

TEACHING FOR UNDERSTANDING:

(Part II) Aligning Understanding by Design and Differentiated Instruction



**Association for Supervision
and Curriculum Development
(ASCD)**

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Presenter**

AGENDA

- **Key Elements of the Concerns-Based Adoption Model (C-BAM): Determining Staff Perceptions About Their Levels of Use and Assessing Levels of Use Within the Learning Organization**
- **Key Principles of Understanding by Design**
- **Key Principles of Differentiated Instruction**
- **Connecting UbD and DI: How Can We Promote the Achievement of All Learners?**
- **Planning Effective Curriculum, Including Lessons and Units Using the Principles of UbD and DI**
- **Effective Formative and Summative Assessment Using UbD and DI Principles and Strategies**
- **Teaching-Learning Strategies and UbD/DI: What Can We Observe in the Classroom?**

Another Way of Looking at Our Workshop...

- What are the *universal planning, teaching, assessment, professional development, and school improvement planning practices* we should see in classrooms that reinforce the principles of Understanding by Design and Differentiated Instruction?
- What are the essential *building blocks* of differentiated instruction and teaching for understanding? In other words, what are *realistic starting points*?
- How can we support staff members in moving toward *full implementation* of these two frameworks?

The Concerns-Based Adoption Model (C-BAM)

- Developed by Donald L. Horsley and Susan Loucks-Horsley, C-BAM views professional development and organization growth through two interrelated lenses: Stages of Concern and Levels of Use.
- C-BAM identifies eight levels of use that provide valuable perspectives from which to view your school or district's work with Understanding by Design and Differentiated Instruction.

C-BAM Levels of Use

Level 0=Non-Use

Level I=Orientation

Level II=Preparation

Level III=Mechanical Use

Level IVa=Routine Use

Level IVb=Refinement

Level V=Integration

Level VI=Renewal

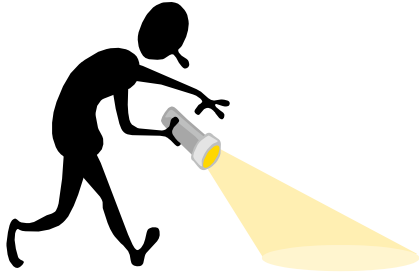
Part I (A)

What does it mean for students to understand what they are learning? What are the core elements and principles of Understanding by Design?

What Is Understanding?

1. **Application:** using what we've learned in new or unanticipated settings and situations.
2. **Explanation:** supporting claims and assertions with valid and complete evidence.
3. **Interpretation:** constructing meaning in reaction to text and life situations and creating new ideas and products based upon this process.
4. **Analysis of perspectives:** describing and comparing different attitudes and perspectives about a controversial event, situations, idea, or theory.
5. **Empathy:** “walking in another’s shoes,” responding emotionally and relationally as others might.
6. **Self-knowledge:** meta-cognitive monitoring, resulting in our revising, rethinking, revisiting, and refining our learning and thinking process.

What Can We See in Effective Classrooms That Promote Understanding and Differentiation?



- **Students on task and engaged**
- **A challenging and relevant curriculum with goals and objectives clearly identified and understood by all learners**
- **Students practicing and revisiting big ideas, essential questions, and spiraling skills and procedures**
- **Varied and continuous assessment with emphasis upon formative assessment to ensure coaching and students' self-monitoring and self-adjustment**
- **Re-teaching and reviewing based on strengths and needs, including flexible grouping**
- **Movement toward conceptual understanding and independent transfer among all learners**

Part I (A)

What Is Understanding by Design?

A DEFINITION

Understanding by Design is a framework and language for designing an education that promotes high levels of student understanding and achievement. It emphasizes the concept of backward design, suggesting that we begin with desired learning results (Stage 1), then think about evidence needed to certify that students have achieved those desired learnings (Stage 2), and finally plan the teaching-learning activities and resources to help students achieve desired results (Stage 3).

Grant Wiggins and Jay McTighe

The **Keys** to Understanding by Design (UbD)



- **Teaching for understanding**—ensuring that students have ongoing opportunities to explore big ideas and essential questions that promote students’ “meaning making” and transfer.
- **Designing backwards**- rather than beginning with traditional design of teaching-learning activities, start with what students should know, do, and understand; design related assessment tasks; then determine how best to teach students to promote success on these tasks, confirming successful achievement of desired results.
- **Emphasizing the six facets**- ensuring that students can demonstrate their understanding through a growing ability to explain, interpret, apply, analyze perspectives, express empathy, and show self-knowledge.
- **The assessment-teaching-learning connection** – creating effective performance tasks, reflective assessments, and culminating projects to allow students to demonstrate their growing understanding.

How Does Research Support UbD?

- **Cognitive learning theory** and **constructivist research** suggest that students construct meaning through such behaviors as explanation, interpretation, and application.
- **Brain-based research** confirms that we learn best when we see the “big picture,” make patterns and connections, and operate in challenging but unthreatening settings.
- Theories of **multiple intelligences, learning styles, emotional intelligence,** and “**flow**” confirm the need for students to be at the center of their own learning process.



Part I (B)

What is Differentiated Instruction? What are its core elements and principles?

Differentiated Instruction...

***Place Your
Bets!***

How Much Do You Think You Already Know About Differentiated Instruction (DI)?

- **How certain are you about each of the following statements about DI?**
- **Start with an imaginary \$500. Bet your full amount if you're sure that the statement is true or false—or hold some back if you're not entirely certain about each statement.**
- **You can bet alone—or with one or more partners.**
- **As your money increases, you can choose to keep betting more of it.**

Equity and Excellence:

Key Values in Successful DI/UbD Schools

- **EQUITY**: According to Robert J. Marzano in What Works in Schools, ***all*** learners have the right to an education based upon a ***guaranteed and viable curriculum with challenging learning goals and effective (and sustained) feedback.***
- **EXCELLENCE**: For students to compete in the world of the 21st Century, their education should be ***rigorous and aligned with core life skills, including assurance that they understand what they are learning***—not just memorize information or model skills in an algorithmic or rote fashion.

Part I (B)

What Is Differentiated Instruction?

A DEFINITION

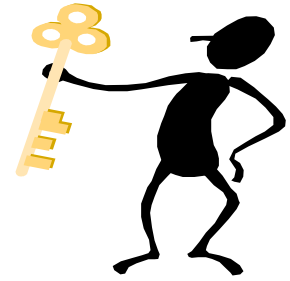
Differentiated Instruction is a teaching philosophy based on the premise that teachers should adapt instruction to student differences. Rather than marching students through the curriculum in lockstep, teachers should modify their instruction to meet students' varying readiness levels, learning preferences, and interests. Therefore, the teacher proactively plans a variety of ways to 'get at' and express learning.

-Carol Ann Tomlinson

WHAT IS DIFFERENTIATED INSTRUCTION?

- **It is qualitative rather than quantitative – more is not better – Adjust the nature not the quantity of class work.**
- **It is grounded in continuous assessment – and instruction is adjusted according to what the assessment reveals.**
- **It is student centered – Learners “own” responsibility for their learning and they are appropriately challenged.**

The **Keys** to Differentiation



- **Attention to Student Differences**-- seeking ways to tap into the variations among student learning profiles, interests, and previous knowledge/readiness levels
- **Strong Element of Pre-Assessment (Diagnostic and Formative)**- diagnosing students' readiness levels and requisite background knowledge with attention to developing tasks that match student achievement levels while challenging and motivating all learners
- **A Climate of Importance and Support For Multiple Pathways of Learning**- creating an atmosphere where flexible grouping helps ensure student access to a wide variety of learning options and work arrangements
- **Rich and Challenging Tasks (“Respectful Work”)** - All students connect to the task at their level of comfort. They all have depth, high levels of thinking and outcomes that all students can appreciate and respect

How Does Research Support DI?

