UDLCAST Workshop_Pre Survey

In preparing for our activities during this workshop, I would like to learn more about you! Please spend a few minutes taking this survey as you settle in.

* Required

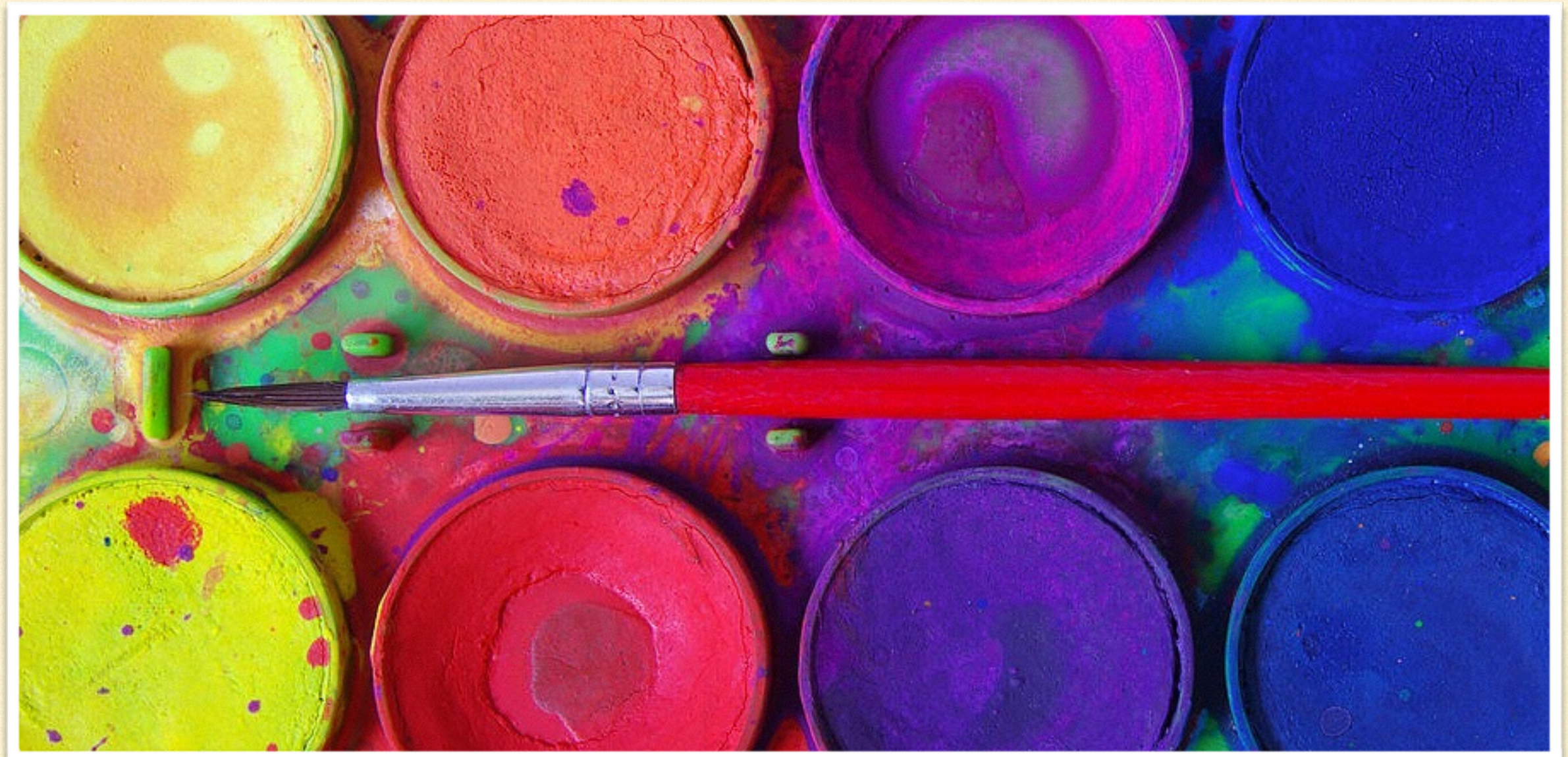
Please take this brief survey as you sit at your table!

http://goo.gl/APQjDC

Write your name on
a ticket
and if you have a
mobile device,

download and
install Aurasma

(directions on table)



UNIVERSAL DESIGN FOR LEARNING

December 4, 2014

UDL WORKSHOP WEBSITE

http://udlpd.weebly.com/

What is Universal Design?

The Principles of Universal Design

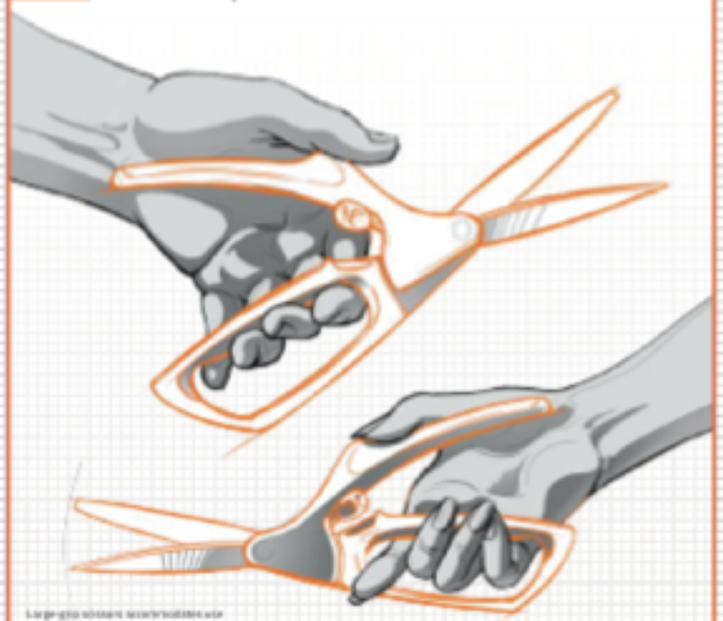
The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.

1 Equitable Use

The design is useful and marketable to people with diverse abilities.

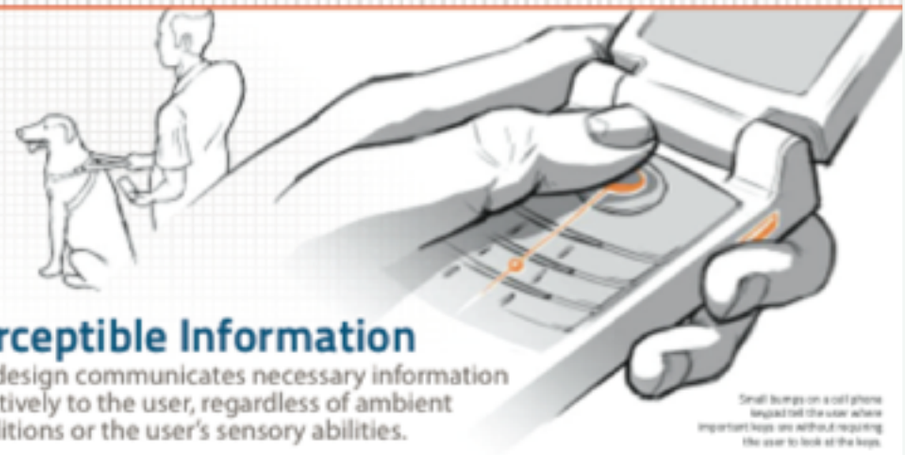
2 Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.



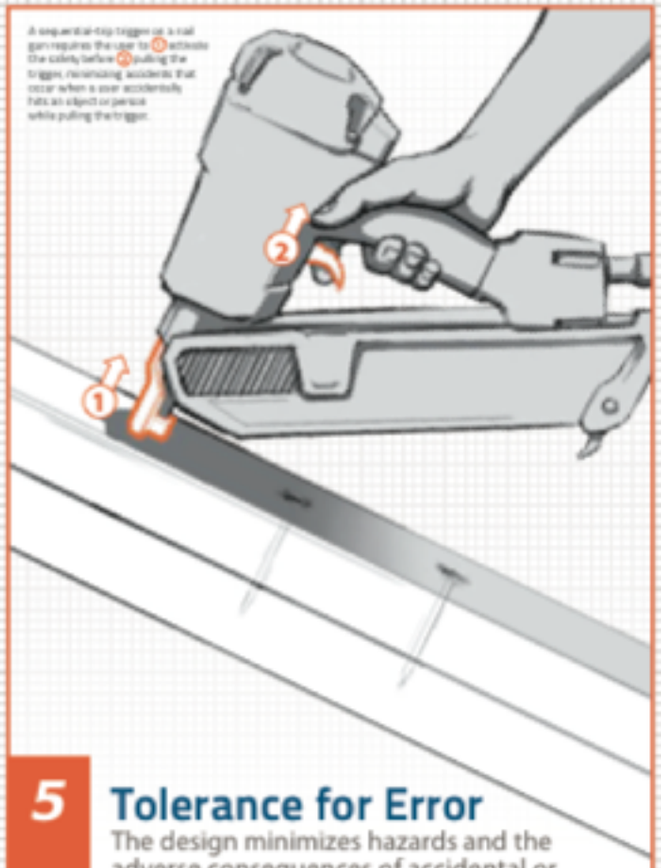
3 Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or education level.



4 Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.



5 Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

6 Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

7 Size and Space for Approach and Use

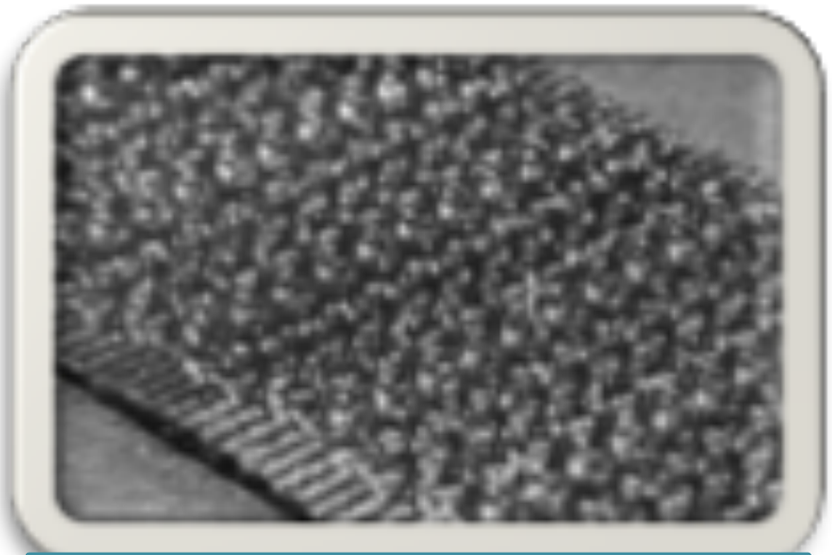
Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

Center for Universal Design at NC State

Web: design.ncsu.edu/cud

E-mail: cud@ncsu.edu

Universal Designs



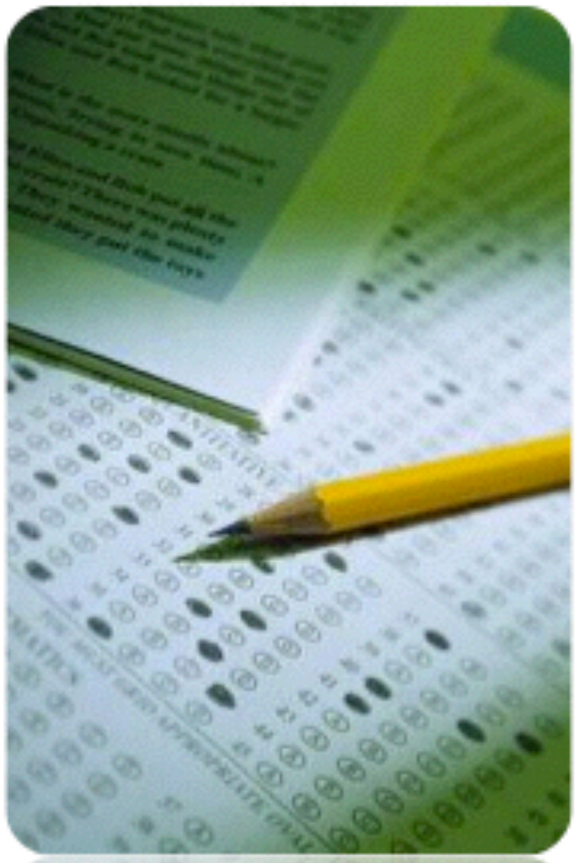
Velcro

Electric Toothbrush

Tactile Pavement

Audio Book

Low –floor Bus



"Consider the needs of the broadest possible range of users from the beginning"

~ Architect, Ron Mace

Universal Design in Architecture

WOUNDED WARRIOR PROJECT

http://udlpd.weebly.com/universal-design-in-action.html


CAST
25
YEARS OF
INNOVATION
1984-2009
Transforming education through Universal Design for Learning — http://www.cast.org
UDL at a glance

Brain Rules

EXERCISE | Rule #1: Exercise boosts brain power.

SURVIVAL | Rule #2: The human brain evolved, too.

WIRING | Rule #3: Every brain is wired differently.

ATTENTION | Rule #4: We don't pay attention to boring things.

SHORT-TERM MEMORY | Rule #5: Repeat to remember.

LONG-TERM MEMORY | Rule #6: Remember to repeat.

SLEEP | Rule #7: Sleep well, think well.

STRESS | Rule #8: Stressed brains don't learn the same way.

SENSORY INTEGRATION | Rule #9: Stimulate more of the senses.

VISION | Rule #10: Vision trumps all other senses.

GENDER | Rule #11: Male and female brains are different.

