Supporting Diverse Learners: Universal Design for Learning

Dr. Anya Evmenova
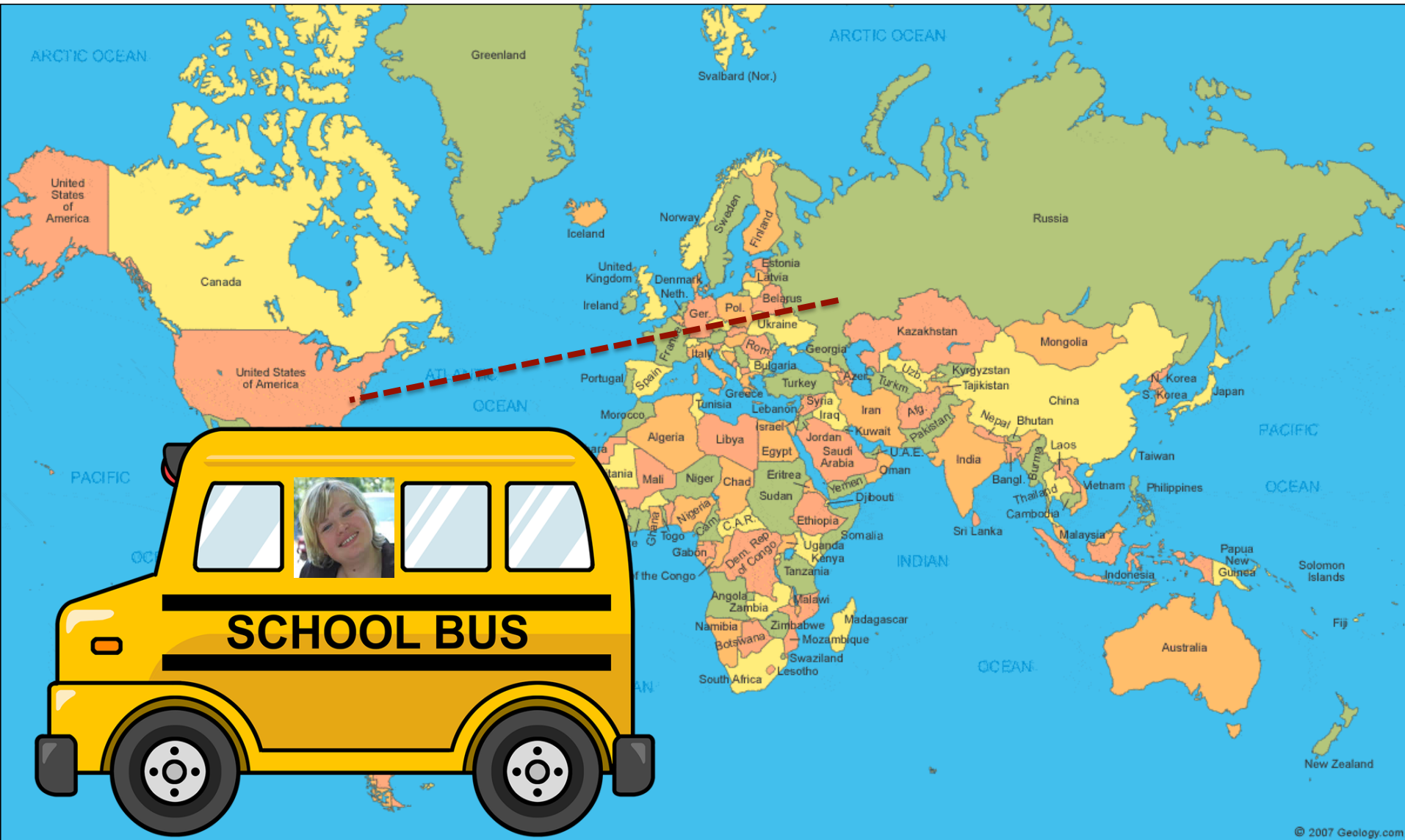George Mason University
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Agenda

- Explain purpose of UDL

- Describe principles of UDL

- Identify UDL strategies for ALL students, including culturally diverse learners

- Recognize UDL Design cycle

About Me

How Culture Shapes Learning?

