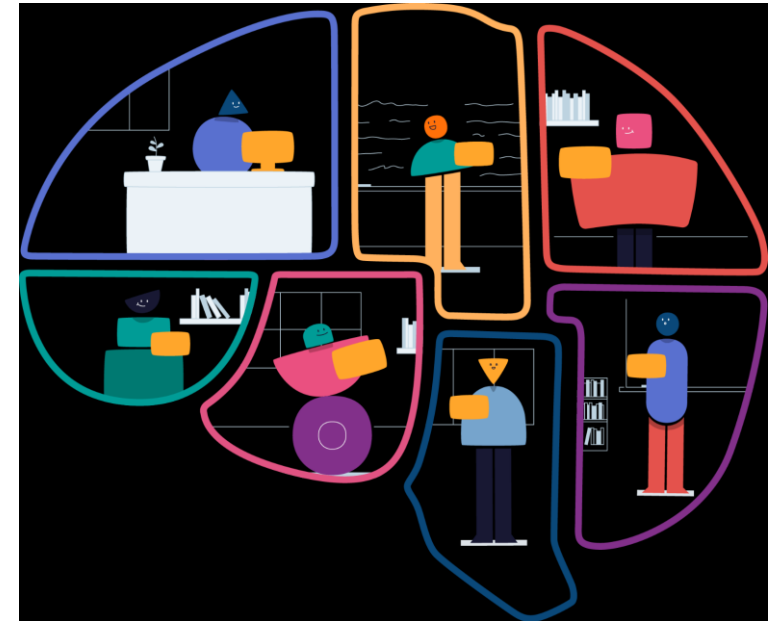


# Implementing UDL in Your Classroom Online or In-person



Aimee Julian, Director

Illinois Center for Specialized Professional Support

Sarah Goldammer, Educational Training Specialist

Southern Illinois Professional Development Center



Southern Illinois Professional  
Development Center



Illinois Center for Specialized Professional Support,  
Illinois State University, College of Education



What is your role or what do you teach?

1-4 How well do you know UDL?

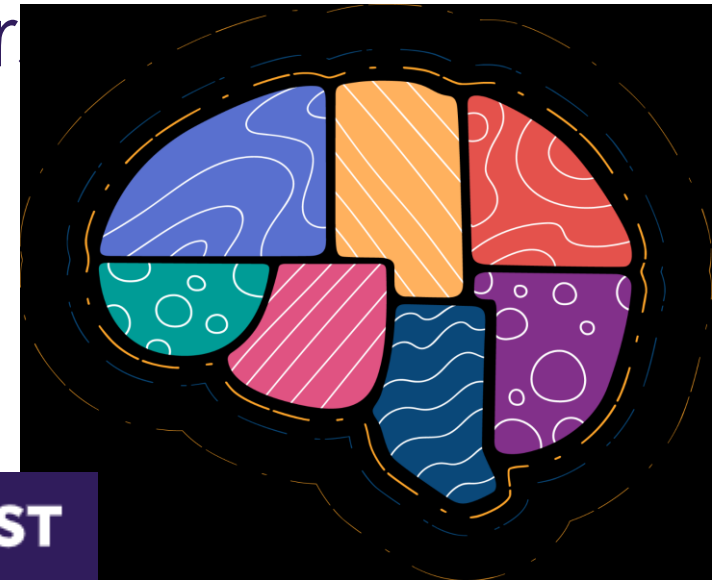
1- Not at All

2- Somewhat

3- Had a Training or two

4- I could write book

Universal Design for Learning (UDL) is an approach to improve and optimize teaching and learning for *all* by setting clear, rigorous goals; anticipating barriers; and proactively designing to minimize those barriers.



# Our Learning Environment

## Self-Regulate

Sit anywhere  
Stand or walk  
Eat anytime  
Fidget

## Perceive

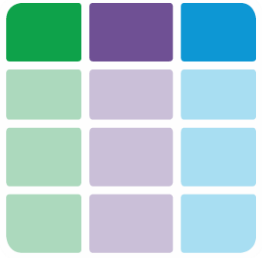
Screen shared  
slides  
Personal copy of  
slides  
Captions

## Act

Agenda  
Chat Box  
Raise Hand  
Doodle

# Our Goals for Today

- Show that the barrier exist in the environment, not the learners.
- Explore the concept and implications of variability.
- Develop foundational understanding of the structure and design of the UDL Guidelines for online or in-person instruction.
- Provide strategies that can be implemented today to embrace and implement UDL in your instruction



# UDL Core Concepts

## The Why



### Architecture



### Neuroscience

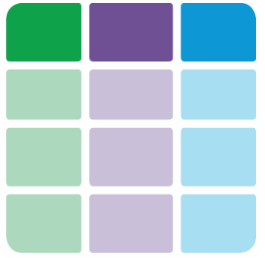


### Learning



**Engagement in Practice:** Sustain effort and persistence

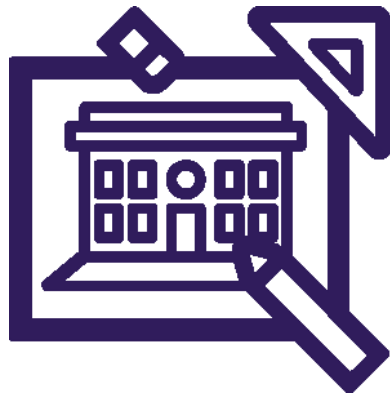
**Engagement in Practice:** Optimize relevance, value, and authenticity



# UDL Core Concepts

## The Why

Architecture



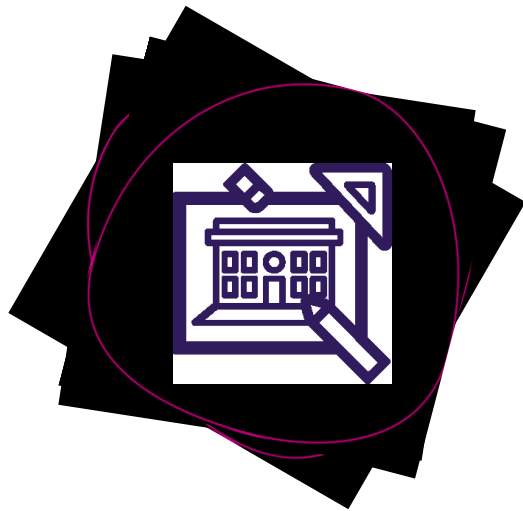
Neuroscience



Learning



- Universal Design in **architecture** is an approach to design that works to ensure products and buildings can be **used by virtually anyone**, regardless of their level of ability or disability.





