

Understanding by Design:

How Can We Develop Curriculum That Promotes Student Understanding, Rather than Just “Knowing/Doing”?




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An Introduction

**Why are we here? What is
Understanding by Design?
How can we use it to enhance
and improve our work with
curriculum?**



Essential Questions for This Workshop

- **What does it mean to understand? How does understanding differ from knowing or being able to do something?**
- **How can we support our students to understand what they are learning?**
- **How can we design curriculum, assessment, instruction, and professional development to promote understanding, rather than knowledge-recall learning?**



Welcome to Understanding by Design!

By the end of this workshop, you should be able to:

- 1. Explain the research principles and learning theory underlying Understanding by Design (UbD).**
- 2. Describe and facilitate six ways your students can demonstrate understanding, rather than just knowledge-recall learning.**
- 3. Apply the principles of backward design to your professional role(s) involving curriculum development.**
- 4. Collaborate with your peers to develop an action plan for using UbD principles and strategies in schools, districts, and/or other learning organizations.**



The “Big Ideas” of This Workshop

- **Designing curriculum that promotes student understanding**
- **Ensuring alignment among the horizontal, vertical, and spiraling dimensions of your curriculum**
- **The three stages of the backward-design process**
- **The six facets of understanding**
- **Unpacking standards to promote student achievement**



What Is Understanding by Design?

- A *framework* that synthesizes research-based best practices in curriculum, assessment, and instruction that promote the learning process.
- A *language* that educators can use to describe and analyze the best ways to promote student understanding, rather than just knowledge/recall.




What Isn't It?

- It is ***not*** a program.
- It is ***not*** one more thing for you to “have to do.”
- It does ***not*** include anything that hasn't been used by master teachers throughout the centuries.



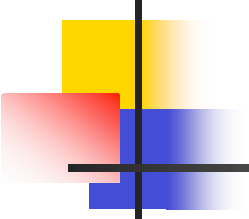
What Are the Core Elements of an Effective Curriculum Management System? (I)

- **A clear and constant focus on the long-term mission of all schooling: to enable all students to achieve worthy intellectual accomplishment as reflected in their ability to transfer their learning to worthy and authentic tasks, reflecting deep levels of understanding and key habits of mind.**
- **A curriculum and assessment framework that honors the overall mission as well as explicit long-term goals of academic programs to ensure that content coverage is no longer the de facto approach to lesson planning and instruction.**



What Are the Core Elements of an Effective Curriculum Management System? (II)

- **A set of explicit research-based principles of learning to which all decisions about pedagogy and planning are referred.**
- **Structures, policies, job descriptions, practices, and the use of resources consistent with mission and learning principles.**



What Are the Core Elements of an Effective Curriculum Management System? (III)

- **An overall strategy of reform centered on the constant exploration of the gap between a mission-driven vision of reform versus the current reality of schooling—i.e., a feedback-adjustment system that is ongoing, timely, and robust enough to enable all teachers and students to change course as needed en route to achieve desired results.**
- **A set of tactics linked to the strategy and straightforward process of planning for orchestrating the key work of schooling and school reform “backward” from the mission and desired results.**

As a Starting Point...

(Sample Agenda: P. 17)

- **THINK**: What are your personal objectives for this workshop?
- **PAIR**: As a table group, determine one to two objectives that you all share.
- **SHARE**: Next, appoint a table presenter who will **(1)** introduce table members and **(2)** present your group's objectives for the workshop.



As you start this workshop...

- ***How do you define the term "understanding"?***
- ***Reflect on your initial definition as you participate in the next two warm-up activities.***
- ***What are the various aspects of understanding that each of them requires you to use?***



A Reflection Checkpoint

1. **THINK** of a time when you moved from knowing about or being able to do something—to ***understanding*** it.
2. **PAIR:** Describe that time to another participant.
3. **SHARE:** What are the behaviors and attitudes common to the experiences you described?



What Is Understanding?

What does it mean to understand? Why is this the great essential question for educators today?



***Essential Questions for
You to Consider...***

***What's so important
about understanding?
Why should we be
concerned with it?***



Some Long-Term Trends That We Need to Consider:

According to the Educational Commission of the States, we are now experiencing:

- **The increasing dominance and impact of technology**
- **Education expanding throughout society and lifetimes**
- **A widening gap between economic have's and have not's**
- **Increasing tensions between metropolitanization and suburbanization**
- **The exponential growth of service-sector employment**
- **The rise of knowledge industries, "knowledge workers," and a knowledge-dependent society**
- **An increasingly global and interdependent economy**
- **Shifts in traditional nuclear families; growing "blendedness"**
- **Increasing personal and occupational mobility**
- **Growing demands for accountability in use of public funds**



A Few Trends Confronting Educational Leaders Today...

According to the Education Commission of the States, we are also experiencing a growing emphasis in education upon:

- **High achievement for all in an increasingly diverse society;**
- **Results-driven accountability;**
- **The need for learning-to-learn skills and knowledge, rather than discrete subject knowledge taught in isolation; and**
- **Focus on students' academic strengths, not just weaknesses.**



An Emerging Continuum...

From...

- **School Time**
- **Teacher-centered**
- **One pace for all**
- **Buildings**
- **Mass instruction**

Toward

- **Learning anytime, anyplace**
- **Student-centered**
- **Different rates and styles of learning**
- **Multiple access points for learning**
- **Personalized instruction**



"The New Basics: Education and the Future of Work in the Telematic Age"

- **David Thornburg:** ***"We are on the cusp of a completely new era. The conventions of interoffice hierarchies, deskbound workers, and long-term employment contracts will quickly give way to a 'telematic' model of work, in which workers are free to hop from client to client and country to country at the speed of a DSL (digital subscriber line) connection."***



Thornburg (Part II): "The New Basics"

I. Digital-Age

Literacy: Scientific, mathematical, and technological literacies; visual and information literacies, and cultural literacy and global awareness

II. Inventive Thinking:

Adaptability/ability to handle complexity; curiosity, creativity, and risk-taking; and higher-order thinking and sound reasoning

III. Effective

Communication:

Teaming, collaboration, and interpersonal skills; personal and social responsibility; interactive communication skills

IV. High Productivity:

Ability to prioritize, plan, and manage for results; effective use of real-world tools; and ability to create relevant, high-quality products



Addressing These Trends Through Student Engagement...