Culture

Attitudes
Beliefs
Art / Drama / Music
Food
Faith/Religion
Behaviour
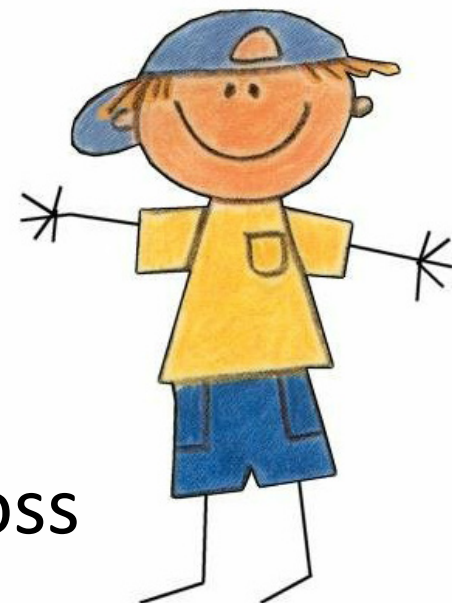Rituals
Customs
Language

Culturally Responsive Teaching

42. George wanted something fun to read on his airplane ride. Point to the book he brought along with him.

Average learner

Myth of an Average Learner by Todd Ross

Unique Learner

How Unique Are We?

- Choose and share a:
  - Word (in any language☺)
  - Phrase/saying
  - Story
  - Movie
  - Drawing
  - Photo
  - Video
  - Song … that best describes you!

Stop & Reflect

- How would you feel if you were forced to follow one format?

Video Describing Me

Two Approaches to Differentiation

- Retrofit
- Universal Design for Learning

	Retrofitted Differentiated Instruction	**Universal Design for Learning**
When	During instruction when the teacher notices the students' needs	When designing the curriculum
How	Make changes or adjustments to the curriculum	Builds resources and options into the curriculum

Adapted from IRIS Module http://iris.peabody.vanderbilt.edu/di/chalcycle.htm

Universal Design for Learning

Retrofitting

- Remodel existing instruction
- Fit student into existing instruction

Universal Design in Architecture

- Expensive to add cost nothing if designed in from the start, used by many

www.GreatBuildings.com

Universal Design for Learning

The term UNIVERSAL DESIGN FOR LEARNING means a scientifically valid framework for guiding educational practice that:

- (A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and

- (B) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient.

Higher Education Opportunity Act of 2008

Principles of UDL

- **Multiple Means of Engagement**
  - Learners engage in learning and practicing the content in varied and flexible ways.

- **Multiple Means of Representation**
  - Content is represented in varied and flexible ways to learners.

- **Multiple Means of Action and Expression**
  - Learners express what they know and can do with the content in varied and flexible ways.

Research Behind UDL

Neuroscience

Learning Sciences

Scaffolding

Mentors

Modeling

Choice

Zone of Proximal Development

Cognitive Psychology

Brain Networks

Universal Design for Learning Guidelines

GO TO THE UDL GUIDELINES

AFFECTIVE NETWORKS:
THE **WHY** OF LEARNING

RECOGNITION NETWORKS:
THE **WHAT** OF LEARNING

STRATEGIC NETWORKS:
THE **HOW** OF LEARNING

Engagement

For purposeful, motivated learners, stimulate interest and motivation for learning.

Representation

For resourceful, knowledgeable learners, present information and content in different ways.

Action & Expression

For strategic, goal-directed learners, differentiate the ways that students can express what they know.

http://www.cast.org/our-work/about-udl.html#.WKKGgRIrKRs

UDL and Expert Learner

Purposeful & motivated	Resourceful & knowledgeable	Strategic & goal-directed
• Are eager for new learning and are motivated by the mastery of learning itself	• Bring considerable prior knowledge to new learning	• Formulate plans for learning
• Are goal-directed in their learning	• Activate that prior knowledge to identify, organize, prioritize, and assimilate new information	• Devise effective strategies and tactics to optimize learning
• Know how to set challenging learning goals for themselves	• Recognize the tools and resources that would help them find, structure, and remember new information	• Organize resources and tools to facilitate learning
• Know how to sustain the effort and resilience that reaching those goals will require	• Know how to transform new information into meaningful and useable knowledge	• Monitor their progress
• Monitor and regulate emotional reactions that would be impediments or distractions to their successful learning		• Recognize their own strengths and weaknesses as learners
		• Abandon plans and strategies that are ineffective