# Architecture: Retrofitting for Access



# Architecture: Universal Design (UD)

## Reflect and Share:

Who will use the ramp?

Why are the handrails important?

Who else may benefit from this design?





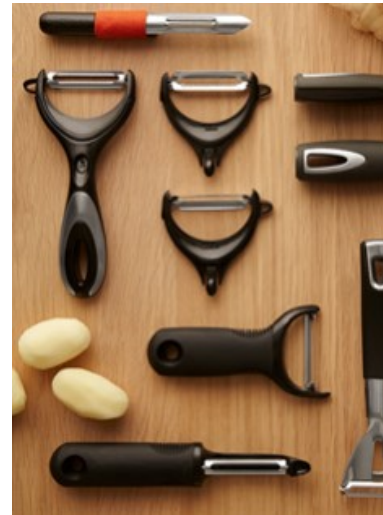
# Universal Design: Necessary for some, good for all.



automatic doors



curb cuts



easy grip tools



closed  
captioning

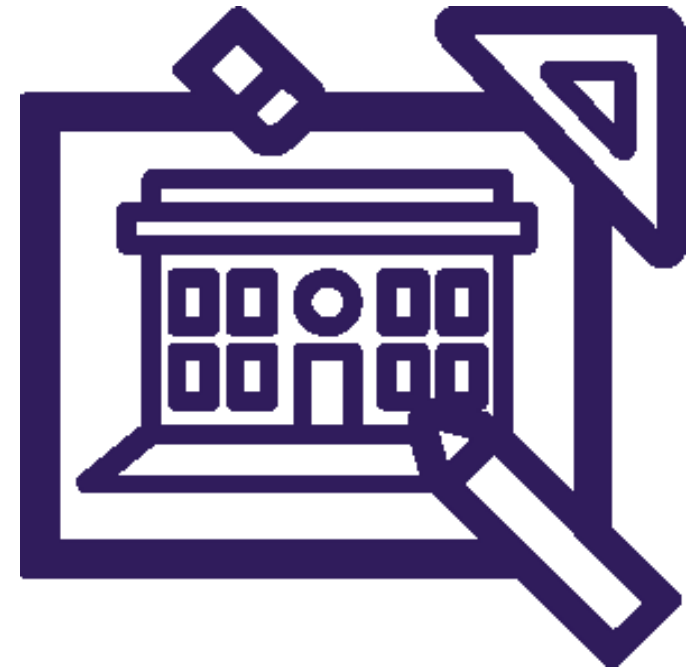
# Equality, Equity, & UDL



UDL Core Concepts:

# The Barrier is in the Environment

The barrier is in the environment,  
not the learner.

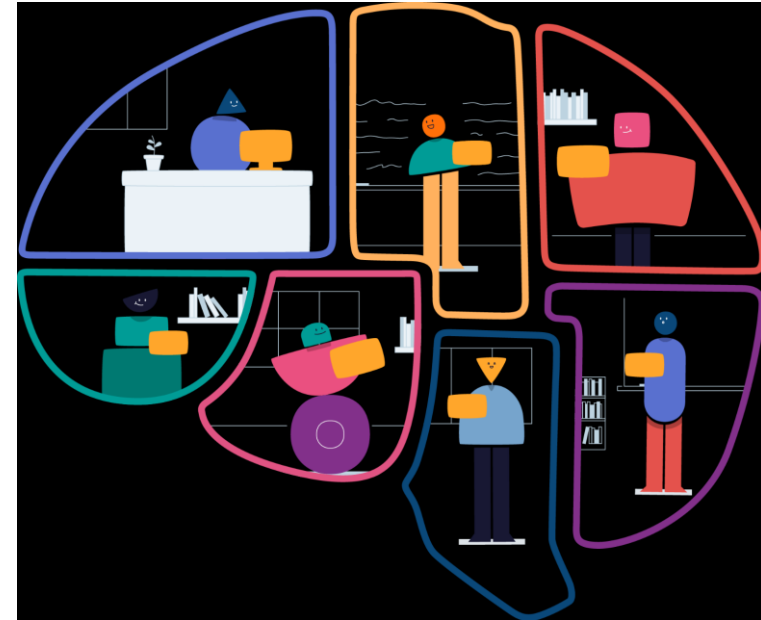


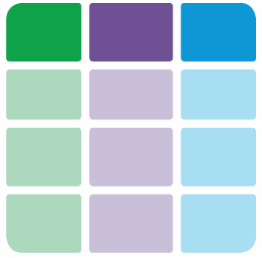
# Reflect:

What **resonates** so far?

What **questions** do you have?

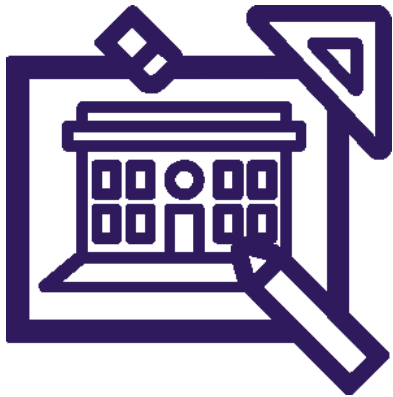
What might work in your **context**?





# The UDL Core Concepts: Neuroscience

The barrier is in the environment, not the learner.



