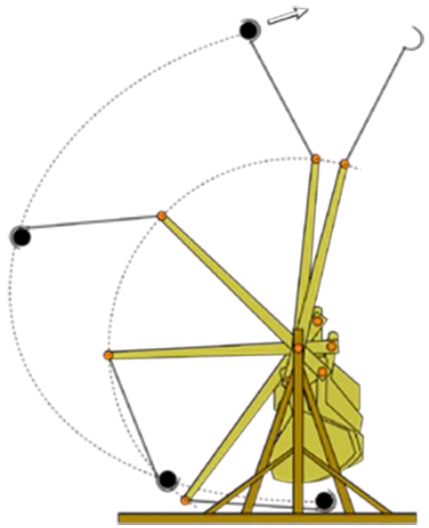
I can choose the right tools and materials for the job

I can choose the right tools and materials within **constraints** (e.g. price, time, space)

I can receive **constructive feedback** from myself, others and my results and using it to make the design better

Today's Goal:

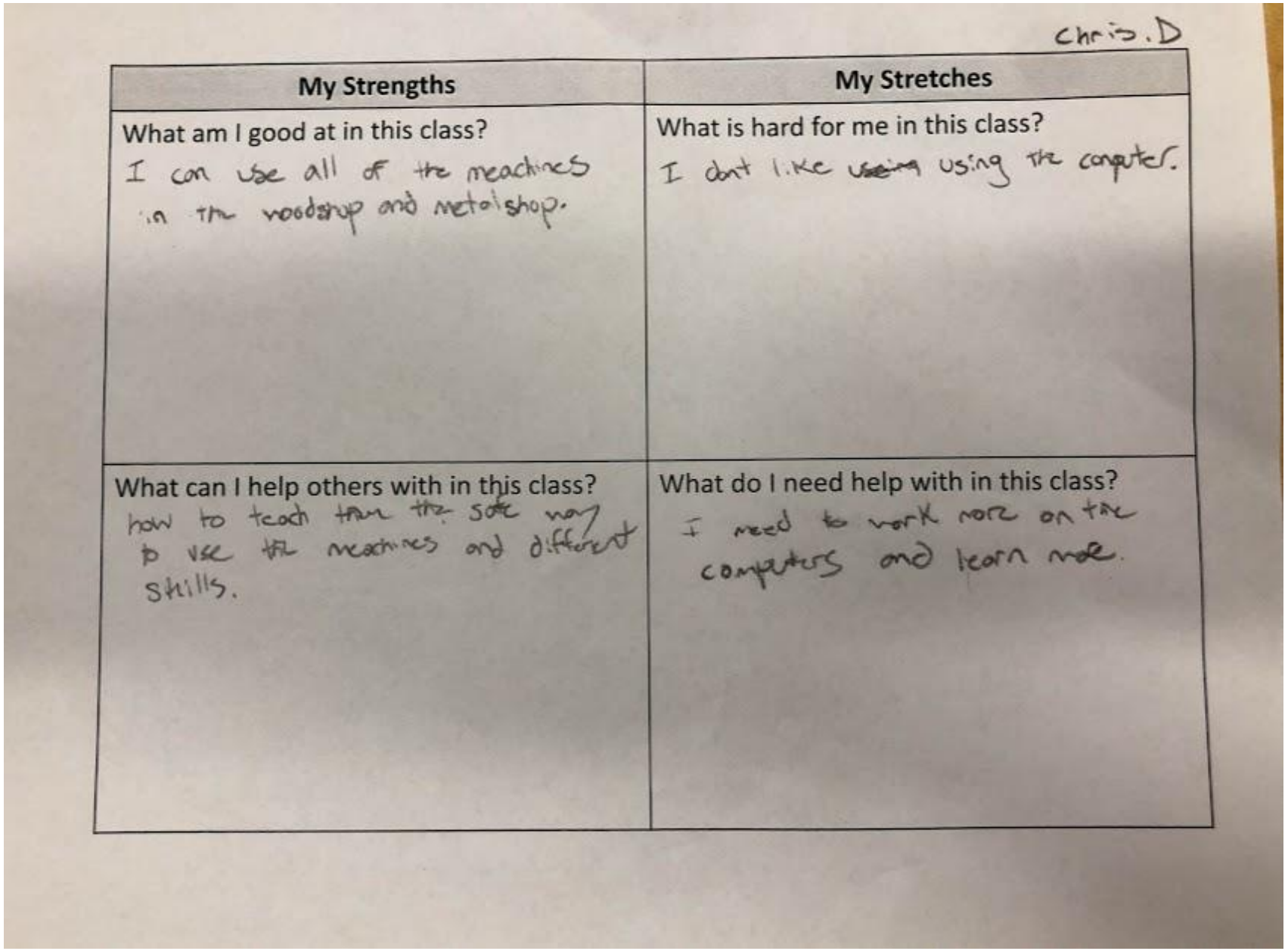
I can be a part of a **collaborative** decision to choose a final design



First: we need to create collaborative working groups

First think **individually**..

My Strengths	My Stretches
What am I good at in this class?	What is hard for me in this class?
What can I help others with, in this class?	What do I need help with, in this class?

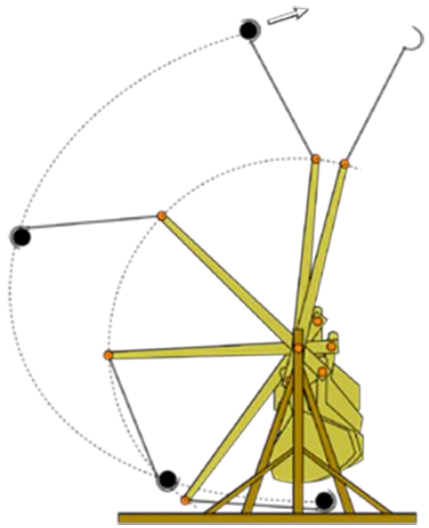


Chris.D

My Strengths	My Stretches
What am I good at in this class? I can use all of the machines in the woodshop and metalshop.	What is hard for me in this class? I dont like ~~using~~ using the computer.
What can I help others with in this class? how to teach them the safe way to use the machines and different skills.	What do I need help with in this class? I need to work more on the computers and learn more.

