Workshop Series for CHIP International
March 10th, 17th, 24th

Review from Day 1:

Learning difficulties arise from a neurological disorder

Some processes than can be affected are:

- Processing
- Memory (working, short-term and long-term memory)
- Attention

Strategies can be used to minimize the impact of disrupted processes; Repetition and frequency play a big role in building new neural pathways

LDs exist throughout an individual's life span and have an impact on non-academic facets of life, including social life, social-emotional well being, self-worth and motivation

The importance of having a growth mindset

Review from Day 2

- Positive teacher relationships with students have the greatest impact on learning.
- Students typically yearn for teacher approval and attention.
- Kids tell us about their needs and wants through behavior.
- Teachers need to be detectives to figure out what student behaviors tell us.
- Misbehaviors can be reduced with:
  - Predictable & consistent routines/expectations in classrooms
  - Providing CONSEQUENCES such as praise when students are successful (success breeds success)
  - Considering ANTECEDENTS (tasks) very carefully
- When teachers praise students for good behavior or work, celebrate what students are DOING, effort, strategies, growth (Wow, you did 5 more exercises than yesterday!)
- When planning lessons or tasks, teachers need to consider student interests, effort required, reducing volume, giving choices, pre-correcting and pre-teaching required skills

Universal Design for Learning

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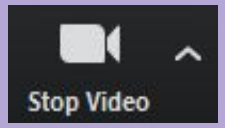
Goals for Day 3:

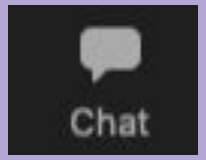
Participants will:

- Explore learner variability
- Learn principles of Universal Design
- Practice applying principles of Universal Design to a lesson plan

Our Norms and Tools for Today

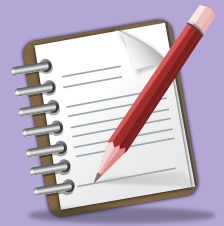


Videos on, if possible



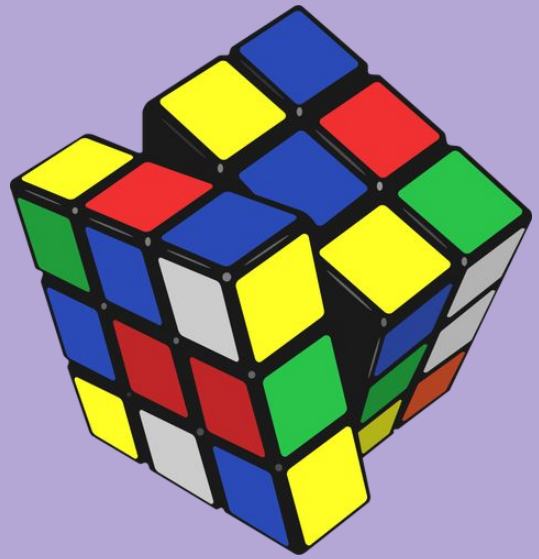
Use chat for responses and questions

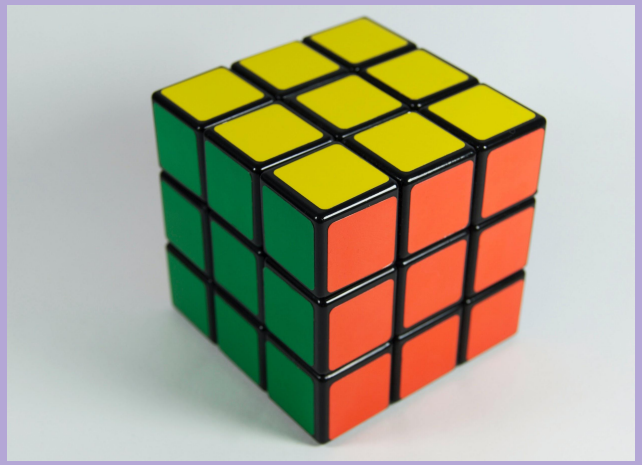
Thinking/Reflection



Individual Responses

Group discussions





Familiar with a Rubik’s cube?

Some examples

R-Cube Competition

Our job is to coach our school's R-Cube team. We need to create a plan to bring success to the team.