## Neuroscience



## Learning



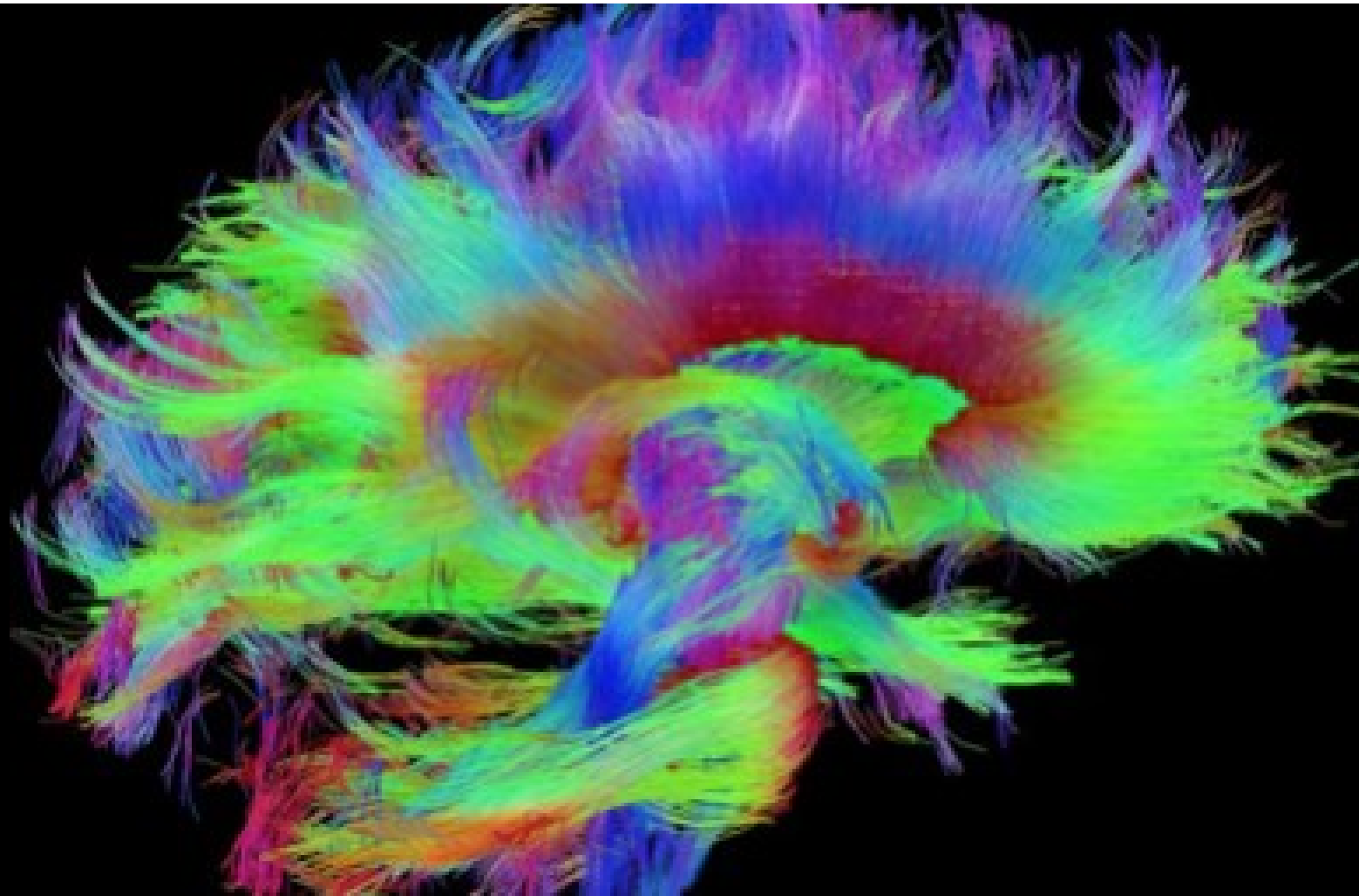
# The Old View of the Brain







Neuroscience now  
**Variability is the norm.**





# Watch Together

## *The Myth of Average*

Air Force Analogy (0:23)

Jagged Learning Profiles (6:40)

Simple Solutions in a School Setting (11:00)

Our Charge Going Forward (15:30)



# Read Independently

[UDL Learning and the Brain](#)

or

[Learner Variability is the Rule, not the Exception](#)

# “The Myth of Average”

**Air Force Analogy**  
(0:23)

**Jagged Learning Profiles** (6:40)

**Simple Solutions in a School Setting** (11:00)

**Our Charge Going Forward** (15:30)



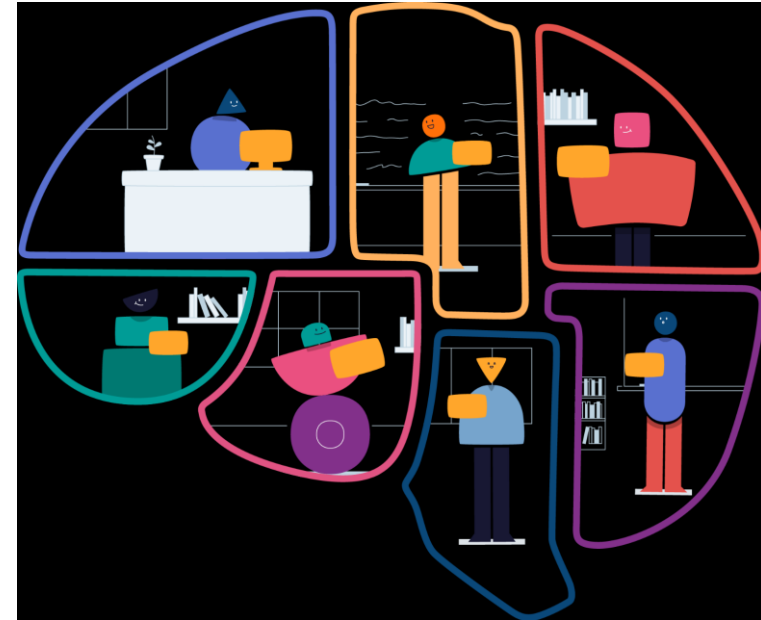
# Reflect:

What **resonates** so far?

What **questions** do you have?

What might work in your **context**?

Where can you use what we have discussed?