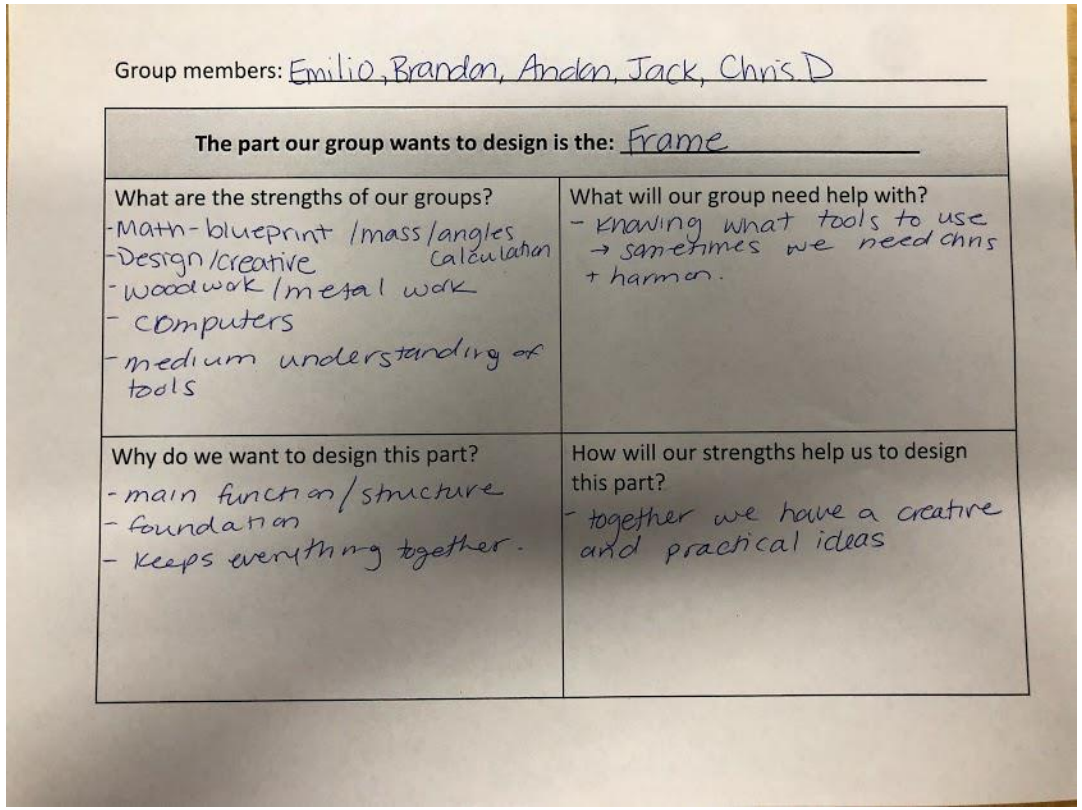
Now think **Collaboratively**…

Find a group that has:
- different strengths than you
- people that can help you with your stretches



Group members: _____

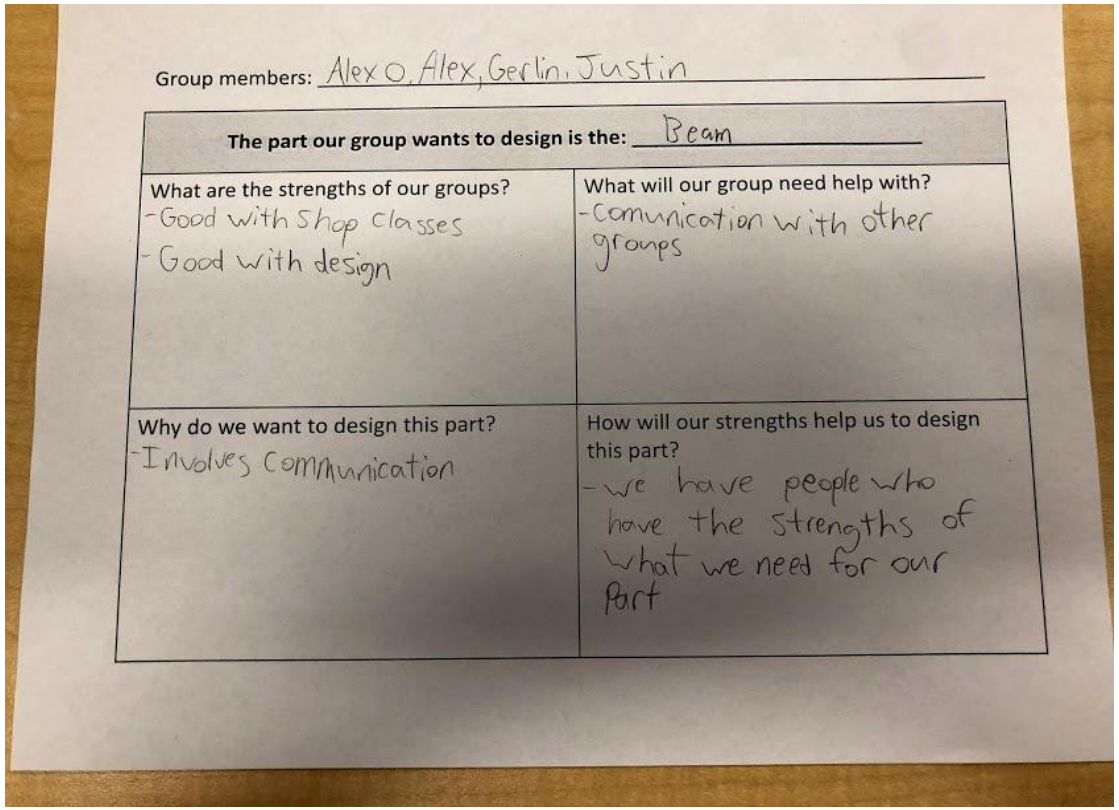
The part our group wants to design is the: _____	
What are the strengths of our groups?	What will our group need help with?
Why do we want to design this part?	How will our strengths help us to design this part?



Group members: Emilio, Brandon, Andon, Jack, Chris D

The part our group wants to design is the: Frame

What are the strengths of our groups?	What will our group need help with?
-Math - blueprint / mass / angles calculation -Design / creative - woodwork / metal work - computers - medium understanding of tools	- knowing what tools to use → sometimes we need chns + harmon.
Why do we want to design this part?	**How will our strengths help us to design this part?**
- main function / structure - foundation - keeps everything together.	- together we have a creative and practical ideas



Group members: Alex O, Alex, Gerlin, Justin

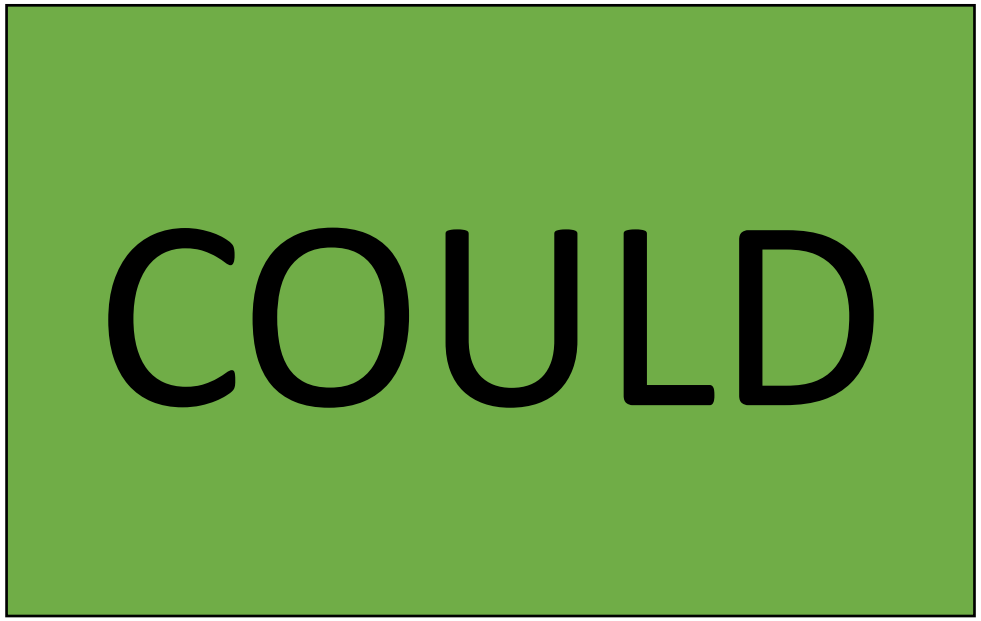
The part our group wants to design is the: Beam

What are the strengths of our groups?	What will our group need help with?
-Good with Shop classes - Good with design	-Comunication with other groups
Why do we want to design this part?	**How will our strengths help us to design this part?**
-Involves communication	-we have people who have the strengths of what we need for our part