- **In your opinion, what does it mean for students to be “engaged” in learning?**
- **Is there a time you can remember when as a student, you were actively engaged in the learning process?**



Student Engagement: ***Some Commonly Identified Behaviors***

Motivation & Sense of Excitement	Sense of Authenticity and Purpose	Self- Monitoring & Regulation
Connections to the Student's World	Ability to Set and Achieve Personal Goals	Transferability & Sustainability
Seeing "the Big Picture"	Understanding Rather than Memorization	A Condition of "Flow"



How Can We Tell When Students Are Understanding?

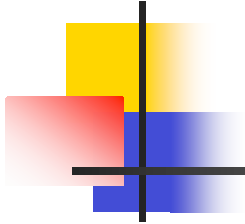
- **Explanation**
- **Interpretation**
- **Application**
- **Analysis of Perspectives**
- **Empathy**
- **Self-Knowledge**



The Six Facets of Understanding (P. 155)

- **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.

Experiencing the Six Facets



- **Select a partner.**
- **Take turns responding to the following prompts, each of which asks you to use one of the six facets of understanding.**
- **As you answer each question, how are using each facet? What similarities and patterns can you identify?**



Explanation

Agree or Disagree?

"Those who fail to learn from the past are condemned to repeat it..."

Explain your response by providing evidence to support your opinion.



Interpretation

Brainstorm five (5) or more ways that teaching is like a popcorn popper...



Application

Wiggins and McTighe assert that understanding is qualitatively different from knowing or being able to do something. Apply this assertion to your own life by describing an experience when you moved from knowing or being able to do something to understanding it...



Perspective

Compare the idea of "*back to the basics*" as it might have been presented in the 1950's to the "basics" of education in the 21st Century.



Empathy

**Imagine that you are a student in a school in which you currently work.
Describe what you see, feel, and think as you go through your day...**



Self-Knowledge

How have your views on the teaching-learning process changed since you first entered the profession of education?



A Reflection Checkpoint

With which of the following *"facets of understanding"* do your students generally perform well? With which do they have trouble? Why?

a. **Explanation**

b. **Interpretation**

c. **Application**

d. **Perspective**

e. **Empathy**

f. **Self-Knowledge**



Resources for Using the Six Facets of Understanding

- **As you introduce Understanding by Design to your school or district, you may wish to use the following resources related to the six facets of understanding:**

 **P. 155=Operational Definitions**

 **P. 156=Questioning for Understanding**

 **Pp. 157-160=Performance Task Ideas**

 **P. 161=Performance Verbs**

 **Pp. 162-166=Performance Task Ideas**



The Research Underlying UbD

**What does educational research tell us about how schools and districts can promote student understanding?
How can we use the research underlying UbD to develop learning principles and a philosophy of learning for our school or district?**



Some Starting Points...

- We ***construct*** meaning: we do not receive it passively.
- Knowing or being able to do something ***does not guarantee*** that we understand it.
- We learn and retain more when we can ***reflect*** upon, ***internalize***, and ***apply*** to our own world the content we are being taught.



Understanding by Design: Principles of Learning

- 1. Review the principles of learning underlying Understanding by Design.**
- 2. Identify those with which you strongly agree as well as any about which you have questions.**
- 3. GROUP DISCUSSION: To what extent are we in consensus as a staff about how people learn?**



What Do Current Learning Theory and Research Tell Us?

Cognitive Learning Theory	Multiple Learning Styles, Modalities, and Intelligences
The Constructivist Classroom	Emotional Intelligence
Brain-Compatible Teaching and Learning	Creativity and "Flow"



Cognitive Learning Theory

- We construct meaning by attaching new knowledge to existing *schema*.
- We learn in *non-linear*, associational, and recursive ways, not in neat, linear fashion.
- Learning is highly *situated*: transfer does not necessarily occur naturally.
- Effective learning is *strategic*: we need to learn when to use knowledge, how to adapt it, and how to self-assess and self-monitor.



The Constructivist Classroom

- **Students are at the heart of the learning process.**
- **Teacher is a facilitator and coach.**
- **Content is presented whole to part, with emphasis upon big ideas and questions.**
- **Assessment and instruction are seamless.**
- **Experiential learning, inquiry, and exploration supersede lecture and “transmission” of information.**



Brain-Compatible Teaching and Learning

- **The brain asks “Why?”**
- **The brain searches for connections, associations, and patterns.**
- **The brain “downshifts” when it perceives threat in the environment.**
- **The memory system to which we most often teach (the semantic/linguistic) is inferior to the episodic and procedural memory systems in storing and retaining knowledge.**



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.**



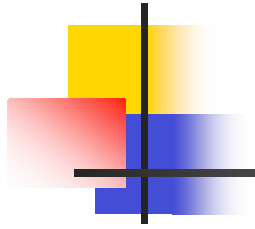
Emotional Intelligence

- **Goleman and the “marshmallow effect.”**
- **Emotional intelligence determines life success more than the cognitive/intellectual.**
- **Students need coaching and support to develop a sense of efficacy and social consciousness.**
- **Classrooms should be safe and inviting communities of learning.**



Creativity and "Flow"

- Mihalyi Csikzentmihalyi: "Flow is a condition in which we experience a sense of timelessness, engagement, and stress-free challenge."
- Creativity requires the ability to free associate and brainstorm.
- Students must be taught to tolerate and explore situations and ideas that are ambiguous and open-ended.
- We must help students to push the limits of their knowledge and ability.



