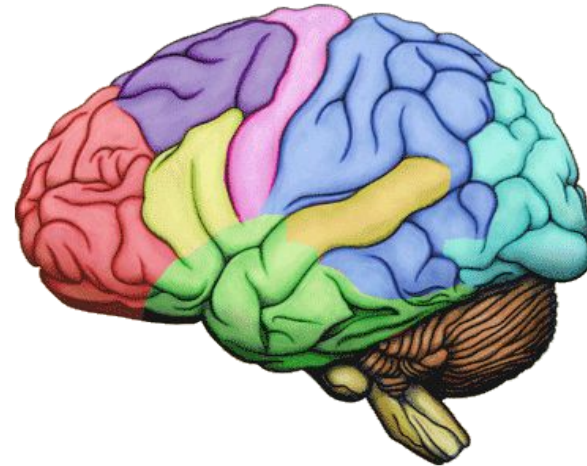
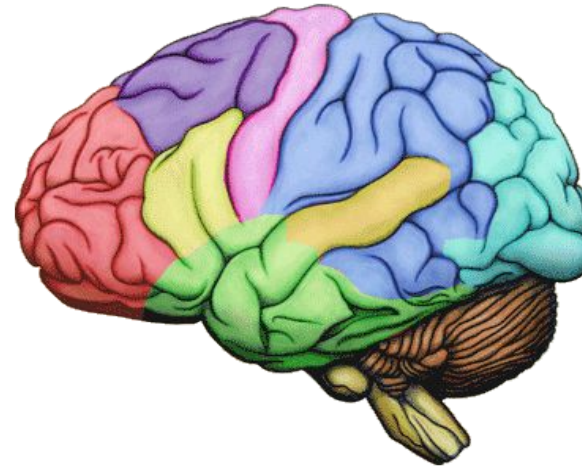


How People Learn



Quick Write

- How do you think learning happens?
 - What are your ideas about what facilitates and supports learning?



Five Foundational Ideas on Learning



- Learning is ***an active process*** to construct understanding.
- Learning ***builds on prior knowledge***.
- Learning occurs ***in a complex social environment*** and is a social activity.
- Learning should be ***situated in an authentic context***.
- Learning is affected by ***motivation and cognitive engagement***.

Reading Partner Research Discussion

How People Learn

- **Form** groups of 6.
- **Pair up** with someone in your group.
- Each pair **Read** one topic.
- **Talk** with your partner:
 - What does each idea mean?
 - How do the ideas relate to what you already know?
- **Share & Discuss** in your group:
 - What is your topic about?
 - What questions came up?
 - What are connections between the topics?
- **Be prepared** to share the big ideas from group discussion.

1. The brain system & prior knowledge
2. Conversations & social activities
3. Engagement in learning

Whole-Community Discussion

How People Learn

What ideas generated interesting/perplexing/controversial/excited discussion within your group?

What connections did you notice across the topics?



What new connections emerged that broadened your thinking in new directions?



Synthesis of Discussion

- People construct understanding of complex ideas over a long period of time.
- Learners don't acquire concepts simply by having someone tell them the content, or even by doing hands-on activities.
- Learners must encounter multiple learning experiences that encourage them to
 - question their assumptions;
 - engage in discussion about their ideas;
 - make connections to and build on their prior knowledge; and
 - apply their new understandings in different contexts.

How can experiences be designed to support learning?

- Learning Cycle design framework
- 5 Foundational Ideas about Learning
- Making Thinking Visible:
 - Turn & Talk
 - Concept Maps
 - Think Pair Share
 - Jigsaw Research Discussions
 - Bridging analogies
 - Micro lab

Visible Thinking Tools

- When we encounter anything new, we make connections which aids in our retrieval of information and helps our mental models grow in complexity
- Making thinking visible:
 - uncovers what learners are thinking, including misconceptions they might be holding, and allows us and them a window into what they are understanding and not understanding.
 - reduces the cognitive load - when we can take ideas and manipulate them out of our head with others, we have many more opportunities for making sense of the concepts
 - uncovers one's own ideas as the starting point for learning and then continuing to make connections to new ideas; learning is not a process of absorbing others' ideas.



7 Thinking Moves—integral to understanding

- Observing closely and describing what's there
- Building explanations and interpretations
- Reasoning with evidence
- Making connections
- Considering different viewpoints and perspectives
- Capturing the heart (core) of a concept and forming conclusions.
- Wondering, sparking curiosity and asking questions

from *Making Thinking Visible: How to Promote Engagement, Understanding, and Independence for All Learners*.
Ron Ritchhart, Mark Cheuch, Karin Morrison. 2011 Jossey-Bass



Ideas on Learning *Revisited*

- How has your thinking about how people learn evolved and/or deepened?
- What change or two will you make in your practice to apply ideas and revelations from discussions and activities during the workshop?



Micro Lab - Considering different viewpoints and perspectives

This strategy is used to direct the group discussion to ensure that everyone has a chance to participate. The structure helps groups to make connections between ideas, explore alternative perspectives, and consider the contributions of each individual's ideas.

- **Directions:**

- **Pose prompts for individual reflection.** Have students respond to a series of prompts to reflect on a topic.
- **Introduce the Micro Lab routine.** In this routine, they'll share their reflections in groups of 3. Have them number off 1-2-3 to form groups of 3.
- **Share:** Ask Number 1s to share their ideas with their groups for 2 minutes. No one speaks except the speaker. Other group members listen and take notes.
- **Silence:** Allow 20-30 seconds of silence for everyone to take in and mentally review what was heard.
- **Share for rounds 2 and 3:** Repeat until all members of each group have shared their thinking.
- **Begin small-group discussions.** Groups may now have an open discussion for 5 minutes. Encourage groups to make connections between what other members have said or to ask questions for clarification.