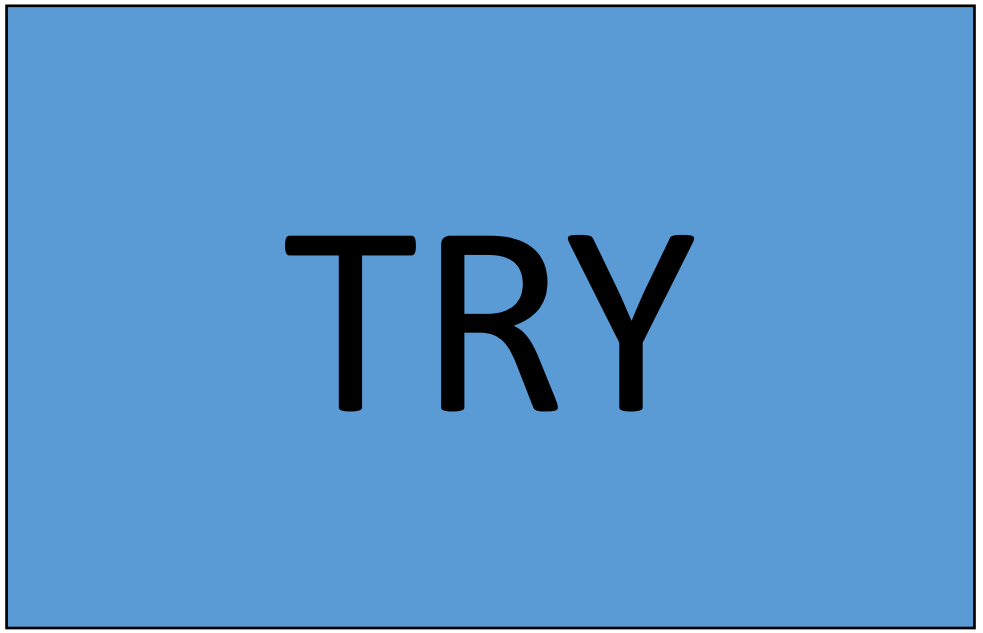
Shelley Moore, 2023

Shelley Moore, 2023

Shelley Moore, 2023



Shelley Moore, 2023



Shelley Moore, 2023

Learning Target:

Start Together

NEED

MUST

CAN

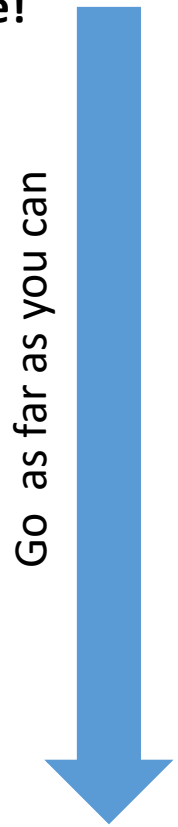
COULD

TRY

Go as far as you can!

My job today:

Start here!



I NEED to -

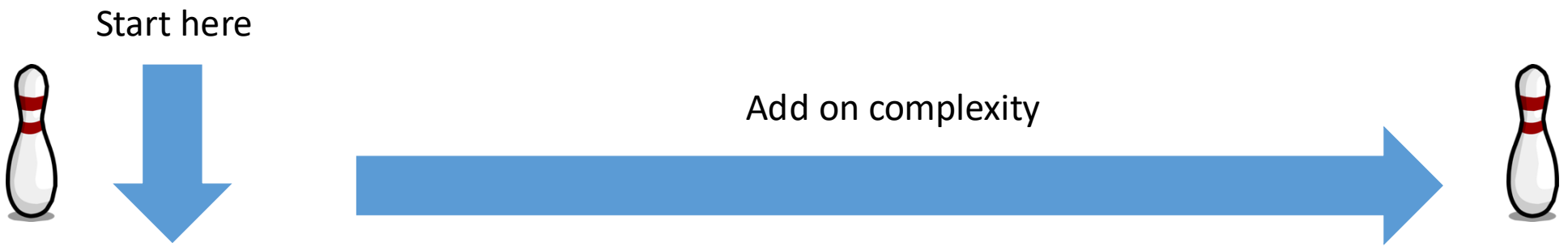
I MUST –

I CAN -

I COULD –

I CAN TRY TO –

The lesson goal:



Access (NEED)	All (MUST)	Most (CAN)	Few (COULD)	Challenge (Try)

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

CURRICULUM & ASSESSMENT DESIGN

Student choice of challenge

Adjustable Curriculum

Student choice of evidence

Adjustable Assessment

Students

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

NEEDS BASED DESIGN

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

Adjustable Supports & Strategies

Student choice of tools and actions

INSTRUCTIONAL DESIGN

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

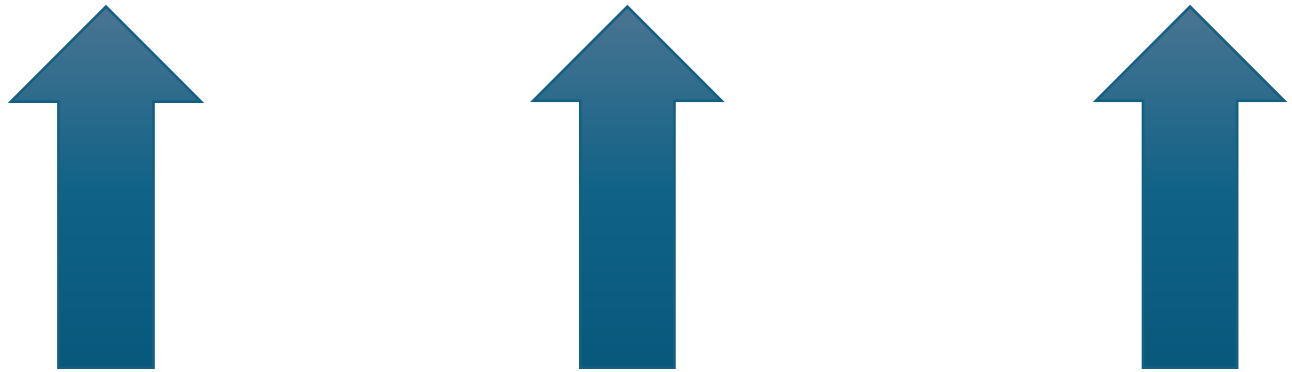
Shelley MOORE PH.D.
2023

Scaffolding Curriculum

- 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 rubric

Rubrics vs. Learning Continuum

	deficit	deficit	Most complex description
Grade Level Learning Standard			



S, Moore, 2024

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.