Our team has 10 1-hour practice sessions before the competition on April 30th, 2021

In the final tournament our R-Cube Team will **score points** by

- Solving the Cube in the fastest time
- Demonstrating Inclusivity in Team Work (Everyone must contribute in an equitable way)

Process

As coaches, here are the steps to follow:

Step 1 - Get to Know your Team

Step 2 - Define Measure of Success for the Team

Step 3 - Determine Design for Cube - Modify Cube

Step 4 - Plan for Training Sessions

Our team members

AFUA

- Has colorblindness
- Loves to be in charge and keep order
- Needs to always be moving - Attention while sitting fades after 5 minutes
- Has always wanted to play with a cube, but has not until this experience

MARY

- Processes at a very slow speed and struggles to find her words
- Singing is calming and helps words come more fluently
- Has difficulty gripping and manipulating the cube

KWESI

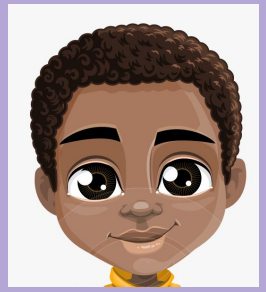
- Admired by peers for being fair and advocates for the needs of friends
- Afraid of failure
- Performs at a solid average in every academic area - Though always worries he is failing - Tears come easily
- Shows great promise in Speaking and Debate
- Little R-cube experience, because he has given up when he has not been able to solve it right away

ESI

- Is extremely shy
- Whispers only to Afua
- Always has a cube in his hands and is always trying to solve it
- Has self-reported that he has never solved it to date - though Afua reports that he solves it easily.

GRACE

- Very high in all Literacy areas, except listening (low comprehension)
- Often stares into space
- Has difficulty focusing on anything spoken - Has great difficulty with anything beyond one step verbal instructions
- Easily loses track of strategies when solving the cube
- Has occasionally played with a rubik's cube.



MICHAEL

- Loves Math
- Shows high abilities in every academic area
- Is known to solve the rubik's cube quickly - Always has a cube in his hand
- Is very talkative and talks fast
- Hates to feel he has more work or responsibility than others - Shuts down when he feels he is being overburdened
- Gets bored and tunes out when not challenged

Thinking about pairs

Avoid Grace (poor listening comprehension) and Michael (fast talker) together

Esi and Afua have a good relationship

Our Measures of Success

(keep in mind the competition scoring rules)

Everyone is involved

Everyone has fun

Everyone needs to work quickly

Everyone will Participate by:

motivating each other

Showing patience

manipulating the cube

Encourage students to stay focused and follow directions

Our plan for modifying the cube

Get a different size rubix cube (smaller or bigger)

Add different tactile stickers (something that sticks out to represent different shapes or letters or symbols)

Give more time to practice (eg. more sessions)

Give shorter sessions to practice

Give the students with less experience more time to practice

Give appreciation for doing one side at a time

Our plan for training sessions

Session 1	Experienced students can demonstrate how the rubix cube works to inexperienced students (in pairs/groups)
Session 2	Teach strategy to complete first side (side/shape) and write the strategy on the board/paper.
Session 3	Students to practice in turns with time limit. Teach kids to encourage each other. Teacher to praise.
Session 4	Teach strategy to complete 2nd side (side/shape) and write the strategy on the board/paper.
Session 5	Students to practice in turns with time limit. Teach kids to encourage each other. Teacher to praise.
Session 6	Teach strategy to complete 3rd side (side/shape) and write the strategy on the board/paper.
Session 7	Students to practice in turns with time limit. Teach kids to encourage each other. Teacher to praise.
Session 8	Teach strategy to complete 4th side (side/shape) and write the strategy on the board/paper. Teacher to praise.
Session 9	Teach strategy to complete 5th side (side/shape) and write the strategy on the board/paper. Teacher to praise.
Session 10	Teach strategy to complete 6th side (side/shape) and write the strategy on the board/paper. Teacher to praise.

Reflection on Activity

How did you feel about this activity?

