Through the Roof: Raising Students' Thinking Skills through Depth & Complexity

with Lisa Van Gemert | **giftedguru.com**   *get the icons & find out more at* **jtayloreducation.com**

Best Practices:

→ Combine the elements with high levels of _____.
→ Combine the elements with a quality _____.
→ Raise the level for GT with _____.
→ Avoid doing the Sherman _____ through _____ thing.

Keep Exploring:

Find the depth & complexity resources at **jtayloreducation.com**. Use discount code "DIFFWITHDC" for 15% off.
Intro to depth & complexity: **bit.ly/depth-complex-byrd**
And then of course there's this **bit.ly/depth-complex-math** for the math peeps.

Depth: Language of the discipline, big idea, essential details, rules, patterns, trends, unanswered questions, ethics: **bit.ly/elements-of-depth**.

Complexity: Change over time, multiple points of view, across the disciplines. **bit.ly/depth-complex2**.

Introduction slide deck: **bit.ly/intro-depth-complex**. Ugly, but comprehensive and with good techniques in the classroom.
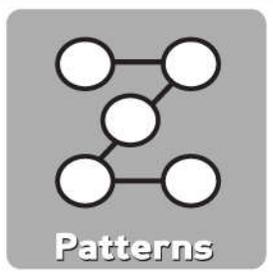
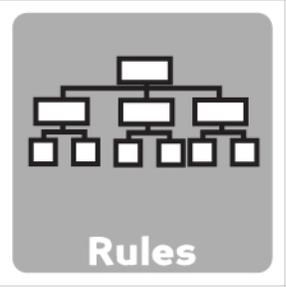Stay connected at **giftedguru.com** for loads of ideas and helps.
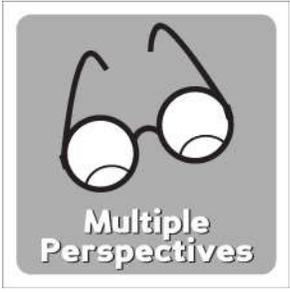
The Elements of DEPTH and COMPLEXITY

Note: This chart identifies questions, thinking skills, prompts, and ideas associated with the eleven elements of the Depth & Complexity Framework. It shares the icon itself, along with:

- Sample Questions that can be used in the course of lesson plans
- Associated Thinking Skills
- Resources most likely to help students locate the information associated with the element and examples of activities

ICON	PROMPT	SAMPLE QUESTIONS	THINKING SKILLS	RESOURCES/EXAMPLES
Language of the Discipline	• specialized vocabulary • tools of the discipline • signs & symbols • names of skills or tasks • jargon/idioms • acronyms	What words are specific to the work in this discipline? What tools does a ____ use? Where did these words come from? What are the most important words in understanding ____?	categorize identify prioritize identify relationships (among the terms) determine appropriate use of terminology	• text • biographies • dictionaries Create a brochure advertising the literary devices the author uses to greatest effect. What piece of equipment is most difficult to be substituted in this lab?
Details	• features • attributes • defining characteristics • parts • factors • data	What are its attributes? What distinguishes this from other things? What details are more/most important? What information can be added to what we already know about __? What elements repeat? What is the sequence/ order of events?	identify traits describe compare/contrast prove with evidence observation note ambiguity	• pictures • documents • diagrams Illustrate how ___ would change if we _____? Use a graphic organizer to prove that _____. Create a crossword puzzle using at least 12 important details from the text.

Patterns	• repetition • predictability • recurring events • cycles • repeated features	What predictions can be made based on past events? What elements/ events/ ideas are repeated over time?	determine relevancy v. irrelevancy summarize distinguish similarities and differences	• timeline • plot outlines • equation patterns • diagrams With a partner, design a 20 Questions game that reveals the pattern of _____.
Trends	• influences • forces • direction • fads [Note: In many ways, this is Patterns combined with Over Time]	What factors are influencing this? What direction is this heading? How is this trend connected to/ influenced by _____ trend?	determine cause and effect relate prioritize formulate questions hypothesize	• graphs • charts • journals Write a brief explaining to the president the social and political influences that led to the Civil War.
Unanswered Questions	• dilemmas/ ambiguities • discrepancies • as yet unknown • unknowable • incomplete ideas • lacking in explanation	What is uncertain? What is not understood? What information is incomplete? What is lacking in understanding? How can you explain the discrepancy between your hypothesis and your results?	recognize fallacies note ambiguities distinguish fact from fiction formulate questions identify missing information generalize hypothesize judge credibility	• multiple and varied reliable resources • non-fiction texts • biographies • quality internet sites Using the Big Idea icon as a graphic organizer, describe three factors that make this problem ambiguous. Create a PowerPoint slide deck with five slides exploring the things that still remain unknown about ____.

Rules	• structure • order • standards • usual behavior • laws • organization • methods	How is this structured? Describe the rules of __? What hidden or unspoken rules exist? What rules do we use in solving ____?	identify relationships among the rules judge the importance of the rules	• editorials • essays • laws • theories/theorems Using a Bracket Map, organize the _____ into four classification categories. Match the characters in the story to at least three conflict types.
Ethics	• controversies • dilemmas • biases • principles • morals • philosophies • values • prejudice/ discrimination • judging/ bias	What are the most important ethical issues? Is this fair? Right? Just? Prejudiced? Justify why it would/would not be fair to ___?	determine bias test assumptions judge with criteria prioritize most important ethical issues	• editorials • essays • journals • non-fiction texts Analyze the benefit in ____ and write a persuasive essay sharing your analysis. How did the previous experience of ___ impact the attitude of ___?
Big Idea	• overarching ideas • broad idea that can be supported with evidence • generalization • universal concept to connect all learning • principles, laws, theories	What theory or general statement applies? What generalizations can be made? What is the main idea? How do you evaluate the importance of the big idea?	prove with evidence generalize identify the main idea infer a big idea from supporting evidence categorize/classify big ideas	• quotations • text Create a poster displaying your analysis of which era of history can be summed up "purification of government and family." Share how the idea "matter cannot be created or destroyed" applies to this situation in a photo essay.

Over Time	• looking at past, present, and future • relationships within a time period • applying something historic to present knowledge • predicting something based on present knowledge • noting change	How are the ideas related among the past, present, and future? How are these ideas related within or during a particular period of time? How has time affected the information? How and why do things change or remain the same?	relates sequence order determine relevance of knowing this topic over time	• time lines • text • primary sources Make a news segment explaining in what way the water cycle is different now than it was one million years ago.
Multiple Perspectives	• different points of view • ways of seeing/ reporting • opposing viewpoints/ outlook/ interpretation • often dependent upon time/place • affected by roles/ responsibilities	What are opposing viewpoints? How do different people and characters see this event or situation?	argue determine bias classify	• biographies • myth/ legend/ fable • debates Create a frame summarizing the perspectives of everyone in your group with regard to ____.
Across Disciplines	• connections across disciplines • touching on many subjects at once • relationships between/ among the disciplines	How does this study connect across disciplines? What are common elements among _____?	judge draw conclusions interpret	• multiple and varied resources • images • discipline-related resources Write a two-paragraph short essay explaining how trends in poetry and art both reflect and inform changing mores in WWI-era Europe.