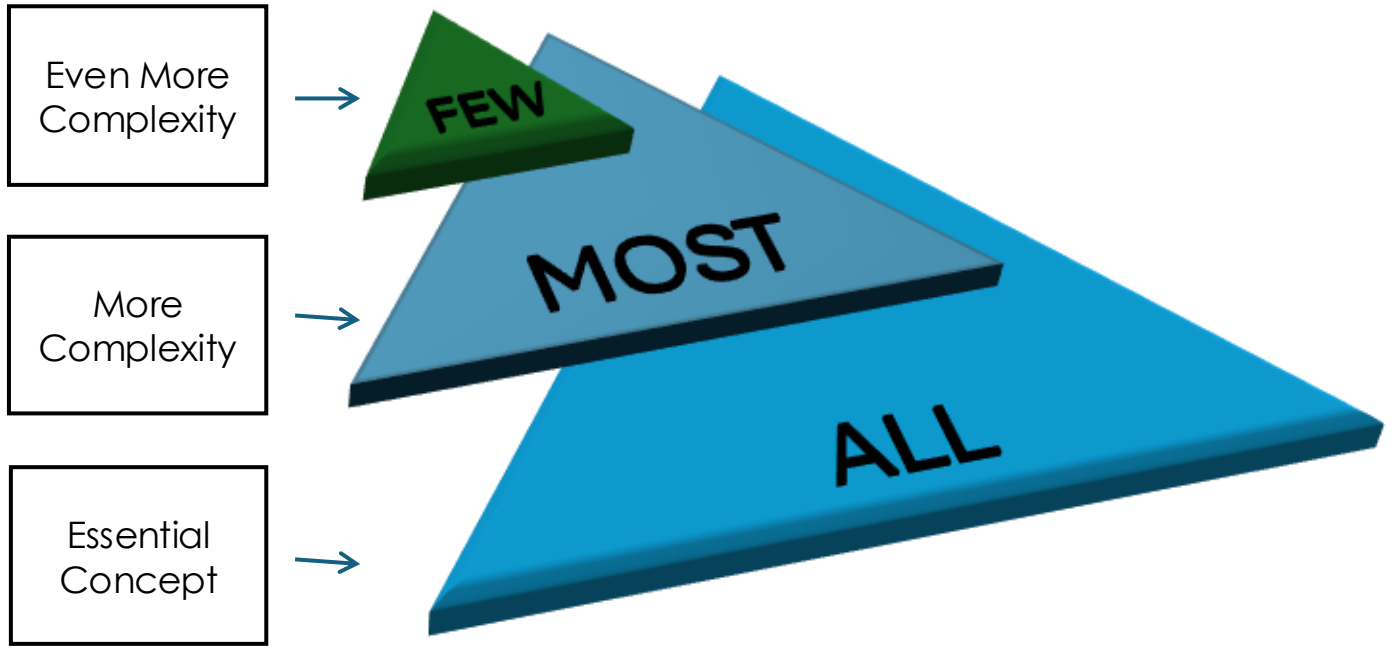
Translation: Your artwork exceeds all expectations; you used creativity, went beyond the basic requirements and showed obvious understanding.

Rubrics vs. Learning Continuum

	Essential	More complex	More complex
Grade Level Learning Standard			

S, Moore, 2024

The Planning Pyramid: Scaffolded Curriculum



Start from access, build on challenge

Moore, 2025

Learning Continuums

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

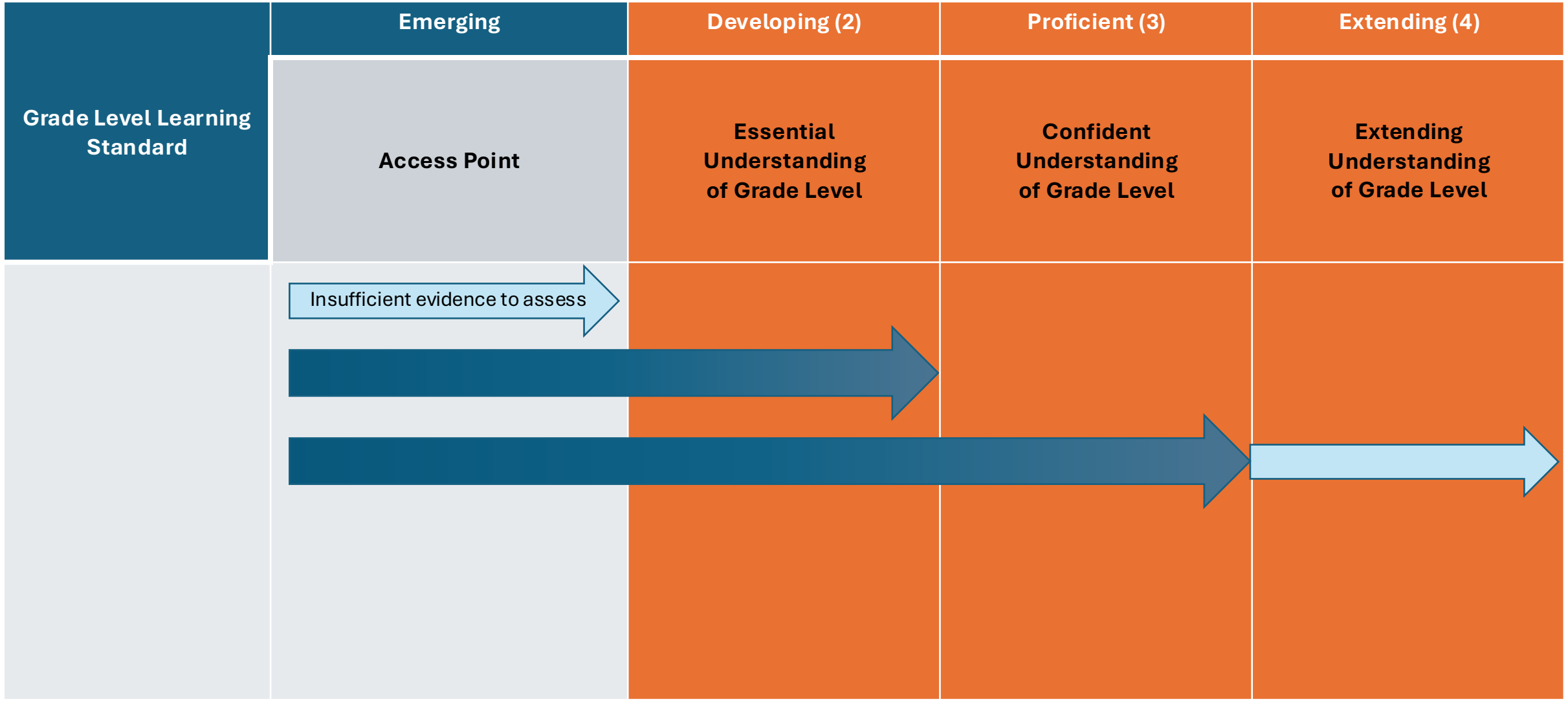
Learning Outcome:			
Student friendly:			
Approaching	**Essential**	**Confident**	**Extending**

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

S, Moore, 2024

An Additive Continuum of Proficiency



Rubric: Life Sciences 9

Curricular Competency Goal: Processing and analyzing data and information Construct, analyze, and interpret graphs, models, and/or diagrams			
Student friendly: I can understand data and information by constructing, analyzing and interpreting visual representations of information			
Approaching	**Developing**	**Confident**	**Extending**
• I can understand data and information by constructing, analyzing and interpreting visual representations of information with support	• I am beginning to understand data and information by constructing, analyzing and interpreting visual representations of information	• I consistently understand data and information by constructing, analyzing and interpreting visual representations of information	• I always understand data and information by constructing, analyzing and interpreting visual representations of information

Rubric: Life Sciences 9

Curricular Competency Goal: Processing and analyzing data and information Construct, analyze, and interpret graphs, models, and/or diagrams			
Student friendly: I can understand data and information by constructing, analyzing and interpreting visual representations of information			
Approaching	**Developing**	**Confident**	**Extending**
• I can understand data and information by constructing, analyzing and interpreting visual representations of information with support	• I am beginning to understand data and information by constructing, analyzing and interpreting visual representations of information	• I consistently understand data and information by constructing, analyzing and interpreting visual representations of information	• I always understand data and information by constructing, analyzing and interpreting visual representations of information

Additive Learning Continuum: Life Science 9

Curricular Competency Goal: Processing and analyzing data and information Construct, analyze, and interpret graphs, models, and/or diagrams			
Student friendly: I can understand data and information by constructing, analyzing and interpreting visual representations of information			
Approaching - IE	**Developing - 2**	**Confident – 3**	**Extending - 4**
→			
I can build a visual representation of data by following a model I can understand a visual representation of information that is familiar to me	I can construct a visual representation of data in one way I can understand what a visual is communicating (what is happening?)	I can construct a visual representation of data in more than one way I can interpret a visual representation of data (why does this matter?)	I can construct a visual representation of data based on the purpose I can analyze a visual representation of data (what data is missing to get a better understanding of the data?)