How did you use your

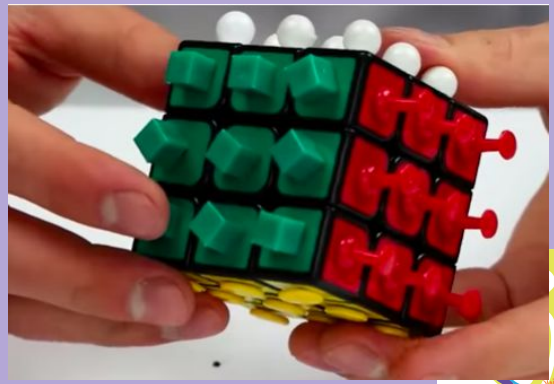
- Heart?
- Mind?
- Growth mindset?

What would you say to Kwesi's mom if she voiced concern that Afua was pulling the team down?

Some possible adaptations

Rubik's Cube for the Blind

Rubik's Cube for Blind People | DIY

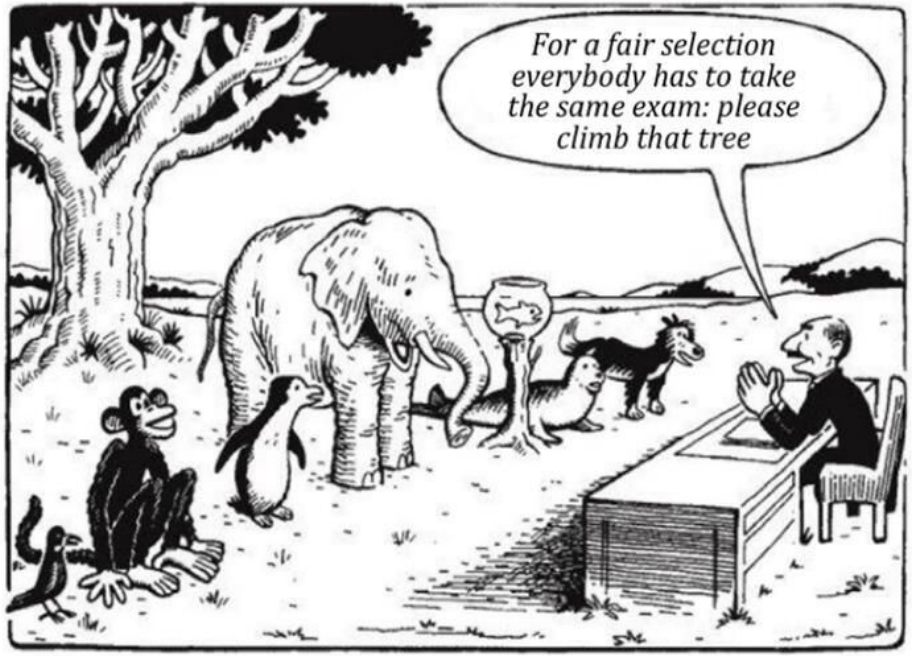


Inclusion - Serving All Students

In an inclusive environment, what would you expect to

- See? Print rich environment, lots of materials
- Hear? Collaborative encouragement and individual praise, successful pairing
- Feel? Everyone is included