Growth Mindset

UDL is NOT only about SPED

	Permanent	Temporary	Situational
Touch	One arm	Arm injury	New parent
See	Blind	Cataract	Distracted driver
Hear	Deaf	Ear infection	Bartender
Speak	Non-verbal	Laryngitis	Heavy accent

Inclusive
A Microsoft Design Toolkit

Sample UDL Strategies

	Provide multiple means of **Engagement**	Provide multiple means of **Representation**	Provide multiple means of **Action & Expression**
	Affective Networks The "WHY" of Learning	Recognition Networks The "WHAT" of Learning	Strategic Networks The "HOW" of Learning
Access	Provide options for **Recruiting Interest** (7) • Optimize individual choice and autonomy (7.1) • Optimize relevance, value, and authenticity (7.2) • Minimize threats and distractions (7.3)	Provide options for **Perception** (1) • Offer ways of customizing the display of information (1.1) • Offer alternatives for auditory information (1.2) • Offer alternatives for visual information (1.3)	Provide options for **Physical Action** (4) • Vary the methods for response and navigation (4.1) • Optimize access to tools and assistive technologies (4.2)
Build	Provide options for **Sustaining Effort & Persistence** (8) • Heighten salience of goals and objectives (8.1) • Vary demands and resources to optimize challenge (8.2) • Foster collaboration and community (8.3) • Increase mastery-oriented feedback (8.4)	Provide options for **Language & Symbols** (2) • Clarify vocabulary and symbols (2.1) • Clarify syntax and structure (2.2) • Support decoding of text, mathematical notation, and symbols (2.3) • Promote understanding across languages (2.4) • Illustrate through multiple media (2.5)	Provide options for **Expression & Communication** (5) • Use multiple media for communication (5.1) • Use multiple tools for construction and composition (5.2) • Build fluencies with graduated levels of support for practice and performance (5.3)
Internalize	Provide options for **Self Regulation** (9) • Promote expectations and beliefs that optimize motivation (9.1) • Facilitate personal coping skills and strategies (9.2) • Develop self-assessment and reflection (9.3)	Provide options for **Comprehension** (3) • Activate or supply background knowledge (3.1) • Highlight patterns, critical features, big ideas, and relationships (3.2) • Guide information processing and visualization (3.3) • Maximize transfer and generalization (3.4)	Provide options for **Executive Functions** (6) • Guide appropriate goal-setting (6.1) • Support planning and strategy development (6.2) • Facilitate managing information and resources (6.3) • Enhance capacity for monitoring progress (6.4)
Goal	**Expert learners** who are… **Purposeful & Motivated**	**Resourceful & Knowledgeable**	**Strategic & Goal-Directed**

Multiple Means of Engagement

- Provide options for recruiting interest
- Providing options for sustaining effort and persistence
- Provide options for self-regulation

Agenda

Name: _____   Date: _____

IDEAS Strategy + Technology Tool =
Ways to Become a Better Writer

Agenda:

☐ Introductions and Agenda

☐ Expectations and Key Words

☐ Persuasion and Writing

☐ Strategy: IDEAS

☐ Identify the Part!

☐ Label a Persuasive Essay

☐ Lesson Wrap-up

Key Terms:

☐Plan: _____

☐Strategy: _____
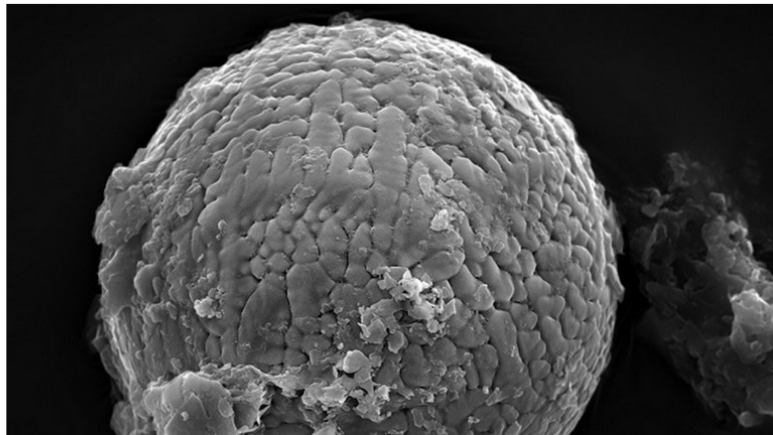
☐Persuade: _____

Adjustable Levels of Challenge

- NEWSELA https://newsela.com
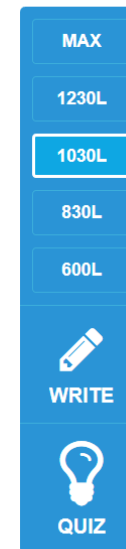
Cooperative Learning

- From 5 minute in class exercises to big projects (e.g., Jigsaw; Think-Pair-Share, Round Robin Brainstorming)

- Tools for collaboration (e.g., Padlet. Stormboard)

- Scaffolds and clear expectations

- Optional group work

- L1-L2 partners

Individualist & Collective Cultures

INDIVIDUALISM	COLLECTIVIST
Focused on independence and individual achievement	Focused on interdependence and group success
Emphasizes self-reliance and the belief that you are supposed to take care of yourself to get ahead	Emphasizes reliance on the collective wisdom or resources of the group and the belief that group members take care of each other to get ahead
Learning happens through individual study and reading	Learning happens through group interaction and dialogue
Individual contribution and status are important	Group dynamics and harmony are important
Competitive	Collaborative
Technical/analytical	Relational

From Ralabate & Nelson, 2017

Self-monitoring and Self-reflection

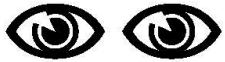**I use pictures, drawings, and props.**
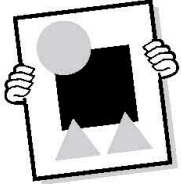
1. still learning   2. sometimes   3. almost always

I look at my audience.

1. still learning   2. sometimes   3. almost always

"One Minute Papers"

Progress charting

My Self Monitoring Form

Name:_____   Date: _____

Today in Class...		Yes	No
	I paid attention to my assigned work	☐	☐
	I followed the classroom rules	☐	☐
	I paid attention to my assigned work	☐	☐
	I followed the classroom rules	☐	☐
My Goal:	I paid attention to my assigned work	☐	☐
I will check ____ **Yeses.**	I followed the classroom rules	☐	☐
Total # of **Yeses** ____ that I checked today.	I paid attention to my assigned work	☐	☐
	I followed the classroom rules	☐	☐

Sign: _____   _____
STUDENT   TEACHER
PARENT

Multiple Means of Engagement

- Provide options for recruiting interest
- Providing options for sustaining effort and persistence
- Provide options for self-regulation

Multiple Means of Representation

- Provide options for perception
- Provide options for language, mathematical expression, and symbols
- Provide options for comprehension

Options for Perceptions

- Provide digital copies as well as hard copies of materials to allow students to manipulate them
- Pair written and auditory content/directions
- Ask students to help!

