FOR A FAIR SELECTION EVERYBODY HAS TO TAKE THE SAME EXAM: PLEASE CLIMB THAT TREE
“The biggest mistake of past centuries in teaching has been to treat all children as if they were variants of the same individual, and thus feel justified in teaching them the same subjects in the same ways.”

Howard Gardner
Today’s Goals: Deeper Understanding

- Enhance understanding of the depth and complexity framework
- Understand how DCC will improve student achievement
DIFFERENTIATION

- Depth, Complexity, Content Imperatives
- Differentiation Equation
- Becoming an Expert
- Universal Concepts
...students must be prepared to compete in the global economy...
How do the principles of differentiation through the integration of DC/CI’s relate to the mission and vision for students in your school district?

What characteristics of DC CI are already evident in your classroom/school?

What kinds of experiences do you want to see in your classroom/school now that you have learned more about the prompts of DC and the CI’s?
DIFFERENTIATING THE CORE THROUGH...

Depth
Exploring a topic in greater detail specific to:
details, patterns, language of the discipline, rules, trends, ethics, big ideas and unanswered questions

Novelty
Providing opportunities for students to demonstrate their learning in different ways: independent Study, Problem Solving, Critical/creative Thinking, Task Commitment, Participation Skills

Standards Based Curriculum

Complexity
Extending student understanding of the content by making connections:
across disciplines, over time and studying different points of view

Acceleration
Concept Building, Universal Concepts, TLAD, Art of Argumentation
Create An Environment of Respect

- We respect individuality.
- Everyone gets an equal opportunity.
- Everyone is expected to be challenged.
- Everyone is expected to improve.
- Everyone is expected to do his/her best.
Academic Rules

Respect

- Everyone is expected to improve.
- Everyone is expected to be challenged.
- Everyone is expected to do his/her best.
- Everyone gets an equal opportunity to learn.
Pathways of Learners - EQUAL EFFORT
Depth & Complexity Framework
Understanding the parts...

Think Like A...
- Geographer
- Historian
- Economist
- Anthropologist
- Geologist
- Physicist
- Political Scientist

Universal Concepts & Generalizations
- Power: Power may be used or abused.
- Change: Change is inevitable.
- Structure: Structures have parts that interrelate.
- Conflict: Conflict is composed of opposing forces.
Depth & Complexity Framework insists that educational culture….

Move away from “how it is” toward “how things could be.”

Move from mediocre and memorization to inspiration and innovation.
As DOK is a tool to ensure teachers are teaching to certain levels of cognitive demand, Depth & Complexity is a conceptual “toolbox” that prompts students to think in abstract, high-level ways similar to disciplinarians.

The Depth & Complexity “toolbox” extends through and across all four levels of Depth-of-Knowledge (DOK).

Depth & Complexity’s foundation, the “Differentiation Equation” already accounts for Bloom’s varied thinking skills as well as DOK’s four levels.

\[ T/S + C (D/C) + R + P \]

Depth & Complexity bridges the gap between describing levels of cognitive rigor (DOK) and designing appropriately differentiated instruction that demands and ensures challenging, rigorous learning experiences.

Depth & Complexity creates a renewed excitement in the classroom. It’s the “how to” for eliciting complex thinking and applying knowledge to real-world experiences..

Why use the Depth & Complexity Framework?
Tests are a means, not an end...
Focus on teaching strategies, not just lessons...
Teach students how to think, not what to think...
1. How should future leaders be taught in today’s classrooms?
2. How can educators increase the number of students that achieve at the highest levels?

These “frameworks” for describing cognitive rigor and necessitating high-level thinking are synergetic.

**Blooms**
What type of thinking is needed to answer question or perform a task?

**DOK**
What skills are required to complete a task from beginning to end? How do students demonstrate their levels of understanding with relation to thinking processes AND content?