Coaching Activity

How would you explain the significance of each of the following to a new teacher?

- 1. Cognitive Learning Theory**
- 2. The Constructivist Classroom**
- 3. Brain-Based Teaching/Learning**
- 4. Addressing Learning Styles**
- 5. Emotional Intelligence**
- 6. Promoting Creativity and Flow**



*Creating a **Philosophy of Learning** for Your School*

- **Every school has a mission statement.**
- **However, not every school has declared what its staff agree to be the core learning principles for that learning organization.**
- **Using what we have discussed so far, create a list of consensus-driven learning principles about which you all agree.**
- **Then, we will share the lists to create a draft of a possible school-wide philosophy of learning.**



A Sample Philosophy of Learning (I)

- 1. A key goal of schooling is fluent and flexible transfer—successful use of one’s knowledge and skills applied to worthy tasks involving situations of importance.**
- 2. Engaged and sustained learning is a prerequisite for understanding and requires that learners constantly see the value of their work and feel a growing sense of efficacy when facing worthy challenges.**



A Sample Philosophy of Learning (II)

- 3. Success at transfer depends upon understanding the big ideas that connect otherwise isolated or inert facts and experiences so that new challenges can be met and new experiences understood.**
- 4. An understanding is a learner realization about the power of an idea. Understandings cannot be “given”; they have to be engineered so that learners see for themselves the power of an idea for making sense of things.**



A Sample Philosophy of Learning (III)

- 5. Learners need clear, completely transparent priorities and a practical understanding of how learning goals are to be met in terms of work products and standards of excellence.**
- 6. Learners require regular, timely, and user-friendly feedback in order to understand goals, produce quality work, and meet high standards.**



A Sample Philosophy of Learning (IV)

- 7. Understanding can only be attained by regular reflection, self-assessment, and self-adjustment in trying to apply prior learning to new situations and tasks via activities and assessments that demand such reflection and transfer.**
- 8. The capacity to understand at a deep level depends greatly on the capacity to think things anew (and other habits of mind) since any insight typically requires the refining of earlier ideas. Becoming willing and able to rethink requires a safe and supportive environment for questioning assumptions and habits.**



A Sample Philosophy of Learning (V)

- 9. Learning is enhanced when it is personalized—when the learners' interests, preferences, strengths, contributions and prior knowledge are sufficiently honored.**



...So How Are We Doing?

- **What do student achievement data tell us about levels of student understanding?**
- **What can these data reveal about curriculum design, development, and implementation in public education today?**



Place Your Bets!

- **How much do you think you know about current educational trends?**
- **IMAGINE that you have \$100.00 to start.**
- **Decide if each of the following statements is true or false. Depending upon how certain you are, bet the full amount you have or a part of it.**



Place Your Bets ONE...

- **TRUE OR FALSE?**

United States students are generally showing significant gains in understanding, based upon standardized test performance.



False! (I)

- **During the past 25 years, no major gains in higher-order thinking performance on National Assessment of Educational Progress (NAEP).**
- **NAEP: Only 6% are competent in Algebra and 15% in US History, despite most students having passed courses by those titles.**



False! (II)

- **Third International Mathematics and Science Study (TIMSS) and James Stigler's UCLA Meta-Study of Teacher Behaviors:**
 - U.S. students outperformed students in only six countries out of the 46 tested.**
 - Unlike high-performing countries, U.S. schools tend to emphasize practice and skill development, not thinking, inventing, and problem solving.**



Place Your Bets TWO...

- **TRUE OR FALSE?**

Generally, curriculum in the United States tends to emphasize critical and creative thinking rather than knowledge-recall learning...



False!

- **In the U.S., schools tend to emphasize coverage of material with many topic segments, rather than a limited set taught in depth.**
- **The U.S. curriculum tends to be a “mile-wide, inch-deep.”**
- **U.S. education tends to emphasize subjects and content rather than the learner as the center of the learning process.**



Place Your Bets **THREE...**

■ **TRUE OR FALSE?**

According to Robert Marzano, author of What Works in Schools, American teachers generally have sufficient time to address the standards for which they are responsible.



False!

- **Robert Marzano (McRel):** “If teachers are expected to get students to learn all of the [K-12] standards identified by their district, on average we need to expand students’ time in school by a minimum of 6,000 hours.”



Place Your Bets FOUR...

■ TRUE OR FALSE?

One of the most effective ways to boost and maintain standardized test scores is to ensure that you cover every standard in your curriculum in case it is on the test.



False! (I)

- **TIMSS, Stigler, Marzano, and others report a test preparation paradox:**

We seem to feel the obligation to "cover" and "touch on" lots of things in case they are "on the test." Results confirm, however, that superficial coverage of material causes **poorer, not better,** test results.



False! (II)

- ***“What an extensive research literature now documents is that an ordinary degree of understanding is routinely missing in many, perhaps most students. If, when the circumstances of testing are slightly altered, the sought-after competence can no longer be documented, then understanding—in any reasonable sense of the term—has simply not been achieved.”***

Howard Gardner, [The Unschooled Mind](#)



What Are the Implications for Your School and District?

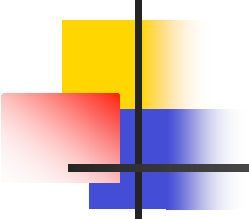
- 1. To what extent do you agree with the conclusions of the TIMSS Report, the Stigler study, and other research cited?**
- 2. What are the implications of this research for your own school or district?**
- 3. What are some possible action steps for addressing these issues?**

The Backward-Design Process



Why does Understanding by Design contend that the best curriculum designs are “backwards”? What does it mean to “design backwards from desired results”?

What are the three stages of the UbD backward-design process?