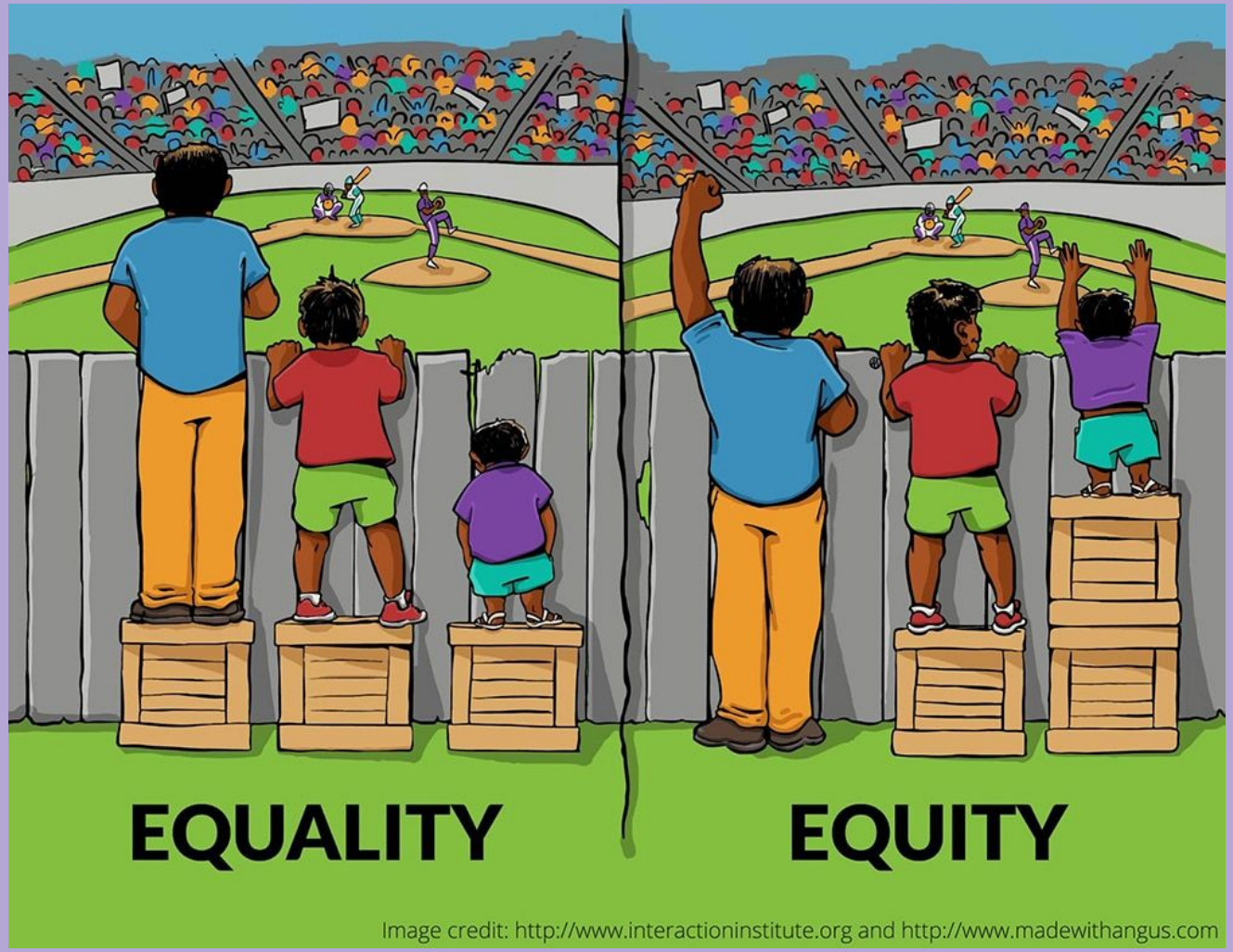
Universal Design



Our Education System

"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid."

- Albert Einstein



To treat all children the same way is to treat them unequally.

Different students have different learning needs; they have a right to have their needs met…" (Mel Levine, 2002)

EQUALITY VERSUS EQUITY

In the first image, it is assumed that everyone will benefit from the same supports. They are being treated equally.

In the second image, individuals are given different supports to make it possible for them to have equal access to the game. They are being treated equitably.

In the third image, all three can see the game without any supports or accommodations because the cause of the inequity was addressed. The systemic barrier has been removed.

