Critical Thinking Deep Learning Progression

Critically evaluating information and arguments, seeing patterns and connections, constructing meaningful knowledge, and applying it in the real world.

Dimension	Limited Evidence	Emerging	Developing	Accelerating	Proficient
Evaluating information and arguments	Learners at this level may be skilled at finding information on a particular topic (e.g. through an internet search or by asking experts). However, they have difficulty discerning whether that information is trustworthy, relevant, or useful. Similarly, learners at this level struggle to spot flaws in the premises, assumptions, reasoning, and/or conclusions of logical arguments.	Learners have good information search skills and some useful 'filters' that allow them to discern whether information is trustworthy, relevant, and useful. They are learning how to evaluate logical arguments to identify unfounded assumptions, flawed premises, logical leaps, faulty reasoning, and unjustified conclusions, but skills in this area are still just emerging, as is their ability to explain their thinking processes.	Learners have skills in determining whether information is trustworthy, relevant, and useful. They understand how to evaluate logical arguments to identify unfounded assumptions, flawed premises, logical leaps, faulty reasoning, and unjustified conclusions. They are beginning to be able to explain their thinking processes.	Learners are skilled at determining whether information is trustworthy, relevant, and useful. They are also able to evaluate logical arguments to identify unfounded assumptions, flawed premises, logical leaps, faulty reasoning, and unjustified conclusions. They can explain their own reasoning, but not yet in a way that demonstrates clarity of thinking and insight.	Learners are skilled at determining – both logically and intuitively – whether information is trustworthy, relevant, and useful. They are skilled evaluators of logical arguments and can identify unfounded assumptions, flawed premises, logical leaps, faulty reasoning, and unjustified conclusions. Further, they can clearly and concisely explain their own reasoning in ways that make sense to others and show good insight and clarity of thinking.
Making connections and identifying patterns	Learners are able to see relatively simple patterns and connections, particularly when they are pointed out. However, at this level students are unlikely to realize interdisciplinary connections, e.g., that a concept, a learning process, or one curriculum area is connected to another.	Learners are developing their ability to seek, access, explore and learn from multiple sources, diverse perspectives and viewpoints to expand thinking toward greater understanding, coherence and appreciation. They are starting to see patterns and make connections, e.g., seeing the whole, not just the parts. At this level, they still require guidance and support to do this well.	Learners can make connections between significant ideas, topics, questions, issues, and thinking and learning processes they are working with. They are also making some connections across artificial 'boundaries', such as: classes, communities and cultures; time: past, present, future; one or more key learning areas; different disciplines.	Learners are able to articulate the importance of identifying patterns and connection-making across 'artificial' boundaries, especially across disciplines. They know that this reflects and strengthens their understandings of the inter-connected nature of learning and of the world and how it works.	Learners are skilled in making connections, identifying patterns and seeing relationships. At this level, they are well equipped to construct deep understanding and to navigate the massive sea of knowledge effectively in an inter-connected global world.
Meaningful knowledge construction	Learners may be skilled consumers and reproducers of information, but still struggle to engage in meaningful knowledge construction; their approaches to tasks still reflect a "guess what is in the teacher's head" or a "guess what is in the textbook" mind set, and need considerable prompting and guidance to take their learning beyond this.	Learners begin each deep learning experience by exploring what they already know and believe about a topic, and use this as the starting point for new learning. Knowledge construction does occur, but is still rather 'surface level', e.g., limited to interpretation, with little use of analysis, synthesis, or evaluation. Learners at this level are still building their critical thinking and reasoning skills.	Learners are able to find different points and pathways into learning that activate, assess, and build on their existing knowledge and beliefs. They have good skills in interpretation and analysis of information, and are able to use this to construct meaningful knowledge, but usually only within one discipline at a time. Synthesis and evaluation skills are generally still developing.	Learners are able to articulate how they actively create knowledge that is new and usable to them. They are able to interpret, analyze, and synthesize and evaluate information from two or more disciplines or perspectives, make meaningful connections between new ideas and their prior knowledge, and clearly understand why the learning is important, and how this will help them now or in the future.	Learners have strong critical thinking and reasoning skills, including interpretation, analysis, synthesis, and evaluation. Knowledge construction is deep, insightful, interdisciplinary or connected across multiple perspectives, and characterized by sound practical and critical thinking. Learners also use their skills to reflect on, evaluate, and improve their own learning processes, products, and outcomes.