Text-to-Speech / Translators

Use text in different formats

Tar Heel Reader - http://tarheelreader.org/

Natural Reader - www.naturalreaders.com

Built-in Accessibility

Translators

E.g., http://www.babelfish.com

Google Translate

Activate Background Knowledge

- 60 Second Recap (middle/high gr.)
http://www.60secondrecap.com

- Use students as cultural resources

Content-specific Videos

- MathCasts.org

- HippoCampus.org

- Mathplayground.com
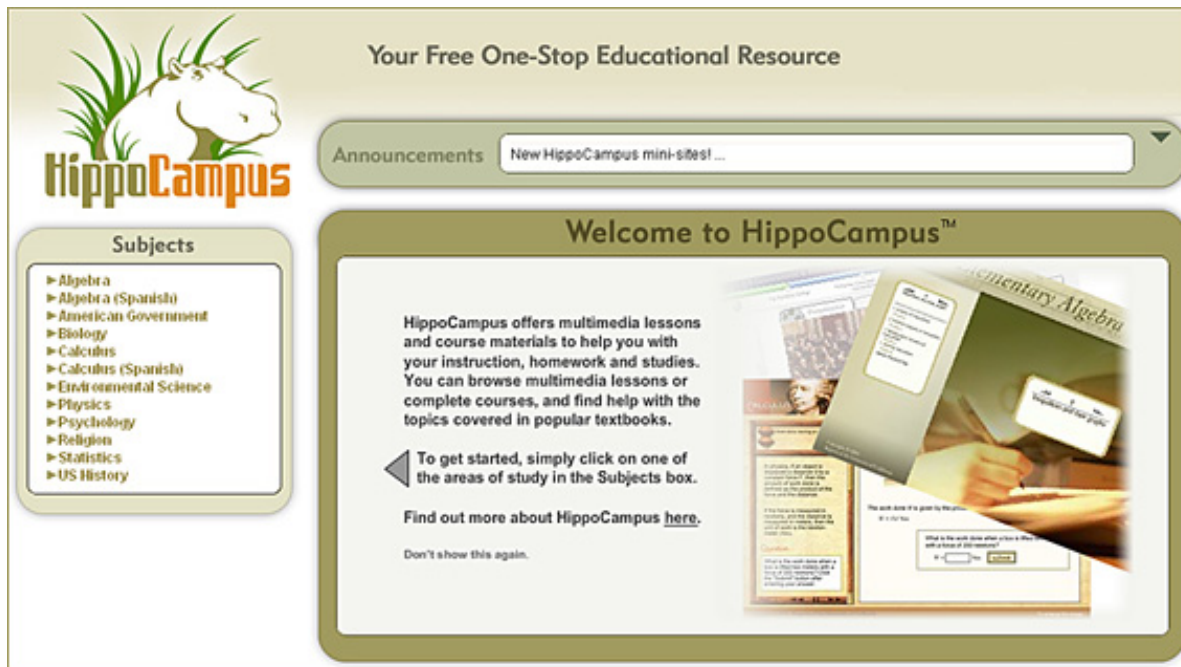
Virtual Manipulatives

❑Virtual Manipulatives and Labs

 ▪ Utah Education Network (for science, social studies as well as other subject areas; K-12) http://www.uen.org/k12student/ interactives.shtml

❑Virtual Museums & Field Trips

 ▪ http://eduscapes.com/tap/topic35a.htm

❑ Virtual Manipulatives

 ▪ http://nlvm.usu.edu/ (free trial)

Clarify Vocabulary
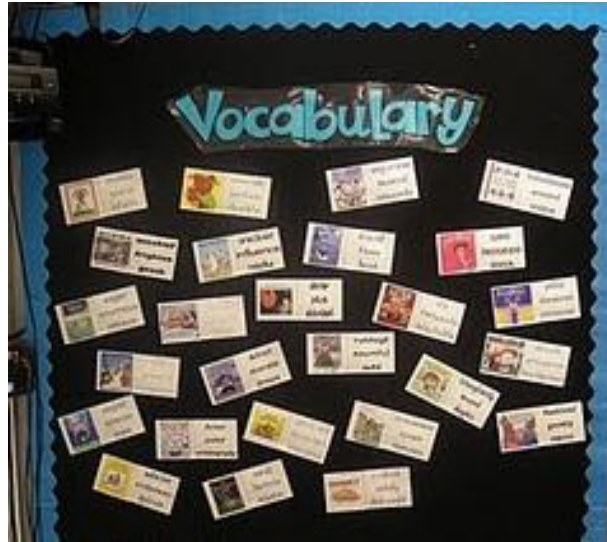
- Create bulletin board to post vocabulary (or Wordle)

- Ask students to draw, find, cut out, design images, use realia to represent vocabulary

Support Comprehension

Topic _____   date _____

Know What I *think* I know	**W**onder What I *want* to know	**L**earn What I *learned*

Gradual Release of Responsibility

Multiple Means of Representation

- Provide options for perception
- Provide options for language, mathematical expression, and symbols
- Provide options for comprehension

Multiple Means of Action/ Expression

- Provide options for physical action
- Provide options for expression and communication
- Provide options for executive functions