- Differentiated Instruction is the result of a synthesis of a number of educational theories and practices about teaching and **learning modalities**...to include: child psychology, behavior management, learning styles, multiple intelligences, and assessment.
- Brain research indicates that learning occurs when the learner experiences moderate challenge and relaxed alertness –**readiness**
- Psychological research reveals that when **interest** is tapped, learners are more likely to find learning rewarding and become more autonomous as a learner.



Connecting Principles: Understanding by Design (UbD) and Differentiated Instruction (DI)

- **The learner is at the heart of the learning process.**
- **The instructor should facilitate learning rather than “dispense” information.**
- **Education should promote understanding, not just knowledge-recall learning.**
- **Curriculum should be organized conceptually around big ideas and essential questions.**
- **Ongoing assessment of students’ strengths and needs must guide and inform the teaching-learning process in order to individualize it.**
- **All learners should move toward independent levels of understanding and transfer.**

Part II

**How Can We
Address Students'
Learning Profiles?**

Learning Profile Factors

- **Group Orientation**: *Independent? Group/peer orientation? Adult orientation? Combination?*
- **Gender and Culture**: *How do they influence your learning process and interests?*
- **Learning Environment**: *What levels of noise, warmth, movement, flexibility, and organization do you prefer?*
- **Cognitive Style**: *Abstract? Random? Practical? Attention span? Intuitive? Sensing? Expressive? Controlled? Creative? Independent? Associational?*
- **Intelligence Preference**: *Verbal? Mathematical? Logical? Spatial/visual? Bodily/kinesthetic? Musical/Rhythmic? Interpersonal/Intra-personal? Naturalist? Existential?*

Multiple Modalities, Learning Styles, and Intelligences

- **We take in impressions and construct meaning about our world through multiple sensory channels and modalities.**
- **There is no single way to learn: We construct meaning, perceive our world, and make judgments based upon a variety of learning styles.**
- **According to Howard Gardner, intelligence is a *potential*, not an innate gift, and manifests through *multiple forms* such as the linguistic, logical/mathematical, visual/spatial, musical, bodily/kinesthetic, interpersonal, intra-personal, and naturalist/ecological.**

Creating Your Own Learning Profile

- Complete each of the following exercises and record your results for each section.
- **THINK**: What do your responses reveal about you? Based on your data, how would you describe your overall learning profile?
- **PAIR**: Share your learning profile elements with a partner.
- **SHARE**: Be prepared to share insights and questions with the whole group.

****How Do You Perceive Things? How Do You Make Judgments?***

- **(1) Do you tend to get more energized by being around other people or (2) finding opportunities to retreat and recharge your energy alone?**
- **(3) Do you tend to make judgments based upon concrete, empirical evidence or (4) emotion and intuition?**
- **(5) Do you tend to be driven more by your thinking and analytical processes or (6) by your feelings, emotions, and relationships?**
- **(7) Do you tend to be highly punctual and closure driven or (8) do you tend to “live in the moment” in “ish-time”?**

****How Do You Perceive Things? How Do You Make Judgments?***

I/E=Do you tend to get more energized by being around other people (**1. extroversion**) or finding opportunities to retreat and recharge your energy alone (**2. introversion**)?

S/N=Do you tend to make judgments based upon concrete, empirical evidence (**3. sensing**) or emotion and intuition (**4. intuitive**)?

T/F=Do you tend to be driven more by your thinking and analytical processes (**5. thinking**) or by your feelings, emotions, and relationships (**6. feeling**)?

J/P=Do you tend to be highly punctual and closure driven (**7. judging**) or do you tend to “live in the moment” in “ish-time” (**8. perceiving**)?

****What Is Your Cognitive Style? How Would You Describe Yourself?***

<p><u>I most often tend to be:</u> concrete, sequential, linear, organized, require clear guidance and directions, prefer closure, need models and exemplars, prefer predictability and order, desire clear and practical reasons for completing an assignment, inclined to work independently, follow policy and procedure.</p>	<p><u>I most often tend to be:</u> abstract, sequential, conceptual, emphasize the big picture, whole-to-part relationships, strategic, intellectually organized but externally I'm a "pile collector," strategic thinker, can be a "devil's advocate," like to debate conflicting perspectives.</p>
<p><u>I most often tend to be:</u> concrete, random, use the here-and-now as a springboard for vision and possibility, "don't fence me in," "don't tell me what to do," enjoy independent projects that are reality-based, strong leadership traits, enjoy non-traditional education.</p>	<p><u>I most often tend to be:</u> abstract, random, tend to be feeling and relationship oriented, highly interactive and communicative, express myself through the arts, equity-oriented, an advocate for the disenfranchised, prefer group activities, not closure driven.</p>

****What Is Your Cognitive Style? How Would You Describe Yourself?***










CONCRETE SEQUENTIAL: concrete, sequential, linear, organized, require clear guidance and directions, prefer closure, need models and exemplars, prefer predictability and order, desire clear and practical reasons for completing an assignment, inclined to work independently, follow policy and procedure.

CONCRETE RANDOM: concrete, random, use the here-and-now as a springboard for vision and possibility, “don’t fence me in,” “don’t tell me what to do,” enjoy independent projects that are reality-based, strong leadership traits, enjoy non-traditional education.

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ABSTRACT RANDOM: abstract, random, tend to be feeling and relationship oriented, highly interactive and communicative, express myself through the arts, equity-oriented, an advocate for the disenfranchised, prefer group activities, not closure driven.

***What Is Your Preferred Intelligence Style? (I)**

-  I am an effective writer and communicator, and I use research as a tool to collect and analyze information.
-  I am excellent in mathematics, and I approach things in a rational, logical way.
-  I can easily solve mechanical problems, and I am excellent in figuring out and using technology and visual representations.
-  I express myself and communicate to the world via music.
-  I use my body and my physical interactions with my environment to express myself and to process my world.
-  I am very aware of how I am feeling and reacting and why.
-  I am very empathetic with others and understand how they are motivated, feeling, and reacting.
-  I love communing with nature and interacting with it.
-  I love to explore the great universal questions about life and its meaning.

*What Is Your Preferred Intelligence Style? (II)



I am an effective writer and communicator, and I use research as a tool to collect and analyze information. *(Linguistic)*



I am excellent in mathematics, and I approach things in a rational, logical way. *(Logical-Mathematical)*



I can easily solve mechanical problems, and I am excellent in figuring out and using technology and visual representations. *(Visual-Spatial)*



I express myself and communicate via music. *(Musical)*



I use my body and my physical interactions with my environment to express myself and to process my world. *(Bodily-Kinesthetic)*



I am very aware of how I am feeling and reacting and why. *(Intrapersonal)*



I am very empathetic with how others and understand how they are motivated, feeling, and reacting. *(Interpersonal)*



I love communing with nature and interacting with it. *(Naturalistic)*



I love to discuss and explore the great universal questions about life and its meaning. *(Existential)*

Sternberg Intelligences “Starters”

ANALYTICAL: Linear, schoolhouse smart, sequential:

- Show how the components of UbD and DI work and interact.
- Explain why the six facets can be used to assess understanding.
- Diagram the three stages of backward design.
- Present a step-by-step approach to using UbD and DI.