Common Problems Associated with Curriculum Design

- **Too many standards with no distinction as to their power or significance.**
- **Discrete, “atomistic” activities that are unrelated to or disconnected from key standards.**
- **A tendency toward coverage, “getting through” standards through worksheet-like activities that appear inauthentic or meaningless to the learner.**
- **Failure to promote student understanding, including lack of emphasis upon transfer toward independent use and authentic, real-world application of knowledge.**



What Do Educators Say About Effective Learning Designs? (P. 267)

- **As we begin to explore what UbD has to say about effective curriculum design, consider the “Characteristics of the Best Learning Designs” (P. 267).**
- **To what extent do you agree with what these educators suggested about the following design elements: (a) expectations, (b) instruction, (c) learning activities, (d) assessment, and (e) sequence and coherence?**



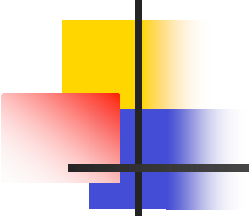
"Backward Design"

(P. 12)

According to Grant Wiggins and Jay McTighe, the best curriculum and instructional designs are "backwards":

- a. **Stage One: Determining Desired Results**
- b. **Stage Two: Assessing Results**
- c. **Stage Three: Designing Instructional Activities**

Backward Design at a Glance (P. 12)

- 
- **Stage One: Identify Desired Results:**
 - a. **Content Standards**
 - b. **Enduring Understandings & Essential Questions**
 - c. **Enabling Knowledge Objectives**
 - **Stage Two: Assess Desired Results:**
 - a. **Use a Photo Album, Not Snapshot, Approach**
 - b. **Integrate Tests, Quizzes, Reflections and Self-Evaluations with Academic Prompts and Projects**
 - **Stage Three: Design Teaching and Learning Activities to Promote Desired Results:**
 - a. **W.H.E.R.E.T.O. Design Principles**
 - b. **Organizing Learning So That Students Move Toward Independent Application and Deep Understanding Using Research-Based Strategies**



Reflection Activity

- 1. Why is it said that “the best instructional designs are ‘backwards’”?**
- 2. How would you explain the three stages of the UBD backward-design process?**



Reviewing Units That Use the Backward-Design Process (I)

- **To understand the backward-design process, it is useful to examine actual units that make use of it.**
- **Review the examples of “before-backward design” units on pages 6-7 and 10. What is flawed or problematic about the “before” versions of “Westward Movement and Pioneer Life” and “Geometry”?**



Reviewing Units That Use the Backward-Design Process (II)

- **Next, examine the “after” versions of each unit on pages 8-9 and 11.**
- **How does the “after” version of each unit reflect the principles of the backward-design process?**
- **How do the revised units eliminate the problem of activity-based, coverage approaches to curriculum design?**



UbD Instructional Design Standards (P. 24)

- **Before we explore each of the stages of the backward-design process in detail, take some time to consider the “UbD Design Standards” on Page 24.**
- **To what extent are these standards aligned with current practices and programs in your school or district?**
- **In your opinion, which of these standards need greater emphasis?**



Stage One

Desired Results:

**What Do We Want All Students to
Understand, Know, and
Be Able to Do?**



Unpacking Standards (I)

In light of the need for standards to be “unpacked,” how can we build consensus about what all students should *understand* (not just know and do) so that they can see the universal issues, patterns, and significance of what they are studying?



Unpacking Standards (II)

- **Understanding by Design suggests that standards must be “unpacked,” with educators building consensus about their levels of power or significance.**
- **In effect, some standards are more significant than others, particularly where understanding is concerned.**
- **According to UbD, unpacking standards requires the delineation of four interrelated components as part of Stage One design:**



The Four Major Components of Stage One Design

- **Established Goals:** *"Power standards," i.e., those content standards considered important enough to require "unpacking" for student understanding.*
- **Enduring Understandings:** *Statements of understanding based upon the "big ideas" of your established goals.*
- **Essential Questions:** *Open-ended, interpretive questions that can be used to trigger and promote student inquiry into the enduring understandings derived from your established goals.*
- **Enabling Knowledge Objectives:** *Performance objectives that articulate what students should know (declarative knowledge/information) and be able to do (procedural knowledge) in order to achieve the designated understandings derived from your established goals/power standards.*



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 (pp. 78-79)

Worth Being Familiar With...

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

**Enduring
Understandings**



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 the relationships between sounds and letters 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?**



To What Extent Are Your School and District in Consensus About...

- ***Content Standards:*** i.e., what all students should be able to know, do, and understand?
- ***Performance Standards:*** i.e., levels of competency expected of all students at key points in their educational development?
- ***Benchmark Assessments:*** i.e., ways in which students will be assessed at key points in their development to ensure they are mastering identified performance standards in order to show progress relative to long-range content standards?



Reflection Activity (1)

To what extent do you agree or disagree with the following statement?

"Standards have to be interpreted and 'unpacked' by educators. They can't just be 'pasted on the board.'"



Reflection Activity (2)

**How can you use the
UBD three-circle
curriculum audit to
“unpack” your district or
state standards?**



To What Extent Do Your Desired Results Address Understanding?

- ***Big Ideas:*** interdependence, heroism, patterns and systems, investigation
- ***Enduring Understandings:*** All great writing is rewriting. Science can help us reveal the structural patterns and processes that shape and define our physical universe.
- ***Essential Questions:*** Is war inevitable? How can we determine what an author means? To what extent is mathematics a language?—How can we learn to “speak” it with fluency and mastery?



“Big Ideas” as Curriculum Organizers (P.69)

- 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"

(pp. 71-75)

<p>Concepts</p> <ul style="list-style-type: none"> ■ Equivalent Fractions ■ Adaptation 	<p>Themes</p> <ul style="list-style-type: none"> ■ The American Dream ■ Ethical citizenship 	<p>Issues/Debates</p> <ul style="list-style-type: none"> ■ Homeland Security ■ Creationism vs. Evolution
<p>Problems</p> <ul style="list-style-type: none"> ■ Deforestation of the rain forests ■ The technology gap 	<p>Challenges</p> <ul style="list-style-type: none"> ■ Surviving the harsh and dangerous frontier life ■ Prospering in a global economy 	<p>Processes</p> <ul style="list-style-type: none"> ■ Historiography ■ Scientific inquiry
<p>Theories</p> <ul style="list-style-type: none"> ■ The Theory of Relativity ■ Natural Selection 	<p>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>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.