Leveraging Digital	Although learners used some digital elements for the task, these were very 'surface level' and did not substantially contribute to the generation of significant questions, the construction of new knowledge, the making of connections, developing ways of thinking together or the application to new contexts.	Learners used digital opportunities to generate questions, find patterns, use as a tool for developing thinking together and make connections in ways that could not have been done otherwise, although they are unlikely to have significantly deepened their critical thinking.	Digital aspects were used by learners to effectively generate significant lines of inquiry, explore the topic across multiple disciplines, identify patterns and connections, deepen their critical thinking, (utilizing) digital as a tool for thinking together and find new contexts for application of the new knowledge.	Learners can clearly articulate how infusing a digital element has enhanced thinking together and critical thinking as well as the products or outcomes produced. They can generate their own digital tools to support critical thinking tasks.	Learners use digital elements ubiquitously throughout the task in powerful ways to deepen the quality and value of thinking together and critical thinking. Learners can articulate in detail about how each digital element has enhanced their ability to think critically and apply that understanding to new and different contexts.
Collaborative knowledge construction	Learners maybe skilled at knowledge construction individually and may collaborate on tasks however they don't yet genuinely engage in thinking together.	Learners are beginning to collaboratively think and work with others to construct new knowledge. They are starting to identify their collective cognitive strengths.	Learners think and work together in ways that spark new thinking and original ideas that are more powerful than the sum of individual ideas. They actively build on each other's thoughts and ideas to create new ideas and knowledge.	Learners think and work together in a synergistic way that sparks breakthrough thinking and powerful ideas rooted in collectively shared cognition. They effectively use tools to support more effective shared thinking. This is becoming a preferred way of thinking around complex tasks and concepts.	Learners think and work together with a powerfully synergistic shared cognition that is almost intuitive. The new knowledge created leverages both individual and collective expertise, and the quality of the shared thinking ensures that new knowledge is highly applicable to the real world. They can articulate how they 'think together' to improve results.
Experimenting, reflecting and taking action on their ideas in the real world	Learners still tend to see the task and solutions within their own world and struggle to see any wider implications from their learning. At this stage they still need significant guidance to help them think through how to test out ideas in the real world. With minimal help, they may be able to apply new knowledge to the context from which it was drawn, but will need significant prompting and guidance to consider applications elsewhere.	Learners are starting to develop basic skills for experimenting with different ideas and learning what works. They are also learning to think about real-world applications for what they have learned, supported by a teacher who actively scaffolds their thinking about transfer. They are beginning to apply their learning in different contexts.	Learners are developing the ability to apply logic and reasoning, draw conclusions and design a course of action, evaluate procedures and outcomes. They are able to adapt, extend or customize their new knowledge for new, specific situations/contexts; apply what they have learned to real-world challenges or problems; and apply what they have learned to their own lives.	Taking account of key themes, constraints and criteria, learners engage in a process of experimentation to develop rough plans and prototypes and test them out in real-world settings. They are able to articulate the importance of transferring or applying their new knowledge appropriately to new and authentic situations and settings – and can explain how they conduct their own further analyses to identify where else this could be applied, and work out how. Along the way, they seek and use feedback to develop improved iterations, using error and mistake-making as opportunities to learn.	Learners have a strong ability to apply critical thinking, logic, and reasoning to evaluating their ideas. They also reflect well on their own processes, and work out how to transfer knowledge into new contexts and take action that makes some difference, based on what they discovered. They have likely identified processes that are particularly effective for identifying and evaluating ideas for creative applications of the knowledge in new contexts. Further, they can demonstrate how this helps them look at what they have learned in a new way that deepens their learning.