Grade: 9	Subject Area: English Language Arts (de-streamed)	Topic: Anchor Text: The Rule of Three	Planning Team: Lake Superior HS

Big Idea(s):

- We are understanding that society's reliance on technology can have consequences, especially during times of crisis
- We are understanding the role of community and relationships in survival and times of crisis
- We are understanding that everyone has something to contribute to a community

Unit Guiding Question(s):

How does technology impact individuals and communities?
How does the role of technology impact human relationships, especially during a times of crisis?
How do individual roles in a community evolve, after and during crisis?

Key Vocabulary: technology, impact, individuals, communities, role, human relationships, crisis, evolve, prediction, confirm, text, stay on track, lose track, get back on track, strategies, helpful connections, understand, important, relevant information, summarize, draw conclusions

Learning Standards	Curricular Language	Student Friendly Language
C2.3 Monitoring of Understanding: Making and Confirming Predictions	*Students will know how making a prediction can help them understand and stay on track* *Students will be able to monitor their understanding by making and confirming predictions to understand text*	• *I know what a prediction is and how to make one* • *I can make and confirm predictions to help me understand text and stay on track*
C2.4 Monitoring of Understanding: Comprehension Check	*Students will know when they are not understanding/ lost track of text* *Students will be able to monitor their understanding*	• *I know when I lose track of the text I am trying to understand* • *I can keep track of my understanding and use strategies to get back on track*
C2.5 Monitoring of Understanding: Making Connections	*Students will know what a helpful connection is, how to make a connection* *Students will know when they are not understanding/ lost track of text*	• *I know what a helpful connection and how to make one* • *I can make helpful connections to help me understand text and stay on track*
C2.6Summarizing: Identifying Relevant information and Drawing Conclusions	*Students will know to find and determine what information is important in text* *Students will know how to draw a conclusion* *Students will be able to summarize by Identifying Relevant information and Drawing Conclusions*	• *I know how to find important and relevant information in text* • *I know how to draw a conclusion using important relevant information in text* • *I can summarize important and relevant information* • *I can draw conclusions using important relevant information in text*

ELA 9 (De-streamed)	Lake Superior High School			
Anchor Text: The Rule of Three by Eric Walters	**Unit Guiding Questions:** How does technology impact individuals and communities? How does the role of technology impact human relationships, especially during a times of crisis? How do individual roles in a community evolve, after and during crisis?			
	→			
Learning Standard	**Approaching (Access Point)**	**Essential**	**Confident**	**Extending**
C2.3 Monitoring of Understanding: Making and Confirming Predictions	• I can think about what I already know and make a guess about what will happen next • I can think about if my guess makes sense • I can change my guess as I understand more	• I can make a prediction using one strategy (using my background knowledge/textual information) • I can ask questions to confirm my predictions • I can adjust my understanding based on my predictions	• I can make a prediction using both strategies (using my background knowledge/textual information) • I can ask questions to dispute my predictions	• I can anticipate possible outcomes by reflecting on multiple elements of the text and context clues • I can anticipate counter arguments to my questions and predictions
C2.4 Monitoring of Understanding: Comprehension Check	• I can tell when I am not on track or not understanding text	• I can use some strategies to get back on track (rereading, looking up words, using vocab, asking questions, other resources)	• I can use many strategies to get back on track	• I can choose the most effective strategy for the context
C2.5 Monitoring of Understanding: Making Connections	• I can explain how the text reminds me of something else	• I can make a helpful connection (to my own life/lived experience/emotions, to other texts/resources, to events in the world)	• I can make many helpful connections	• I can make connections that reflect my own experience and challenge my thinking to consider other perspectives/lived experiences
C2.6 Summarizing: Identifying Relevant information and Drawing Conclusions	• I can share some details of a text that I think are important to an idea or theme	• I can summarize important details and relevant information in text	• I can synthesize (draw conclusions) based on information and my helpful connections	• I can synthesize ideas connected to (or uncovering) a theme or big idea

Grade: 9	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		**Unit Guiding Question(s):** **What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do?** **How are the structures of DNA and the structures of proteins related?** **How can I use evidence to explain how the structure of DNA impacts that structure of proteins?** **How are the structure of proteins and related to the essential functions of life?** **What is the role the systems of specialized cells?**
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.	I can explain using evidence that there are theories and laws that describe the natural world - 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)	Disciplinary Core Ideas LS1.A: Structure and Function Systems of specialized cells within organisms help them perform the essential functions of life. 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.	I know that the systems of specialized cells inside organisms perform essential functions of life • I know what systems of specialized cells are • I know what organisms are • I know what the essential* functions of life are 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
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.

Next Generation Science Standards (NGSS)		
Subject Area: Science	**Strand: Structure of DNA**	**Grade: 9**
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	**Guiding Unit Question:** What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do? How are the structures of DNA and the structures of proteins related? How can I use evidence to explain how the structure of DNA impacts that structure of proteins? How are the structure of proteins and related to the essential functions of life? What is the role the systems of specialized cells?	
Unit Vocabulary: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms		