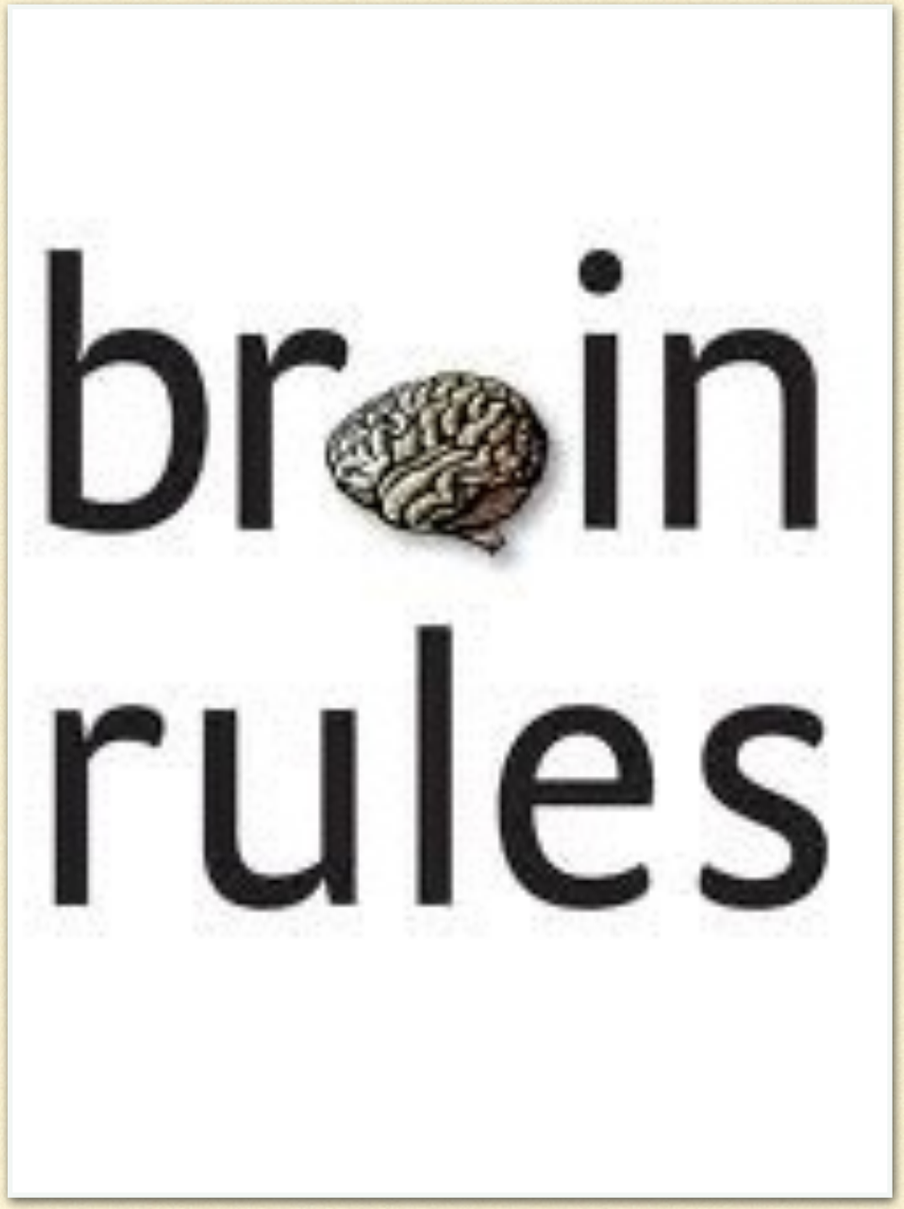
EXPLORATION | Rule #12: We are powerful and natural explorers.

Brain Rule #5: Repeat to Remember

TO CONTINUE LEARNING ABOUT BRAIN RULES, COMPLETE ONE OF THESE ACTIVITIES.

1. AT YOUR TABLE YOU HAVE A CARD WITH A NUMBER. USE THIS TO INVESTIGATE YOUR BRAIN RULE.

2. SPEND SOME TIME INVESTIGATING SOME OF THE INTER-ACTIVES ABOUT BRAIN RULES ON JOHN MEDINA'S WEBSITE.

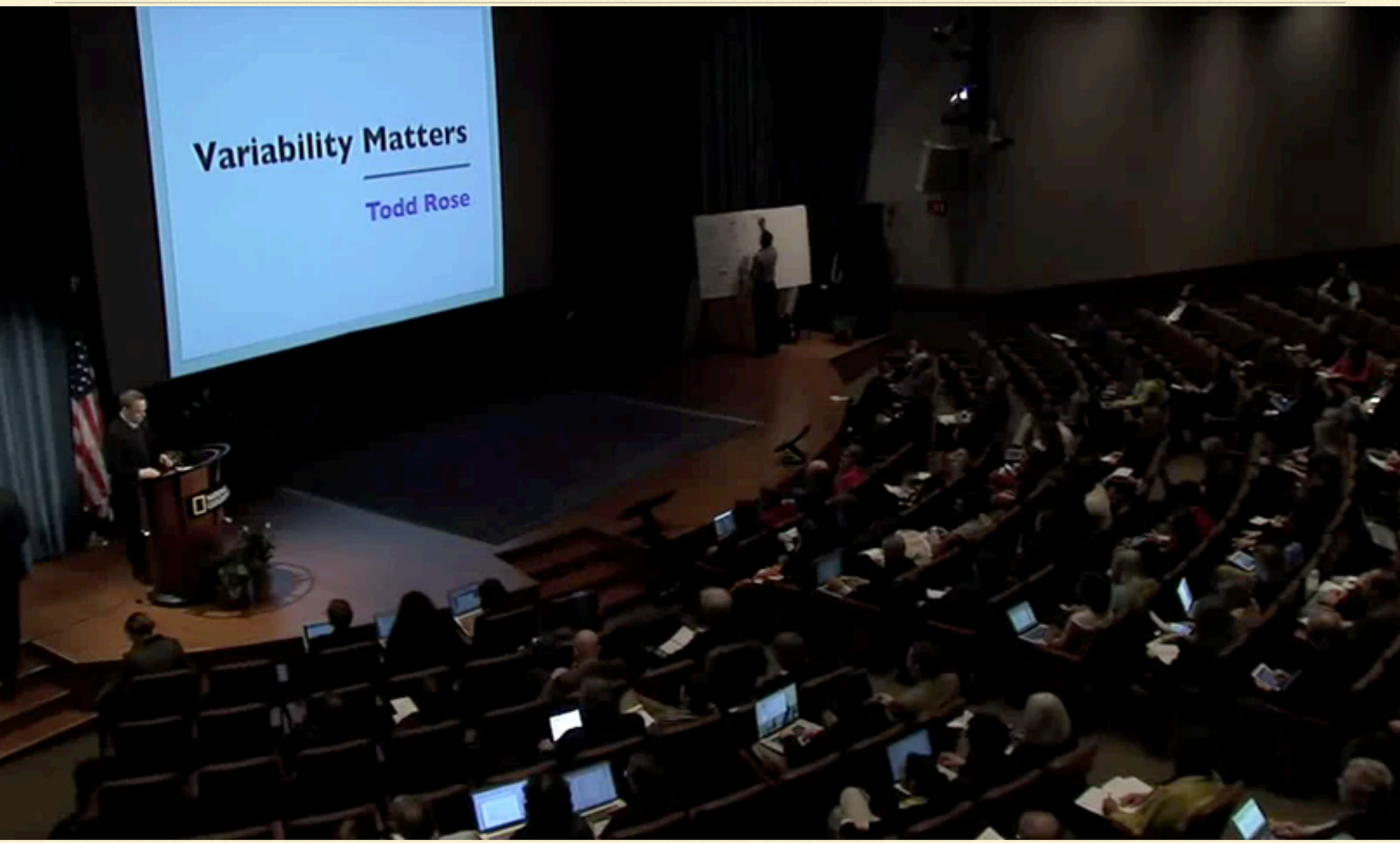


http://www.brainrules.net/about-brain-rules

Learner

Variability

- Variability is the rule
- Context matters
- Learning occurs at the dynamic interaction between the individual (variability) & the environment (context)
- UDL is a framework to address variability



https://www.youtube.com/watch?v=8WClnVjCEVM

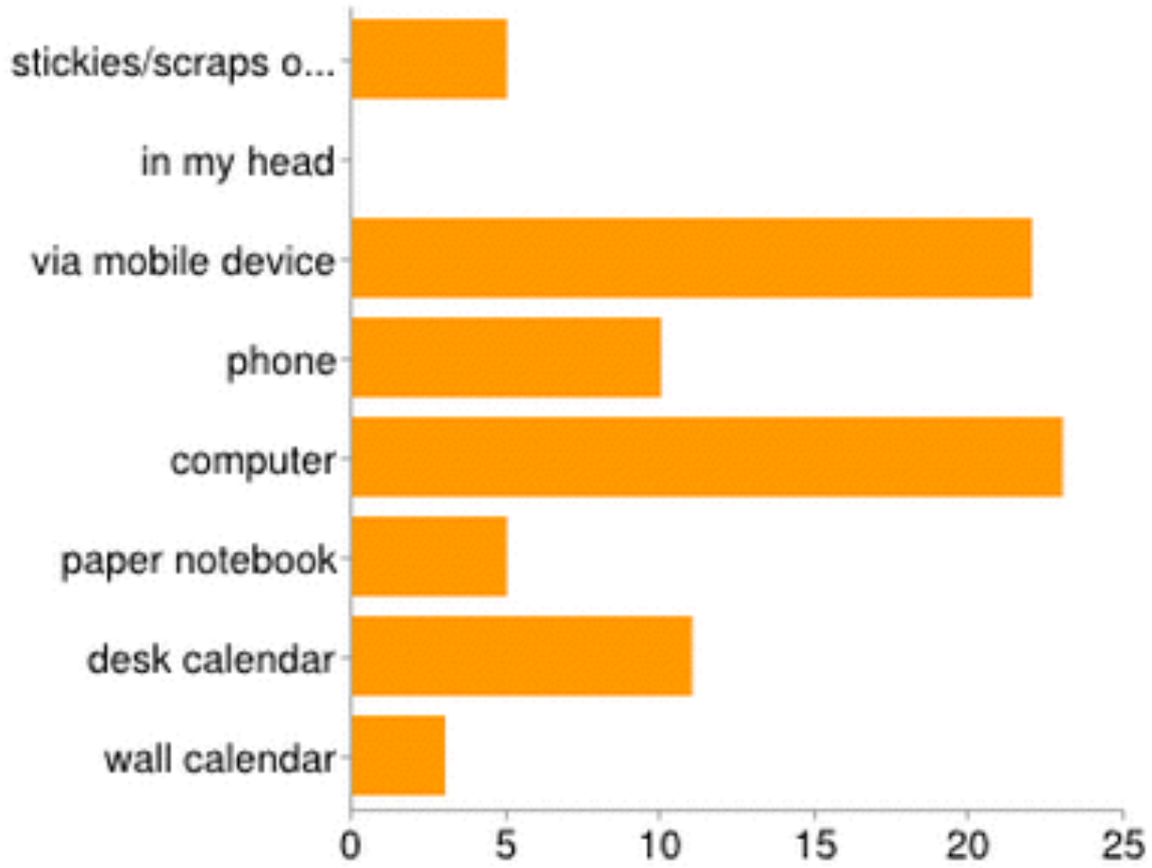
Why are curricula limited if they are designed for the 'average' learner?

What makes learner variability systematic?

Why is it important for educators to know about systematic learner variability?

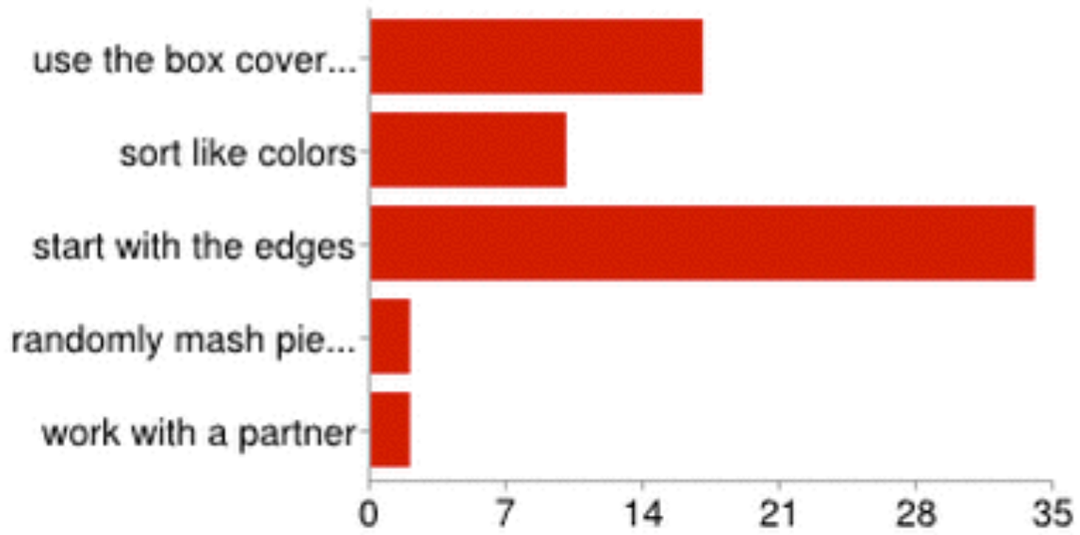
Our variability

How do you like to keep track of your daily appointments?



stickies/scraps of paper	**5**	13%
in my head	**0**	0%
via mobile device	**22**	55%
phone	**10**	25%
computer	**23**	58%
paper notebook	**5**	13%
desk calendar	**11**	28%
wall calendar	**3**	8%

What are the steps you take to complete a jigsaw puzzle?



use the box cover as a guide	**17**	43%
sort like colors	**10**	25%
start with the edges	**34**	85%
randomly mash pieces together	**2**	5%
work with a partner	**2**	5%

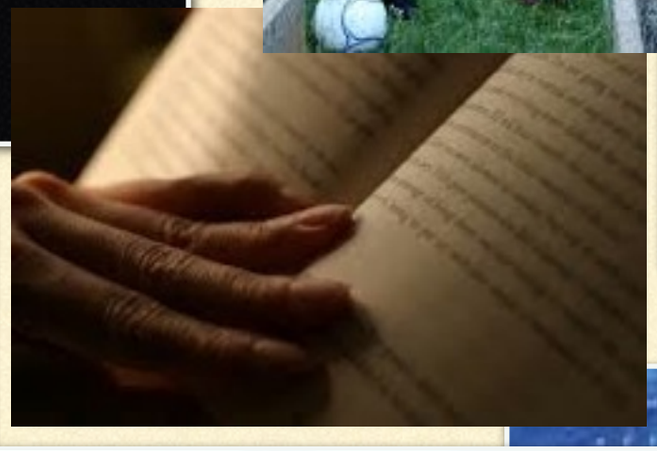
UDLCAST Workshop_Pre Survey

In preparing for our activities during this workshop, I would like to learn more about you! Please spend a few minutes taking this survey as you settle in.