Understanding  
Variability:

The Dinner  
Party Analogy

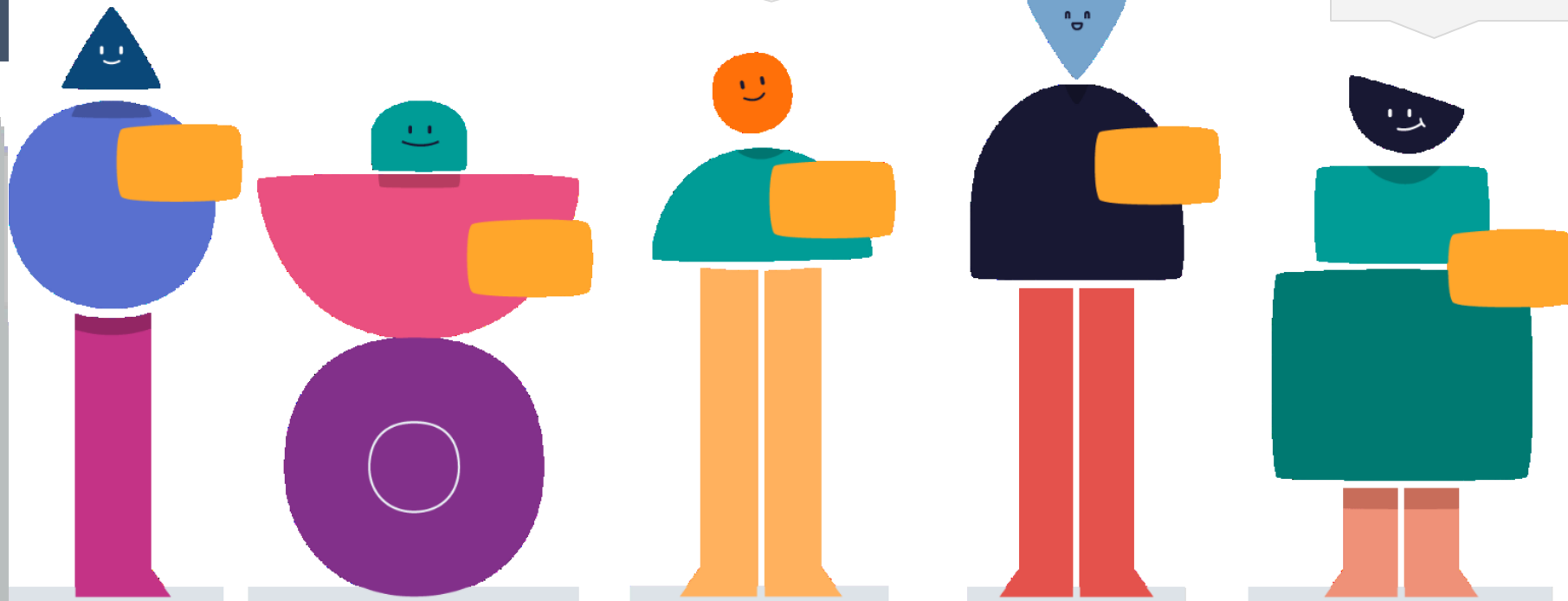


# The Dinner Party

gluten-free

lactose intolerant

vegetarian





# The Dinner Party Analogy: Proactive Menu Design



# Choice is not the same as variety

**M**

**Tu**

**W**

**Th**

**F**

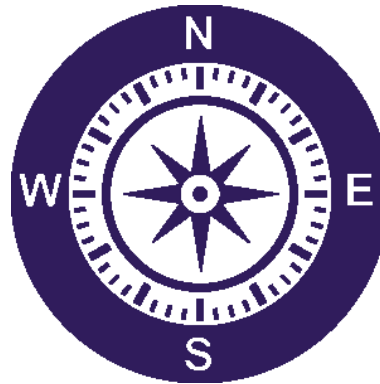




# Variability is Contextual

**North:** Likes to **take action**, try things, and **plunge in**.

**West:** Likes to know the **who, what, when, where, how**, and why before acting.



**East:** Likes to look at the **big picture** and the possibilities before acting.

**South:** Likes to consider **everyone's feelings** and **hear all voices** before acting.

# Scenario 1

You are grocery shopping in a market you know well.

**North:** Plunge in

**East:** Look at the big picture

**South:** Consider feelings

**West:** Pay attention to detail



# Scenario 2

You are planning a party for your best friend's birthday.

**North:** Plunge in

**East:** Look at the big picture

**South:** Consider feelings

**West:** Pay attention to detail





# Scenario 3

You are on a committee that is deciding which curriculum to purchase.

**North:** Plunge in

**East:** Look at the big picture

**South:** Consider feelings

**West:** Pay attention to detail



UDL Core Concepts:

# Variability is the norm

**Variability** is the norm.



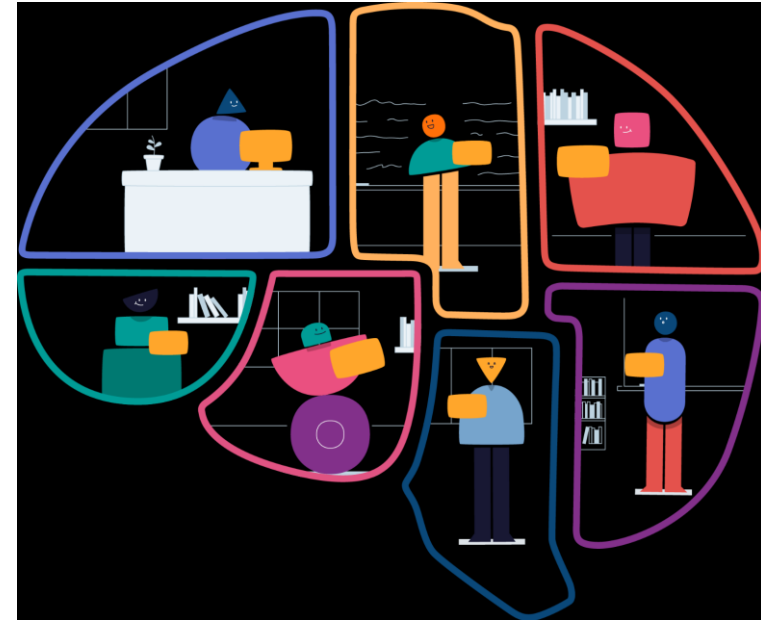
# Reflect:

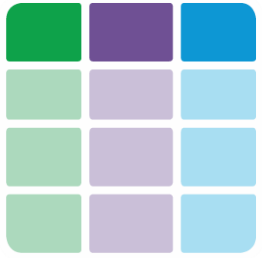
What **resonates** so far?