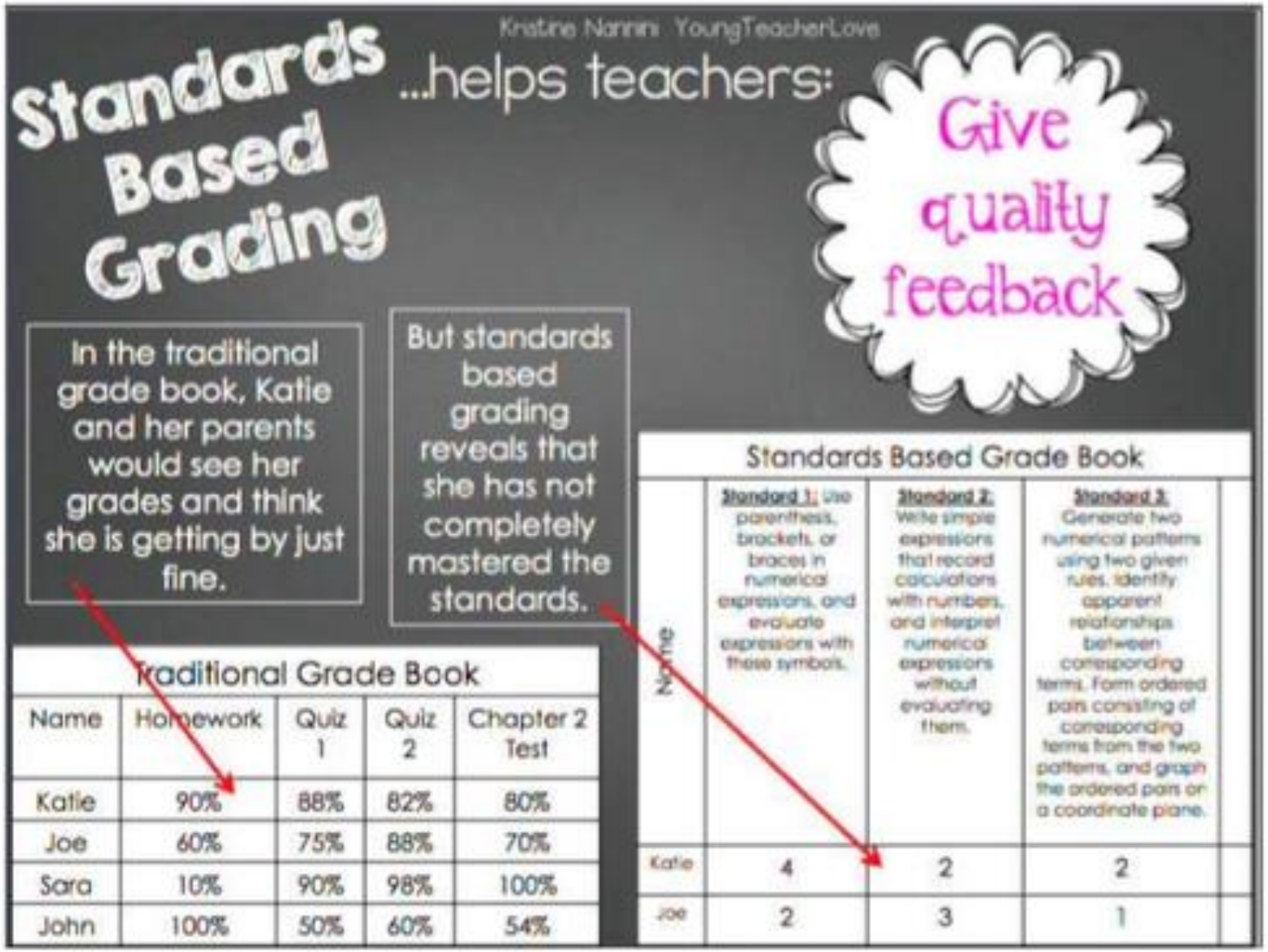
Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices (skill)	I can explain using evidence that there are theories and laws that describe the natural world	I know what a theory is I know what a law is I know what evidence is I know what the natural world is	I know the difference between scientific theories and laws I can explain how scientific theories and laws are used to make predictions about the natural world	I know examples of scientific theories and laws I can explain the role of evidence and how it supports scientific theories and laws	I know how scientific theories and laws are developed I can explain the limitations of specific scientific theories and laws
Disciplinary Core Ideas (knowledge)	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 know what a cell is I know the structure of a cell I know what I need to live	I know the major organ systems in the human body and the key functions they perform I know the basic structure and function of common cell types/ how cells work I know the role of DNA, genes and proteins in the structure and functions of cells	I know what cellular specialization is and how different cell types are adapted to carry out specific roles I know how the specialized structures and mechanisms of different cell types, including DNA, genes and proteins, enable them to perform their roles	I know how multicellular organisms rely on coordinated systems of specialized cells to sustain life I know how evolutionary adaptations have led to the development of specialized cell types and organ systems
Crosscutting Concepts (understanding)	I understand that structures are made of many different components that are connected and have specific functions.	I understand that there are different kinds of structures in my life and the world	I understand that structures have many components or individual parts that combine to form a larger structure	I understand that components in structures are interconnected and interdependence to support the overall function of a structure	I understand that each component in a larger structure has specific roles and functions

Class: Gr 9 Westmore		Subject Area(s): Math	Planning Team: Shella
Big Idea(s): Powers are useful when expressing large number succinctly			**Unit Guiding Question(s): Why do we use exponents? Why is it useful to show the same number in multiple ways? What patterns do we notice when work with powers?**
Vocabulary to know and use (content): whole number, powers, bases, exponents, technology, zero,			**Vocabulary to know and use (skills & competencies): concrete, pictorial, symbolic, evaluate, convert, solve problems, curious, strategies, showing my learning**
Unit Goals		**Curricular Language**	**Student friendly language**
Learning Standard	**N9.1**	• Demonstrate (concretely, pictorially, and symbolically) understanding of powers with integral bases (excluding base 0) and whole number exponents including representing using powers, evaluating powers, powers with an exponent of zero • solving situational questions [C, CN, PS, R, T]	I know… • Powers, bases, whole numbers, exponents, how to evaluate, how to convert, how to solve problems using powers • How to use technology as a tool I can show my understanding of powers, bases, and whole number exponents by: • Using powers • Evaluating powers • Converting powers with an exponent of zero • Solving problems that use powers
Targeted Skills	**R**	• **Reasoning:** make sense of mathematic, confidence, reason and explain, think and develop a sense of wonder in math	I can be curious in math
	PS	• **Problem solving:** learning through problem solving, strategies,	I can use strategies to solve problems
	C	• **Communication:** concretely, pictorially, and symbolically.	I can show my learning in many ways
Targeted Competency: Collaboration			We are collaborators that work together, respect different viewpoints, and contributing to group efforts.

Class: Gr 9 Westmore	Subject Area(s): Math	Planning Team: Shella
Big Idea(s): Powers are useful when expressing large number succinctly	**Unit Guiding Question(s):** Why do we use exponents? Why is it useful to show the same number in multiple ways? What patterns do we notice when work with powers?	

Learning Outcome(s)	**Students will *Demonstrate (concretely, pictorially, and symbolically) understanding of powers with integral bases (excluding base 0) and whole number exponents;* solving situational questions [C, CN, PS, R, T]**			
Student Friendly Language	**Access Point**	**Grade Level Complexity**		
	Approaching (Beginning)	**Essential (2) (Approaching)**	**Confident (3) (Meeting)**	**Extending (4)**
I am building my understanding of powers by:	• knowing that a power is a way to show how many times to multiply a number by itself • knowing that powers help us manage large numbers • knowing examples in the worlds that use powers and exponents	• knowing what an exponent is and what it represents in a power, such as a-n meaning a multiplied by itself n times • knowing how to use technology as a tool to help solve problems using powers	• knowing how to calculate values of powers with bases • knowing how to apply exponent laws, such as multiplying powers with the same base to solve problems using powers	• knowing what zero exponents mean and how they apply to the real world
I can show my understanding of powers, bases, and whole number exponents by:	• showing what an exponent is	• converting powers to repeated multiplication • using technology to solve problems using powers	• calculating values of powers with bases • applying exponent laws to solve problems using powers	• evaluating powers with an exponent of 0 • Applying powers to understand a real-world event/ context

1. Standards based vs. standardized curriculum



Standards Based Grade Book																	
Learning Standard/ Performance Expectation													**Evaluation**				
													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**	**3**	**4**	**IE/IEP**	**2**	**3**	**4**	**IE/IEP**	**2**	**3**	**4**					
Student 1 (IEP)																	
Student 2																	
Student 3																	
Student 4																	
Student 5																	
Student 6																	

Grade: 9	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		**Unit Guiding Question(s):** **What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do?** **How are the structures of DNA and the structures of proteins related?** **How can I use evidence to explain how the structure of DNA impacts that structure of proteins?** **How are the structure of proteins and related to the essential functions of life?** **What is the role the systems of specialized cells?**

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.	I can explain using evidence that there are theories and laws that describe the natural world - 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)	Disciplinary Core Ideas LS1.A: Structure and Function ▯ Systems of specialized cells within organisms help them perform the essential functions of life. ▯ 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.	I know that the systems of specialized cells inside organisms perform essential functions of life • I know what systems of specialized cells are • I know what organisms are • I know what the essential* functions of life are 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
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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
	• 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**
• 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.	