* Required

If you had to name one personal activity that brings you joy and passion, what would it be?

basketball
baking/cooking
Cooking!
Spending time with my kids
Vacationing at my cabin
Making pizza with my family
Baking




PASSPORT

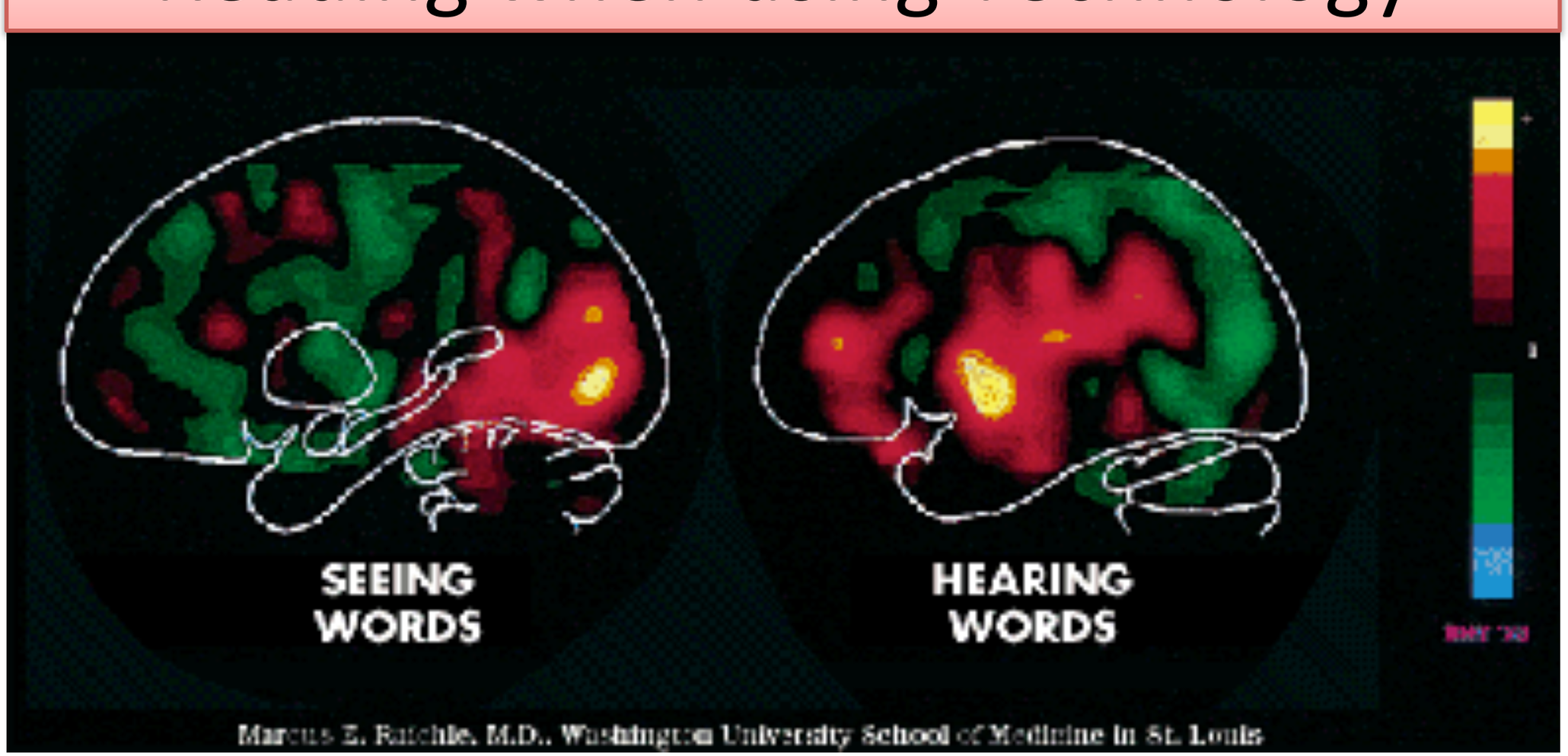
	North *Acting – "Let's do it;"* *Likes to act, try things, plunge in.*	
West *Paying attention to detail —likes to know the who, what, when, where and why before acting.*		**East** *Speculating – likes to look at the big picture and the possibilities before acting.*
	South *Caring – likes to know that everyone's feelings have been taken into consideration and that their voices have been heard before acting.*	

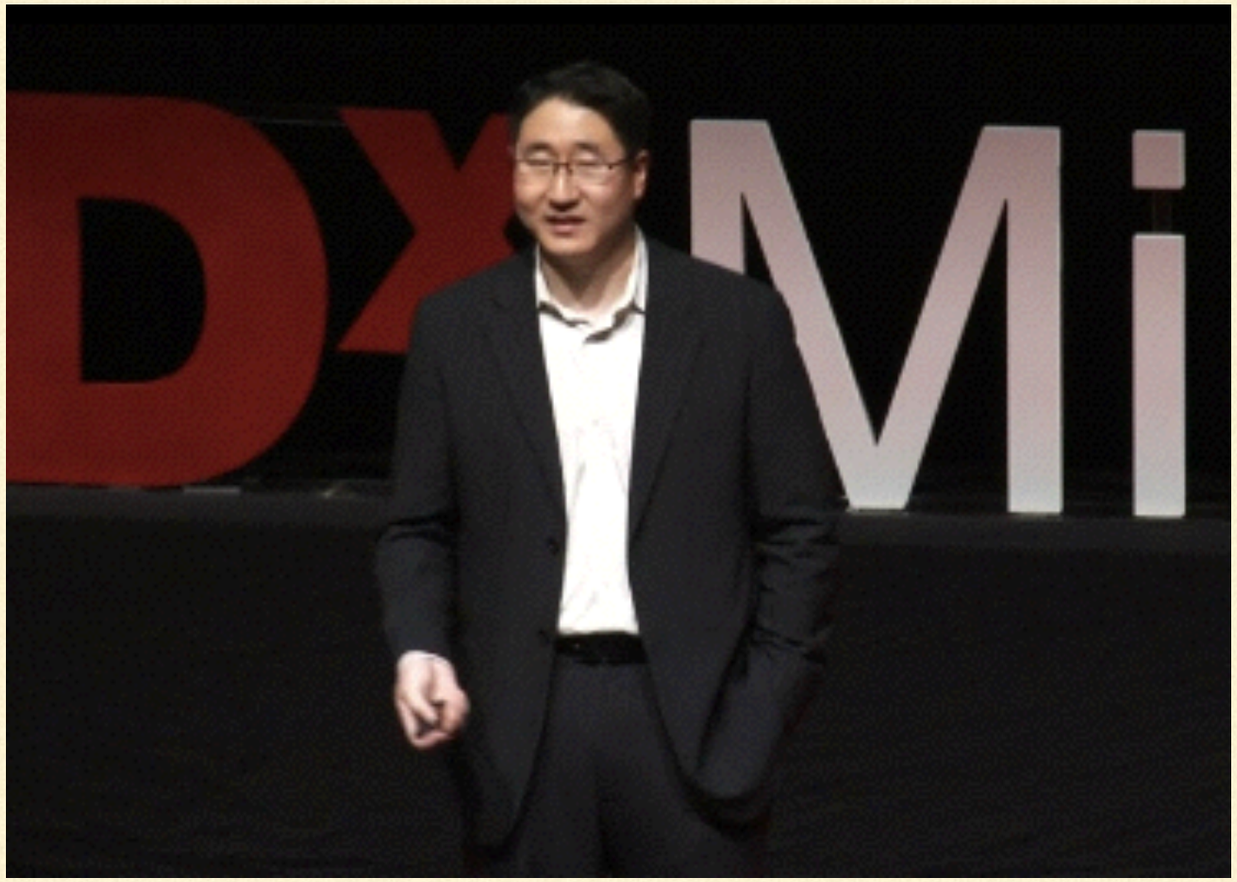
Suppose you are holding a holiday party and you are the host.

- How do you go about planning the event?
- Which role do you most associate with yourself and why?