**Depth & Complexity**
How is curriculum differentiated to benefit and appropriately challenge all levels of learners? What tools can teachers use to empower students to demonstrate a deep & complex understanding of content through application of skills and knowledge?
Layering the Curriculum for the All Learners

Concrete

Depth
Dependent

Reflective Learners

Abstract

Complexity
Novelty
Dependent Independent

J Taylor Education, 2016

P. Lerwick, 2010
Depth and Complexity Framework

Think Like A...
Geographer
Historian
Economist
Anthropologist
Astronomer
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Physicist
Political Scientist

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Power: Power may be used or abused.
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21st Century Learner

Independent Study
My Independent Study
Is Based on the Theme
My view of the theme:
My name:
Date started:
Date finished

Depth and Complexity Prompts/Icons
Content Imperative Prompts/Icons

TEKS
Universal Design

© J Taylor Education
One of the paramount goals of the TEKS are that they demand students think in deeper ways about less content. The idea of having less to teach but challenging students to think in a more complex, abstract matter while formulating big ideas related to learning sounds appealing and rewarding. However, we unfortunately are witnessing the opposite effect in many Texas schools. Teachers are not being given enough autonomy and both the classroom educators and other educators responsible for creating curriculum and lessons within a district are often times struggling to meet, and ultimately exceed the demands of the TEKS. Depth & Complexity provides concrete tools for them to do just that...differentiate and prompt different levels of learners to think from multiple perspectives and at much deeper levels about any content.

**Depth & Complexity** is the perfect match to the TEKS and their intended outcomes. The TEKS promotes deep levels of problem solving and thinking. The Depth & Complexity Framework provides practitioners with actual strategies, the engine that powers the car so to speak, that moves them from simply discussing higher-level thinking and developing learning opportunities that necessitate broader layers of thinking. That is what has been missing - the actual tools to write lessons that meet all demands of the TEKS while creating a rigorous and appropriately challenging learning for all students. Depth & Complexity…

- Refers to approaching or studying something from the [concrete to the abstract](#), from the [known to the unknown](#).
- Requires students to examine topics by determining the [facts](#), [concepts](#), [generalization](#), [principles](#) and [theories](#) related to them.
- Depth & Complexity prompts (icons) help students better understand the curriculum by [eliciting levels of reasoning](#) as a means to acquire and apply knowledge.
- **These prompts were defined as the common features to each discipline.** (Burker, 2003)
- **Referred to as “Thinking Curriculum”** because it increased the level of challenge for all students. (CDE, 2005)
The 21st Century Learner (aka as 21st Century Learning, College and Career Ready, etc) is a phrase being thrown around in hopes that the educational system better prepares young people for the numerous challenges in the quickly evolving and internationally competitive workplace. While there are many descriptions of what skills are necessary for teachers to integrate “21st Century Skills” into instruction, the common themes include: shifting away from solely direct instruction, focusing on critical thinking & problem solving skills, working successfully in a group/community setting, differentiated teaching with emphasis on varied learning styles, effective communication skills, technological savvy, imagination and the ability to adapt.

**Depth & Complexity** is an ideal partner for the 21st Century Learner as it:

- prompts students to think and problem solve like disciplinarians and professionals. When applying the concepts and components of Depth & Complexity to the study of disciplines, students are being prompted to think in similar ways as disciplinarians do when engaging in research and scholarly behavior. What better way to prepare students for the 21st Century workplace than to approach their learning in the same way that successful professional do. Furthermore, disciplinarians that were introduced to, and familiarized with Depth & Complexity communicated that the Framework is a “conceptual toolkit.”

- provides several techniques for teachers to differentiate content, process, and product.

- creates a **student-centered** learning environment where students look at unanswered questions within ethical dilemmas as they justify their Big Idea related to a topic of study. They are asked to analyze information from different perspectives and are required to problem solve from various standpoints.

