



# A Model for UDL and Brain-Based Learning

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STEP 1

Know your learners

Know your learning outcomes

Build awareness about your learner's cultures, interests, and strengths prior to the lesson. Be aware of your own biases.

Identify the big ideas and skills from the grade level academic and SEL standards that are critical for your learners.

STEP 2



## Recruit Interest & Agency

- Pose an essential question about the big idea.
- Help learners make personal connections.
- Activate the Reticular Activating System (RAS) in the brain with novelty, curiosity, and relevance.
- Facilitate authentic/real life learning and doing.
- Create relaxed alertness through the environment, your relationships, and active classroom entry.

STEP 3



## Scaffold Inputs

- Provide inputs in right-sized bits (no more than 10-15 minutes at one time).
- Provide multiple means of input related to the big idea: text, video, audio, various language, etc.
- Allow the learner to choose and find other inputs.

STEP 4



## Scaffold Thinking

- Provide processing in right-sized bits (no more than 5-10 minutes).
- Provide think time and cognitive routines like discussion protocols, sentence stems, and graphic organizers. Support discussion and written reflection as options.
- Help learners to "play" with ideas and share ways of knowing. Allow the learner to choose.

STEP 5



## Scaffold Expression

- Provide options for the learner to demonstrate understanding and mastery: writing, audio, video, mixed media, discussion, etc. Allow the learner to generate other ways of sharing that they met the standard.
- Support an authentic product, performance, or service, when possible.

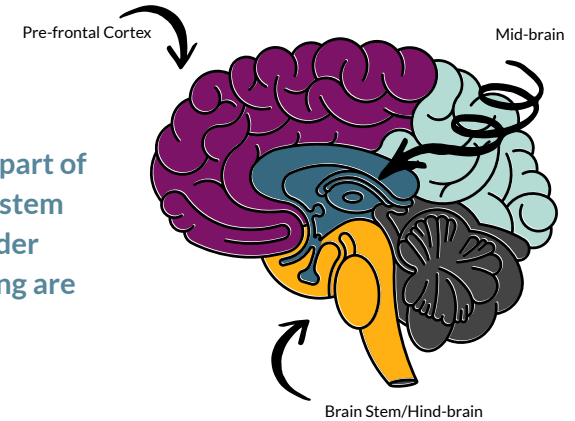
STEP 6



## Solidify Learning

- Review, revisit, and apply learning to consolidate neural pathways within 24-48 hours.

All learning occurs in the pre-frontal cortex. It is impossible to access this part of the brain when the brain stem and limbic system are under siege. Safety and belonging are critical to learning.



Create cycles of input and processing until learners are ready to demonstrate understanding and mastery.

## Brain Science Vocabulary

**Reticular Activation System (RAS):** The RAS is the part of the brain that determines what is important to pay attention to.

**Amygdala Hijack:** When the learner cannot access the learning or rejects the learning through passive or aggressive non-participation, the survival state and emotional states of their brain take over, causing an amygdala hijack or "flip."

**Flow:** When a learner is fully immersed in a feeling of energized focus, full involvement, and enjoyment (Csikszentmihalyi). When a learner is identity-affirmed, both learning and contributing the the learning of others.

**Executive State:** The executive state lies in the pre-frontal lobe or neocortex of the brain, which is the most "human" and advanced part of our brain where all learning occurs. Our executive state helps us problem solve, think critically, and answer "what can I learn from this?"

**Emotional State:** The emotional state lies within the limbic system and is highly linked to our ability to self-regulate. When we experience an amygdala hijack, the emotional state of our brains is in charge and learning cannot occur.

**Survival State:** Sometimes referred to as the "lizard brain" because it is in charge of our most primitive functions, the brain stem is constantly answering, "am I safe?" and governs whether we fight, flee, or freeze.

This tool incorporates best practices from the following educational frameworks and resources: Universal Design for Learning, Deeper Learning, Culturally Responsive Teaching and the Brain, and Belonging through a Culture of Dignity.