The Brain, Listening and Reading

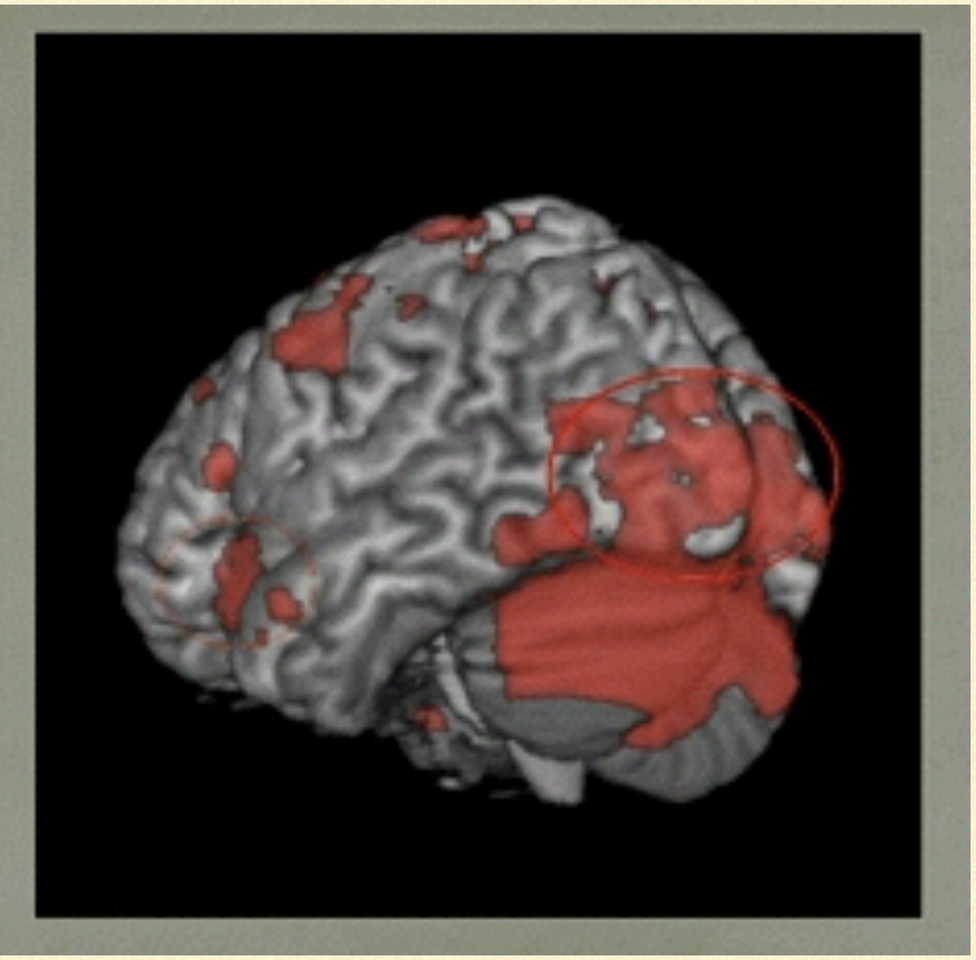
Reading when using Technology



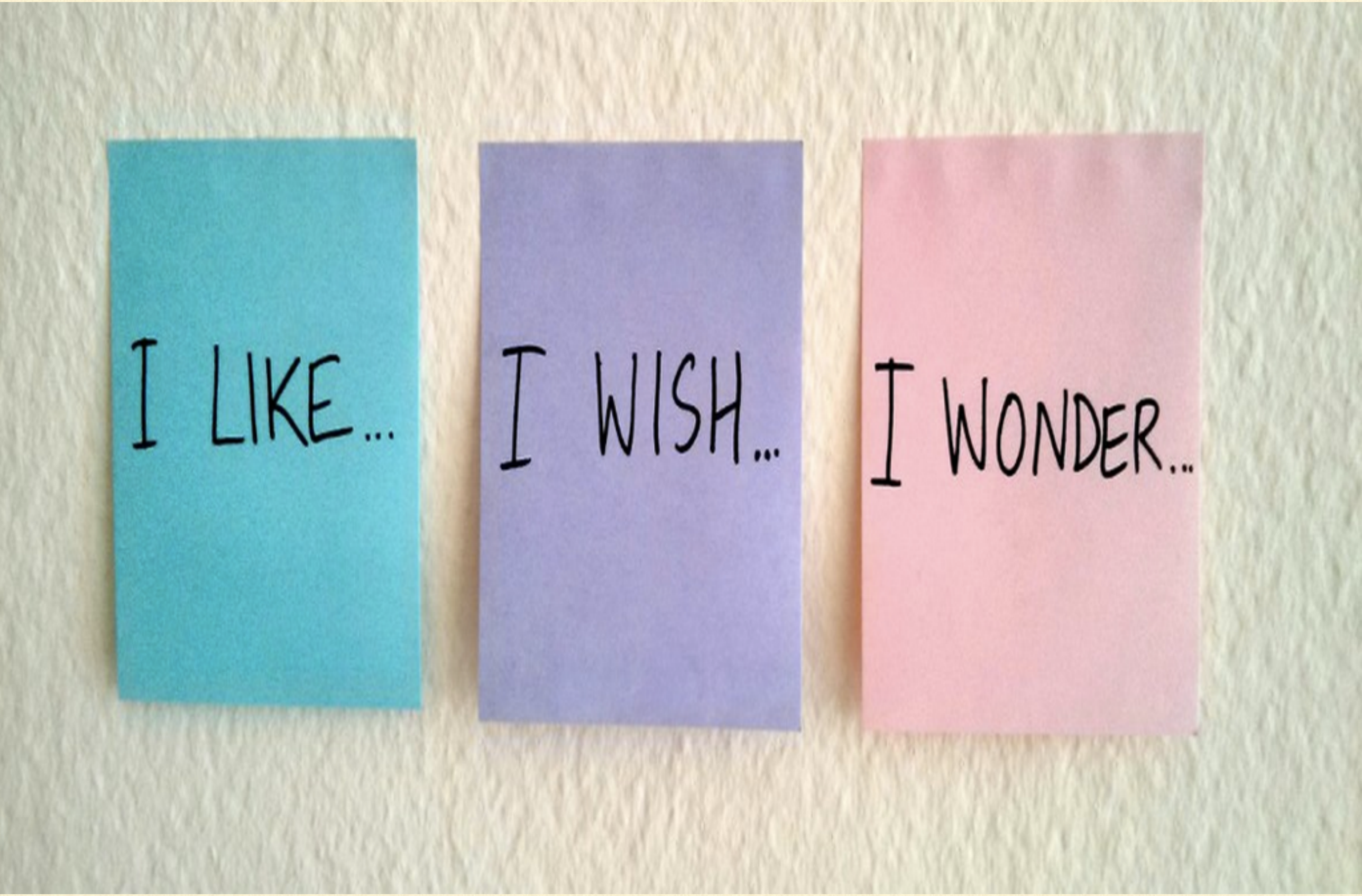


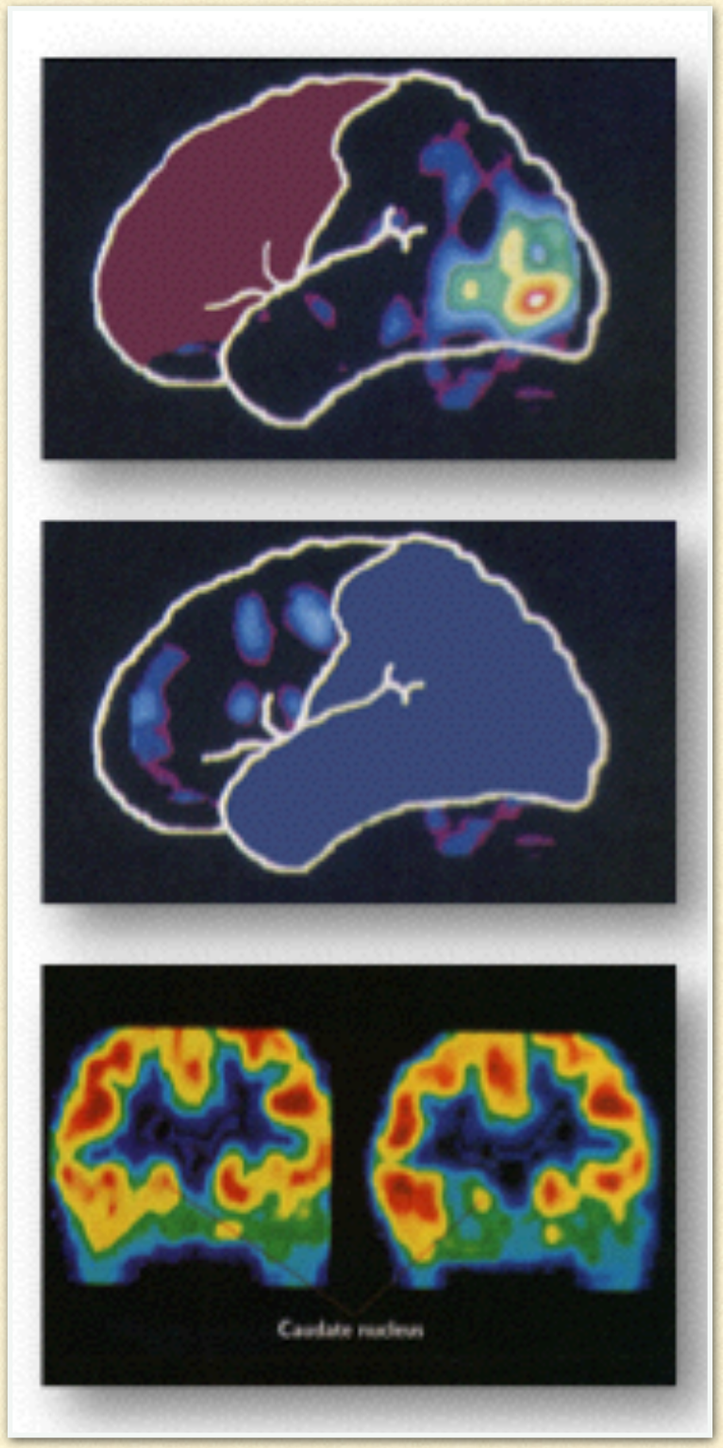
Your Brain on Improv

"One area turns on, and a big area shuts off, so that you're not inhibited, so that you're willing to make mistakes, so that you're not constantly shutting down all of these new generative impulses." - Charles Limb



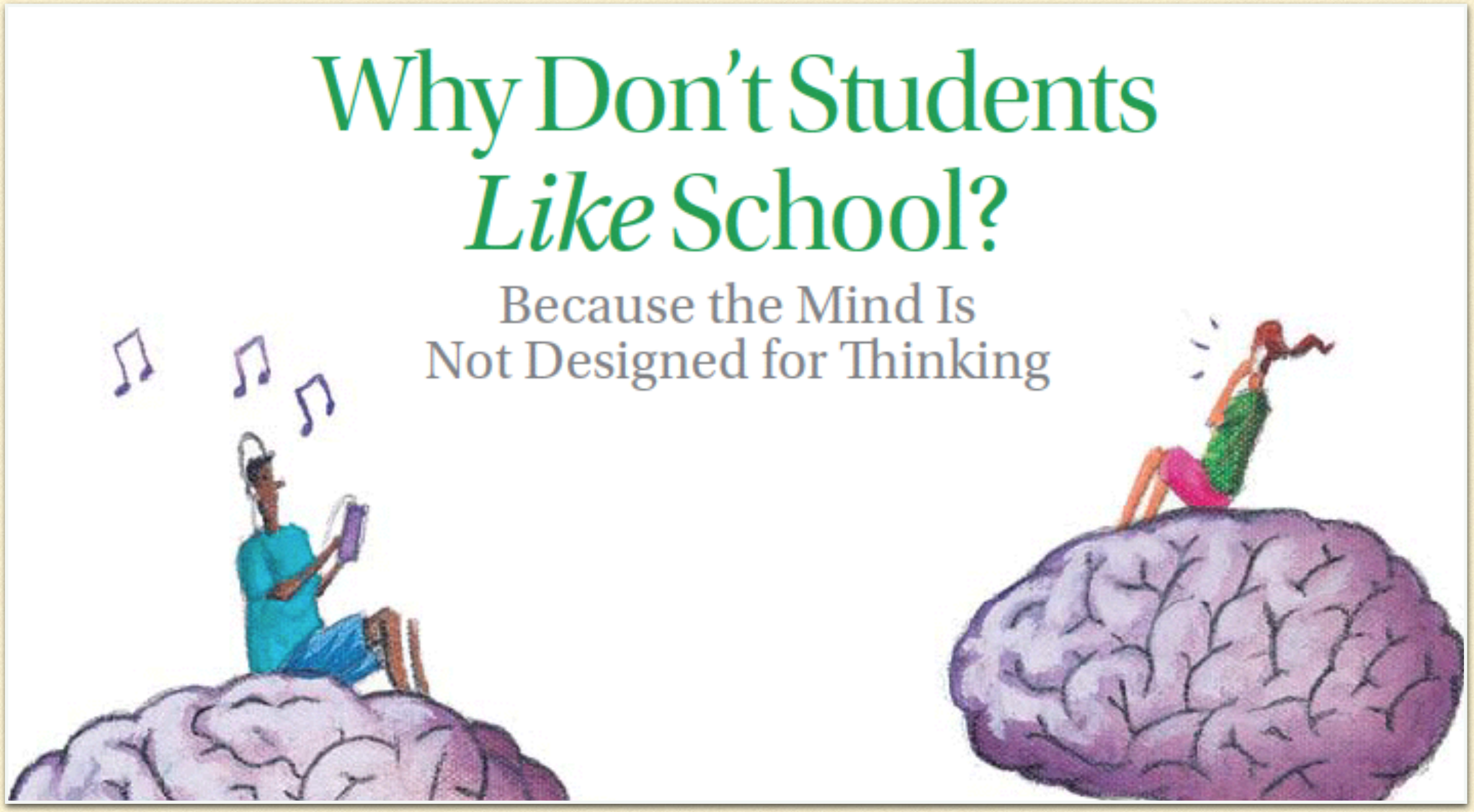
Well, this is actually four rappers' brains. And what we see, we do see language areas lighting up, but then -- eyes closed -- when you are free-styling versus memorizing, you've got major visual areas lighting up. You've got major cerebellar activity, which is involved in motor coordination. You have heightened brain activity when you're doing a comparable task, when that one task is creative and the other task is memorized."


I LIKE...
I WISH...
I WONDER...



UDL and the Learning Brain

WHY STUDENTS DON'T LIKE SCHOOL?



THINKING IS…

Effortful: "You can't think about something else while you work on a problem."

THINKING IS…

Slow: “Your thinking system does not instantly calculate the answer to a problem the way that your visual system immediately takes in a visual scene.”

THINKING IS…

Uncertain: "Your visual system seldom makes mistakes, and when it does, you usually think you see something similar to what is actually out there… Your thinking system might not even get you close; your solution to a problem may be far from correct."

This is why visuals will be recalled over 91% of the time after a few days after learning…63% after a year.

Recognition Networks

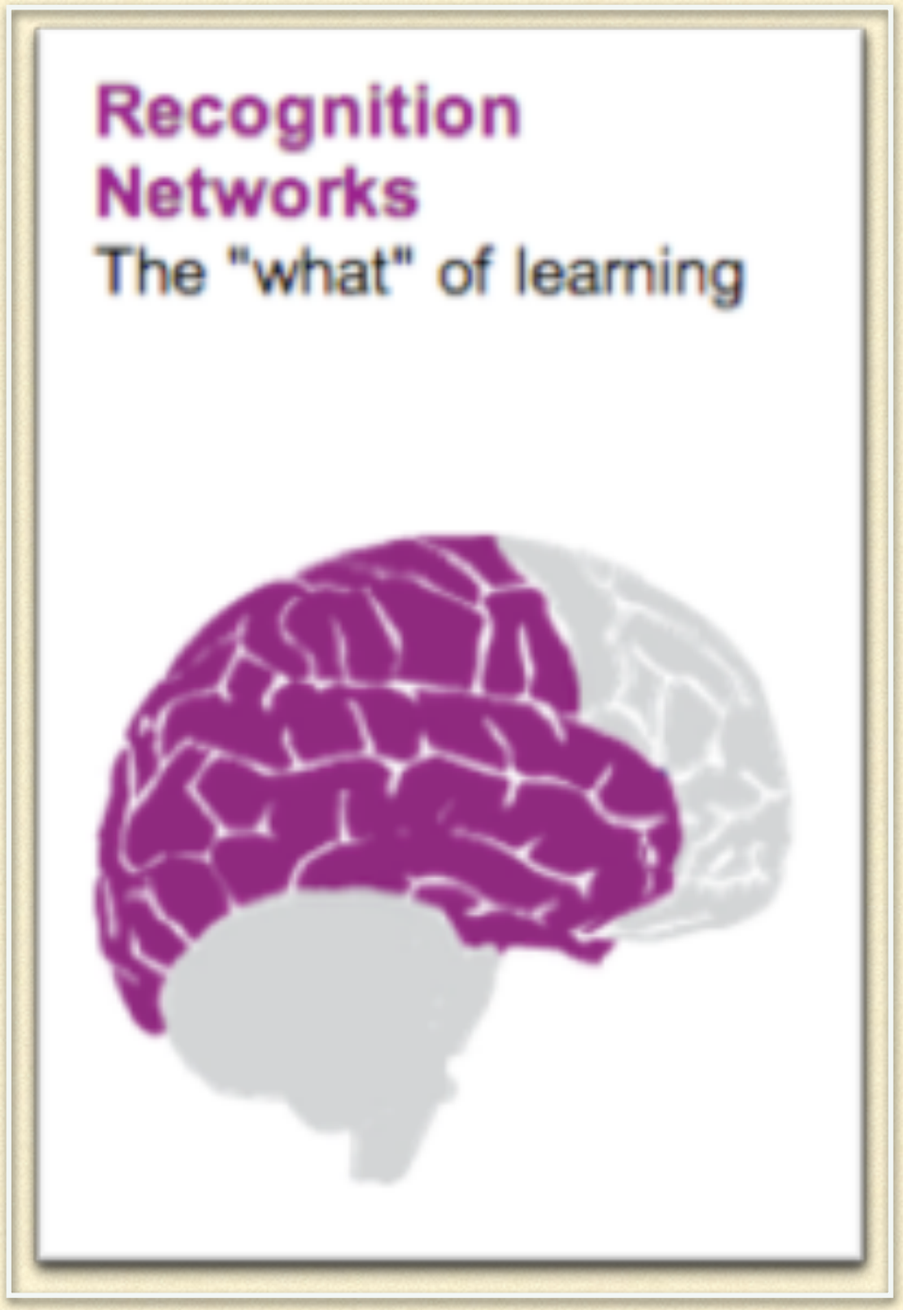
Recognition Networks

The "what" of learning

How we gather facts and categorize what we see, hear, and read. Identifying letters, words, or an author's style are recognition tasks.

AURASMA

Multiple Means of Representation

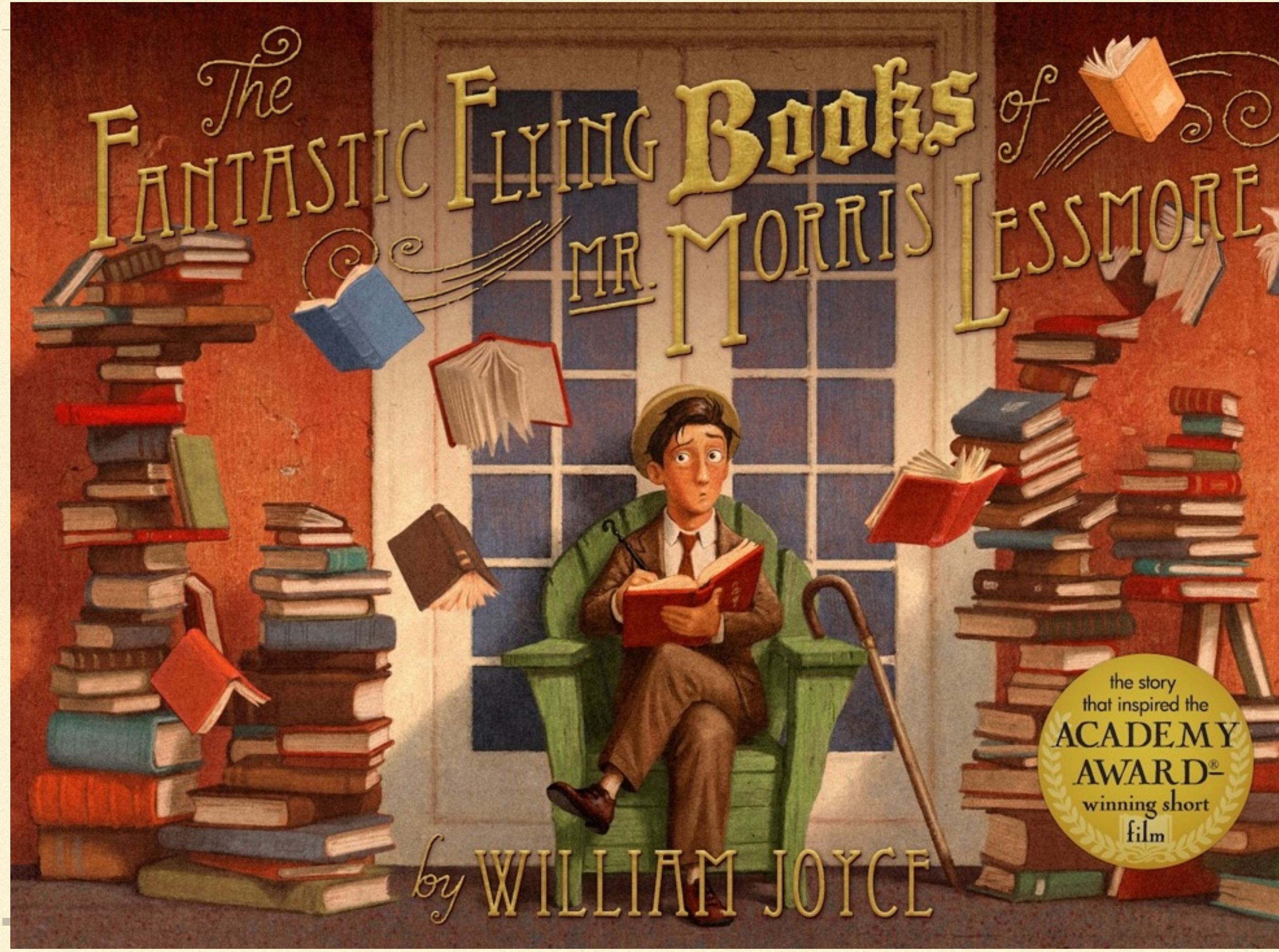


How do learners gather information and organize facts?