- enables interdisciplinary instruction, solidifying that optimal learning is not discipline specific. Disciplines often taught independently in the classroom are not a realistic sample of how professionals approach problems and process information.
In the past few years, Depth of Knowledge (DOK) has received much attention as it is being lauded as one of the engines that shapes the development of Texas assessment questions. While it has been around for many years, DOK’s new-found popularity is related to its supposed focus on having students demonstrate levels of understanding with both process and content. More importantly, administrators are being told DOK “language” will be similar to what is students test questions will look like. There is nothing to fear however… as the often confusing and misinterpreted four levels of Depth & Knowledge all fall under the Depth & Complexity Framework umbrella.

Understanding of DOK is often vague from district-to-district and state-to-state and a common confusion is arising with respect to DOK’s role in instruction. Educators do not seem to fully grasp how to create lessons and learning experiences that seamlessly include the hierarchal levels of DOK. Instead, we are witnessing a “back-dooring” of looking at DOK levels and then crafting a learning objective based on, frankly put, those “levels” that administrators are being told will be found within an assessment test. This confusion and misuse of DOK ends when, instead, the Depth & Complexity Framework is used as the foundation for lesson creation.

Depth & Complexity trumps DOK in flexibility, ease of incorporation, and richness/complexity of learning opportunities, as it:

- provides a simple, yet concrete way for both student and teacher to exhibit their mastery of DOK’s four levels (using DC Icons, Content Imperatives, Disciplinarian Thinking, Universal Concepts & Generalizations).
- bridges the gap between simply describing levels of cognitive rigor (DOK) and actually designing instruction that demands and ensures rigorous learning experiences.
- acts as the students’ “Toolbox,” eliciting abstract, high-level thinking skills similar to those used by disciplinarians.
- focuses on learning connecting to real-world experiences, where DOK prompts real world connectivity in only its highest tier. Depth & Complexity was not created with assessments in mind, but instead as a deep, exciting way to think!
DOK levels and Geology

DOK 3- **Describe** a model that you might use to represent the relationships that exist within the rock cycle. *(Requires deep understanding of rock cycle and a determination of how best to represent it)*

DOK 2- **Describe** the difference between metamorphic and igneous rocks. *(Requires cognitive processing to determine the differences in the two rock types)*

DOK 1- **Describe** three characteristics of metamorphic rocks. *(Simple recall)*

Same verb—used at all three DOK levels
Now Use Depth and Complexity!

Think Like A...

- Geographer
- Historian
- Economist
- Anthropologist
- Astronomer
- Geologist
- Physicist
- Political Scientist

Universal Concepts & Generalizations

**Power:** Power may be used or abused
**Change:** Change is inevitable
**Systems:** Systems follow rules
**Structure:** Structures have parts that interrelate
**Conflict:** Conflict is composed of opposing forces

© J Taylor Education
Depth & Complexity and Geology

• DOK 4 - From the perspective of a conservationist, economist, and geologist, analyze the implications of digging a quarry near a residential neighborhood to extract igneous rocks for building highways. Write a persuasive opinion article for your local paper in favor of opening the quarry, while critiquing how decisions have been influenced by economic, environmental, and geopolitical factors.

• DOK 3 – Gather evidence to support the idea that the rock cycle can lead to the rise or decline of civilizations. Make a flow chart prioritizing the different stages of the rock cycle that supports the generalization that “one change leads to another.”

• DOK 2 – Compare and contrast metamorphic and igneous rocks by describing their characteristics and differences.

• DOK 1 – State three characteristics of metamorphic rocks.
Universal Design for Learning (UDL) was developed to counteract the “one size fits all” learning approach pervading US Schools over the past several years. The obsession with assessment results and inflexibility of prescribed curricula created boundaries to appropriate individualized learning opportunities. The concepts that there should be multiple means to acquiring and processing content and that instruction can be tailored to meet the needs of various learners falls right in line with the tenants of Depth & Complexity. Depth & Complexity provides educators with numerous user-friendly strategies that both enhance the UDL experience and ensure the principles of UDL are being met.