Introducing

Enduring Understandings:

A Concept-Attainment Activity (P. 107)

- **Examine the examples on P. 107 to determine the common characteristics of effectively framed enduring understandings.**
- **Apply your list to #'s 11-16 to determine if each example is or is not a statement of enduring understanding.**



Enduring Understandings (P. 115)

- 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 Understandings (P. 114)

- 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...

(P. 116)

- **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 and natural phenomena.

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 (pp. 120-121)

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. (123)
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. (127)
3. Students will demonstrate exercises in strength training, cardiovascular activities, and flexibility training. (129)



Introducing Essential Questions:
A Concept-Attainment Activity (P. 88)

- **Examine the examples on P. 88 to determine the common characteristics of effectively framed essential questions.**
- **Apply your list to #'s 13-18 to determine if each example is or is not an essential question.**



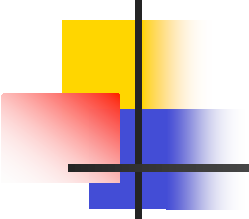
Essential Questions...(P. 91)

- 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 (pp. 93-103)

- 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 (P. 92)

- 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... (P. 106)

- **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?***



*Try Your Hand at Correcting the Following
"Flawed" Essential Questions...*

1. What are the differences between a democracy and a monarchy?
2. What were the major causes of the American Civil War?
3. Why is mathematics important?
4. How can we create a personal fitness plan?
5. How did Sophocles and Euripides differ in their use of the chorus?



Sample Revisions for the "Flawed" Essential Questions...(I)

- 1. What are the differences between a democracy and a monarchy?** *(How are power and authority distributed in various forms of government? Why do different countries and regions have different forms of government? How do governments differ in their view of citizenship and conferred authority?)*
- 2. What were the major causes of the American Civil War?** *(Why do civil wars occur? How do civil wars reflect imbalances and disequilibrium among political, economic, and social factions within a society? To what extent was the U.S. Civil War inevitable? To what extent could it have been avoided?)*
- 3. Why is mathematics important?** *(How does mathematics function in our world? How would our world be different if there were no mathematics? Why is mathematics considered to be a universal language throughout our world today?)*



Sample Revisions for the "Flawed" Essential Questions...(II)

- 4. How can we create a personal fitness plan?**
(What does it mean to be physically fit? How can we promote physical fitness throughout our lifetime? How does our personal fitness plan need to change and evolve as we age and mature?)
- 5. How did Sophocles and Euripides differ in their use of the chorus?**
(What is a tragedy? To what extent are there universal elements common to all tragedies? How did Sophocles and Euripides differ in their approach to tragedy?)



An Algorithm for Creating Essential Questions

1. Determine the “big ideas” in your enduring understandings.
2. Decide which of the big ideas you wish your students to explore and debate.
3. Use “how, why,” or to what extent” to reframe your big ideas as questions:
 - **How**=process
 - **Why**=cause and effect
 - **To what extent**=matters of degree or kind



Create Essential Questions from the Following Enduring Understandings:

1. Statistical analysis and data display often reveal patterns that may not, at first, be obvious.
2. The interactions between heredity and experience shape human behavior.
3. Historical interpretation depends, in part, upon the perspective(s) of the historian.
4. Studying other languages and cultures offers insights into our own.
5. Dietary requirements vary for individuals based upon such factors as age, activity level, weight, metabolism, and health.



Sample Essential Questions from These Enduring Understandings (I)

- 1. Statistical analysis and data display often reveal patterns that may not, at first, be obvious. *(How can statistical analysis reveal patterns in our world? To what extent can we use data displays to reveal patterns that may not, at first, be obvious to us?)***
- 2. The interactions between heredity and experience shape human behavior. *(How do heredity and experience interact? How do these patterns of interaction shape human behavior? To what extent is human behavior dependent upon both nature and nurture?)***
- 3. Historical interpretation depends, in part, upon the perspective(s) of the historian. *(To what extent is history derived from a process of interpretation? To what extent is history objective? To what extent can it be objective? How is history dependent upon the perspectives and biases of the historian presenting it?)***



Sample Essential Questions from These Enduring Understandings (II)

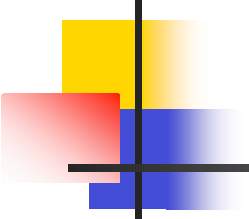
- 4. Studying other languages and cultures offers insights into our own. (*Why do we study other languages? How can our study of other languages give us insight into our own language and cultures?*)**
- 5. Dietary requirements vary for individuals based upon such factors as age, activity level, weight, metabolism, and health. (*How can we determine our own dietary requirements? To what extent do dietary requirements vary from individual to individual? How do age, activity levels, weight, metabolism, and health affect individuals' dietary requirements?*)**



Enabling Knowledge Objectives

Now that you've established what you want students to understand (via enduring understandings and essential questions), you'll need to determine:

- What should students ***know*** in order to achieve these understandings and complete the unit successfully?
- What should students ***be able to do*** in order to achieve these understandings and complete the unit successfully?



The Structure of Knowledge (pp. 65-68)

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.







To What Extent Do Your Desired Results Contain Objectives That Emphasize the Six Facets of Understanding? (P. 161)

- ***The Six Facets:*** explain, interpret, apply, analyze perspectives, express empathy, demonstrate self-knowledge and meta-cognitive awareness
- ***Know:*** facts, concepts, generalizations, rules and principles
- ***Do:*** skills, procedures, processes



For Example...