PRACTICAL: Streetsmart, contextual, focus on applied use:

- Demonstrate how you have used UbD and DI in your classroom.
- Show how your school could use DI to motivate students.
- Based on your own experience, develop a plan describing how DI and UbD can be used to enhance student achievement.

CREATIVE: Innovator, outside the box, what if, improver:

- Find a new way to describe the six facets of understanding.
- Use unusual materials to create a map for DI or UbD.
- Make connections between DI and UbD to help us see commonalities.
- Become a student in your own classroom and use this new perspective to generate ideas for improving student motivation.

How Can You Address Learning Style Elements? (1)

- **Group Orientation**: Independent? Group/peer orientation? Adult orientation? Combination? *(Vary learning tasks to allow for whole-group, small-group, and independent work and exploration.)*
- **Gender and Culture**: *How do they influence your learning process and interests? (Whenever possible, ensure that students have options in materials and texts. Ensure that resources reflect a range of cultures. Help students to see themselves in the curriculum they study.)*
- **Learning Environment**: *What levels of noise, warmth, movement, flexibility, and organization do you prefer? (Consider learning centers. Arrange the classroom to accommodate a range of modality preferences.)*

How Can You Address Learning Style Elements? (2)

- **Cognitive Style**: *Abstract? Random? Practical? Attention span? Intuitive? Sensing? Expressive? Controlled? Creative? Independent? Associational? (Explore the design principles of such frameworks as McCarthy's 4-MAT System. When possible, vary task options to accommodate the concrete v. abstract; the random v. sequential; the introvert v. the associational.)*
- **Intelligence Preference**: *Verbal? Mathematical? Logical? Spatial/visual? Bodily/kinesthetic? Musical/Rhythmic? Interpersonal/Intra-personal? Naturalist? Existential? (In culminating performance tasks and related performances, encourage students to express their intelligence preferences.)*

Resources for Learning Profiles and Preferences

- **Rita Dunn.** “Rita Dunn Answers Questions About Learning Styles” in *Educational Leadership*, Vol. 48, n. 2, October 1990, pp. 15-19.
- **Howard Gardner.** (1993). *Multiple Intelligences: The Theory in Practice*. New York: Basic Books.
- **Daniel Goleman.** (1995). *Emotional Intelligence*. New York, NY: Bantam Books.
- **Anthony Gregorc.** (1982). *An Adult's Guide to Style*. Maynard, MA: Gabriel Systems.
- **McCarthy, B., & D. McCarthy.** (2006). *Teaching in the 4-MAT Cycle: Designing Instruction for Diverse Learners and Diverse Learning Styles*. Thousand Oaks, CA: Corwin Press.

Part III

- **What is an effective curriculum?**
- **How can we determine what all learners should know, do, and understand at the conclusion of lessons and units?**

Four Steps to a MUCH Better Curriculum

Hook

How am I going to make learning tasks appealing, inviting, and intriguing to my students?

Do the tasks absolutely and with no ambiguity call on students to grapple with one or more of the key understandings and core knowledge and skills of the unit?

Focus

Are the tasks crafted at very high levels of thought and production for the students who will perform them? Are you confident they will stretch them in use of information, critical and creative thinking, reflection on their thinking, skill and accuracy, research, insight, or other areas valuable in this effort?

Ratchet

Are the directions written in such a way that the students cannot take the “low road” or the easy out with their work? Are they written to direct students to the “high road” or the quest for quality in work and thought?

Tighten

Stage One: Desired Results

- **All students should master the same rigorous, challenging “power standards” (established goals).**
- **Both UbD and DI suggest that desired results should focus on long-range understandings (e.g., big ideas, enduring understandings, and essential questions).**
- **Declarative (i.e., information such as facts, concepts, generalizations, principles, rules theories) and procedural knowledge (i.e., skills, procedures, processes) should reinforce students’ ability to develop understanding and transfer knowledge to new and independent tasks and situations.**

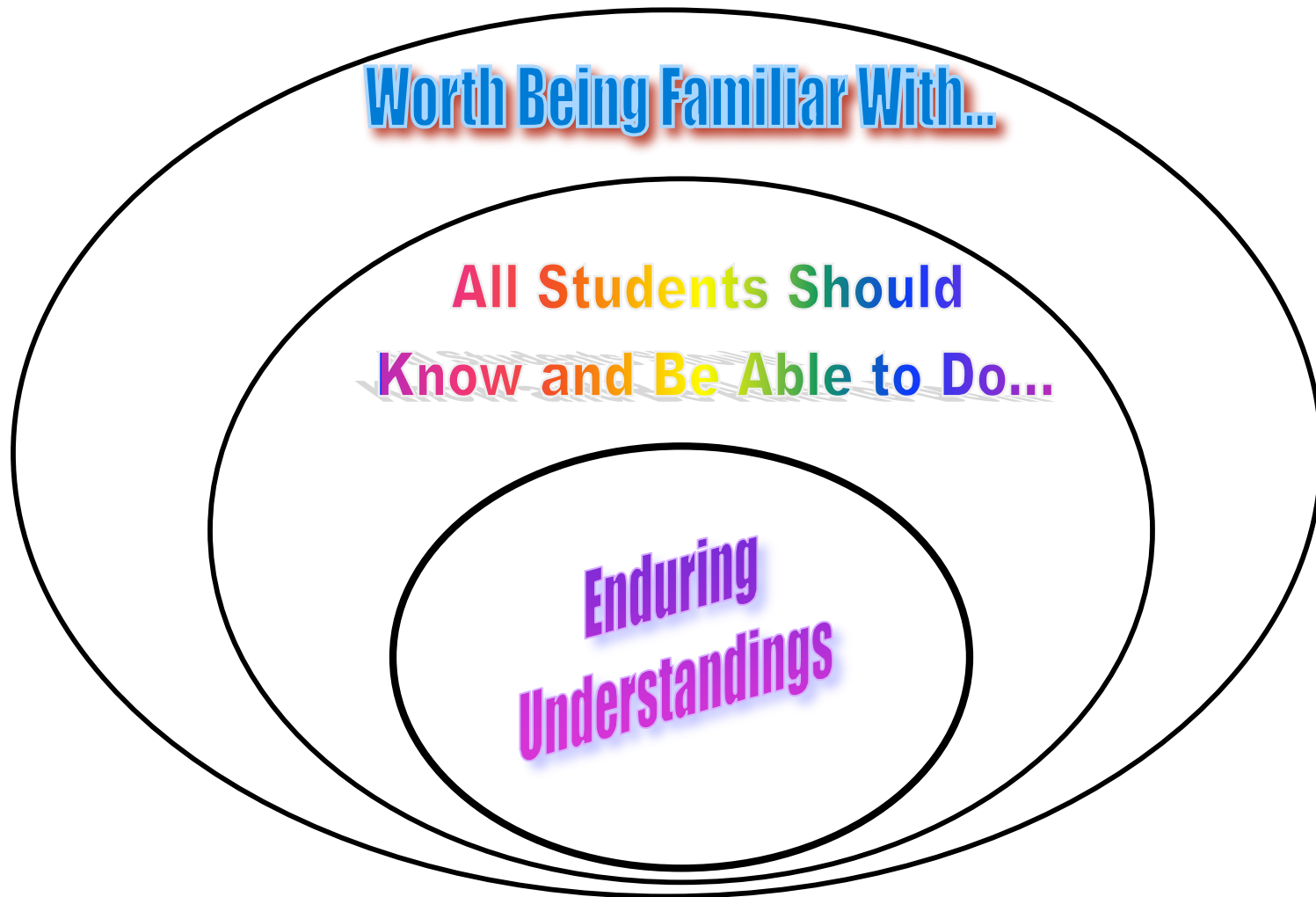
K-U-D

- **K**=What *information* do we want students to know (i.e, facts, concepts, generalizations, theories, rules, principles)?
- **U**=What do we want students to understand (i.e., be able to *transfer* or *use independently*?)
- **D**=What do we want students to be able to do (i.e., skills, procedures, processes)?

