

Costa's Levels of Thinking

“The harder we question, the harder we hunt. The harder we hunt, the more we learn.” — Patrick Rothfuss

Level 1 Thinking and Questioning

What is the learner doing at Level 1?

- Accessing definitions, principles, and concepts from short- and long-term memory

What do answers to Level 1 questions look like?

- Concrete and readily available in the text or resources being referenced. Answers are usually short, consisting of one or two words or a short sentence.

What is the purpose of a Level 1 question?

- A series of Level 1 questions can be used to guide students in gathering the data they will need to process to answer a follow-up Level 2 or Level 3 question.

Sample Verbs	Sample Prompts (Note the actual VERB need not be in the prompt)	
Level I – Input (Gather/Recall)	Count	How many apps are on your phone?
	Complete	The primary element for life on Earth is _____.
	Define	What is a mineral?
	Describe	What does the city look like in the winter?
	Identify	Label the parts of the cell.
	List	What are the prime numbers in this set? (1, 3, 4, 6, 7, 16, 17, 20, 21, 23)
	Match	Which sentence best describes this equation?
	Name	Find the name of the river that separates Haiti from the Dominican Republic.
	Observe	Watch the fish in the tanks and record your observations.
	Recall	Write down what the weather was like last August.
	Recite	What is the first line of the US Constitution?
	Scan	Look at the schedule and determine how often buses run.
Select	Which of these words cannot be both a noun and verb?	

Level 2 Thinking and Questioning

What is the learner doing at Level 2?

- Accessing definitions, principles, and concepts from short- and long-term memory and processing or manipulating that information to come up with the answer.

What do answers to Level 2 questions look like?

- Usually require at least a sentence or two.

What is the purpose of a Level 2 question?

- To support learners reading between the lines and assembling and relating multiple pieces of information to come up with the answer.

Sample Verbs		Sample Prompts (Note the actual VERB need not be in the prompt)
Level 2 – Process	Analyze	Determine the additional information you will need to solve this problem.
	Compare	How are fish and amphibians similar?
	Contrast	Culturally, how were the 60s and 80s different?
	Distinguish	Describe the features that might make you think this building was designed by Frank Lloyd Wright.
	Experiment	What are some ways you might test your idea?
	Explain	How has the smartphone changed our society?
	Group	How might you separate these 15 minerals into groups?
	Make Analogies	How are the systems of a car like that of a cell?
	Organize	Rearrange this information so it is more easily accessed.
	Sequence	Arrange the following events from earliest to most recent.

Level 3 Thinking and Questioning

What is the learner doing at Level 3?

- Applying knowledge of the relationship between disparate concepts in a novel situation. The question should invite the learner to think creatively, using imagination and judgment to arrive at an answer.

What do answers to Level 3 questions look like?

- Tend to be longer, ranging from a multiple sentence paragraph to a full length essay.

What is the purpose of a Level 3 question?

- To support learners in forming an opinion, creating something new, making a prediction, or generalizing a concept and then backing it up with evidence.

Sample Verbs	Sample Prompts (Note the actual VERB need not be in the prompt)	
Level 3 – Output (Apply)	Apply	How does surface tension help a water skipper stay afloat?
	Evaluate	Decide if the Giant Mudskipper is a fish or amphibian.
	Forecast	It is a “La Niña” year; would you expect it to be wetter or dryer than usual? Why?
	Generalize	Describe the risks for all small companies starting with very little capital.
	Hypothesize	What will happen to this marshmallow if we put it in a vacuum chamber?
	Imagine	What would communication be like if there was no sound?
	Judge	Is the Constitution or the Bill of Rights more important for our democracy? Why?
	Model	Build a model of a plant cell.
	Predict	Considering what you know about macro-economics, what might happen to US economy if the euro suddenly decreased in value?
	Speculate	All copper, halite, and diamond have suddenly disappeared. How will this impact our environment physically and socially?