Students will be able to:

-  **Explain** the significance of the following facts about the American Civil War.
-  **Interpret** the meaning of and **apply** the following concepts to the analysis of cause and effect patterns in labs focusing on chemical and physical changes in matter.
-  **Analyze and explain the origins of conflicting perspectives** about the Kennedy assassination.
-  **Express empathy** for the characters by participating in a role-play or simulation of events from the novel.



Activity

- 1. How would you describe the six facets of understanding to a colleague who is not present?**
- 2. Create at least three “enabling knowledge” objectives using some of the six facets verbs.**



Examining Sample Stage One Unit Designs

- **Examine the sample Stage 1 design on pages 52-53 of the workbook. How are the principles for designing Stage One desired results used here?**
- **Compare the Stage 1 design from pages 54-44 to the sample one-page designs on pages 32-35 and the two-page designs on pages 38-45. Which of the various designs do you prefer? Why?**
- **Which design principles from Stage 1 would you include in your school or district's mandated lesson or unit design policies? Why?**



Activity

- 1. What are the four key elements of Stage One in the backward-design process?**
- 2. How does each element relate to the three-circle audit process?**



Stage Two

Determining Assessment Evidence:

How will we diagnose, monitor, and evaluate students' achievement of Stage One desired results?



A Stage Two Essential Question

How can schools and districts develop and sustain an *effective assessment process* that reinforces the *monitoring the understanding* of all learners?

Assessing Understanding: 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.

Curricular Priorities and Assessment Methods (P. 141)

■ 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... (P. 142)

- **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 (P. 142)

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 FAT-P (audience, format, topic, purpose) clearly stated?**
- **Culminating performance assessment tasks and projects?**



A Self-Reflection Activity (P. 143)

- 1. Complete the questionnaire on page 143, "Sources of Assessment Evidence: Self-Assessment."**
- 2. Compare your responses to those of one or more participants at your table. On which areas do you agree there is a high level of use? In which areas do you agree there is a need for improvement or expanded emphasis?**



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**

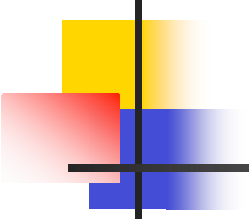
Think about a time when you were surprised (*topic*). Write a letter (*format*) to a friend (*audience*) in which you describe that experience. Use a logical narrative sequence with concrete sensory details to help your friend understand what this event was like and how you experienced it (*purpose*).



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 (pp. 168-169)

- 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 (P. 182)



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 (P. 188)

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.



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	Interest Centers	Complex Instruction
Tiered Centers	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



Examining Sample Stage Two Unit Designs

- **Examine the sample Stage 2 design on pages 54-55 of the workbook. How are the principles of balanced assessment design used here?**
- **Compare the Stage 2 design from pages 54-44 to the sample one-page designs on pages 32-35 and the two-page designs on pages 38-45. Which of the various designs do you prefer? Why?**
- **Which design principles from Stage 2 would you include in your school or district's mandated lesson or unit design policies? Why?**

Resources for Stage Two Assessment Design

- **As you introduce Understanding by Design to your school or district, you may wish to use the following resources related to Stage Two (assessment design):**



Pp. 168-169=Performance Task Samples



P. 172=G.R.A.S.P.S. Design Template



Pp. 173-179=G.R.A.S.P.S. Resources



P. 180=Self-Test Assessment Ideas



Pp. 181-196=Scoring Tools Resources



Pp. 197-207=Performance Task Ideas



P. 233=Three Types of Classroom Assessments



P. 234=Informal Checks for Understanding



Pp. 235-236=Assessing and Addressing Misunderstandings



Stage Three

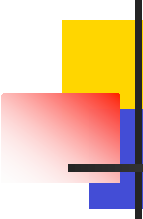
Designing Teaching- Learning Activities:

How can we promote student achievement of Stage One desired results as confirmed by their performance on Stage Two assessments?



A Stage Three Essential Question

How can schools and districts promote *instructional practices* that reinforce the engagement, achievement, and understanding of all learners?



What Can We Observe in a Classroom That Promotes Student Understanding? (pp. 268-269)

- **As we begin to explore the design of teaching and learning activities that promote student understanding (Stage 3), consider the “Observable Indicators of Teaching for Understanding” identified on pages 268-269.**
- **In your opinion, how often are these indicators present in classrooms with which you are familiar? Which ones would you like to see more of? Why?**




An Introduction to **W.H.E.R.E.T.O. (P. 212)**

- **UbD suggests that when designing instructional activities (Stage 3), educators make use of a set of design principles called **W.H.E.R.E.T.O.****
- **These design principles form a kind of “blueprint” for designing teaching and learning activities that promote deep understanding and transfer.**



Designing Instructional Activities to Promote Understanding

- **W**=Where are we going? Why are we going there? In what ways will we be evaluated?
- **H**=How will you hook and engage my interest?
- **E**=How will you equip me for success?
- **R**=How will you help me revise, rethink, refine, and revisit what I am learning?
- **E**=How will I self-evaluate and self-express?
- **T**=How will you tailor your instruction to meet my individual needs and strengths?
- **O**=How will you organize your teaching to maximize understanding for all students?