Robson Square, Vancouver,
British Columbia

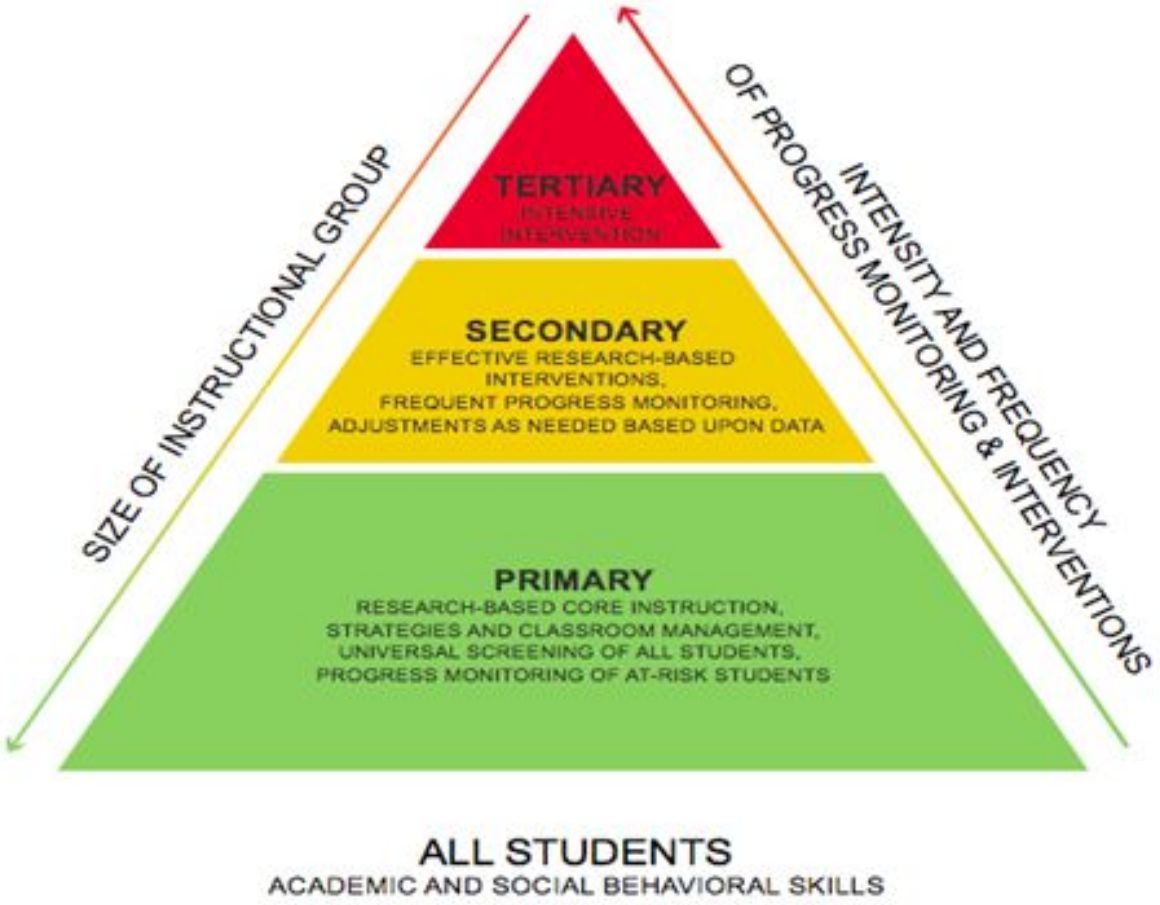
One size does not fit all

~~Access~~ + Support + Challenge

All students should be able to access all the content, materials and activities.