What **questions** do you have?

What might work in your **context**

What might this look like in your classroom?





# The UDL Core Concepts: Learning

The barrier is in the environment, not the learner.



Variability is the norm.



## Learning



UDL Core Concepts:

# We can design for variability

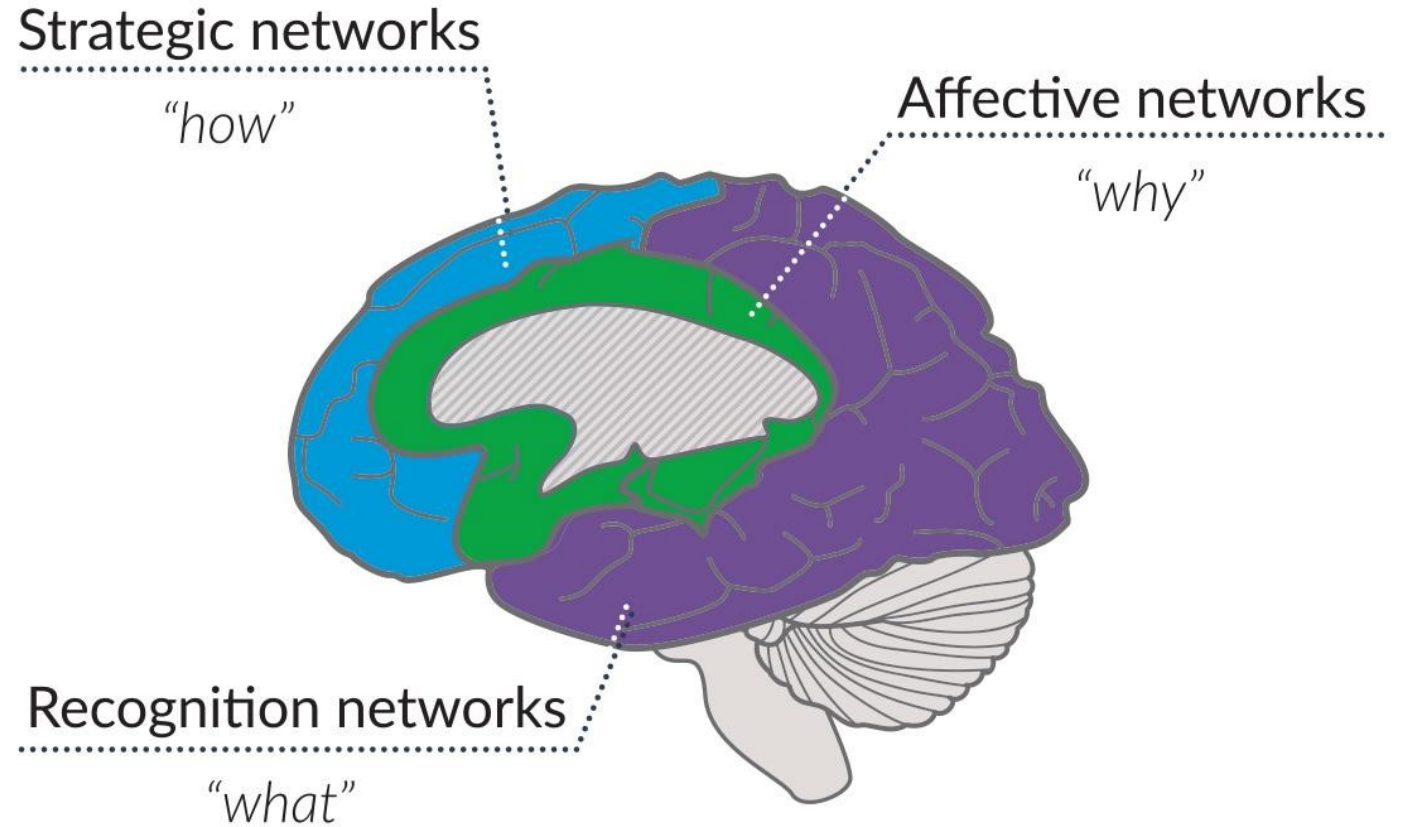
**Variability is predictable**  
in learning and can be  
designed for.





# UDL & The Learning Brain

- There is no average brain
- The brain has incredible plasticity
- Goals drive the nervous system