Unpacking Standards Using the Three-Circle Audit Process

- How can you “unpack” your content standards to determine their level of power or significance?**
- Understanding by Design suggests that you use the following three-circle audit process:**

The UbD “Three-Circle Audit” Process



The Understanding by Design Three-Circle Audit

1. Standards need to be interpreted and **“unpacked.”**
2. Staff members need to determine:
 - a. **Outer Circle:** What is worth being familiar with?
 - b. **Middle Circle:** What should all students know and be able to do?
 - c. **Center Circle:** What are the enduring understandings students should explore and acquire?

For Example...

For a group of tenth-grade World History students, how would you rank each of these:

- **The day and year the Magna Carta was signed...**
- **The historical significance of the Magna Carta...**
- **The enduring influence of significant political documents throughout the history of world civilization...**

Into Which Circle Would You Place the Following Learning Goals...?

<p>1. Identify the years in which Mark Twain was born and died. (English, Grade 8)</p>	<p>2. Use the Periodic Table to identify the atomic weights of carbon, oxygen, and helium. (Chemistry, Grade 11)</p>	<p>3. Describe how a bill becomes law at state and national levels. (Civics, Grade 9)</p>
<p>4. Explain how we can use sound and letter combinations to make sense of text. (Reading, Grade 1)</p>	<p>5. Apply the habits of mind used by scientists to engage in scientific inquiry. (Science, Grade 5)</p>	<p>6. Interpret how a primary source document reflects political bias on the part of an author. (U.S. History, Grade 8)</p>
<p>7. Describe eating patterns and menus from previous historical eras. (Health, Grade 4)</p>	<p>8. Identify key figures who contributed to the development of modern statistics. (College-Level Intro. to Statistics Course)</p>	<p>9. Trace universal patterns, themes, and motifs common to art through the ages. (Humanities, Grade 12)</p>

To What Extent Do You Have a Core Curriculum?

- **Do all teachers responsible for the same grade level and/or subject area agree on:**
 - a. What is worth being familiar with?**
 - b. What should all students know and be able to do?**
 - c. What are the enduring understandings we expect of all our students?**

“Big Ideas” as Curriculum Organizers

- 1. Big ideas are significant and recurring concepts, principles, theories, and processes that represent essential focal points or “conceptual lenses” for prioritizing content.**
- 2. Through the identification of big ideas, we can find ways to organize discrete curriculum elements such as facts, skills, and activities.**
- 3. They are powerful because they embody transferable ideas applicable to other settings, situations, and content areas.**
- 4. They engage students in the process of “uncoverage,” discovering meaning, drawing significant inferences, and enhancing the authenticity of learning experiences.**

Categories for “Big Ideas”

<p style="text-align: center;">Concepts</p> <ul style="list-style-type: none"> •Equivalent Fractions •Adaptation 	<p style="text-align: center;">Themes</p> <ul style="list-style-type: none"> •The American Dream •Ethical citizenship 	<p style="text-align: center;">Issues/Debates</p> <ul style="list-style-type: none"> •Homeland Security •Creationism vs. Evolution
<p style="text-align: center;">Problems</p> <ul style="list-style-type: none"> •Deforestation of the rain forests •The technology gap 	<p style="text-align: center;">Challenges</p> <ul style="list-style-type: none"> •Surviving the harsh and dangerous frontier life •Prospering in a global economy 	<p style="text-align: center;">Processes</p> <ul style="list-style-type: none"> •Historiography •Scientific inquiry
<p style="text-align: center;">Theories</p> <ul style="list-style-type: none"> •The Theory of Relativity •Natural Selection 	<p style="text-align: center;">Paradoxes</p> <ul style="list-style-type: none"> • Poverty in the Wealthiest Nation in the World •One person’s healthiest diet may be another’s least healthy. 	<p style="text-align: center;">Assumptions/ Perspectives</p> <ul style="list-style-type: none"> •We are experiencing a condition of global warming. •We need to go back to the “basics” in education.

Enduring Understandings

1. Statements or declarations of understandings comprised of two or more big ideas.
2. Framed as universal generalizations—the “moral” or essence of the curriculum story.
3. Help students to “uncover” significant aspects of the curriculum that are not obvious or may be counterintuitive or easily misunderstood.
4. Formed by completing the statement: ***Students will understand THAT:.....***

Sample Enduring Understandings

- 1. Numbers are abstract concepts that enable us to represent concrete quantities, sequences, and rates.**
- 2. Democratic governments struggle to balance the rights of individuals with the common good.**
- 3. The form in which authors write shapes how they address both their audience and their purpose(s).**
- 4. Scientists use observation and statistical analysis to uncover and analyze patterns in nature.**
- 5. As technologies change, our views of nature and our world shift and redefine themselves.**
- 6. Dance is a language through which the choreographer and dancer use shape, space, timing, and energy to communicate to their audience.**

Overarching vs. Topical Enduring Understandings

- Enduring understandings vary according to their scope and level of generalization.
- An ***overarching understanding*** can apply to multiple points during a student's education; the most overarching can also apply to multiple content areas.
- A ***topical understanding*** is unit or time-specific and generally applies to a specific unit within the student's course of study.

Examples of Overarching and Topical Enduring Understandings

Overarching

- **Mathematics allows us to see patterns that might have remained unseen.**
- **When technologies change, art forms frequently follow suit.**

Topical

- **Statistical analysis and graphic displays reveal patterns in seemingly random data.**
- **When photography emerged, Impressionists rejected realism in favor of conveying impressions of reflected light upon the human eye.**

Avoiding Common Pitfalls...

- Don't confuse enduring understandings with goals or objectives: *e.g., Students will be able to understand equivalent fractions; Students will understand the water cycle.*
- Don't present truisms, vague generalities, or unpacked global statements ending in adjectives: *e.g., The United States is a complex country; Fractions are important; There are many differences and similarities between Canada and the United States.*
- Don't "leave in" your "Students will understand that..." stem: *e.g., Students will understand that true friendship is more often revealed during challenging times than during happy times; Students will understand that listening is an active process involving summarizing, clarifying, and questioning another speaker's communication.*

***Try Your Hand at Correcting the Following
“Flawed” Enduring Understandings...***

- 1. Students will support their topic sentences with evidence.**
- 2. The resources of a region are very important.**
- 3. There are many ways that science and mathematics are connected.**
- 4. Students will understand that significant technological breakthroughs often produce major social, economic, and cultural changes within a society or civilization.**

Some Possible Alternative Versions...

- 1. Students will support their topic sentences with evidence.**

Effective expository writing requires that topic sentences and thesis statements be supported with meaningful and valid evidence, including facts, statistics, examples, reasons, and quotes from experts.