Some students will need support or scaffolds to help them with access

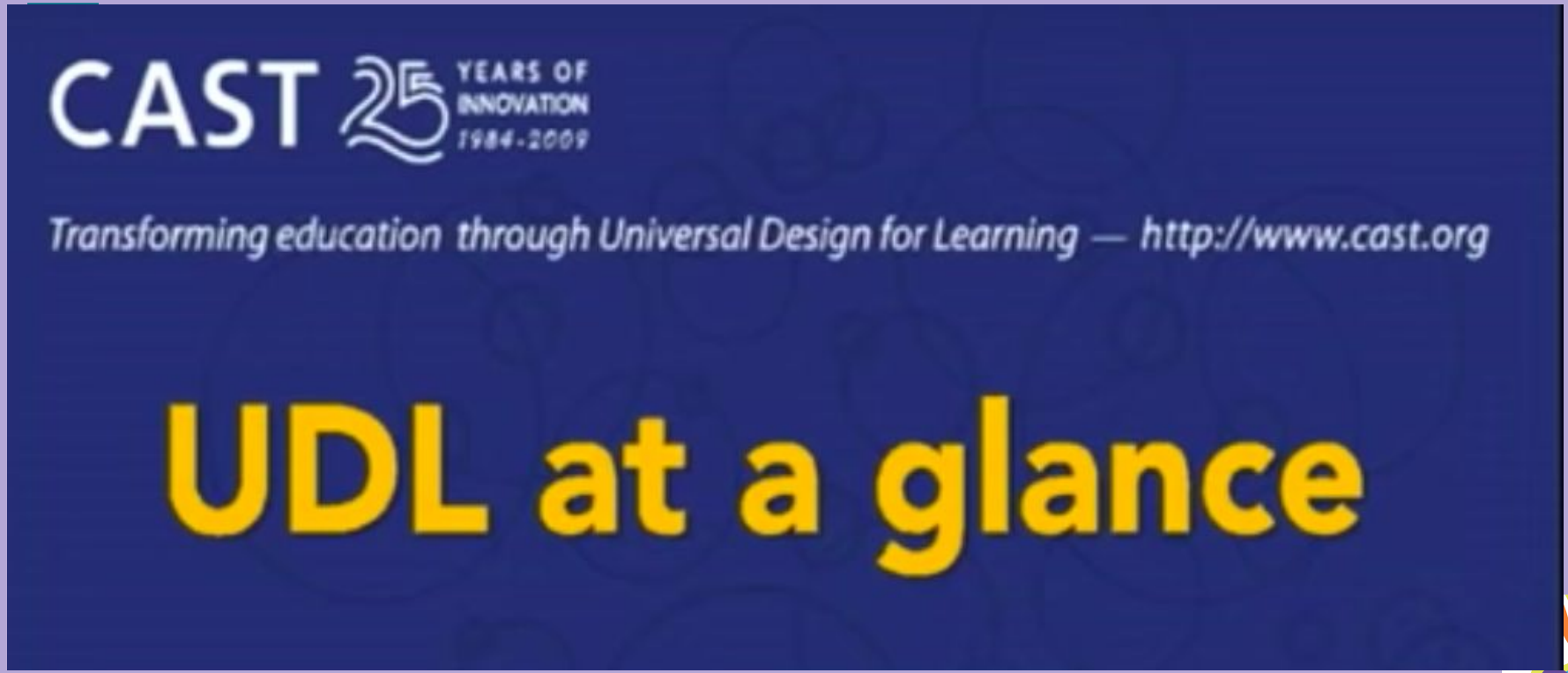
Some students will need extension because they already know the material or are excited to learn more



Response to Intervention

https://cecblog.typepad.com/.a/6a00d83452098b69e201

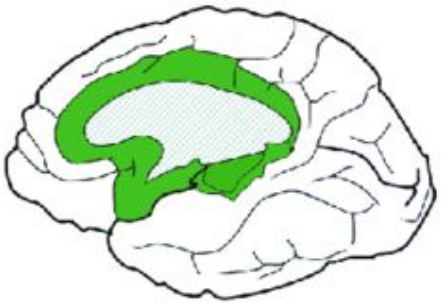
What is Universal Design?



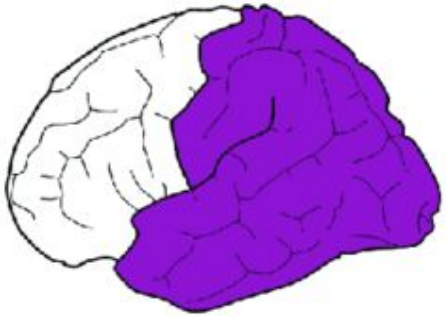
https://www.cast.org/impact/universal-design-for-learning-udl

Address Learning Variability Across Neural Networks...

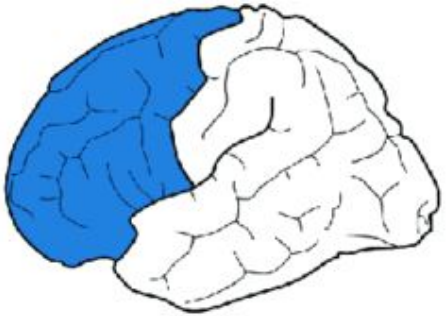
Affective Networks
The WHY of learning



Recognition Networks
The WHAT of learning



Strategic Networks
The HOW of learning



Engagement

Representation

Process

Address L

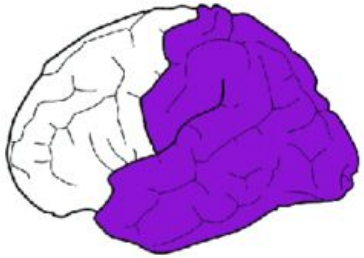
Affective Networks
The WHY of learning

...by Informing the D

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

Learning Variability Across I

Recognition Networks
The WHAT of learning



Design of Multiple, Flexible

Representation
Provide options for comprehension
Provide options for mathematical expressions, and symbols
Provide options for perception

Neural Networks...