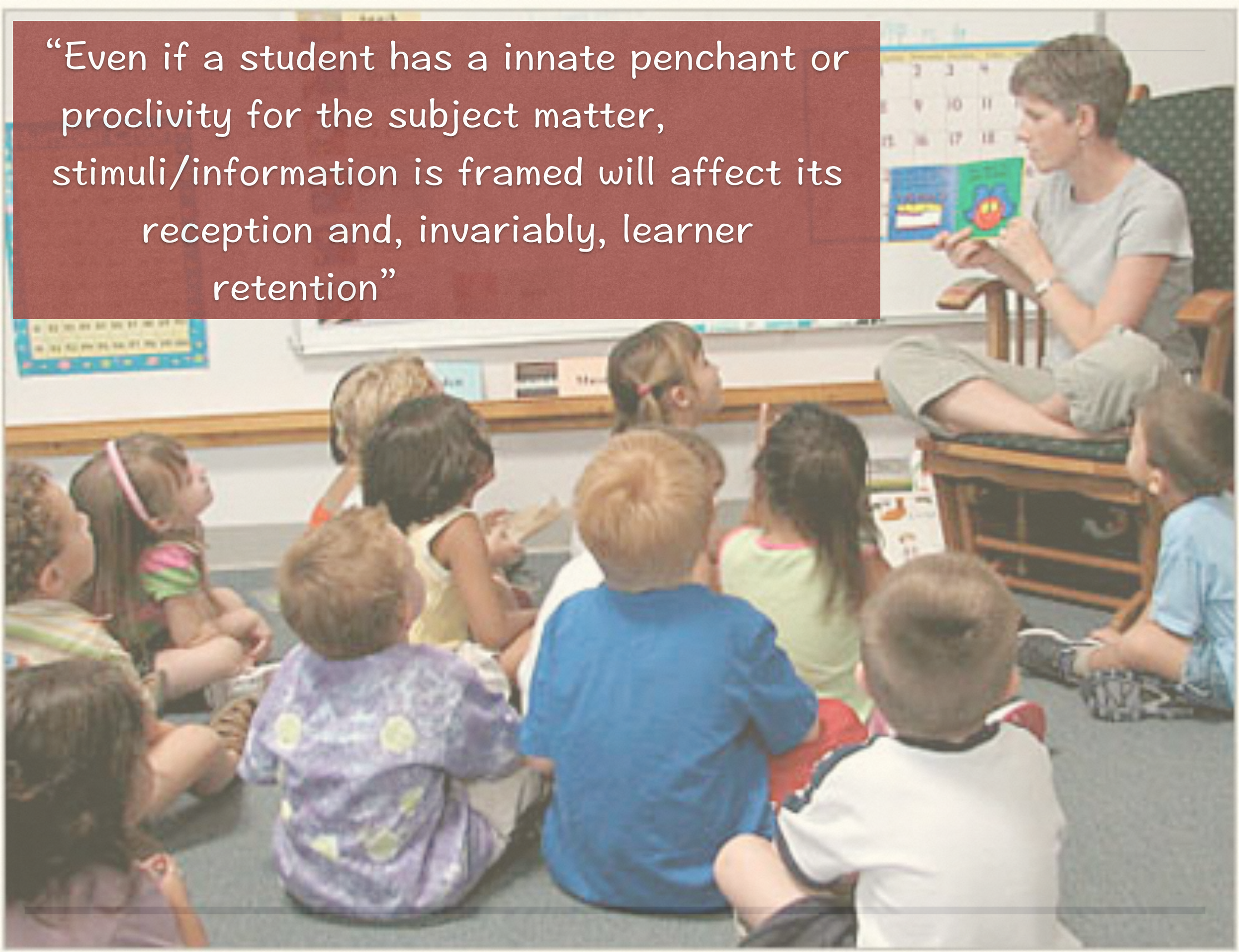
How do learners categorize what they see, hear and read?

AURASMA

The Fantastic Flying Books of Mr. Morris Lessmore

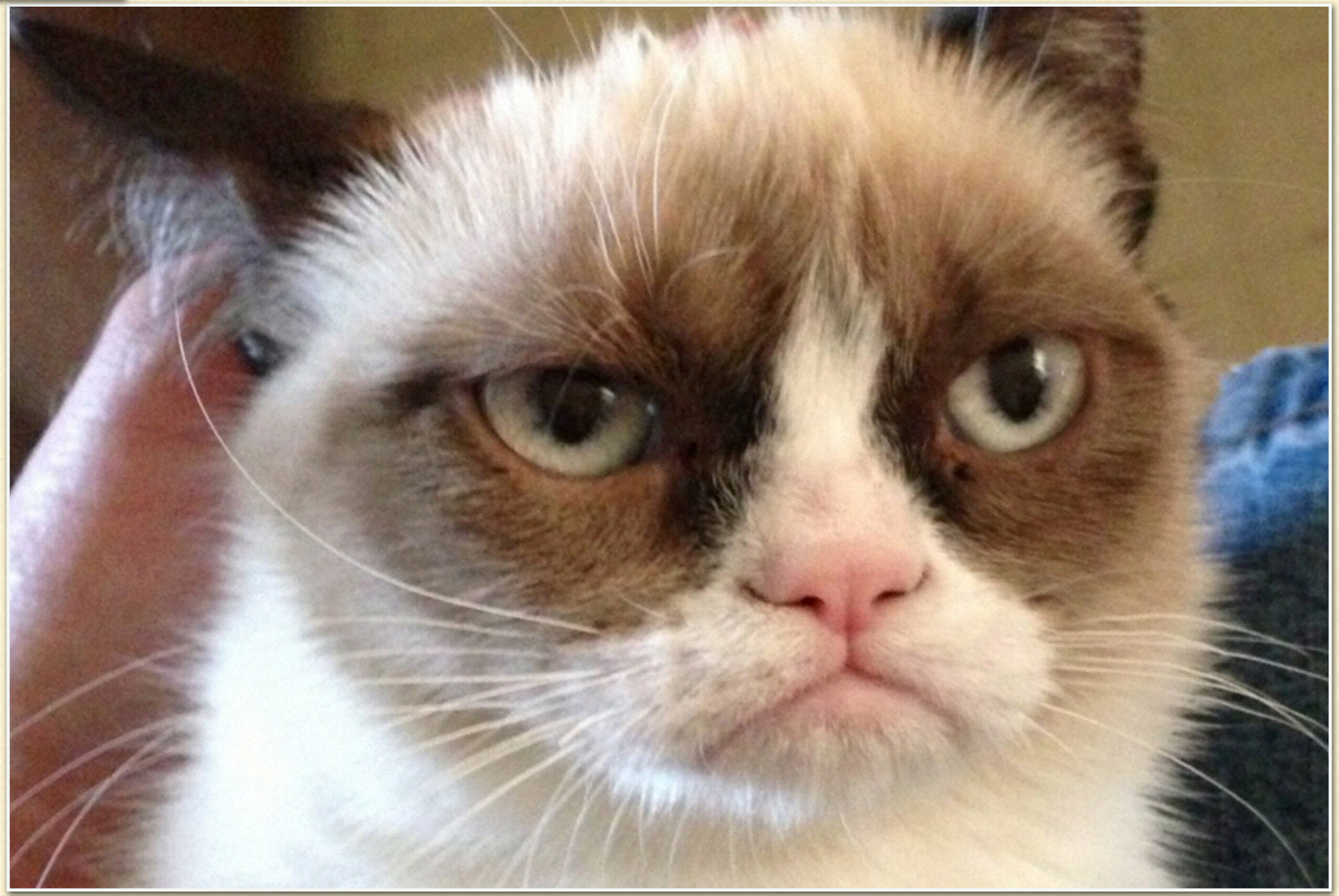


by William Joyce



"Even if a student has a innate penchant or proclivity for the subject matter, stimuli/information is framed will affect its reception and, invariably, learner retention"

Try your Aurasma app on this image!



Examples of Representation

www.visuwords.com

TED Ed Lessons Worth Sharing

http://ed.ted.com/

http://ed.ted.com/lessons/the-science-of-symmetry-colm-kelleher

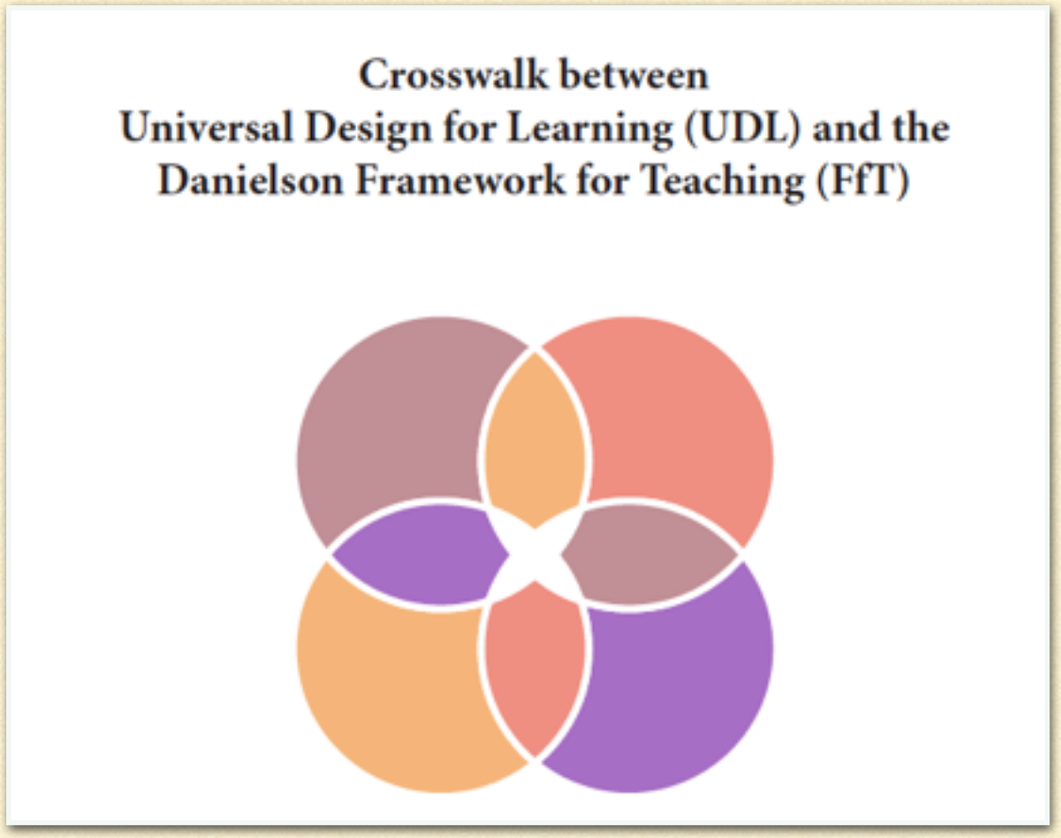
voki

www.voki.com

AURASMA

CONNECTING DANIELSON TO UDL: REPRESENTATION

- 1A: Demonstrating Knowledge of Content and Pedagogy
- 1B: Demonstrating Knowledge of Students
- 1C: Setting Instructional Outcomes
- 1D: Demonstrating Knowledge of Resources
- 1E: Designing Coherent Instruction
- 3A: Communicating with Students
- 3B: Using Questioning and Discussion Techniques
- 3C: Engaging Students in Learning
- 3D: Using Assessment in Instruction

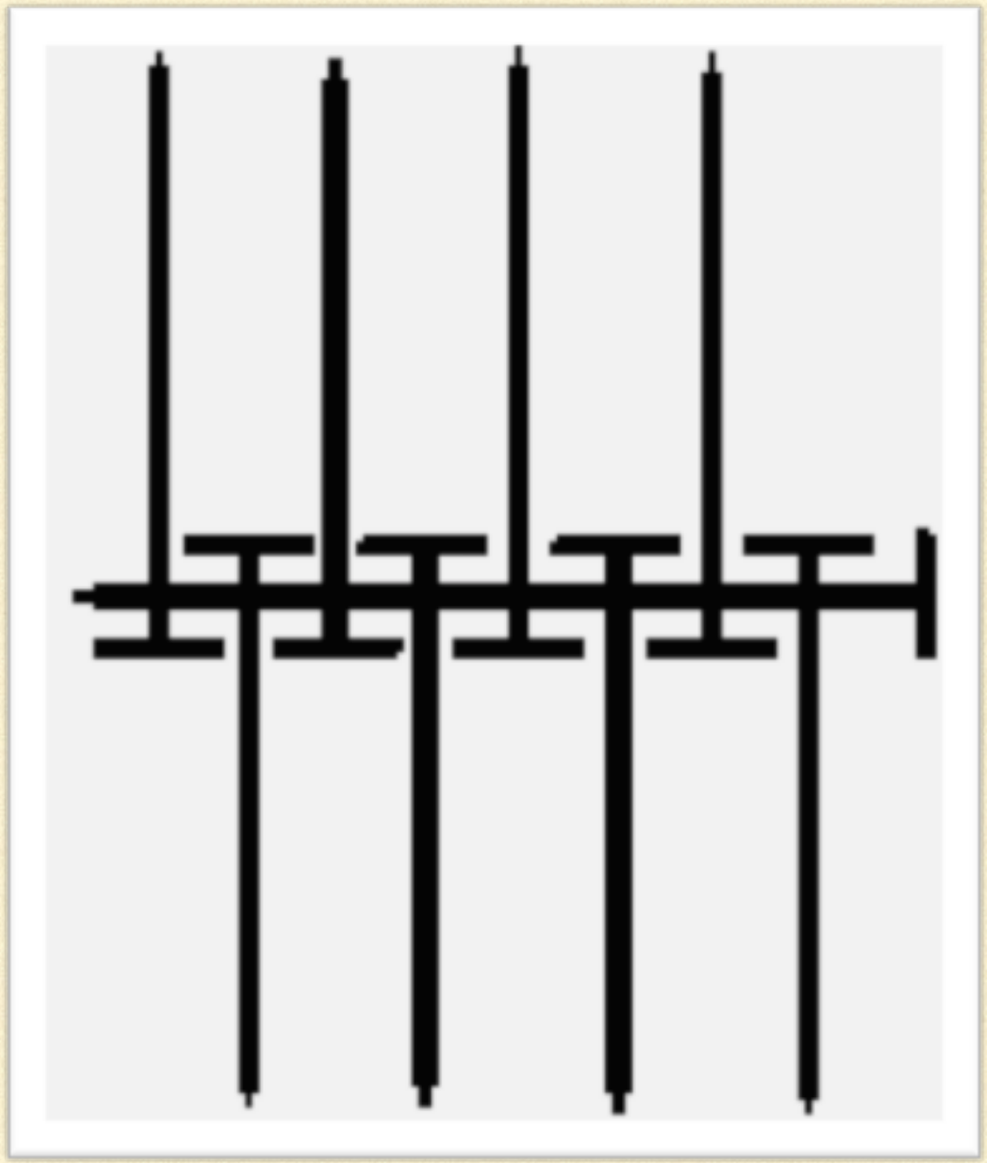


TRY THIS CHALLENGE!