Provide Options for Physical Action

❑ Interactive quizzes in Excel

❑ Interactive PowerPoint Games
E.g., http://www.csun.edu/science/ref/games

❑ Timelines in Excel and Word; Human timelines
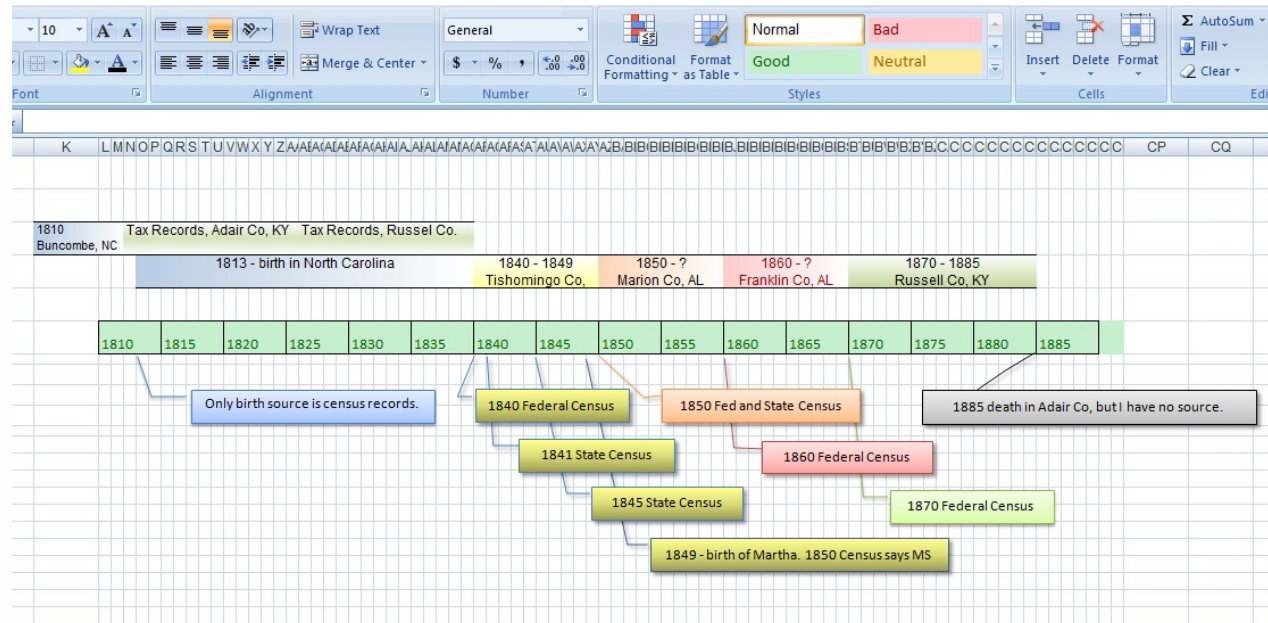
Provide Options for Expression
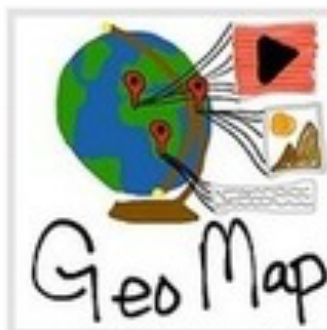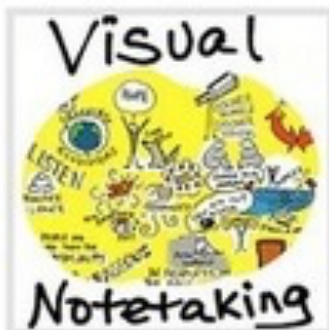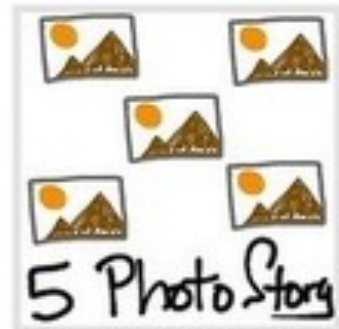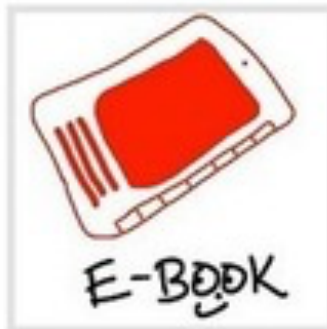
Alternatives to Communication