- 2. The resources of a region are very important.**

The natural and human resources within a geographic region contribute to the characteristics and quality of its economy.

- 3. There are many ways that science and mathematics are connected.**

Mathematics, particularly statistical analysis, represents the “language” used by scientists to describe and analyze patterns in the physical universe.

- 4. Students will understand that significant technological breakthroughs often produce major social, economic, and cultural changes within a society or civilization.**

Significant technological breakthroughs often produce major social, economic, and cultural changes within a society or civilization.

An “Algorithm” for Creating Enduring Understandings

- 1. Determine your “Power Standards.”**
- 2. Identify the “big ideas” in those standards.**
- 3. Find patterns and connections between two or more of these big ideas you wish to emphasize in your unit or course of study.**
- 4. Use the “*Students will understand that...*” stem to formulate your first-draft version.**
- 5. Revise your initial version to make it student-friendly and age-appropriate.**

Create Enduring Understandings from the Following Standards:

- 1. The student will recognize the visual arts as a basic aspect of history and human experience.**
- 2. Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points related to immigration and the United States.**
- 3. Students will demonstrate exercises in strength training, cardiovascular activities, and flexibility training.**

Essential Questions...

- **Are interpretive, i.e., have no single “right answer.”**
- **Provoke and sustain student inquiry, while focusing learning and final performances.**
- **Address conceptual or philosophical foundations of a discipline/ content area.**
- **Raise other important questions.**
- **Naturally and appropriately occur.**
- **Stimulate vital, ongoing rethinking of big ideas, assumptions, and prior lessons.**

Sample Essential Questions

1. In what ways does art reflect culture as well as shape it?
2. To what extent can a fictional story be “true”?
3. Why study history? What can we learn from the past?
4. Why do societies and civilizations change as technologies change?
5. How does language shape our perceptions?
6. How would our world be different if we didn't have fractions?
7. How do the structures of biologically important molecules account for their functions?

Overarching vs. Topical Essential Questions

- Essential questions vary according to their scope and level of generalization.
- An ***overarching essential question*** can apply to multiple points during a student's education; the most overarching can also apply to multiple content areas.
- A ***topical essential question*** is unit or time-specific and generally applies to a specific unit within the student's course of study.

Examples of Overarching and Topical Essential Questions

Overarching

- How do effective writers hook and hold their readers?
- How do organisms survive in harsh or changing environments?

Topical

- How do great mystery writers hook and hold their readers?
- How do animals and plants survive in the desert?

Avoiding Common Pitfalls...

- Avoid questions that have a single correct answer or a range of correct answers: *e.g., What makes fractions equivalent? What are the major characteristics of Romantic poetry?*
- Avoid merely “rephrasing” lesson objectives as questions: *How can we edit for subject-verb agreement? How can we describe the parts of a cell? How can we apply the steps in the scientific method?*
- Avoid emphasizing overly obscure or subsidiary aspects of the curriculum as a basis for essential questions: *How did Emerson’s family history contribute to his ideas about Transcendentalism? How did Darwin’s Voyage of the Beagle shape his views about natural selection?*
- Avoid excessively vague or unfocused questions: *Why is literature important? How has the United States changed?*

The Structure of Knowledge

Declarative (Know)

- **Facts**
- **Concepts**
- **Generalizations**
- **Theories**
- **Rules**
- **Principles**

Procedural (Do)

- **Skills**
- **Procedures**
- **Processes**

Declarative Knowledge (Know)

- **Facts**: 1776; Annapolis is the capital of Maryland; Lyndon Johnson succeeded John F. Kennedy.
- **Concepts**: interdependence; scientific method; equivalent fractions; grammar and usage
- **Generalizations**: Tragic heroes frequently suffer because of a failure to recognize an internal character defect; Technology changes frequently produce social and cultural changes.
- **Theories**: Einstein's Theory of Relativity; Natural Selection
- **Rules**: The Pythagorean Theorem; rules for pronouncing sound-symbol combinations in English
- **Principles**: Newton's Laws; the Commutative Principle

Procedural Knowledge (Do)

- **Skill**: Focus a microscope; Decode the meaning of a word using a context cue.
- **Procedure**: Prepare and analyze a slide specimen; Summarize the main idea of a paragraph or passage.
- **Process**: Collect a variety of leaf specimens and compare their structures using a microscope; Trace the development of an author's theme in a work of literature.

DI and UbD--Shared Ideas About High Quality Curriculum Design That Promotes Student Achievement of Rigorous Desired Results:

- **Is clearly focused on the essential understandings and skills of the discipline that a professional would value.**
- **Is mentally and affectively engaging to the learner.**
- **Is joyful – or at least satisfying.**
- **Provides choices.**
- **Is clear in expectations.**
- **Allows meaningful collaboration.**
- **Is focused on products (something students make or do) that matter to students**

UbD and DI: High quality curriculum

(cont.) . . . :

- **Connects with students' lives and world.**
- **Seems real (is real) to the student.**
- **Is coherent (organized, unified, sensible) to the student.**
- **Is rich, deals with profound ideas.**
- **Stretches the student.**
- **Calls on students to use what they learn in interesting and important ways.**
- **Involves the student in setting goals for their learning and assessing progress toward those goals.**

Revisiting the Six Facets of Understanding (Stage One—Desired Results)

Explanation: Backing up claims and assertions with evidence.

Interpretation: Drawing inferences and generating something new from them.

Application: Using knowledge and skills in a new or unanticipated setting or situation.

Perspective: Analyzing differing points of view about a topic or issue.

Empathy: Demonstrating the ability to walk in another's shoes.

Self-Knowledge: Assessing and evaluating one's own thinking and learning: revising, rethinking, revisiting, refining.

Sample “Six Facets” Instructional and Learning Goals

Students will be able to:

1. **Explain** the motivation of major characters in works of fiction.
2. **Interpret** the implied meaning of a text and expressing their conclusions in analytical essays.
3. **Apply** mathematical algorithms to real-world problems involving measurement.
4. **Compare and contrast the major perspectives** and assumptions associated with contemporary social, political, and economic issues.
5. **Demonstrate empathy** for historical figures by expressing how they would feel if they were confronting similar problems, issues, and decisions.
6. **Display evolving self-knowledge** by articulating ways they have revisited and revised their thinking during instructional units.

Sample “Six Facets” Professional Development Goals

Educators will be able to:

1. **Explain** the meaning of student testing data trends and their implications for improving test preparation practices.
2. **Interpret** the learning profiles and readiness needs of individual students.
3. **Apply** research-based strategies to improve the teaching-learning process in their classrooms.
4. **Compare and contrast the major perspectives** and assumptions associated with current models of emergent literacy.
5. **Demonstrate empathy** for students from diverse cultural backgrounds by providing opportunities for them to explore and communicate about their individual and shared heritages.
6. **Display evolving self-knowledge** by articulating ways they have revisited and revised their teaching-learning practices as a result of the professional development activities in which they have participated this year.

Part IV

**What is effective assessment?
Why is diagnostic and formative
assessment so important
in DI and UbD?**

Assessment and UbD and DI: Some Starting Points...

- **Assessment and instruction are inextricably linked.**
- **The nature of your desired result(s) will determine the type(s) of assessment task you use to monitor student achievement.**
- **When assessing for understanding, more than selected-response test items (true-false, fill in the blank, multiple choice) are required.**

Stage Two: Assessment Evidence

- **Both UbD and DI emphasize the power and value of diagnostic, formative, and summative assessment.**
- **Assessment should be balanced and use a variety of assessment tasks to create a “photo album” of students’ progress toward mastering the desired results for your unit, course, or grade level.**
- **Assessments should be anchored in cornerstone culminating projects and other performance tasks that represent “respectful work.”**

What Are the UbD Indicators of Assessing for Understanding?