“W” Essential Questions (pp. 215-216)

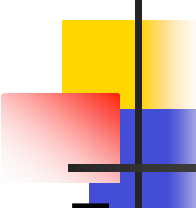
- **Articulation of Goals:** *Where are we going in this unit or course? What are our goals and standards? What resources and learning experiences will help us achieve them?*
- **Communication of Expectations:** *What is expected of students? What are the key assignments and assessments? How will students demonstrate understanding? What criteria and performance standards will be used for assessment?*
- **Establishment of Relevance and Value:** *Why is this worth learning? How will this benefit students now and in the future?*
- **Diagnosis:** *From where are students coming? What prior knowledge, interests, learning styles, and talents do they bring? What misconceptions may exist that must be addressed?*



“H” Strategies

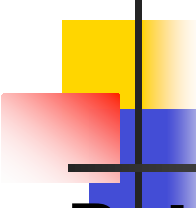
(P. 217)

- **Odd facts, anomalies, counterintuitive examples**
- **Provocative entry questions**
- **Mysteries and engaging anecdotes or stories**
- **Challenges**
- **Student-friendly problems and issues**
- **Experiments and predictions of outcomes**
- **Role-plays and simulations activities**
- **Sharing personal experiences**
- **Allowing students choices and options**
- **Establishing emotional connections**
- **Humor**



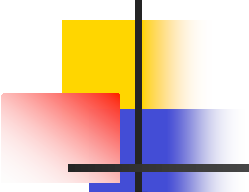
"E" Essential Questions (pp. 218-219)

- **Experiential and Inductive Learning:** *What experiential or inductive learning will help students to explore the big ideas and essential questions?*
- **Direct Instruction:** *What information or skills need to be taught explicitly to equip students for successful achievement of desired results?*
- **Homework and Other Out-of-Class Experiences:** *What homework and other out-of-class experiences are needed to equip students to achieve desired results and complete expected performances?*



"R" Essential Questions (pp. 221-222)

- **Rethink**: *What big ideas do we want students to rethink? How will your design challenge students to revisit important ideas?*
- **Revise or Refine**: *What skills need to be practiced or rehearsed? How might student products and performances be improved?*
- **Reflect**: *How will you encourage students to reflect on their learning experiences and growing understanding? How will you help them to become more meta-cognitive?*



Sample "E" Questions (P. 223)

- **What do you really understand about**?
- **What questions and uncertainties do you still have?**
- **What was most and least effective in?**
- **How could you improve**?
- **How would you describe your strengths and needs in...?**
- **What would you do differently next time?**
- **What grade or score do you deserve? Why?**
- **How does what you've learned connect to other learnings?**
- **How have you changed your thinking?**
- **How does what you've learned related to your present and future?**
- **What follow-up work is needed?**

"T" Essential Questions (P. 224)



- **Content**: *How will you accommodate different knowledge and skill levels? How will you address a variety of learning modalities and preferences? How will you use a range of resource materials?*
- **Process**: *How will you vary individual and group work? How will you accommodate different learning style preferences and readiness levels?*
- **Product**: *To what extent will you allow students choices in products for activities and assignments? How will you allow students choices for demonstrating significant understandings?*



"O" Essential Questions (P. 225)

- **Conceptual Organization Along a Developmental Continuum**: *How will you help students to move from initial concrete experience toward growing levels of conceptual understanding and independent application?*
- **Coverage**: *What aspects of your unit or program are most appropriately and effectively addressed in linear, teacher-directed, or didactic fashion?*
- **"Uncoverage"**: *What is most appropriately and effectively "uncovered" in an inductive, inquiry-oriented experiential manner?*



Applying Stage 3

- 1. How is W.H.E.R.E.T.O. the “blueprint” for Stage Three learning activities?**
- 2. How would you explain each of the W.H.E.R.E.T.O. elements to a colleague with whom you work?**






Examining Sample Stage Three Unit Designs

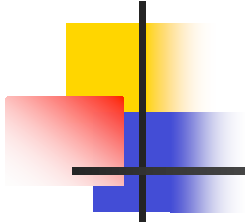
- **Examine the sample Stage 3 design on Page 56 of the workbook. How are the W.H.E.R.E.T.O. design elements used here?**
- **Compare the Stage 3 design from Page 56 to the sequential, calendar-based design on Page 57. Which of the two designs do you prefer? Why?**
- **Which design principles from Stage 3 would you include in your school or district's mandated lesson or unit design policies? Why?**



Resources for Stage Three Design of Teaching-Learning Activities

- **As you introduce Understanding by Design to your school or district, you may wish to use the following resources related to Stage Three (design of teaching-learning activities):**
-  **P. 237=The Logic of Design vs. the Sequence of Teaching**
-  **P. 238=Design Checklist—Stage 3**
-  **Pp. 239-240=Frequently Asked Questions About Stage 3**

Some Reflections to This Point...



...So what can we conclude about schools and districts that promote various dimensions of engaged student learning that result in understanding, not just knowledge-recall learning?



So Far, We've Explored...

- **Changes in our society necessitating the need to emphasize student engagement.**
- **The need to emphasize student understanding, not just knowledge-recall learning.**
- **The power of a core and conceptually-organized curriculum built upon high expectations for all students.**
- **The necessity of differentiating assessment and instruction.**
- **The power of using research-based instructional practices to promote student engagement.**



Promoting Understanding in the Learning Organization...

- **A commitment to continuous progress**
- **Involvement of all stakeholders in decision-making and problem-solving**
- **Built on a community of inquiry and learning**
- **Ongoing use of collaborative processes, including study groups, inquiry teams, and action research cohorts.**



Activity

- 1. As you reflect back on the training so far, what do you consider to be the “big ideas” of UBD?**
- 2. What are some possible next steps for implementing what you have learned?**



Curriculum Development

**How can we develop
curriculum that reflects the
philosophy and principles of
Understanding by Design?**



What Is Curriculum?

- **Curriculum is a system for managing and facilitating student learning based upon consensus-driven standards.**
- **An effective curriculum is aligned so that students progress through various grade levels, developing growing understanding of the big ideas and essential questions underlying the content they are studying.**



An Operational Definition

**According to the NEASC Accreditation Standards:
“The curriculum, which includes coursework, co-curricular activities, and other school-approved educational experiences, is the school’s formal plan to fulfill its mission statement and expectations for student learning. The curriculum links the school’s beliefs, its expectations for student learning, and its instructional practices. The strength of that link is dependent upon the professional staff’s commitment to and involvement in a comprehensive, ongoing review of the curriculum.”**



*According to
Wiggins and McTighe (I):*

“The goal of curriculum is not to take a tour of content, but to learn to use it, right from the start. Curriculum is thus inseparable from valid performance assessment task design.”