**Depth & Complexity** and UDL are synergetic and complement one another as frameworks that both:

- move learning away from “assessment driving instructional practices” and towards a student focused, exciting learning environment.
- are founded with the base understanding that all students learn differently and that they deserve differentiated learning without sacrificing the authenticity of standards and core curriculum.
- promote tiering for students so they may be challenged at appropriate levels that inspire them to delve deeper into an area of study.
- provide multiple ways for students across the spectrum, from Special ED, EL, and Gifted Students, to become engaged and express/share their learning while exhibiting they have a rich understanding of a particular area of intrigue or study.
DEPTH AND COMPLEXITY AND THE CONTENT IMPERATIVES

- Dr. Sandra Kaplan, Bette Gould, Sheila Madsen
- CA Golden State Exam, AP and IB Programs
- Inherent in all disciplines of study
- Increases sophistication of content
- Fosters the skills necessary to think critically, analytically and creatively
- Positively impacts gifted and non-gifted student understanding across the disciplines
The prompts of depth and complexity enable one to further develop their understanding in a more complex, sophisticated manner, suitable for their advanced needs, interest and/or ability (Kaplan, 2005).
Dimensions of Depth & Complexity

**Depth**: Language of the Discipline, Details, Patterns, Rules, Trends, Unanswered Questions, Ethics, & Big Idea

**Complexity**: Change Over Time, Multiple Perspectives, & Across the Disciplines

These are considered the 11 essential elements needed in order to master a subject & understand concepts in a deeper, more complex way.

**Examples**: Great Depression, the water cycle
specialized language related to a discipline or topic

Think like...
a biologist, an archaeologist, a mathematician

What words would students need to know to master/discuss: addition...
Multiplication... the Great Depression

- Disciplines/fields
- School subjects
- Time periods
- Multiple meaning words
- Science, SS, Math journals
- Preview text to predict word meanings
Language of the Discipline Mini-Lesson

**Geneticist (Genetics)**
Genes
Chromosomes
Heredity
Environment
Nature vs. Nurture
Cloning
Dominant
Laboratory

**Football Coach (Football)**
Touchdown
Field Goal
Pigskin
Hail Mary
Yards
Season
Plays

© Emily Biggers
parts that make up the whole, the information that enhances understanding

- parts
- factors
- Variables
- traits/attributes

Natural connection to BIG IDEA
What details support:
  - your answer?
  - the main idea of the story?

Observations
Compare/Contrast

Why is the flower the icon that represents DETAILS?
Details Mini-Lesson

Emily Biggers
aunt
sister
love the beach
teacher
freelance writer
daughter

6th Grader
Whiz Quiz
PreAP
Oldest in school
Graduation
Safety Patrol
Lockers
recurring elements or factors

Found in:
• ideas
• objects
• stories
• Events
• Behavior

Identify patterns
But also...
Why do the patterns occur?
Did the pattern change OVER TIME?

Cause & Effect
Relationships among Patterns

Read Three Little Pigs, discuss patterns, have students find 2 other books from the classroom library that have patterns.
Rules create/provide structure. They represent organization & hierarchy.

Rules of Behavior

Rules in Academics
- Scientific classifications
- Structure of a text or essay
- Mathematical formulas
- Grammar

Stated vs. Unstated Rules
## Rules Mini-Lesson

<table>
<thead>
<tr>
<th>STATED RULES</th>
<th>UNSTATED RULES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
<td>4.</td>
</tr>
</tbody>
</table>
represent the general direction of change

explained by external factors/influences that contribute to change (social, political, geographic, economic, etc.).

Cause & effect.... Spikes

For a trend to occur, one thing has to replace, or compete with, another.

It is a combination of PATTERNS & CHANGE OVER TIME.

Example: Hardback books to E-books in schools... What is causing this TEND?
Questions about anything that is:
• Unsolved
• Unclear
• Unproven

Ideas that are:
• yet to be explored
• unresolved
• incomplete
• not answered quickly
• may not be answerable (yet)

These generate thinking & discussion.