# UDL Guidelines Representations

[PDF version](#) of the  
Guidelines




[Online, interactive](#)  
[version](#) of the  
Guidelines

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

**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**



# Research and the UDL Guidelines

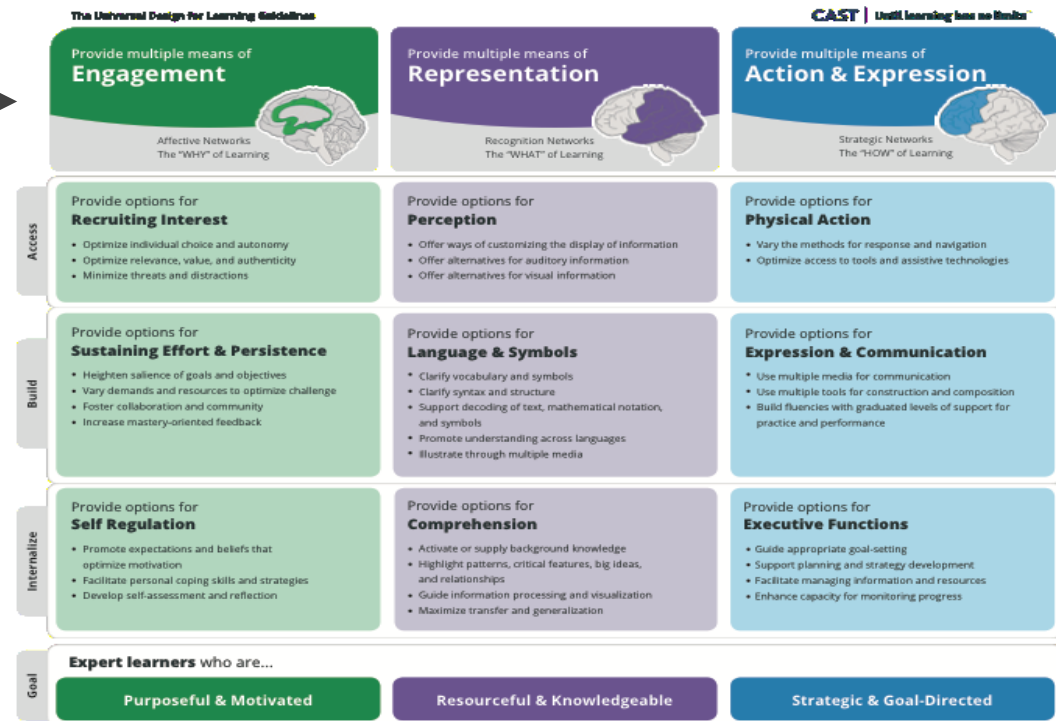
The UDL Guidelines are grounded in research in the **learning sciences**:

- cognitive science
- cognitive neuroscience
- neuropsychology, &
- neuroscience.



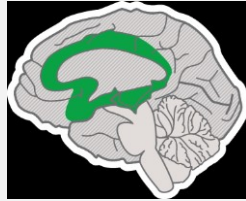
# What is the **range and source** of human variability in learning?

## 3 Principles



willgoldschone.com/eng | © CAST, Inc. 2018 | Suggested Citation: CAST (2018). Universal design for learning guidelines version 2.2 [graphic organizer]. Wakefield, MA: Author.

Affective Networks  
The “Why” of Learning



## Provide multiple means of Engagement

Affective networks monitor the internal and external environment to set priorities, motivate, and engage learning and behavior.

How students will engage?

Recognition Networks  
The “What” of Learning



## Provide multiple means of Representation

Recognition networks sense and perceive information in the environment and transform it into usable knowledge.

How students will perceive?

Strategic Networks  
The “How” of Learning



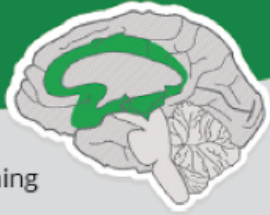
## Provide multiple means of Action & Expression

Strategic networks plan, organize, and initiate purposeful actions in the environment.

How students will act on their understanding?