- **Students are exploring big ideas, enduring understandings, and essential questions.**
- **All learners are showing growing evidence of the six facets of understanding.**
- **Assessment emphasizes a “photo album” of student achievement, combining tests and quizzes with reflective activities, academic prompts, culminating projects, and student self-assessment via rubrics and scoring guides.**

What Are Differentiated Instruction Assessment Principles?

- **Pre-, post-, and on-going assessments are given and used to adjust instruction, with a balanced, “photo-album” rather than a “snapshot” approach used.**
- **Moderate challenge appropriately assigned for each student.**
- **Clear learning goals are explicitly stated, including emphasis upon enduring understandings and essential questions as conceptual organizers.**
- **Flexible grouping occurs regularly.**
- **Respectful tasks cause all students to have authentic contributions to make.**
- **Shared responsibilities for learning are evident.**

Curricular Priorities and Assessment Methods

- Traditional quizzes and tests (selected response).....

Worth Being Familiar With...

- Quizzes and tests (constructed response).....

All Students Should Know and Be Able to Do...

- Performance tasks and projects...

- Performance tasks and projects (complex, open-ended, authentic).....

Enduring Understandings

Assessing Your Assessments...

- **Do you select the appropriate assessment tool or process to assess each desired result?**
- **Do you use a range of assessment tools, rather than just tests and quizzes?**
- **Do you strive for a photo album, not a snapshot, of student performance data?**
- **Does your photo album provide a full portrait of what your students know, do, and understand relative to your desired results?**

Assessing Your Assessments

Do you make use of...

- **Tests and quizzes that include constructed-response items?**
- **Reflective assessments (reflective journals, think logs, peer response groups, interviews)?**
- **Academic prompts with a RAFT (role, audience, format, topic/purpose) clearly stated?**
- **Culminating performance assessment tasks and projects?**

Differentiating Assessments: Some Questions for Your Consideration

- **How do you assess students' readiness levels when designing assessments?**
- **To what extent are students' learning profiles taken into account when designing assessment products?**
- **When is it possible to align assessment products with student interests? To what extent can doing so enhance student achievement?**

Criteria for Differentiated Assessment “Products”

- **Clearly lay out what students should demonstrate, transfer, or apply to show what they understand and can do as a result of the study.**
- **Provide one or more modes of expression.**
- **Lay out clear, precise expectations for high-quality content (e.g., rubrics, scoring guides); steps and behaviors of developing the product; and the nature of the product itself.**
- **Provide support and scaffolding for high-quality student success.**
- **Provide for variations in student readiness, interest, and learning profile.**

Some Approaches to Differentiating Assessments

Tiered Lessons and Centers	Interest Centers	Complex Instruction
RAFTS	Interest Groups	Aligning Products with Multiple Intelligences
Learning Contracts	Varied Homework	Cooperative Learning JIGSAWS
Orbital Studies	Curriculum Compacting	Anchored Activities and Varied Texts and Materials
Independent Study	Varied Journal Prompts	Multiple Learning Modality Options

Constructed-Response Test Items

- **Require some form of performance by the student within the testing situation.**
- **Involve students in demonstrations of understanding, not just knowledge-recall learning.**
- **Are often written, but can be differentiated to allow for alternative approaches.**
- **Can involve some form of choice by the learner.**

Sample Constructed-Response Test Items

- 1. Defend or negate the following statement: Those who fail to learn from the past are condemned to repeat it.**
- 2. Examine the solution to the math word problem presented below. Describe an alternative—and more efficient—way of solving it.**
- 3. Observe the following videotape, which highlights elements of a local eco-system. Describe your observations and conclusions about the health of that system.**

Activity

Write at least two sample test or quiz items that require “constructed” (rather than “selected”) responses from students.

Formal and Informal Reflective Assessments

- **Encourage students to internalize and apply to themselves and peers significant evaluation standards and criteria.**
- **Engage students in self-evaluation and meta-cognitive processing.**
- **Ensure that all learners are becoming self-monitoring and are “owning” the evaluation criteria.**
- **Encourage active feedback and adjustment.**

Sample Reflective Assessment Activities

1. **Reflective Journal Entries**: How well do you understand this passage? What are the main ideas from this lesson? What did this material mean to you?
2. **Think Logs**: How would you describe the process of classification? How has your approach to problem-solving changed during this unit?
3. **Self-Evaluations**: Based upon our evaluation criteria, what grade would you give yourself? Why?
4. **Peer Response Group Activities**: What can you praise about the work? What questions can you pose? What suggestions can you make for polishing the product?
5. **Interviews**: Tell me about your perceptions of this project. What do you consider to be your strengths and areas in need of improvement?

Activity

Think about what you will be teaching in the coming week(s). Create a reflective journal entry and a think log entry for your students related to this content.

The Academic Prompt

- **A structured performance task that elicits the student's creation of a controlled performance or product.**
- **These performances and products should align with criteria expressed in a scoring guide or rubric.**
- **Successful prompts articulate a format, audience, topic/content focus, and purpose.**

A Sample Academic Prompt with a **FAT-P**

Think about a time when you were surprised (*topic*). Write a letter (*format*) to a friend (*audience*) in which you describe that experience. Use a logical narrative sequence with concrete sensory details to help your friend understand what this event was like and how you experienced it (*purpose*).

Activity

**Create a sample academic prompt that embodies each of the FAT-P elements:
*format, audience, topic, purpose.***

Distinguishing Between an Academic Prompt and a Culminating Performance Task and Project

- In designing performance tasks, we need to ask ourselves: *What is the level of independent transfer students are expected to demonstrate?*
- If students are still in the area of “guided practice,” an academic prompt may be more appropriate; if students are expected to demonstrate independent transfer and a high level of conceptual understanding, a culminating project or authentic performance task (cornerstone performance) may be most appropriate.
- Review the “Performance Task Samples” on [pages 168-169](#) of the workbook. In your opinion, which ones are academic prompts (**because they are highly teacher-guided and mediated**) and which ones are closer to independent projects or cornerstone performances (**because they require extended student time, independent transfer, and a high degree of conceptual application**)?

Elements of an Effective Performance Task and Culminating Project

- **G**=real-world goals
- **R**=real-world role(s)
- **A**=real-world audience
- **S**=real-world situation
- **P**=real-world products and performances
- **S**=standards for acceptable performance

A Sample G.R.A.S.P.S.

You are a member of a team of scientists **investigating deforestation of the Amazon rain forest**. You are responsible for **gathering scientific data** (including such visual evidence as photographs) and **producing a scientific report** in which you summarize current conditions, possible future trends, and their implications for both the Amazon itself and its broader influence on our planet. Your report, which you will **present** to a **United Nations sub-committee**, should include **detailed and fully-supported recommendations** for an action plan **which are clear and complete**.

Try Your Hand at Completing a G.R.A.S.P.S.

- **Form groups of six-seven participants.**
- **Select three participants as your “designated thinkers.”**
- **The other three-four participants will be outer-circle “process observers,” responsible for feedback on participant interactions, task completion, and use of the six facets of understanding.**
- **The three thinkers will have 20 minutes to complete the following G.R.A.S.P.S. task.**
- **At the conclusion of this 20-minute time period, process observers will provide feedback to the “thinkers.”**

You're a Winner!