Strategic Networks
The HOW of learning

Opportunities to Learn

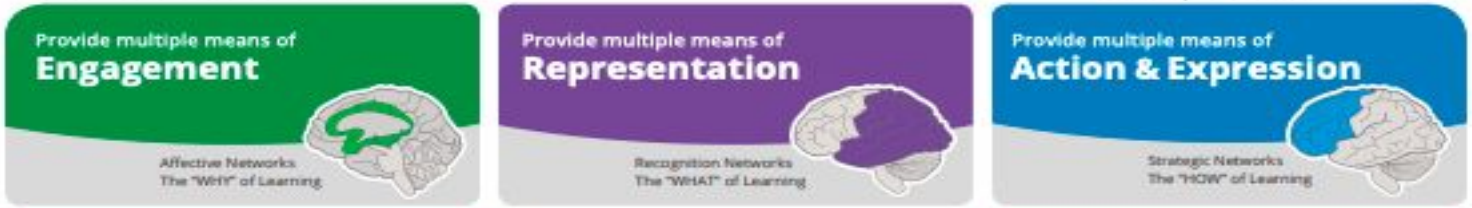
Action and Expression
Provide options for executive function
Provide options for expression and communication
Provide options for physical action

Engagement	Representation	Action and Expression
Provide options for self-regulation	Provide options for comprehension	Provide options for executive function
Provide options for sustaining effort and persistence	Provide options for mathematical expressions, and symbols	Provide options for expression and communication
Provide options for recruiting interest	Provide options for perception	Provide options for physical action

https://www.cast.org/impact/universal-design-for-learning-udl

The Universal Design for Learning Guidelines

CAST | Until learning has no limits



Access

Provide options for Recruiting Interest

- Optimize individual choice and autonomy
- Optimize relevance, value, and authenticity
- Minimize threats and distractions

Provide options for Perception

- Offer ways of customizing the display of information
- Offer alternatives for auditory information
- Offer alternatives for visual information

Provide options for Physical Action

- Vary the methods for response and navigation
- Optimize access to tools and assistive technologies

Build

Provide options for Sustaining Effort & Persistence

- Heighten salience of goals and objectives
- Vary demands and resources to optimize challenge
- Foster collaboration and community
- Increase mastery-oriented feedback

Provide options for Language & Symbols

- Clarify vocabulary and symbols
- Clarify syntax and structure
- Support decoding of text, mathematical notation, and symbols
- Promote understanding across languages
- Illustrate through multiple media

Provide options for Expression & Communication

- Use multiple media for communication
- Use multiple tools for construction and composition
- Build fluencies with graduated levels of support for practice and performance

Internalize

Provide options for Self Regulation

- Promote expectations and beliefs that optimize motivation
- Facilitate personal coping skills and strategies
- Develop self-assessment and reflection

Provide options for Comprehension

- Activate or supply background knowledge
- Highlight patterns, critical features, big ideas, and relationships
- Guide information processing and visualization
- Maximize transfer and generalization

Provide options for Executive Functions

- Guide appropriate goal-setting
- Support planning and strategy development
- Facilitate managing information and resources
- Enhance capacity for monitoring progress

Goal

Expert learners who are...

Purposeful & Motivated | **Resourceful & Knowledgeable** | **Strategic & Goal-Directed**

Group Activity

Compare and contrast 2 lesson plans

Lesson Plan 1 and Lesson Plan 2

UDL principles you noticed in the two lesson plans

Representation	Textbook (audio and digital) Pictures Videos Models
Engagement	Reading Discussion Relate to own life Excavation kit Outside activity
Action and Expression	Presentation about burial customs Presentation in any format

Individual Activity

For a lesson you recently taught, or for one you are about to teach, think about the principles of UDL

- Multiple means of engagement
- Multiple means of representation
- Multiple means of action and expression

How can you adapt your lesson to better follow the UDL guidelines?

Extra Resources

For further exploration:
The Myth of Average

UDL Lesson Plan examples:
Grade 2 Math
Grade 4 Language Arts
Grade 6 Science
Science Lesson video analysis
Science Lessons with UDL considerations - Various Grades

For further development:
UDL Online Course - Iris Module