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



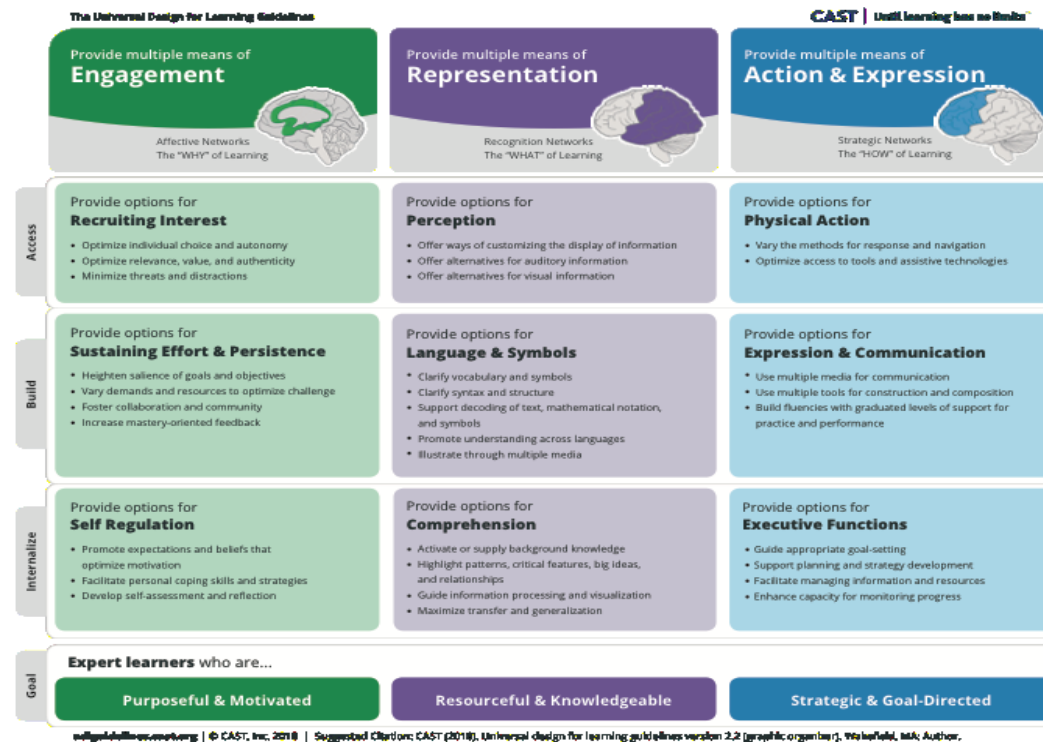
**How will learners  
engage?**

**How will learners  
perceive and  
comprehend?**

**How will learners  
act on their  
understanding?**



# What are the **design components source** to consider when addressing variability in each network?





9 Guidelines



# What are the specific **practices** that reduce barriers to learning in each of the principles?

31  
Checkpoints

	<b>The Universal Design for Learning Guidelines</b>	<b>CAST   Until learning has no limits</b>	
	<b>Provide multiple means of Engagement</b> <small>Affective Networks The "WHY" of Learning</small> 	<b>Provide multiple means of Representation</b> <small>Recognition Networks The "WHAT" of Learning</small> 	<b>Provide multiple means of Action &amp; Expression</b> <small>Strategic Networks The "HOW" of Learning</small> 
<b>Access</b>	<b>Provide options for Recruiting Interest</b> <ul style="list-style-type: none"> <li>Optimize individual choice and autonomy</li> <li>Optimize relevance, value, and authenticity</li> <li>Minimize threats and distractions</li> </ul>	<b>Provide options for Perception</b> <ul style="list-style-type: none"> <li>Offer ways of customizing the display of information</li> <li>Offer alternatives for auditory information</li> <li>Offer alternatives for visual information</li> </ul>	<b>Provide options for Physical Action</b> <ul style="list-style-type: none"> <li>Vary the methods for response and navigation</li> <li>Optimize access to tools and assistive technologies</li> </ul>
<b>Build</b>	<b>Provide options for Sustaining Effort &amp; Persistence</b> <ul style="list-style-type: none"> <li>Heighten salience of goals and objectives</li> <li>Vary demands and resources to optimize challenge</li> <li>Foster collaboration and community</li> <li>Increase mastery-oriented feedback</li> </ul>	<b>Provide options for Language &amp; Symbols</b> <ul style="list-style-type: none"> <li>Clarify vocabulary and symbols</li> <li>Clarify syntax and structure</li> <li>Support decoding of text, mathematical notation, and symbols</li> <li>Promote understanding across languages</li> <li>Illustrate through multiple media</li> </ul>	<b>Provide options for Expression &amp; Communication</b> <ul style="list-style-type: none"> <li>Use multiple media for communication</li> <li>Use multiple tools for construction and composition</li> <li>Build fluencies with graduated levels of support for practice and performance</li> </ul>
<b>Internalize</b>	<b>Provide options for Self Regulation</b> <ul style="list-style-type: none"> <li>Promote expectations and beliefs that optimize motivation</li> <li>Facilitate personal coping skills and strategies</li> <li>Develop self-assessment and reflection</li> </ul>	<b>Provide options for Comprehension</b> <ul style="list-style-type: none"> <li>Activate or supply background knowledge</li> <li>Highlight patterns, critical features, big ideas, and relationships</li> <li>Guide information processing and visualization</li> <li>Maximize transfer and generalization</li> </ul>	<b>Provide options for Executive Functions</b> <ul style="list-style-type: none"> <li>Guide appropriate goal-setting</li> <li>Support planning and strategy development</li> <li>Facilitate managing information and resources</li> <li>Enhance capacity for monitoring progress</li> </ul>
<b>Goal</b>	<b>Expert learners who are... Purposeful &amp; Motivated</b>	<b>Resourceful &amp; Knowledgeable</b>	<b>Strategic &amp; Goal-Directed</b>

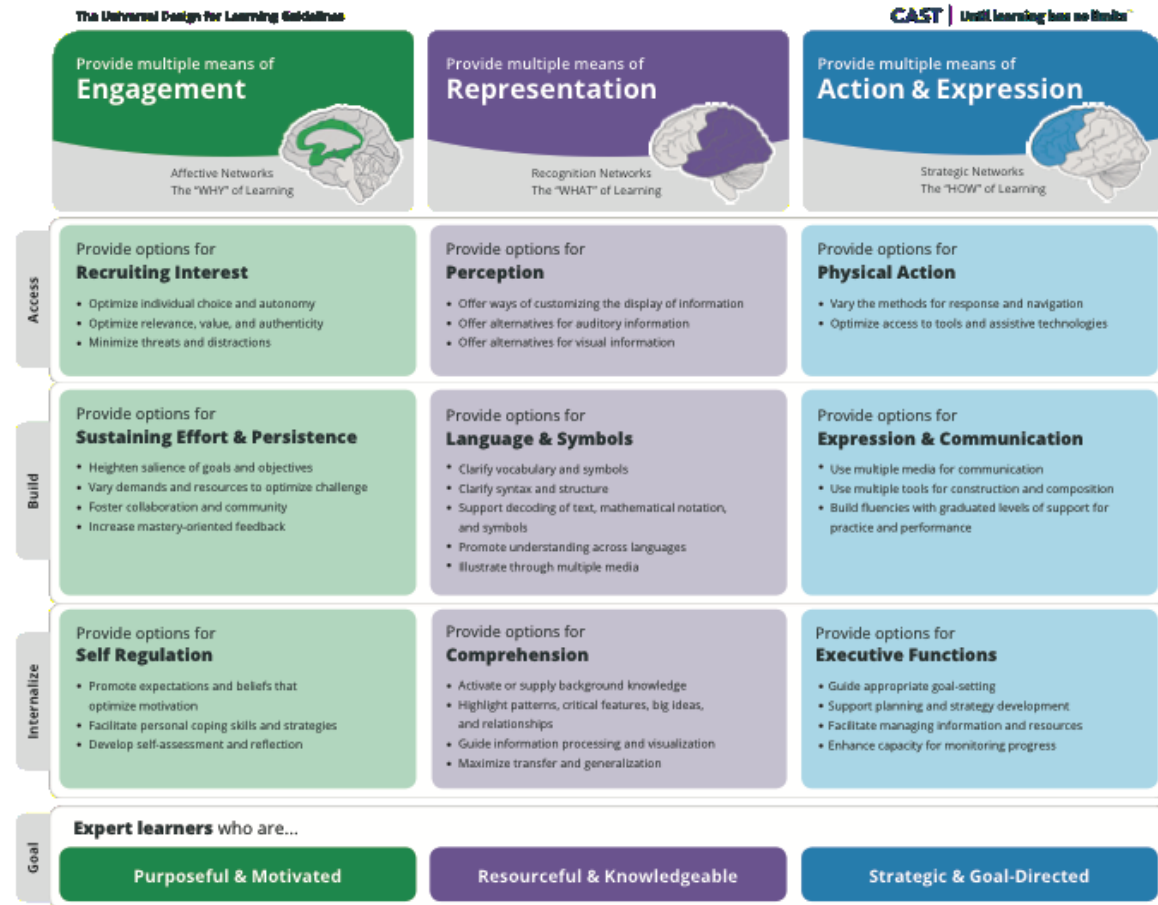
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3 Principles  
Brain **networks**

9 Guidelines  
Design **components**

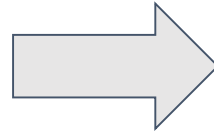
31 Checkpoints  
Specific **practices**



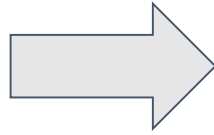
udlguidelines.cast.org | © CAST, Inc. 2018 | Suggested Citation: CAST (2018). Universal design for learning guidelines version 2.2 [graphic organizer]. Wakefield, MA: Author.