Next Generation Science Standards (NGSS)		
Subject Area: Science	**Strand: Structure of DNA**	**Grade: 9**
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	**Guiding Unit Question:** What is the structure of DNA? What is DNA? What does DNA look like? What does DNA do? How are the structures of DNA and the structures of proteins related? How can I use evidence to explain how the structure of DNA impacts that structure of proteins? How are the structure of proteins and related to the essential functions of life? What is the role the systems of specialized cells?	
Unit Vocabulary: theories and laws, evidence, natural world, structure of DNA, DNA, proteins, essential functions of life, life, systems of specialized cells, organisms		

Foundations	Student Friendly Language	Access Point	Essential	Confident	Extend
Science & Engineering Practices (skill)	I can explain using evidence that there are theories and laws that describe the natural world	I know what a theory is I know what a law is I know what evidence is I know what the natural world is	I know the difference between scientific theories and laws I can explain how scientific theories and laws are used to make predictions about the natural world	I know examples of scientific theories and laws I can explain the role of evidence and how it supports scientific theories and laws	I know how scientific theories and laws are developed I can explain the limitations of specific scientific theories and laws
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Crosscutting Concepts (understanding)	I understand that structures are made of many different components that are connected and have specific functions.	I understand that there are different kinds of structures in my life and the world	I understand that structures have many components or individual parts that combine to form a larger structure	I understand that components in structures are interconnected and interdependence to support the overall function of a structure	I understand that each component in a larger structure has specific roles and functions

Standards Based Grade Book (NGSS)																	
Learning Standard/ 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												**Evaluation**				
	Science and Engineering Practices				**Disciplinary Core Ideas**				**Crosscutting Concepts**								
Possible Evidence of Learning	Research project (digital poster, podcast, science magazine article), Annotated diagram, audio description of diagram, paragraph explanation of a DNA structure				Research project (digital poster, podcast, science magazine article), DNA Infographic, video of infographic presentation, research project, quizzes				Research project (digital poster, podcast, science magazine article)								
Reporting Language	**Approaching / Access Point**	**Emerging/ Essential**	**Developing**	**Extending**	**Approaching / Access Point**	**Emerging/ Essential**	**Developing**	**Extending**	**Approaching / Access Point**	**Emerging/ Essential**	**Developing**	**Extending**	**Total**	**Out of**	**%**	**Letter Grade**	**4-Point**
Evaluation	**IE/IEP**	**2**	**3**	**4**	**IE/IEP**	**2**	**3**	**4**	**IE/IEP**	**2**	**3**	**4**		**12**			
Student 2	•	•			•	•			•	•			6	**12**	63%	C-	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

Class: Grade 8	Subject Area(s): ELA/Social Studies	Planning Team: J & S & Team NT
Big Idea(s): Exploration, expansion, and colonization had varying consequences for different groups Exploring stories and other texts helps us understand ourselves and make connections to others and to the world I can understand that different cultures and communities have different perspectives		**Unit Guiding Question(s):** How do the narratives of exploration and colonization reflect the diverse perspectives the cultures and communities involved? How can stories from multiple perspectives help us to better understand ourselves and how we connect to others?
Vocabulary to know and use (content): narratives, exploration, expansion, colonization, interactions, exchange, ideas, arts, cultures, civilizations, perspectives, past, present, people, places, issues, events, values, worldviews, beliefs, time and place, cause, influence, decisions, actions, events, short term, long term, consequences, story, oral tradition, local Indigenous perspectives, points of view, sources, viewpoints		**Vocabulary to know and use (skills & competencies):** compare, explain/describe, understand, critical thinking, reflective thinking

Unit Goals	Curricular Language	Student friendly language
Content Goal:	interactions and exchanges of resources, ideas, arts, and culture between and among different civilizations	I know how different civilizations interacted and exchanged goods and ideas
Content Goal:	exploration, expansion, and colonization	I know what exploration, expansion and colonization is
Curricular Competency Goal: SS - Perspective	Explain different perspectives on past or present people, places, issues, or events, and compare the values, worldviews, and beliefs of human cultures and societies in different times and places	I can explain different perspectives of different cultures and communities over time
Curricular Competency Goal: SS- Cause & Consequence	Determine which causes most influenced particular decisions, actions, or events, and assess their short-and long-term consequences	I can explain the causes and consequences of decisions, actions, or events
Curricular Competency Goal: ELA - Comprehend & Connect	Recognize and appreciate the role of story, narrative, and oral tradition in expressing local Indigenous perspectives, values, beliefs, and points of view	I can appreciate the story and oral traditions of (local) Indigenous Peoples
Curricular Competency Goal: ELA - Comprehend & Connect	Synthesize ideas from a variety of sources to build understanding	I can gather and find themes from many different source to help me understand
Curricular Competency Goal: ELA – Create & Communicate	Exchange ideas and viewpoints to build shared understanding and extend thinking	I can share ideas and viewpoints to help myself and others understand and stretch our thinking
Key Competency Goal: Critical & Reflective Thinking	Critical and Reflective Thinking (1-3)	

Name:	Date:

How do the narratives of exploration and colonization reflect the diverse perspectives the cultures and communities involved?
How can stories from multiple perspectives help us to better understand ourselves and how we connect to others?

Goals	My evidence of learning	Showing my Learning				I Need Support	I Need Challenge
	Actvtivities/ tasks	Kinesthetic/ Concrete	Written/ abstract	Oral/ conversation	Visual/ pictorial/		
I know how different civilizations interacted and exchanged goods and ideas							
I know what exploration, expansion and colonization is							
I can explain different perspectives of different cultures and communities over time							
I can explain the causes and consequences of decisions, actions, or events							

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	Actvtivities/ tasks	Kinesthetic/ Concrete	Written/ abstract	Oral/ conversation	Visual/ pictorial/		
I can appreciate the story and oral traditions of (local) Indigenous Peoples							
I can gather and find themes from many different sources to help me understand							
I can share ideas and viewpoints to help myself and others understand and stretch our thinking							
I can be a critical thinker							

Bio 20-1: Muscles Unit Test

Targeted Outcomes for this Task:

20-D4.2k - Students will know how muscles contract and that heat is generated in the muscles through contraction.

Approaching	Emerging	Developing	Confident	Extending
I know moving my muscles can make me warm.	I know that muscles can only contract and this produces heat. I know that muscles use actin and myosin to contract and this type of work requires ATP which releases heat.	I can explain a muscle cramp referring to how actin and myosin bind and identify the cause of the cramp.	I know the relationship between actin, the myosin and the tropomyosin	I understand the impact of various substances (i.e. poisons) and how they impact muscle contraction and function.