Unanswered questions are good!
Pursue answers.
Principles, right vs. wrong/ good vs. bad, gray area

conflicting points of view on events, ideas or issues

involves bias, values, or judgments

- Literature, Science, History, Economics
- “Take a Stand” game – (afternoon session)

Natural Connection:
ETHICS with MULTIPLE PERSPECTIVES
a generalization, principle, or theory about the curriculum being studied (the focus)

- Purpose for learning
- Theme
- What is the “big idea” of today’s lesson?
- Main idea of a story or paragraph (in the roof) -- supported with evidence/details (pillars).

Use with universal themes and generalizations or even lesson objective for the day.
(Change) Over Time
Past, Present, Future

How something changed or stayed the same over a period of time

- Natural
- Man-made
- Past influencing present or future
- Characters, settings
- Rate or speed of change
- Consequences of change

Examining the “why” is critical.
Over Time Mini-Lesson

What is something you enjoyed doing as a young child?
• As a teenager?
• In college (or young adulthood)?
• Currently?

What has stayed the same? What has changed over time?

(With students – as a baby, kindergarten, now in fourth grade… Depends on their exact age.)
different points of view on ideas, events, people, and issues

- may represent an "expert" viewpoint
- someone else's "glasses" or "lenses"
  - Characters
  - Famous Inventors, Leaders, Explorers
  - Empathy/conflict resolution
  - Conflicts in novels/history
  - Cultural/Global

Combines well with the other icons.
Did __’s perspective CHANGE OVER TIME?
Perspectives regarding ETHICAL ISSUES

Use to help make decisions.
How an area of study is related to other subjects or disciplines

- How does (content) relate to math, science, history?
- Integrated studies
- Text to Self, Text, World Connections

When studying an artist:
- where he/she lived (geography)
- style (art)
- influences (history)
Use Depth & Complexity in Daily Life?
How about in the house buying process I am in right now?

- Are there any specialized terms I need to know when house hunting? Does real estate have its own “language?”
- What are the important details?
- Are there patterns or trends that are important to examine?
- What are the rules?
- Do ethical issues ever arise? What should I look out for in this regard?
- How does buying or selling a house change over time?
- What perspectives should I consider?
- What disciplines overlap with real estate?
- What’s the big idea?
- And… do I have any unanswered questions? If so, what resources might help me find answers?
## Depth and Complexity

<table>
<thead>
<tr>
<th>Icon</th>
<th>Definition</th>
<th>Prompt</th>
</tr>
</thead>
<tbody>
<tr>
<td>🗣️</td>
<td><strong>Language of the disciplines</strong> - the specific specialized and technological terms associated with a specific areas of study</td>
<td>specialized vocabulary; tools used by disciplinarians; names of skills or tasks particular to people working within the discipline</td>
</tr>
<tr>
<td>🌺</td>
<td><strong>Details</strong> - specific characteristics that describe a concept, theory, or even a fact.</td>
<td>parts; attributes; factors; variables</td>
</tr>
<tr>
<td>🌀</td>
<td><strong>Patterns</strong> - recurring events represented by details</td>
<td>repetition; predictability; recurring events; cycle; repeated features</td>
</tr>
<tr>
<td>📈</td>
<td><strong>Trends</strong> - refers to factors that influence events</td>
<td>influences; forces; direction; course of action; fads</td>
</tr>
<tr>
<td>💡</td>
<td><strong>Unanswered questions</strong> - the ambiguities and gaps of information recognized within an area or discipline under study</td>
<td>dilemmas; ambiguities; unclear ideas; discrepancies; yet unknown; not understood; lacking in explanation; incomplete ideas</td>
</tr>
<tr>
<td>🏬</td>
<td><strong>Rules</strong> - the natural or person-made structure or order of things that explains the subject in study</td>
<td>Structure; order; explanation; organization; laws</td>
</tr>
<tr>
<td>🔴</td>
<td><strong>Ethics</strong> - the controversial issues that plague an area of study</td>
<td>different opinions; judging; bias; controversial issues; problems; morals; prejudice; discrimination</td>
</tr>
<tr>
<td>🏛️</td>
<td><strong>Big Ideas</strong> - the generalizations, principles, and theories that distinguish themselves from the facts and concepts of the area or discipline under study</td>
<td>overarching ideas; broad idea that can be supported with evidence; generalization; universal concept to connect all learning</td>
</tr>
<tr>
<td>🔔</td>
<td><strong>Over time</strong> - the understanding of time as an agent of change and recognition that the passage of time changes our knowledge of things</td>
<td>looking at past; present; and future; relationships within a time period; applying from the past to the present</td>
</tr>
<tr>
<td>🕒</td>
<td><strong>Perspective</strong> - the concept that different points of view alter the way ideas and objects are viewed and valued</td>
<td>different points of view; ways of seeing and reporting things; opposing viewpoints; outlooks; interpretation</td>
</tr>
<tr>
<td>🌊</td>
<td><strong>Across the disciplines</strong> - connections made within, between, and among various areas of study or disciplines</td>
<td>connections among disciplines; touching on many subjects all at once; relationships within the disciplines; relationships between the disciplines</td>
</tr>
</tbody>
</table>
ICONS -- How to Begin