- **Remember that lottery ticket you and your team purchased at the beginning of the summer? It turns out that you are all winners!**
- **You and your team have won a vacation dream house worth \$2,000,000!**
- **As is true for anything in life, your dream house comes with a few small-print issues you will have to address...**

The Small-Print Issues...

- You and your team can build your house anywhere in the world.
- You are allowed to build only one structure (not multiple dwellings), but you can design that structure any way you like.
- You must use your \$2,000,000 (tax free) to buy both the land and the house you put on it. Any remaining funds can be used to maintain the house.
- Once it is built, you cannot sell the property for five years. You must all keep possession of it for that period.
- Your job now is to determine where it will be built, what its design features will be (via a flip-chart blueprint you are to design and present), and how you all will manage it.
- Be prepared to share your plan with the “Lottery Advisory Board” so that they approve it. You will be evaluated on: (a) how well you fulfill the terms of the agreement; (b) positive group dynamics and problem-solving; and (c) quality of your final presentation.

Follow-Up Activity

**Use the G.R.A.S.P.S.
design elements to create a
powerful culminating
performance task or project
for a unit you teach.**

Assessing Performance Tasks

- **Modified Holistic Scoring Rubrics**
- **Analytic-Trait Rubrics**
- **Analytic Scoring Guides**

Modified Holistic Scoring Rubric

3= All data are accurately represented on the graph. All parts of the graph are correctly labeled. The graph contains a title that clearly tells what the data show. The graph is very neat and easy to read.

2= Data are accurately represented on the graph or the graph contains only minor errors. All parts of the graph are correctly labeled or the graph contains minor inaccuracies. The graph contains a title that generally tells what the data show. The graph is generally neat and readable.

1= The data are inaccurately represented, contain major errors or are missing. Only some parts of the graph are correctly labeled, or labels are missing. The title does not reflect what the data show, or the title is missing. The graph is sloppy and difficult to read.

The Analytic-Trait Rubric

Traits	Understanding	Performance or Performance Quality
Scale	<i>Weights:</i> 65 percent	35 percent
4	Shows a sophisticated understanding of relevant ideas and processes...	The performance or product is highly effective...
3	Shows a solid understanding of the relevant ideas and processes...	The performance or product is effective...
2	Shows a somewhat naïve or limited understanding of relevant ideas or processes...	The performance or product is somewhat effective...
1	Shows little apparent understanding of the relevant ideas and processes...	The performance or product is ineffective.

Analytic Scoring Guide

50%=Content: Clearly-presented thesis statement with fully-developed supporting ideas and balanced evidence to make a compelling and convincing argument.

25%=Organization: Consistent support of thesis statement with all ideas and supporting evidence aligned with the controlling ideas of the composition. Consistent attention to the use of transitional expressions and other techniques to ensure coherence and clarity.

25%=Editing: Elimination of major grammar and usage errors with clear attention to correct syntax and sentence variety.

**Evidence That Assessments Are Used on a Regular Basis to
*Differentiate Curriculum and Instruction***

- **Teacher makes continuing efforts to know and understand each student as an individual learner.**
- **Teacher has varied and assigned tasks to students to meet readiness needs based on prior assessment of skill mastery levels.**
- **Students can articulate the skill they are working to improve.**
- **Teacher uses a variety of assessment modes throughout a unit. (questions, observations, participation, notes, ...).**
- **Students are asked about interests and learning preferences, and are given work opportunities that respond to those**
- **Assessments embrace the expectation that students can think about, use and connect the skills, knowledge and big conceptual understandings of the learning goals.**

**Evidence That Assessments Are Used on a Regular Basis to
*Emphasize Student Understanding***

- **Teacher emphasizes all students' evolving conceptual understanding via enduring understandings and essential questions.**
- **Lesson and unit objectives are aligned with one or more of the six facets of understanding.**
- **A balanced, “photo-album” approach to assessment guides and informs the monitoring of student progress.**
- **Students demonstrate increasing ability to use what they have learned in authentic, “real-world” settings and situations, including culminating performance tasks and projects.**
- **Students are clear about where they are headed, why they are heading there, and ways they will be evaluated.**
- **Student interest is “hooked” and engaged.**
- **Students are encouraged to revisit, revise, rethink, and refine their learning.**

Part V

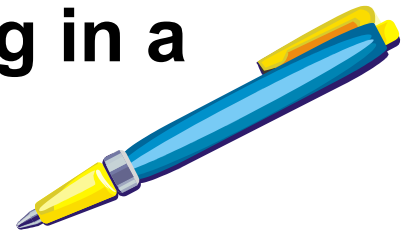
- **What can we observe in classrooms that promote high levels of student understanding?**
- **What can we observe in classrooms in which teachers differentiate content, process, and product to accommodate students' readiness levels, interests, and learning profiles?**

Stage Three: Teaching-Learning Activities

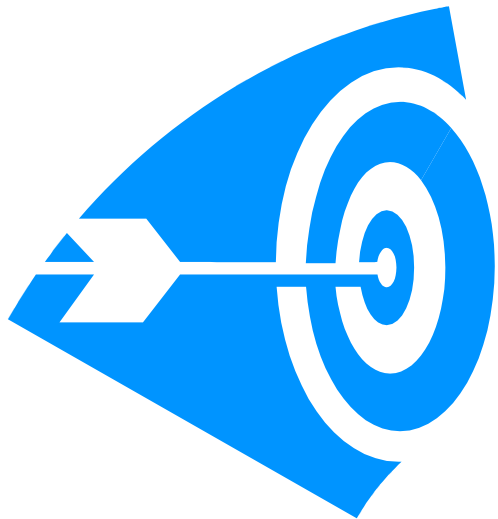
- **Both UbD and DI emphasize that all students should master the same rigorous, challenging “power standards” (established goals).**
- **Both UbD and DI suggest that desired results should focus on long-range understandings (e.g., big ideas, enduring understandings, and essential questions).**
- **Declarative (i.e., information such as facts, concepts, generalizations, principles, rules theories) and procedural knowledge (i.e., skills, procedures, processes) should reinforce students’ ability to develop understanding and transfer knowledge to new and independent tasks and situations.**

Try generating some exemplary practice statements about **Understanding by Design.**

- What would you see a teacher doing in a classroom that promotes student understanding?
- What would students be doing to demonstrate true understanding, rather than formulaic knowledge-recall learning?
- How would the teacher be assessing student achievement of desired results?
- How would students be encouraged to revisit, revise, rethink, and refine their learning?



Four Possible Criteria to Use for Assessing the Implementation of Understanding by Design:



- **Student demonstration of the six facets of understanding**
- **Focus on big ideas, enduring understandings, and essential questions**
- **Use of a balanced, “photo album” approach to assessment**
- **Evidence of W.H.E.R.E.T.O. teaching-learning principles**

UbD: The W.H.E.R.E.T.O. Principles

W=Where are we going? Why? In what ways will we be evaluated?

H=How will you hook and engage me?

E=How will you equip me for success?

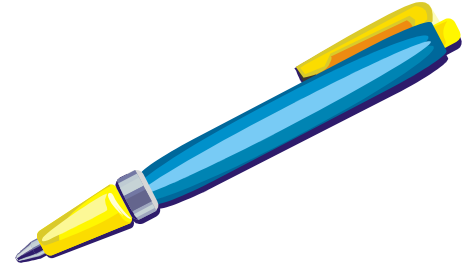
R=How will you get me to revisit, revise, rethink, and refine my understanding?