20- 4.3s I can **analyze** and **interpret** by:

- looking for patterns in my data to help me understand what is happening
- connecting my data to other scenarios and contexts
- coming up with some possible solutions or explanations for what is happening
- organizing and displaying my data in ways that make sense to me

Approaching	Emerging	Developing	Confident	Extending
I can make a logical decision when given choices, by using my background knowledge and observations.	I can identify patterns and trends in data and explain relationships among the variables.	I can interpret and connect my data to determine possible solutions or explanations for my investigation.	I can identify and evaluate potential applications of findings to different scenarios.	evaluate designs and prototypes in terms of function, reliability, safety, efficiency, use of materials and impact on the environment

20–4.4s I can **communicate** my findings by:

- using SI units and Sig Digs
    - presenting my findings so it makes sense to others (modes representation)

Approaching	Emerging	Developing	Confident	Extending
I/we don't give up when things get hard I/we can participate in a task without or without a group I/we share my thinking and ideas	I/we can understand what needs to be done, I know what the task is asking me/us to do I/we can communicate findings/results clearly I/we can use unit vocabulary when responding to tasks	I/we can choose my role based on the needs of the assignment and group I/we can follow the steps of a task I/we can use of multiple sources of information.	I can work to combine input and ideas from everyone in my group and create a clear presentation I/we can use multiple forms to present our findings (visual, oral, written)	I/we can connect our findings to multiple perspectives I/can ask follow up questions to understand the information

Task Question	Outcomes Targeted
Use these words to fill in the blanks in questions 1a-c below: contraction heat actin myosin warm/hot **1 a. I know that when I move my body I feels _____.**	**20-D4.2k** (approaching) **20- 4.3s** (approaching) **20–4.4s** (approaching)
1b. Muscles are made up of _____ and _____. **1c. The movement between actin and myosin is done through _____ movement only, and a by-product of this movement produces ATP and _____.**	**20-D4.2k** (emerging) **20- 4.3s** (approaching) **20–4.4s** (approaching)
2. After exercising heavily, athletes sometimes experience muscle cramps. Explain what is happening in the muscle when it is cramping ensuring you reference actin, myosin, and the specific cause of a cramp in your description.	**20-D4.2k** (developing) **20–4.4s** (approaching/ emerging)

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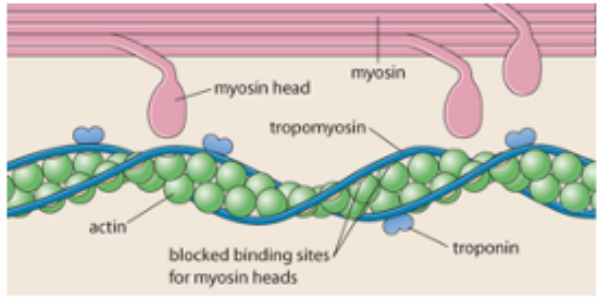
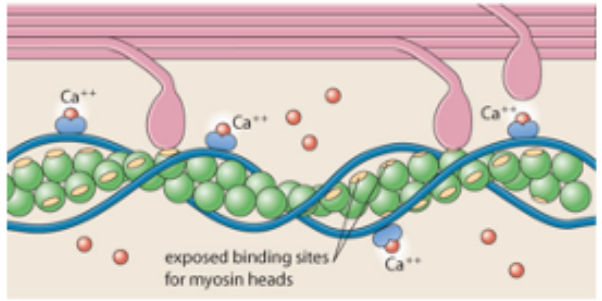
5. Use the following additional information to answer the next two questions.

Additional experiments using injections of radioactive Ca^{2+} show that the ions are stored within the sacs of the sarcoplasmic reticulum in resting muscle tissue. When the tissue is stimulated to contract with electrodes, the radioactive Ca^{2+} ions are found among the actin and myosin filaments as shown below.



The muscle is at rest.



The muscle is contracting.

5a. Refer to diagram of the muscle at rest above, and explain what effect a lack of tropomyosin would have in muscle tissue

5b. The diagram of the muscle contracting shows the role of calcium ions in repositioning tropomyosin. Where are these ions stored when the muscle is at rest? What causes them to move among the actin and myosin filaments?

20-D4.2K (confident)

20–4.4s (approaching/ emerging)

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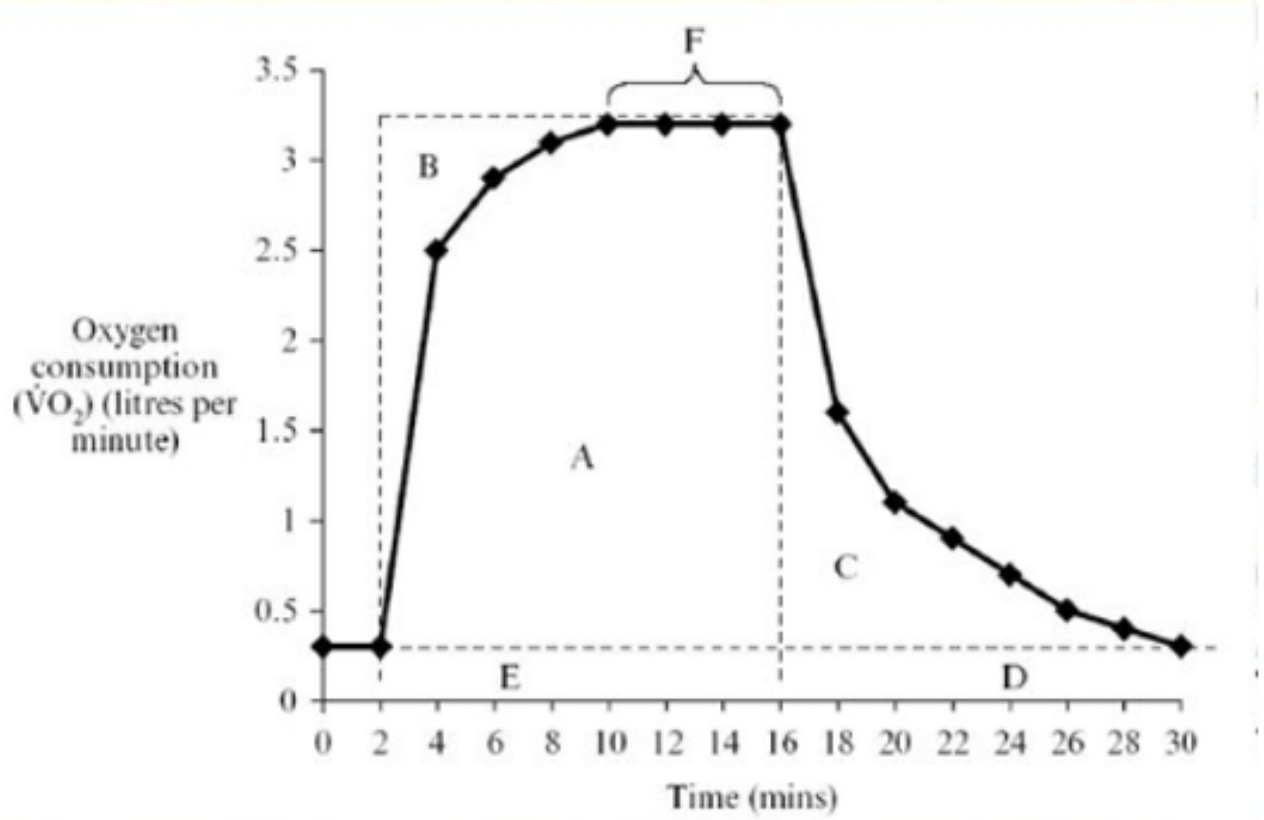
6. *Use the following information to answer the next two questions.*

The graph shows the oxygen consumption of a subject during a period of rest, exercise, and recovery.



5a.	Which letter (A-F) represents the oxygen deficit?	**20-D4.2k** (emerging)
b.	How long did the exercise last?	**20-D4.2k** (emerging)
c.	What is occurring during C?	**20- 4.3s** (emerging)

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

CURRICULUM & ASSESSMENT DESIGN

Student choice of challenge

Adjustable Curriculum

Student choice of evidence

Adjustable Assessment

Students

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

NEEDS BASED DESIGN

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

Adjustable Supports & Strategies

Student choice of tools and actions

INSTRUCTIONAL DESIGN

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

Shelley MOORE PH.D.
2023

Thinking Back, Looking Forward

What is one useful thing you learned in this series?

What is one thing that you want to learn more about?

What is one thing you are already doing?

What is one new thing you want to try?

What is one idea that has challenged your thinking & practice?

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