Remember, the icons are tools to challenge learners to venture deeper and to broaden their understanding of the areas of study.

• Post all of the icons in your room to show that you value the icons as intellectual tools.
• Look for appropriate icons within your lessons.
• Integrate 1 or 2 icons into your lessons.
• Add icons to worksheets.
• Use icons as graphic organizers.
• Use the Big Idea icon to summarize or end lessons.
• When you “brainstorm” during a lesson, use the icons to label the information on the chart.
• Allow the students to choose their own icons to develop their own questions for study.
• Use the icons in center activities and to differentiate the tasks at the centers.
• Frame anything: teacher, student, story, concept, chapter, lesson, poem, art, etc.
• Use icon cards/blocks for discussion purpose.
• Use Unanswered Questions icon for the “W” part of a “K, W, L” chart.
INTRODUCING THE PROMPTS OF DEPTH AND COMPLEXITY

Student choice

more than one at time

with Standards

one at a time

with varied resources

student application
Introducing Depth & Complexity to your Students

– Define and Discuss the dimensions
– Apply to existing knowledge
– Apply to new knowledge/content
– Integrate into the real world
While reading, listen for details that impact the story, such as characters, setting, problem and solution.

While reading, listen for patterns that occur over and over. Listen for the events or behaviors that repeat and can be predicted.

Identify the pattern of events and character behavior by listening to a picture book read aloud. Participate in a group discussion to share your understanding and create a visual using pictures and words to share your findings with the group.
Who can **elaborate** and describe the details of the pattern?

How do the details of the pattern **relate** to the big idea “One change leads to another?”

Details of the Pattern
LANGUAGE OF THE DISCIPLINE

How would _______ be best described by people working in this area/field/discipline?

RULES

Define the consequences of intended and unintended rules governing ________.

BIG IDEA

Describe all of these ideas regarding _______ in one brief statement.

ETHICS

Prove with evidence that there were and still are ethical considerations involved in the treatment of ________.

MULTIPLE PERSPECTIVES

Compare ________ from the perspectives of an historian, anthropologist, sociologist, and psychologist.
Describe the patterns or repetition you find.

________________________________________________________________________

Predict what might come next.

________________________________________________________________________

List things that are repeated over time.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Draw a pattern or cycle from this topic.
A Deep and Complex Look at Literature: Lon Po Po

**Big Ideas & Unanswered Questions with Literature**

While most elementary-aged children have heard the classic story about Red-Riding Hood, *Lon Po Po* provides an opportunity for the students to see the story from a different cultural perspective. Viewing both stories through Main Ideas allows students to see how the global themes remain the same despite the differences in details. The Unanswered Questions might relate to both stories, such as “Why would a wolf want to hurt children,” while another question might be specific to *Lon Po Po*, “Is Po Po a common nickname for Grandmother in China?” A cross-cultural study using children's literature and the icon of Unanswered Questions can encourage students to develop more curious minds.