E=How will I self-evaluate and self-express?

T=How will you tailor my learning to suit my individual strengths and needs?

O=How will you organize my learning so that I move toward growing levels of understanding?

Try generating some exemplary practice statements about **differentiation.**

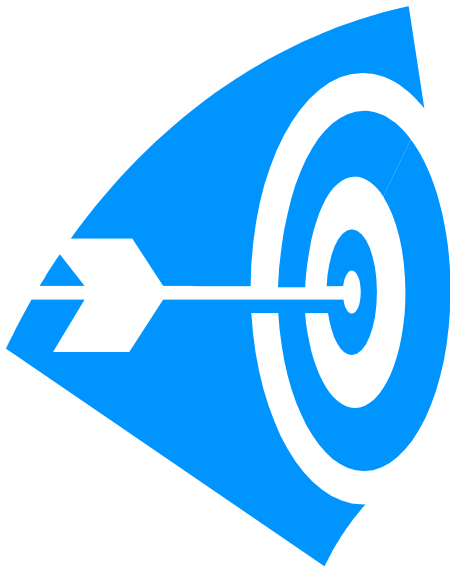


- What would you see in a differentiated classroom?
- What would students be doing?
- What would a teacher say?
- How would you know that learning is happening?
- How would you know that students were engaged and challenged?

Possible criteria to use for identifying **differentiated instruction**:

Addressing students' readiness levels, interests, and learning profiles by:

- **Modifying the learning environment**
 - **Modifying content**
 - **Modifying process**
 - **Modifying products**



Learning Environment

- **Respect for all learners demonstrated by students and teacher.**
- **All tasks and products have meaning and authenticity.**
- **Risk-taking encouraged, supported.**
- **Emphasis upon developing deep understanding for all.**
- **Students are coached to persist when they encounter difficulties.**
- **Flexibility in room and grouping arrangements.**
- **Flexibility in pacing.**
- **Students are given choices to motivate and engage in learning.**
- **Student work is displayed reflecting students' achievement of desired results and classroom use of a balanced assessment process.**

Content Differentiation

- **Curriculum is based on key concepts, principles, and skills, with enduring understandings and essential questions revisited throughout the lesson or unit.**
- **Students are asked to apply essential knowledge, understandings, and skills in ways similar to experts, reinforcing students' evolving understanding via the six facets.**
- **Rich, important ideas and essential skills are introduced at levels of difficulty that are appropriately challenging for individuals, with a range of assessment tools (including student self-reflections and self-evaluations) used to monitor student achievement and adjust instruction to promote it.**
- **Regular, expected use of complex materials, activities and classroom centers are a key part of content differentiation.**
- **Systematic planned efforts to have learning in one classroom or subject carry over into others, making connections that help students place knowledge in a wider context.**
- **Every student's vocabulary grows through the use of domain-specific vocabulary appropriate for the subject(s).**

Process Differentiation

- **Teacher varies mode of presentation to reach a range of learning preferences.**
- **Students consistently work in a variety of group and individual settings to tap into needs of differing interests, styles of learning, and readiness**
- **In groups, students have roles and responsibilities that cause them to be active contributors to group products.**
- **Wide range of materials and resources are used to meet readiness needs of students**
- **Ongoing means of diagnosing student knowledge and skills with ways to adjust the pace extend from a commitment to balanced assessment aligned with desired results.**

Product Differentiation

- **Students have choices about how to express their learning and attainment of learning goals.**
- **Students help design tasks, products, and the criteria of excellence.**
- **Assessments used allow students to see individual/personal growth along a continuum of excellence/mastery.**
- **Students receive timely, informative feedback that helps them improve products and work toward higher standards.**
- **Whenever possible, units culminating in independent performance tasks and culminating projects (e.g., G.R.A.S.P.S.).**

Walk-Through Look-Fors:

Comparing Traditional Classrooms with UbD / DI Focused Instruction

Traditional Classroom

1. Student differences are masked or acted upon when problematic.
2. Assessment is most common at the end of learning to see “who got it”.
3. A relatively narrow sense of intelligence prevails.
4. A single definition of excellence exists.
5. Student interest is infrequently tapped.

A UbD/DI Classroom

1. Student differences are studied as a basis for planning.
2. Assessment is multi-faceted and diagnostic to understand how to make instruction more responsive to learner needs.
3. Focus on multiple forms of intelligence and the facets of understanding is evident.
4. Excellence is defined by evaluating desired results as well as individual growth from a starting point.
5. Students are frequently guided in making interest-based learning choices

Traditional Classroom, cont'd

6. Relatively few learning profile options are taken into account.
7. Whole class instruction dominates.
8. Coverage of texts and/or curriculum guides drives instruction.
9. Mastery of facts and skills-out-of-context are the focus learning
10. Single option assignments are the norm.
11. Time is relatively inflexible
12. A single text prevails.

A UbD/DI Classroom

6. Many learning profile options are provided for.
7. Many instructional arrangements are used.
8. Student readiness, interest, and learning profile shape instruction.
9. Big ideas and essential questions cue students into the organization and conceptual ideas underlying what they are studying.
10. Multi-option assignments are frequently used.
11. Time is used flexibly in accordance with student need.
12. Multiple materials are provided.

Traditional Classroom, cont'd

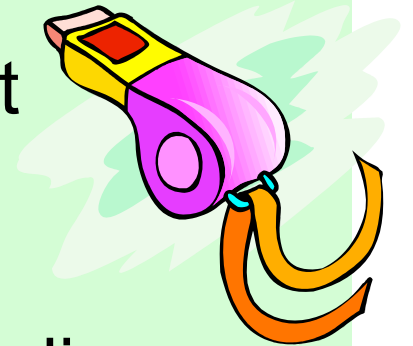
13. Single interpretations of ideas and events may be sought.
14. The teacher directs student behavior.
15. The teacher solves problems.
16. The teacher provides whole class standards for grading.
17. A single form of assessment is often used.

A UbD/DI Classroom

13. Multiple perspectives on ideas and events are routinely sought.
14. The teacher facilitates students' skills at becoming more self-reliant learners.
15. Students help one another and the teacher solve problems.
16. Students work with the teacher to establish both whole class and individual learning goals.
17. Students are assessed in multiple ways.

Ideas for Integrating and Communicating

- From school or district initiatives, determine that differentiation and Understanding by Design are a focus of discussion for faculty and administrative groups.
- Agree on common, consistent meaning of vocabulary:
 - Assessment /pre-assessment/ adjust instruction
 - Flexible grouping
 - Learning goals – enduring understandings, essential questions, six facets
 - Backward design



Getting started, continued

- Brainstorm what excellence in a differentiated and understanding-based classroom looks like; use their words and ideas
- Sort the brainstorm list into 4-5 common headings (e.g., Learning Environment, Desired Results, Assessment Tasks, Teaching-Learning Processes, Classroom Management)
- Self-assess/group assess priorities for focus of staff development and observations and support, in short term
- Develop a more fully described and explicit statement of excellence.
- Set criteria for assessments & observations

Areas for Possible Focus on Differentiation and UbD

- Classroom learning environments that promote engagement and understanding
- The six facets of understanding
- Using a balanced, photo album approach to assessment
- The backward-design process
- Guiding principles of differentiation
- Content differentiation
- Process differentiation
- Product differentiation