With a small group. With a partner or small group, balance as many nails as you can on the head of the nail on the wood.

- Yes, this can be done.
- If you know the solution, don't tell your team!

TRY THIS CHALLENGE!



A: You balanced 10 nails!

B: You balanced 8 nails!

C: You balanced 6 nails!

D: You balanced 4 nails!

If you could not balance more than 1 nail, try again!

SOLUTION

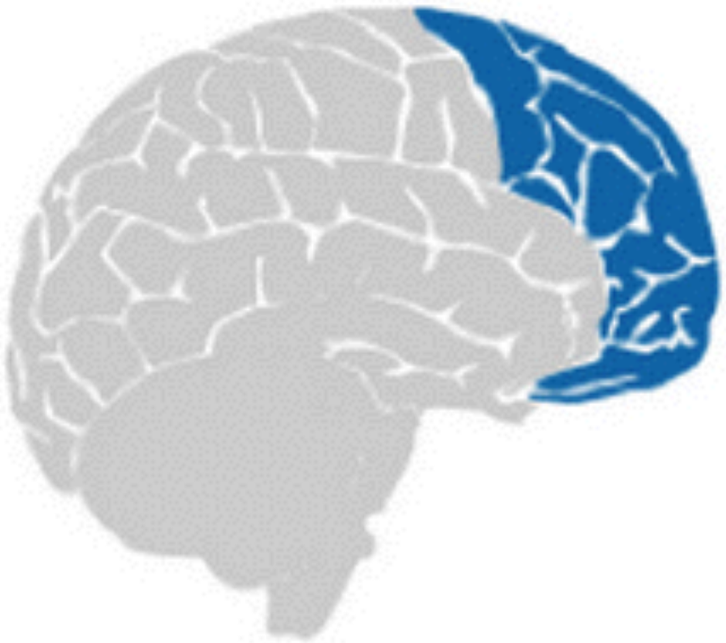
Lay a second large nail on a flat surface and place other nails across this nail, head to head as shown above. Finally, place another nail on top of this assembly, head to tail with the second nail. Carefully pick up the assembly and balance it on the upright nail.

SOLUTION

Strategic Networks

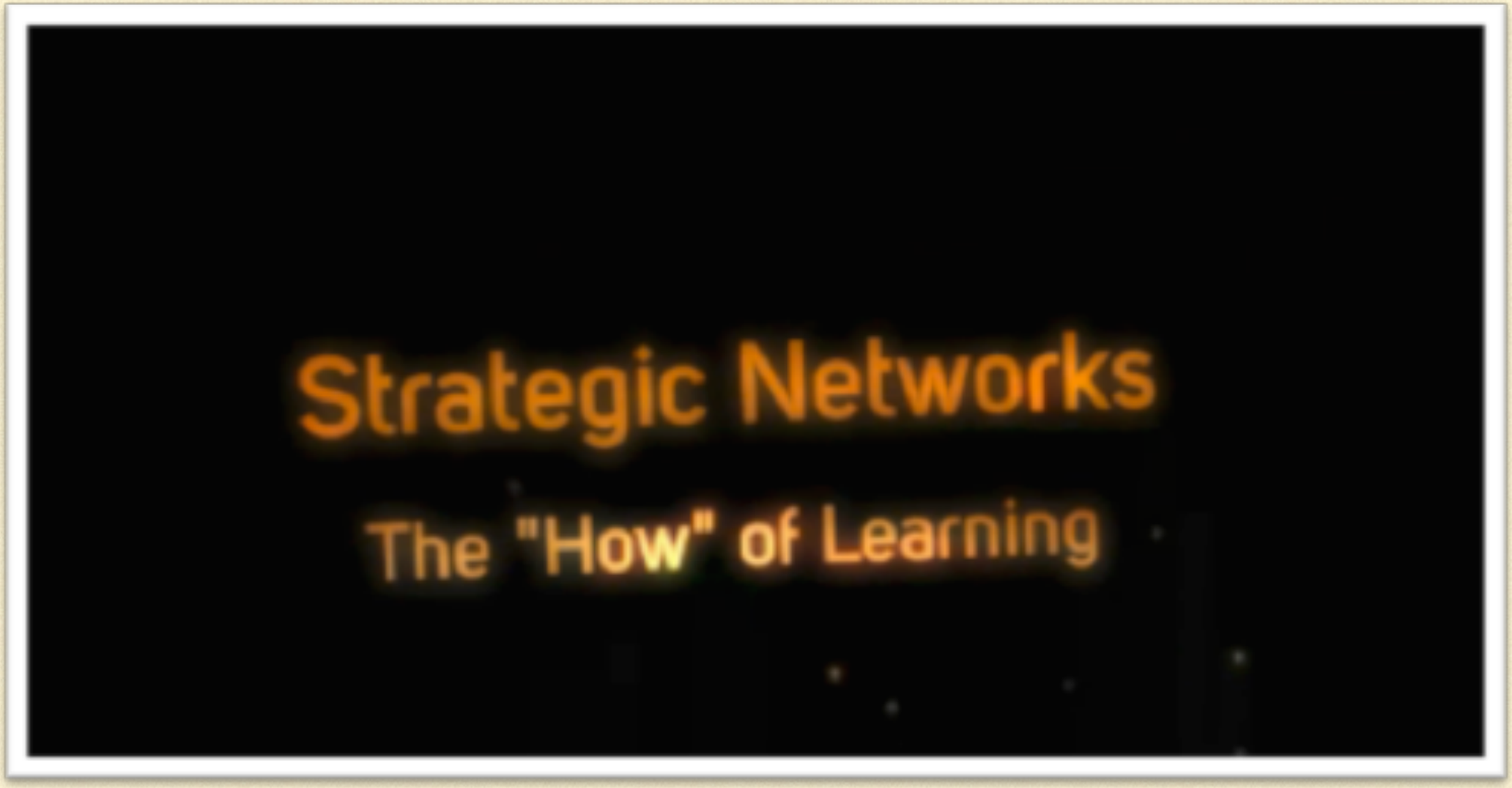
Strategic Networks

The "how" of learning



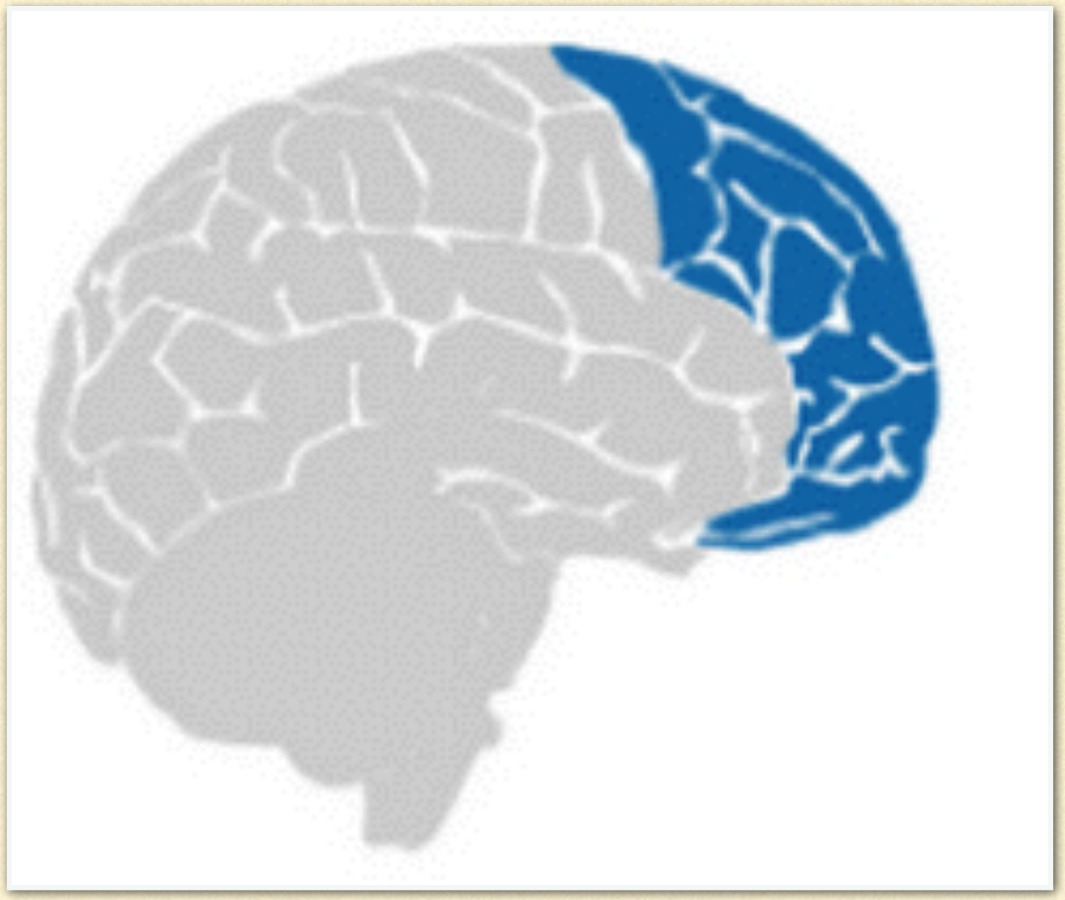
Planning and performing tasks. How we organize and express our ideas. Writing an essay or solving a math problem are strategic tasks.

AURASMA



http://animoto.com/play/wyiavd4dNwEFu76pR51xaA

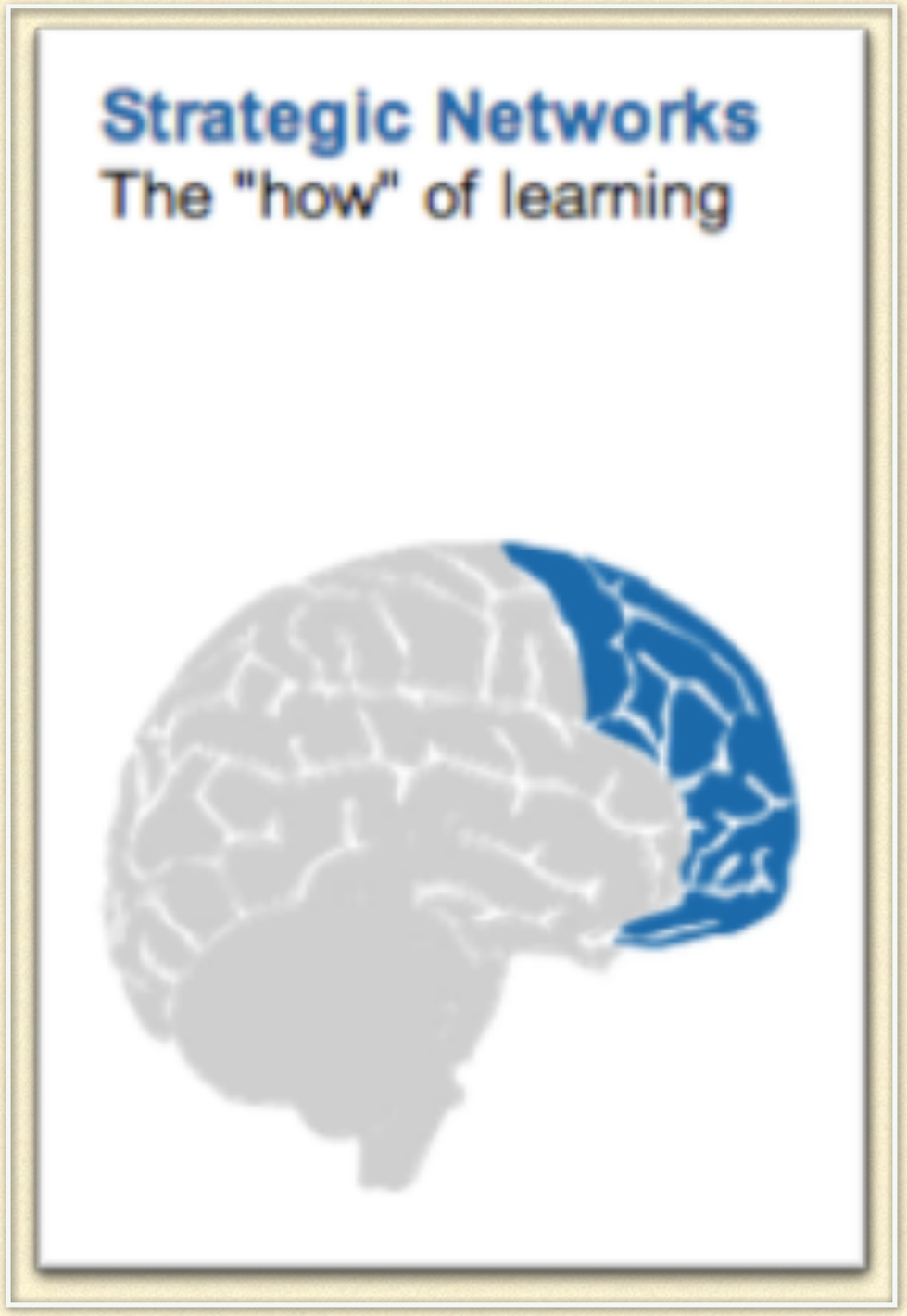
Lend me your frontal lobe



Multiple Means of Action/Expression

How do learners plan and perform tasks?