**Intentional Teaching Considerations:**

- **Work together to solve a problem**
- **Be creative**
- **Be certain before you make a decision**
- **Get more information**

**What is the main idea of this topic?**
- Listen to your parents when they are trying to protect you.
- Think before you act.

**Why is this main idea important?**
Because it will keep you safe.

**Unanswered Questions**

- What did you learn?
- It can be easy to be fooled.
- If we think carefully before we act, it might prevent us from getting hurt or being fooled.

- What questions remain about this topic?
- Why would a wolf want to hurt children?
- How would you be able to be certain it was your PoPo?
- Why were the mother and children living alone?
- What happened to the father?
- Is PoPo a common nickname for Grandmother in China?

**What resources can help you answer these questions?**

- National Geographic
- Wolf experts
- Grandmas & Grandpas teachers
- Write to the author

**Create a drawing about this question.**

- Listen to your parents when they are trying to protect you.
- Think before you act.

Because it will keep you safe.

- Why would a wolf want to hurt children?
- How would you be able to be certain it was your PoPo?
- Why were the mother and children living alone?
- What happened to the father?
- Is PoPo a common nickname for Grandmother in China?
Use *Depth and Complexity* concepts to elaborate any topic or unit.

• Give a of this .

• Look .

• Use to shed light on .

• Pull apart the you encounter.

• Discover if are due to insufficient . Explain.

P. Lerwick, 2010.

J Taylor Education, 2016
Intellectual Pathway

• For each student, create an *individual* Intellectual Pathway to a product.
• E.g., Unanswered Questions lead to Details lead to Patterns lead to Perspectives Over Time.

• Student A:

• Student B:

• Student C:
But remember,

we are **not** teaching the icons, we are teaching concepts to new levels of depth and complexity using pictures to stand for the thinking strategies. Depth & Complexity is **not** a program.

J Taylor Education, 2016

*P. Lerwick, 2010.*
# Relationship Between Depth & Complexity and Reading Skills

## Dimensions of Depth

<table>
<thead>
<tr>
<th>Language of the Discipline</th>
<th>Reading Skills</th>
<th>Related Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figurative speech</td>
<td>Multiple meaning of words, technical vocabulary</td>
<td></td>
</tr>
<tr>
<td>Define facts</td>
<td>Describe, note synonyms</td>
<td></td>
</tr>
<tr>
<td>Sequence, relate events</td>
<td>Hypothesize, guess, predict, identify main idea</td>
<td></td>
</tr>
<tr>
<td>Sequence, relate events, identify cause and effect</td>
<td>Forecast, note influences, forces, compare and contrast</td>
<td></td>
</tr>
</tbody>
</table>

| Unanswered Questions | Differentiate fact from opinion | Note ambiguity, guess, predict, identify discrepancies |

| Rules | Identify cause and effect, provide reasons, explore why | Determine relevance, note order, identify stated/unstated learnings, order |

| Ethics | State reasons why, determine bias | Draw conclusions, argue, prove with evidence, infer |

| Big Ideas | State/make generalization | Identify theory, state principle |

## Dimensions of Complexity

<table>
<thead>
<tr>
<th>Fast Future Present</th>
<th>Reading Skills</th>
<th>Related Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sequence, relate events</td>
<td>Predict, guess, order</td>
<td></td>
</tr>
</tbody>
</table>

| Points of View | Describe perspective, determine bias, infer | Identify stereotype, assume multiple and varied ideas |

| Establish Interdisciplinary Connections | Relate events | Connect, associate, integrate information, link ideas |

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Sandra N. Kaplan, University of Southern California

J Taylor Education, 2016