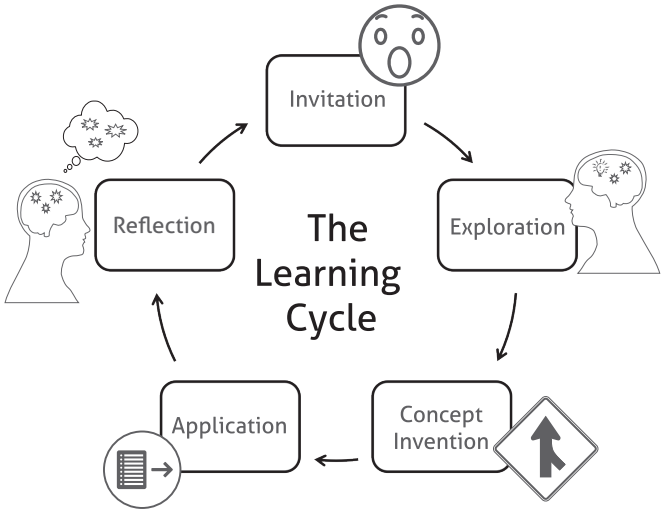
Learning Cycle Design Framework



Invitation — Initiates the learning task and sets the context. The invitation phase sparks interest, and spurs learners to recall and retrieve past connections from their memories that may be relevant to present learning experiences. Generates anticipation, and captures learners' attention to focus on the topic of the upcoming activities.

Educator's Role: Create interest and pique curiosity. Raise questions and problems to be explored. Elicit responses that uncover learners' current knowledge about the concept or topic.

- How will the task get learners interested in learning about the topic?
- How will the task provoke learners to access their prior knowledge?

Exploration — The exploration phase is driven mainly by learners' interest and questions, followed by discussion about observations, results, ideas, and more questions. It involves exploration of real phenomena, providing a common base of experiences for learners to develop new concepts and skills. Learners retrieve prior connections to examine alongside new information in an effort to determine the relevance to the new ideas. They begin to elaborate on memories related to the concept and use their everyday language to articulate their thinking.

Educator's Role: Encourage learners to work together without direct instruction from you. Observe and listen to learners as they interact. Ask probing questions to redirect learners' investigations when necessary. Provide time for learners to puzzle through problems. Invite learners to listen to what peers are saying or noticing.

- How will the task provide learners with experiences that produce concrete observations and discoveries to help them make sense of the topic?
- How will the task urge learners to relate prior experiences with new ones?

Learning Cycle Design Framework *(continued)*

Concept Invention — With their interest and attention captured, learners actively process the experience, review evidence and data they gathered through exploration, and try to make sense of it. As learners describe their observations and generate explanations, they make new and/or different connections to existing memories.

> *Educator's Role:* Encourage learners to explain concepts and definitions in their own words. Guide them to express out loud their evolving understandings with their peers. Reassure them that what they express doesn't need to be coherent just yet; the purpose is to test out connections. Ask for evidence, and clarification from learners to help them make sense of their experience. Push for integrating new information with existing memory, including rearranging prior connections. Use and introduce technical language from the discipline. Connect to learners' direct experiences when explaining concepts.

- How will the task encourage learners to struggle with their understanding and negotiate their ideas with others?

Application — New connections are still tenuous. The application phase urges learners to apply new knowledge and skills to solving a problem or meeting a challenge, transferring their new knowledge to unfamiliar contexts in the world. Learners retrieve these fresh connections in their memories and elaborate on them further as they apply them to different contexts, which in turn strengthens the new connections.

> *Educator's Role:* Provide opportunities for learners to use vocabulary, definitions, and explanations, and transfer knowledge from familiar circumstances to novel ones in order to strengthen new connections.

- How will the task demand learners to apply what they've learned to a new situation or context?
- How will the task invite learners to make connections that are meaningful to them?

Reflection — Learners reflect on how their original notions have been or need to be modified. In this phase learners are consciously thinking about the new connections they've made to existing memories, and how their understanding is changing. Reflection cultivates metacognitive skills. It's time for learners to be conscious of what they learned and how they learned it, which becomes a resource for future experiences.

> *Educator's Role:* Encourage learners to confront their former ideas and evolve new ones, solidify conceptual framework connections, and build metacognitive skills.

- How will the task prompt learners to think back on the process for learning to help reinforce their understandings and make them better learners in the future?