COSTA'S Levels of Questioning

FOR AVID

LEVEL 1 - FACTUAL. "JUST LOOK IT UP."

- What is __ When Who Where How many/much/long
- Why, according to ...? How, according to ...?
 - => A Level 1 question gives you all the information you need to find a definite answer.

LEVEL 2 - INTERPRETIVE. "READ BETWEEN THE LINES."

- Compare & contrast Analyze Relate Interpret
- Find patterns Why, judging by the book's description...?
- How, guessing by __'s account...?
- => A Level 2 question requires you to interpret part of the question to answer it.

Hint: You may choose to justify your interpretation and choices, or describe (analyze) the possible interpretations.

LEVEL 3 - REFLECTIVE/OPEN-ENDED. "BEYOND THE LESSON."

- Reflect on Apply Decide Justify Prove
- Give your opinion Explain your reasoning
- Imagine What if_? "...in a different situation...",
- Find an analogy or metaphor Come up with a new way
- Evaluate: good/bad, better/worse, effective/ineffective, practical/impractical, beneficial/detrimental, appropriate/inappropriate,certain/uncertain, possible/impossible, necessary/unnecessary. . .
- Why, based on all that you know...? How, based on your own experience...?
- => A Level 3 question is open-ended. You must provide your own interpretations and evaluate different options to provide your own answers in your own way.

Hint: You may choose to describe your evaluation process: ex. "Assuming 'A', there are these options...; comparing/contrasting the options, weighing the differences and similarities, taking into account my own preferences (x, y, z) – the appropriate choice is____. <u>But if we assume 'B',"</u>

What level are these questions?

- What does our book say is the primary cause of the American Civil War?
 Level 1 It's strictly factual. Just look it up. There is only one answer.
- What do historians say is the primary cause of the American Civil War?

 Level 2 "Which historians?" Different historians give different answers.
- What was the primary cause of the American Civil War?

Level 3 - Your answer totally depends on your own perspective, giving consideration to domestic and worldwide pressures, evaluation of historical research, as well as your own beliefs. There is no single "right" way to answer this question, but you can choose to be more thorough, balanced, insightful, and logical.

• HINTS for Answering Level-3 Questions •

Some Level-3 questions may appear simple – but below the surface, there may be MANY fine answers. When questions are "vague", figure out what you need to know – then fill in the blanks yourself! "If A , then ____; If B, then ____, etc." Look through the possibilities for patterns, and discuss them, too. Sum them up, then start again looking for new sets of possibilities and patterns. Level-3 answers don't end – until you decide they do!

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Example AVID Tutorial Questions

Science

- L1. What are the 5 layers of the earth's atmosphere?
- L1. Who is considered the father of the field of Genetics?
- L1. About when did the Cretaceous period end?
- L1. What is the product of this reaction: $C_3H_8 + 5O_2 \rightarrow ?$
- L2. What are some unique features of the upper atmosphere?
- L2. What did Mendel do differently in his experiments than his contemporaries?
- L2. What did the Cretaceous and Jurassic periods have in common?
- L2. What other combustion reactions would produce carbon dioxide and water vapor?
- L3. How much easier would it be to launch a rocket from the upper atmosphere?
- L3. Why did Mendel succeed where his contemporaries did not?
- L3. Why did the dinosaurs die?
- L3. What would make for a better internal combustion engine?

Math

- L1. What is the graph that satisfies the equation $y = 2/(3+7e^x)$
- L1. If Jim's car is 15 feet long at rest, what's the length at 2/3 the speed of light?
- L1. What are the complex roots of $y = 3x^4 + 10x^3 3x^2 + 16x + 11$?
- L2. How does the graph change as you alter each of the constants?
- L2. At what speed would the car's length (1) be equal to Jim's height (h)?
- L2. How do you solve a 4th-degree polynomial equation?
- L3. How is the S-Shaped Growth curve used in the physical and social sciences?
- L3. What might it be like to fly near the speed of light?
- L3. What in my life might vary as a 4th-order equation? (A depends on B depends on C depends on D.)

Level 1: Look it up or solve it either way, there is one correct answer. Note: "Tutorial Questions" may not be Level 1!

> Level 2: There is a set of correct answers – your answers may depend on how you interpret the question.

Level 3: Completely open-ended questions. Note: No "correct" answers, but some may be "better" than others!

Even a "hard" question can be Level 1 if it has only one answer!

When you're mainly JUGGLING, comparing, RELATING, or mixing-n-matching pieces and concepts, you're using Level 2.

<u>Level 3</u> questions jump out of the lesson, into the "real world".

English

- L1. How many plays were written by William Shakespeare?
- L1. Which character is also known by some as "Mithrandir"?
- L1. List 50 prepositions in alphabetical order.
- L2. Which of Shakespeare's plays have been most influential?
- L2. How is Gandalf's race (Astari) like and unlike the race of Men?
- L2. How can you tell a prepositional phrase from a participial phrase?
- L3. What might the eternal popularity of Shakespeare say about people in general?
- L3. How might Gandalf's imperfections be important to the telling of the story?
- L3. How might participial phrases be used to make your writing more colorful and active?

History

- L1. Who signed the Declaration of Independence? (name at least 10 of the signers)
- L1. What date was the Iraq War launched by the United States government?
- L1. Who did the Warren Commission charge with shooting President John F. Kennedy?
- L2. What did the signers of the Declaration of Independence have in common?
- L2. What according to President George. W. Bush are the reasons for the Iraq War?
- L2. What do other theories have to say about the Kennedy assassination?
- L3. Is the Declaration of Independence fully living up to its original vision?
- L3. How different could the last few years have been had the U.S. not invaded Iraq?
- L3. Who killed JFK?

Even if it took you years to find the answer, if it has one answer, it's Level 1!

Use graphical organizers to sort and organize

<u>Level 2</u> thínking: **Draw It Out!** ex. Grids, charts, graphs, mind-maps, Venn diagrams...

Level 3 questions can be used in a lesson to " Make It Real ".

"So what? Is this useful? What does this have to do with anything?"

You are responsible for bringing your Level 1 knowledge to tutorial in the form of your notes!

You also must bring to tutorial a Level 2 or 3 question.

Your fellow students and tutor will help you to move through Level 2 thinking towards Level 3 thinking to help you "Make It Real"!