- Create role plays

- Create videos

- Voki avatars – http://voki.com/

- PowToon - https://www.powtoon.com

- Comic Strip Generator - http://www.toondoo.com
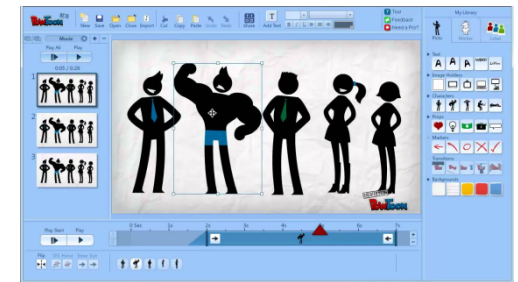
Story Starters

- Sentence starters

- Story starters
  - Video
  - Audio
  - Story starter cubes

- Speech-to-text/Recorders

Scaffolds

- ❑ Guided Notes, Reading Guides

- ❑ Work Exemplars & Rubrics

- ❑ Break Assignments
  into Chunks with Feedback

rubistar

Create Rubrics for your Project-Based Learning Activities

Multiple Means of Action/ Expression

- Provide options for physical action
- Provide options for expression and communication
- Provide options for executive functions

Project WeGotIT!

1 **Pick your goal:** I will include 3 reasons and 3 examples.

2 Fill in the chart below. Click here to see an example.

Brainstorm: best desser; flavors; choices; cold; delicious; many reasons to love

	Main Points	Sentences	Check your work!
Identify your opinion	Best dessert	Ice-cream is the best dessert ever!	☒ I included my opinion.
Determine 1st reason	flavors	First, ice-cream comes in many flavors.	☒ I included 3 reasons to support my topic.
Elaborate with examples	Different choices	For example, ice-cream can be vanilla or chocolate, so you can pick the one you like.	
Determine 2nd reason	chold	Also, it is cold.	☒ I have as many examples as I planned to have in my goal.
Elaborate w/ example	Nice in the summer	To illustrate, it is good to have in the summer time to cool you off.	
Determine 3rd reason	Delicious	Finally, ice-cream is very delicious.	
Elaborate w/ example	Want more	Specifically, it is so delicious that you always want more.	
Add transition words *as you go!*			☒ I have proper transition words.
Summarize	Many reasons to love	In conclusion, there are many reasons that ice-cream is the best dessert.	☒ I summarized my opinion.

3 Next, copy the text in the orange box.

4 Paste (A) the text into the box below. Read your essay and edit it.

Click here to see how your final paragraph should look.

> Ice-cream is the best dessert ever! First, ice-cream comes in many flavors. For example, ice-cream can be vanilla or chocolate, so you can pick the one you like. Also, it is cold. To illustrate, it is good to have in the summer time to cool you off. Finally, ice-cream is very delicious. Specifically, it is so delicious that you always want more. In conclusion, there are many reasons that ice-cream is the best dessert.

5 Evaluate:
1. How many words do I have in my essay? 74
2. How many sentences do I have in my essay? 8
3. How many reasons do I have in my essay? 3
4. How many examples do I have in my essay? 3
5. Do all my sentences make sense? Choose an item.
6. How do I feel about my essay: ☐ ☐ ☒
7. My next goal is: I will include 3 reasons and 3 examples.

Feedback: You've included _____ transition words _____ in your essay, which makes you a great writer!

Activity

- UDL is NOT all about technology:

- How could you support
  - Multiple means of engagement
  - Multiple means of representation
  - Multiple means of action/expression

  with …

|	Provide multiple means of **Engagement** Affective Networks The "WHY" of Learning	Provide multiple means of **Representation** Recognition Networks The "WHAT" of Learning	Provide multiple means of **Action & Expression** Strategic Networks The "HOW" of Learning
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Goal	**Expert learners** who are... **Purposeful & Motivated**	**Resourceful & Knowledgeable**	**Strategic & Goal-Directed**