The goal of UDL is to support **expert learning**.

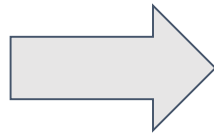
The learner needs  
**access.**



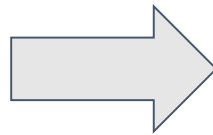
The learner builds  
**understanding.**



The learner develops  
**skills and practices.**



The learner  
becomes an  
**expert learner.**



[udlguidelines.cast.org](http://udlguidelines.cast.org) | © CAST, Inc., 2018 | Suggested Citation: CAST (2018). Universal design for learning guidelines version 2.2 (graphic organizer). Wakefield, MA: Author.



# UDL is not a checklist...

Infuse UDL based on your goal

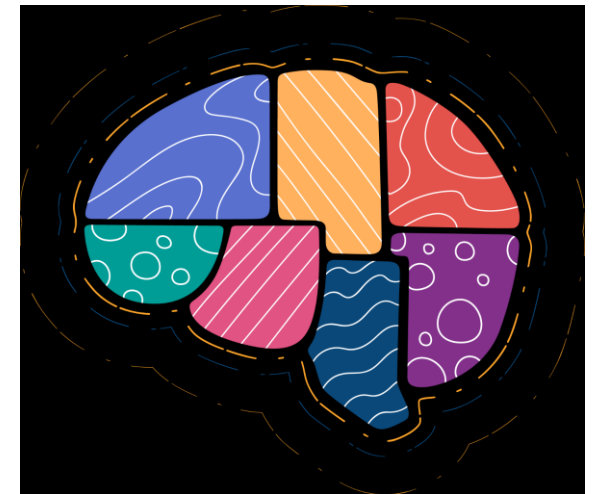


# Teach students how to learn, not just what to learn.





**Universal Design for Learning (UDL)** is an approach to improve and optimize teaching and learning for *all* by setting clear, rigorous goals; anticipating barriers; and proactively designing to minimize those barriers.



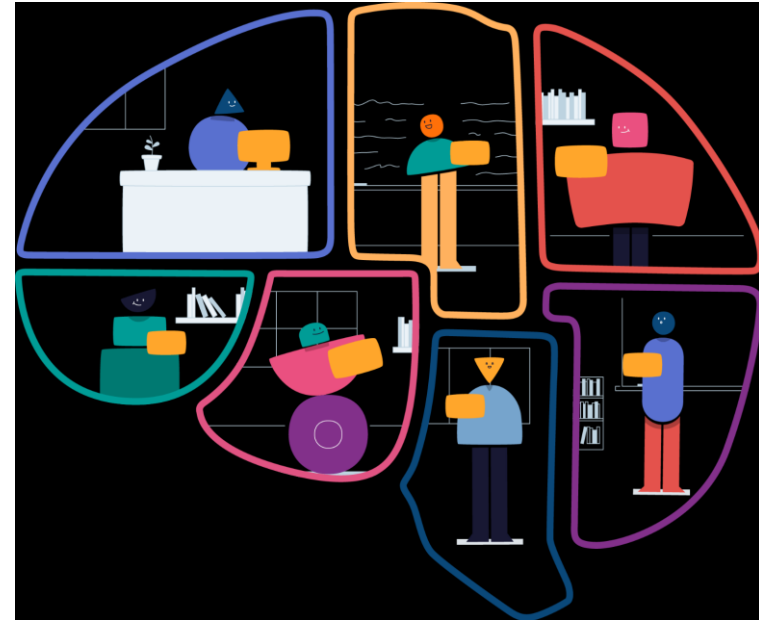
# Reflect:

What **resonates** so far?

What **questions** do you have?

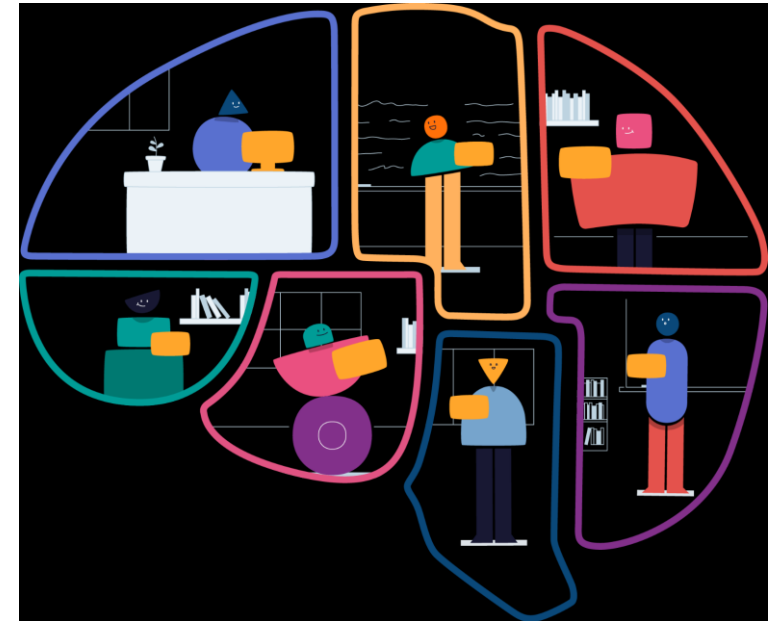
What might work in your **context**?

How will you **apply** UDL in your curriculum?





# Implementing UDL in Your Classroom Online or In-person



Aimee Julian, [alafoll@ilstu.edu](mailto:alafoll@ilstu.edu)

Sarah Goldammer, [sgoldam@siue.edu](mailto:sgoldam@siue.edu)



Southern Illinois Professional  
Development Center

**icsps** impacting  
educational  
equity

Illinois Center for Specialized Professional Support,  
Illinois State University, College of Education