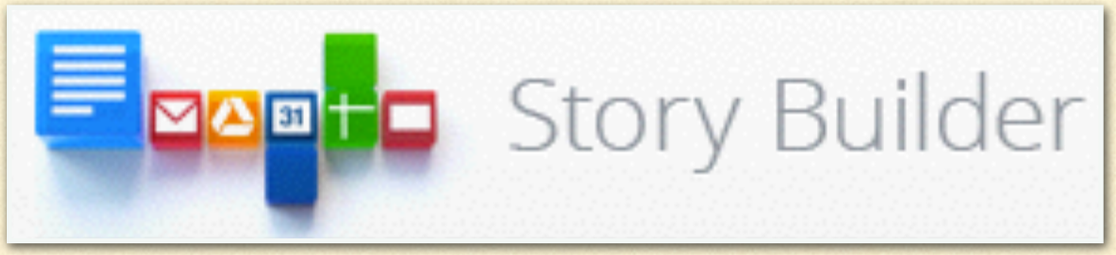
How do learners organize and express their ideas?



AURASMA

“One of my major projects culminates in a brochure informing people about natural disasters. I thought the students enjoyed it and showed many facts in a way that incorporated their art, but apparently it wasn’t the hit I thought it was- I need to find a way to provide options.”-middle school teacher

Examples of Action/Expression



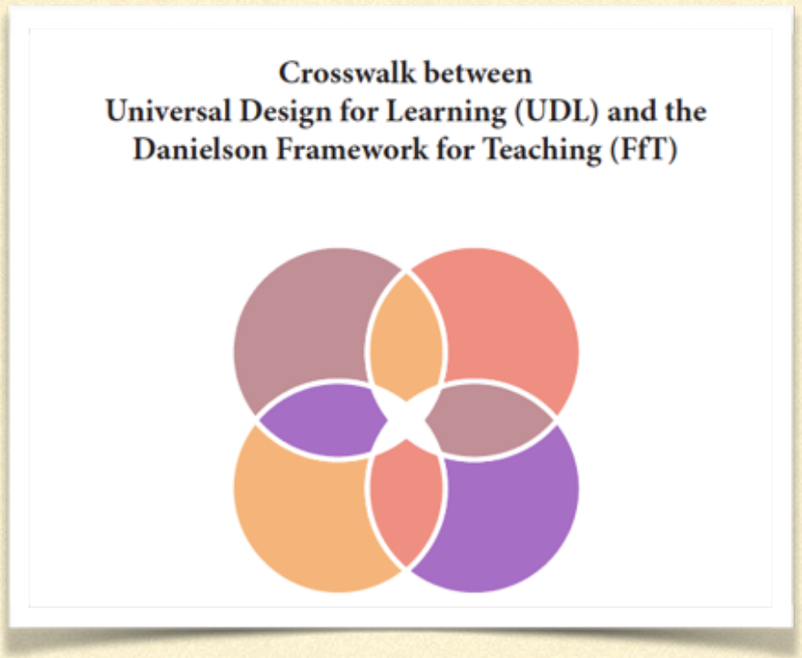
docsstorybuilder.appspot.com

www.animoto.com

http://storybird.com

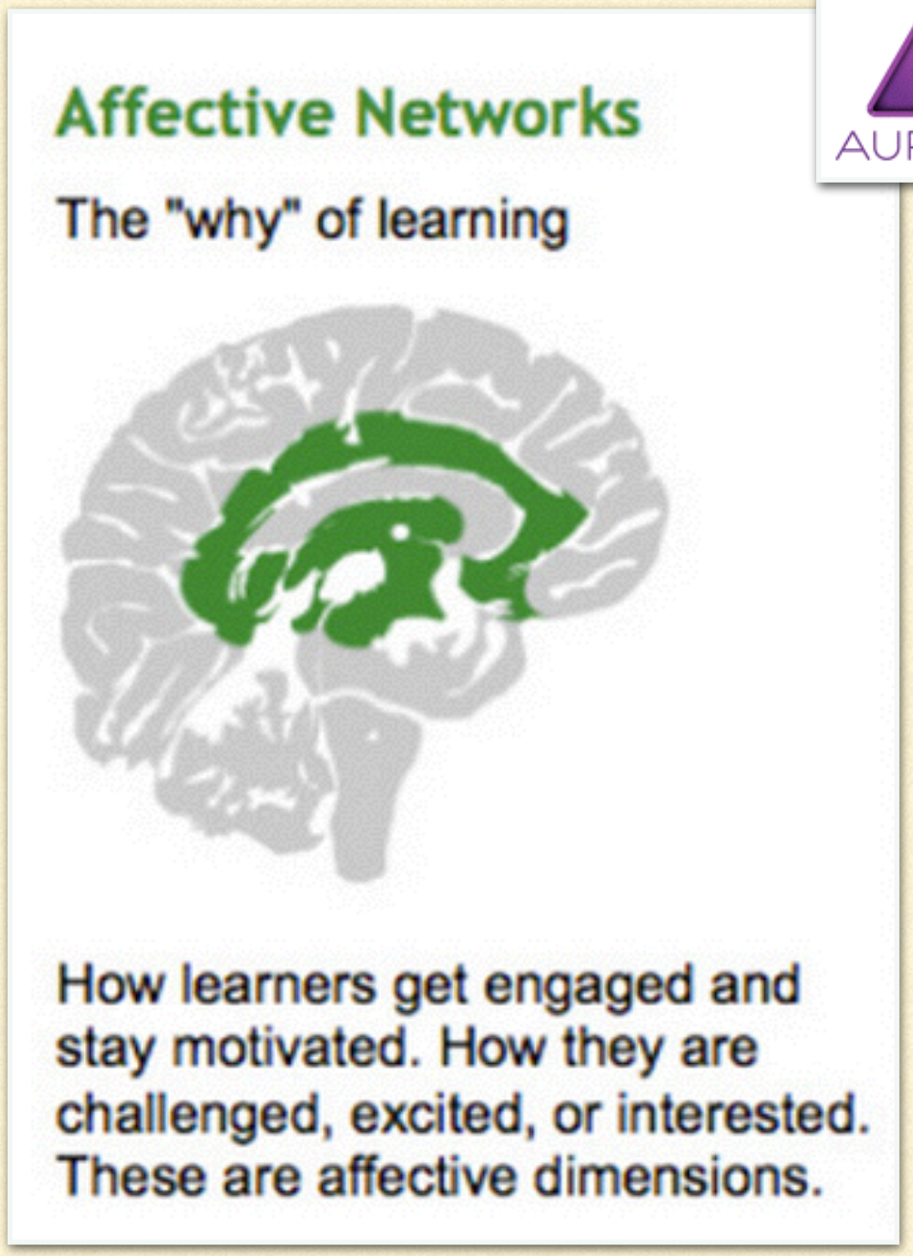
"If you assign a project and get back 30 of the same thing, you didn't assign a project; you assigned a recipe."- *Steve Keinath*

CONNECTING DANIELSON TO UDL: ACTION AND EXPRESSION



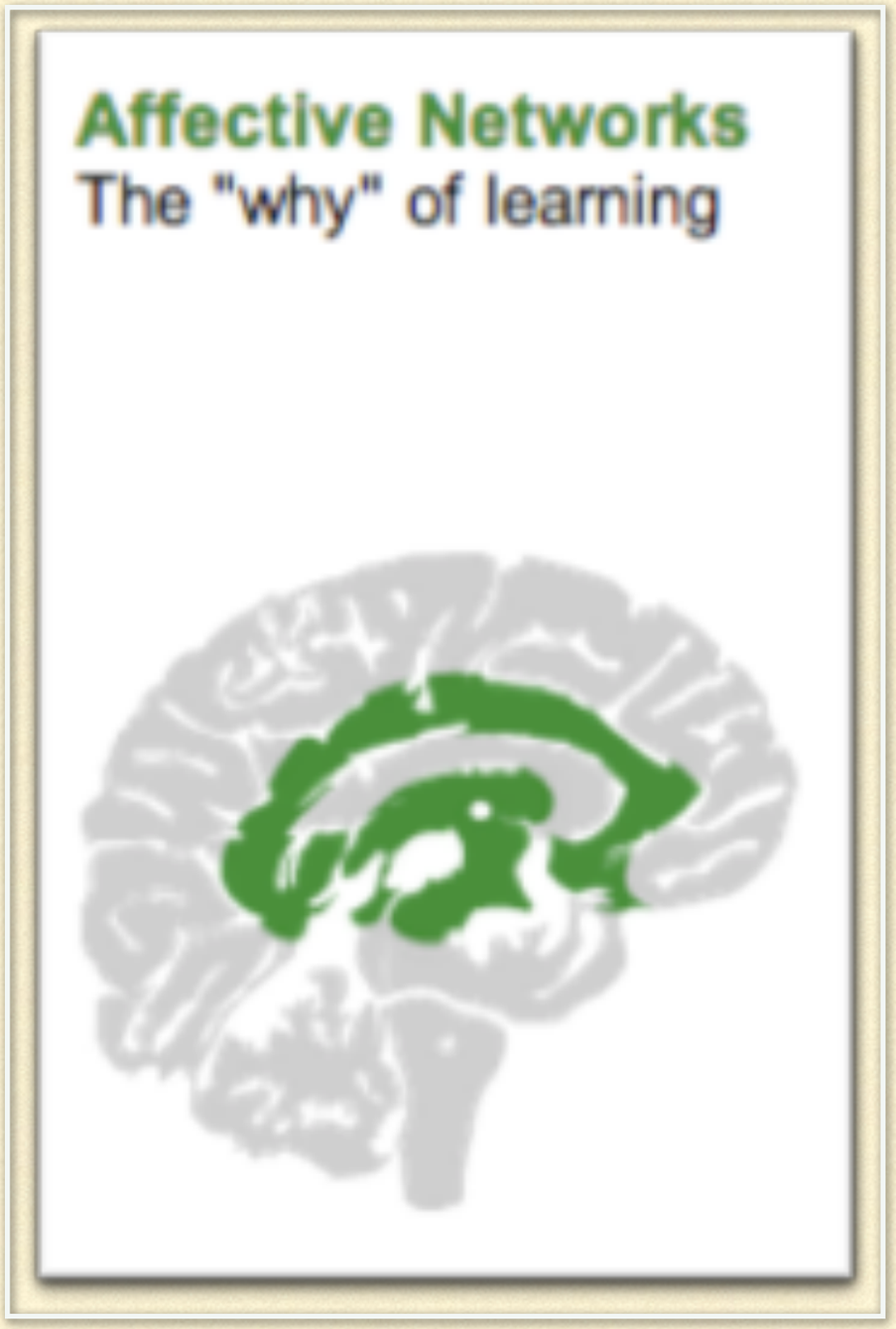
- 1B: Demonstrating Knowledge of Students
- 1C: Setting Instructional Outcomes
- 1E: Designing Coherent Instruction
- 1F: Designing Student Assessments
- 2B: Establishing a Culture for Learning
- 2C: Managing Classroom Procedures
- 2D: Managing Student Behaviors
- 3A: Communicating with Students
- 3B: Using Questioning and Discussion Techniques
- 3C: Engaging Students in Learning

Affective Networks



https://www.youtube.com/watch?v=Zokqjjly77Y

Multiple Means of Engagement



How do learners get engaged and stay motivated?

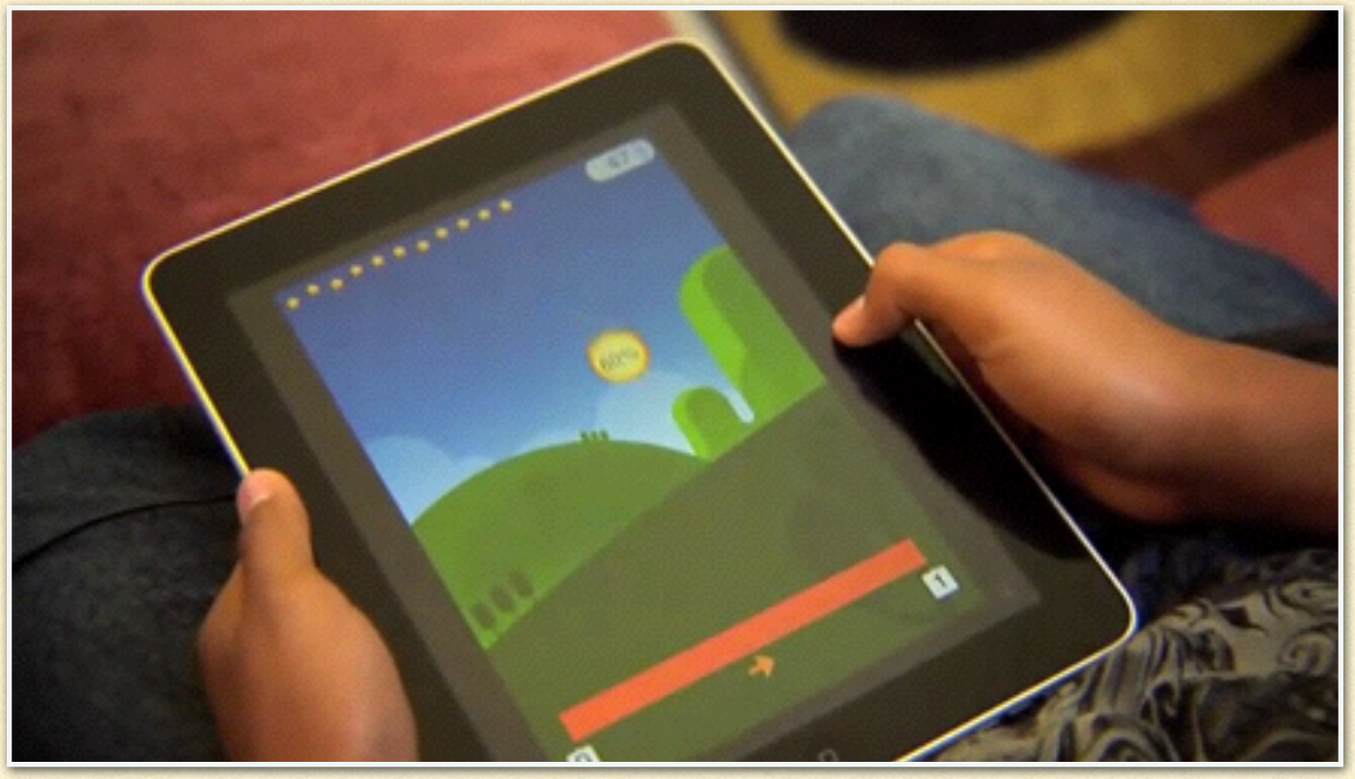
How are students challenged, excited and interested in learning?