UDL Exchange
udlexchange.cast.org

UDL Resources   **UDL Lessons**   **UDL Collections**
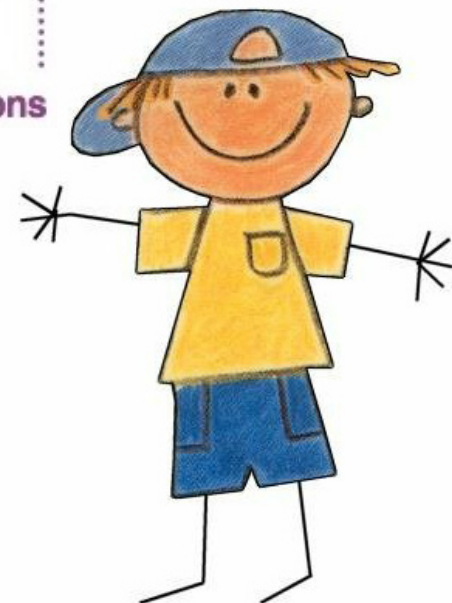
UDL Design Cycle

Apply UDL Principles to …

- 4 Curriculum Components

1. Learning Goals
2. Instructional Materials
3. Instructional Methods
4. Assessment

Instructional materials: The media and tools used for teaching content.

Learning goals: A description of what students are expected to learn.

Assessments: The method used for measuring student learning.

Instructional methods: The manner in which the content is taught.

UDL Design Cycle

Begin the lesson planning process by unwrap the academic standard to be addressed.

Step 1: Develop clear GOAL statements *(in relation to skills and concepts of the academic standard)*

Step 2: Develop ASSESSMENTS in relation to goals. Use UDL guidelines to develop varied formative and summative assessments

Steps 3 &4: Develop flexible METHODS and MATERIALS. Use UDL guidelines to include supports and scaffolds.

Teach the standards-based lesson(s) designed with consideration of UDL.

Reflect on what worked and what can be changed to reduce barriers and increase access. Revise as needed

Intentional, proactive design considering learner variability and existing barriers

From Rao & Meo, 2018

UDL SMART Goals

Specific   Attainable   Time-bound

Measurable   Result-Oriented

Flexible

- *E.g., By the end of the unit, given models and prompts as needed, learners will contrast the points of view of three characters in X as measured by a descriptive rubric.*
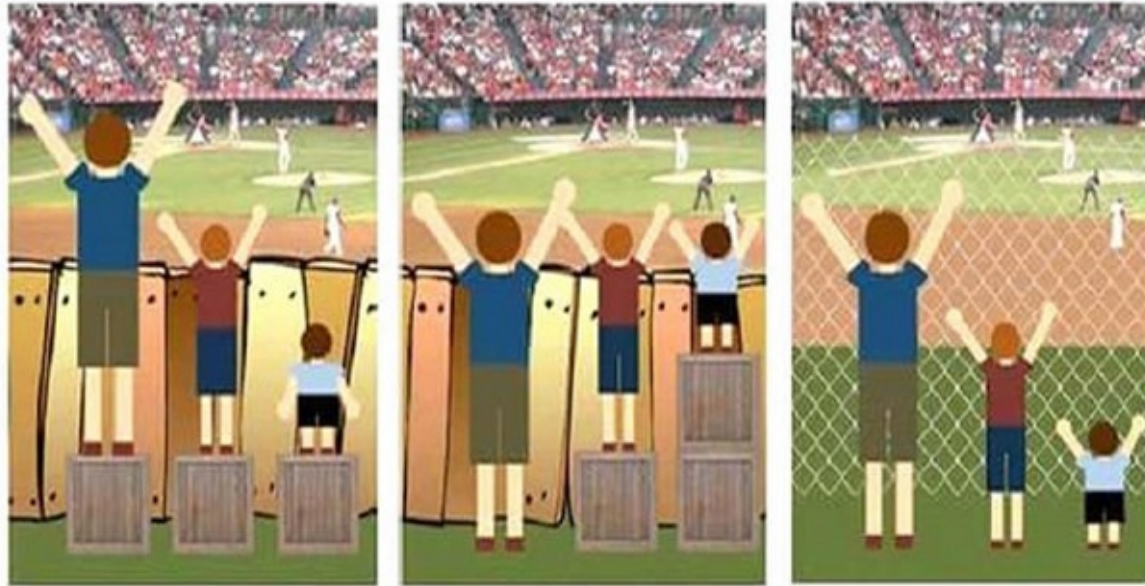
Self-Reflection THINK-PAIR-SHARE

In your learning environment …

This presentation makes me want to include … as part of my instruction.

Equality – Equity – UDL

Take Your Time!

Remember!

Questions & Answers

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