"I don't like boring worksheets. I don't like just reading stuff and then doing questions, this doesn't help me learn or remember."

motionMATH

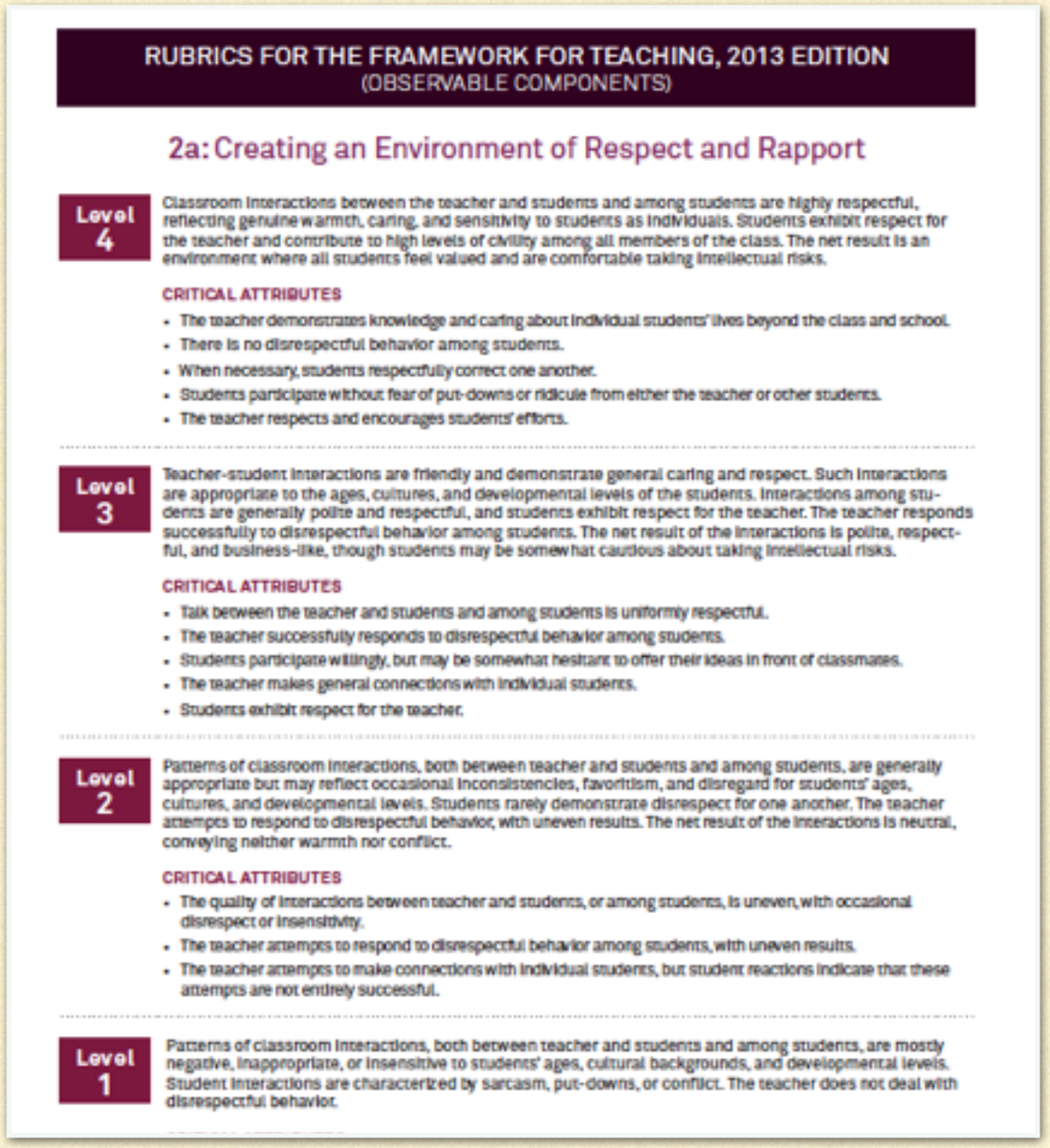
play with numbers!

http://motionmathgames.com



Learn about our upcoming unit in Science!

CONNECTING DANIELSON TO UDL: ENGAGEMENT



RUBRICS FOR THE FRAMEWORK FOR TEACHING, 2013 EDITION
(OBSERVABLE COMPONENTS)

2a: Creating an Environment of Respect and Rapport

Level 4

Classroom interactions between the teacher and students and among students are highly respectful, reflecting genuine warmth, caring, and sensitivity to students as individuals. Students exhibit respect for the teacher and contribute to high levels of civility among all members of the class. The net result is an environment where all students feel valued and are comfortable taking intellectual risks.

CRITICAL ATTRIBUTES

- The teacher demonstrates knowledge and caring about individual students' lives beyond the class and school.
- There is no disrespectful behavior among students.
- When necessary, students respectfully correct one another.
- Students participate without fear of put-downs or ridicule from either the teacher or other students.
- The teacher respects and encourages students' efforts.

Level 3

Teacher-student interactions are friendly and demonstrate general caring and respect. Such interactions are appropriate to the ages, cultures, and developmental levels of the students. Interactions among students are generally polite and respectful, and students exhibit respect for the teacher. The teacher responds successfully to disrespectful behavior among students. The net result of the interactions is polite, respectful, and business-like, though students may be somewhat cautious about taking intellectual risks.

CRITICAL ATTRIBUTES

- Talk between the teacher and students and among students is uniformly respectful.
- The teacher successfully responds to disrespectful behavior among students.
- Students participate willingly, but may be somewhat hesitant to offer their ideas in front of classmates.
- The teacher makes general connections with individual students.
- Students exhibit respect for the teacher.

Level 2

Patterns of classroom interactions, both between teacher and students and among students, are generally appropriate but may reflect occasional inconsistencies, favoritism, and disregard for students' ages, cultures, and developmental levels. Students rarely demonstrate disrespect for one another. The teacher attempts to respond to disrespectful behavior, with uneven results. The net result of the interactions is neutral, conveying neither warmth nor conflict.

CRITICAL ATTRIBUTES

- The quality of interactions between teacher and students, or among students, is uneven, with occasional disrespect or insensitivity.
- The teacher attempts to respond to disrespectful behavior among students, with uneven results.
- The teacher attempts to make connections with individual students, but student reactions indicate that these attempts are not entirely successful.

Level 1

Patterns of classroom interactions, both between teacher and students and among students, are mostly negative, inappropriate, or insensitive to students' ages, cultural backgrounds, and developmental levels. Student interactions are characterized by sarcasm, put-downs, or conflict. The teacher does not deal with disrespectful behavior.

- 2A: Creating an Environment of Respect and Rapport
- 2B: Establishing a Culture for Learning
- 2D: Managing Student Behavior
- 3A: Communicating with Students
- 3C: Engaging Students in Learning

UDL Guidelines

AURASMA

Universal Design for Learning Guidelines

I. Provide Multiple Means of Representation

1: Provide options for perception

1.1 Offer ways of customizing the display of information

1.2 Offer alternatives for auditory information

1.3 Offer alternatives for visual information

2: Provide options for language, mathematical expressions, and symbols

2.1 Clarify vocabulary and symbols

2.2 Clarify syntax and structure

2.3 Support decoding of text, mathematical notation, and symbols

2.4 Promote understanding across languages

2.5 Illustrate through multiple media

3: Provide options for comprehension

3.1 Activate or supply background knowledge

3.2. Highlight patterns, critical features, big ideas, and relationships

3.3 Guide information processing, visualization, and manipulation

3.4 Maximize transfer and generalization

Resourceful, knowledgeable learners

II. Provide Multiple Means of Action and Expression

4: Provide options for physical action

4.1 Vary the methods for response and navigation

4.2 Optimize access to tools and assistive technologies

5: Provide options for expression and communication

5.1 Use multiple media for communication

5.2 Use multiple tools for construction and composition

5.3 Build fluencies with graduated levels of support for practice and performance

6: Provide options for executive functions

6.1 Guide appropriate goal-setting

6.2 Support planning and strategy development

6.3 Facilitate managing information and resources

6.4 Enhance capacity for monitoring progress

Strategic, goal-directed learners

III. Provide Multiple Means of Engagement

7: Provide options for recruiting interest

7.1 Optimize individual choice and autonomy

7.2 Optimize relevance, value, and authenticity

7.3 Minimize threats and distractions

8: Provide options for sustaining effort and persistence

8.1 Heighten salience of goals and objectives

8.2 Vary demands and resources to optimize challenge

8.3 Foster collaboration and community

8.4 Increase mastery-oriented feedback

9: Provide options for self-regulation

9.1 Promote expectations and beliefs that optimize motivation

9.2 Facilitate personal coping skills and strategies

9.3 Develop self-assessment and reflection

Purposeful, motivated learners

UDL Guidelines 2.0 - Organizer with links to examples

	Multiple Means of Representation (WHAT) Recognition—the ways information is presented Provide options for...	Multiple Means of Action and Expression (HOW) Strategic—participation or demonstration of knowledge and skills Provide options for...	Multiple Means of Engagement (WHY) Affective—How students are engaged and motivated Provide options for...
Provide access	Perception—same information different ways; format allows for users to adjust ▪ Offer ways of customizing the display of information ▪ Offer alternatives for auditory information ▪ Offer alternatives for visual information	Physical Action—same goals, different motor, strategic and organizational options ▪ Vary the methods for response and navigation ▪ Optimize access to tools and assistive technologies	Recruiting Interest—same goal, different ways to engage student interest ▪ Optimize individual choice and autonomy ▪ Optimize relevance, value and authenticity ▪ Minimize threats and distractions
Provide guided practice and support	Language, mathematical expressions and symbols—provide alternative representations for clarity and comprehensibility ▪ Clarify vocabulary and symbols ▪ Clarify syntax and structure ▪ Support decoding text, mathematical notation and symbols ▪ Promote understanding across languages ▪ Illustrate through multiple media	Expression and communication—provide learners with different ways to express what they know ▪ Use multiple media for communication ▪ Use multiple tools for construction and composition ▪ Build fluencies with graduated levels of support for practice and performance	Sustaining effort and persistence—help learners develop sustained attention and effort ▪ Heighten salience of goals and objectives ▪ Vary demands and resources to optimize challenge ▪ Foster collaboration and communication ▪ Increase mastery-oriented feedback
Provide independent practice	Comprehension—help learners develop ways to transform information into useable knowledge ▪ Activate or supply background knowledge ▪ Highlight patterns, critical features, big ideas and relationships ▪ Guide information processing, visualization and manipulation ▪ Maximize transfer and generalization	Executive Function—help learners develop deliberate strategies for learning ▪ Guide appropriate goal-setting ▪ Support planning and strategy development ▪ Facilitate managing information and resources ▪ Enhance capacity for monitoring progress	Self-regulation—help learners develop intrinsic abilities to self regulate ▪ Promote expectations and beliefs that optimize motivation ▪ Facilitate personal coping skills and strategies ▪ Develop self-assessment and reflection
	Resourceful, knowledgeable learners	**Strategic goal-directed learners**	**Purposeful, motivated learners**

https://sites.google.com/site/udlguidelinesexamples/

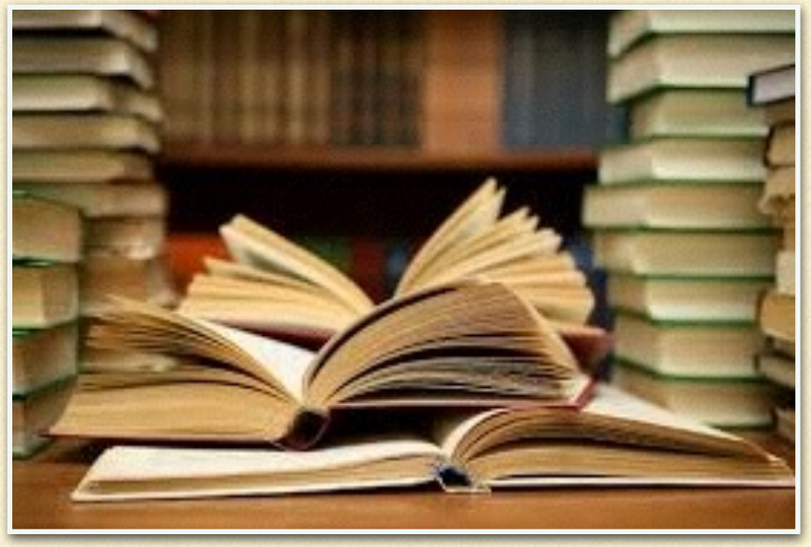
UDL is not just about high tech options, it is about:

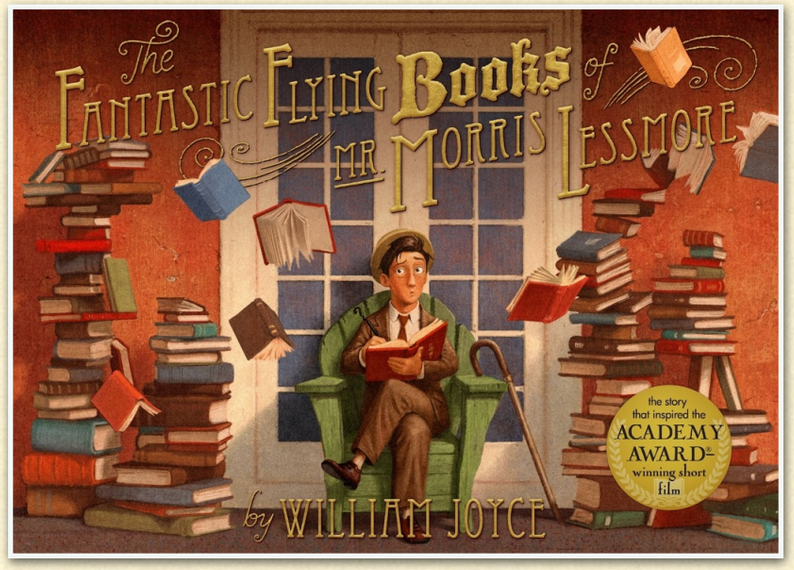
knowing your learners

embedding tools (tech or traditional)

planning a flexible, engaging environment

creating and implementing meaningful tasks





UDL in our lives

http://udlpd.weebly.com/udl-in-our-lives.html


How do I apply this to my practice?
What will you share with colleagues?