*According to
Wiggins and McTighe (II):*

“If autonomous transfer and meaning is the goal, then the curriculum must be designed from the start to give you practice in autonomous transfer and meaning-making, and make clear via assessments that this is the goal.”



*According to
Wiggins and McTighe (III):*

“An academic curriculum must be more like the curriculum in law, design, medicine, music, athletics, and early literacy: focused from the start on masterful performance as the goal.”



According to Wiggins and McTighe (IV):

“The most basic flaw in the writing of conventional school curriculum is that it is too often divorced from the ultimate accomplishments desired. Thus, we advise educators to design the assessment system first...We are speaking of ‘desired performances,’ authentic performances that embody the mission and program goals. Think of them as cornerstone performances reflective of the key challenges and accomplishments of the subject, the essence of ‘doing’ the subject with core content.”



Sample Cornerstone Performances

- **In science, the design and debugging of significant experiments.**
- **In history, the constructing of a valid and insightful narrative of evidence and argument.**
- **In mathematics, the quantifying and solving of perplexing or messy real-world problems.**
- **In world language, the successful translation of complex idiomatic expressions.**
- **In communication, the successful writing for specific and demanding audiences and purposes.**
- **In the arts, the composing/performing of a sophisticated piece.**



Comparing a Challenge and Discipline-Based Curriculum to a Topic and Activity-Based Approach (I)

Cornerstone Performances	Related but Not Sufficient Learning Activities
1. Leave school with a personal direction based on valid information about your competence and interests.	1. Learn about careers and describe your goals.
2. Successfully solve a number of genuinely important, challenging, and complicated problems with minimal prompts and cues and maximum self-direction and initiative.	2. Do textbook problems that are simplified and cued so that the learner simply “plugs in” previously-learned facts and skills.
3. Get your writing published and/or successfully reviewed by expert readers.	3. Learn, use, and be assessed on the “writing process.”











Comparing a Challenge and Discipline-Based Curriculum to a Topic and Activity-Based Approach (II)


4. Critically identify questionable assumptions and conclusions in speech, texts, or symbol systems that most people do not think are problematic.	4. Learn and complete exercises on logical fallacies and grammatical errors.
5. Develop insightful, supported accounts of present issues in light of history and varied points of view.	5. Read the history text, and pass tests on the content of history.
6. Leave school able to comprehend text beyond the level of America's newspapers.	6. Learn, use, and be tested in reading strategies via short passages.
7. Successfully defend your thesis.	7. Write a research paper following a prescribed format.

Comparing a Challenge and Discipline-Based Curriculum to a Topic and Activity-Based Approach (III)

8. Make a difference: Influence local policy, improve the community, better someone's life, etc.	8. Study Civics, speak in an informed way about how laws are in theory made, describe how a bill becomes law, etc.
9. Truly achieve a purpose with an audience: engage, move, persuade them.	9. Play a musical piece or say the character's lines correctly.
10. Settle an argument; resolve a dispute.	10. Engage in discussion.
11. Identify the most salient variables and control for them in experimental design and debugging.	11. Complete science labs as designed and complete the structured lab sheets.

Wiggins and McTighe Cite Thomas Gilbert's Description of an Effective Performance-Based System (Such as a Great Curriculum):

-  **Identify the expected accomplishments, mission, responsibilities, and duties.**
-  **State the requirements for each accomplishment.**
-  **Describe how performances will be measured and why.**
-  **Set exemplary standards.**
-  **Identify exemplary performers and any other available resources that people can use to become exemplary performers.**
-  **Provide frequent and clear feedback about how well each person is performing, comparing them with exemplary standards.**
-  **Supply as much backup information as needed to help people troubleshoot their own performances and that of people for whom they are responsible.**
-  **Relate various aspects of poor performance to specific remedial actions.**



What Are the Elements of an Effective Curriculum System?

- **Ensuring horizontal, vertical, and spiraling articulation.**
- **Eliminating areas of misalignment and achievement gaps.**



To What Extent Has Your District Ensured the Following?

- **Horizontal Curriculum Elements:** Within a grade level or grading period, required learning results are manageable, conceptually organized, learner-appropriate and complementary?
- **Vertical Curriculum Elements:** Across grade levels, learning results ensure that students build upon prior learning and prepare for subsequent learning requirements at later grade levels.
- **Spiral Curriculum Elements:** Core competencies (e.g., “meta-skills”) and conceptual understandings are revisited through multiple grade levels, with learners demonstrating growing levels of proficiency and insight.



To What Extent Is There Alignment in Your Curriculum?

The Ideal and the Organic	The Taught
The Written	The Supported
The Tested/ Assessed	The Learned



The Levels of an Effective Curriculum Management System

The Ideal: The principles and values articulated in mission and vision statements.

The Organic: The verbalized but unwritten values espoused by teachers and administrators.

The Written: Curriculum guides, frameworks, scope and sequence documents, units, lessons.

The Tested/Assessed: The components of the written curriculum that are formally evaluated via testing.

The Taught: The content teachers actually present and expect students to learn.

The Supported: Resources that support curriculum delivery, including schedules, materials, and training.

The Learned: What students actually learn and accomplish as a result of participating in the curriculum management system.



Curriculum (Activity One)

- **THINK**: *To what extent are the layers of our curriculum aligned? To what extent do components of our curriculum operate at cross-purposes?*
- **PAIR**: *What do we agree at our table to be areas of our curriculum that need aligning?*
- **SHARE**: *Appoint a presenter to share your group's perceptions about curriculum alignment in your school or district.*



Curriculum (Activity Two)

- **What does a school look like when it reflects a commitment to teaching and learning for understanding?**
- **In your table groups, study and discuss the next slide, which summarizes a set of principles for “curriculum as a system for managing learning.”**
- **Be prepared to have a designated presenter share your table’s evaluation of the extent to which your school addresses each of the systemic recommendations.**

Key Elements of a Curriculum System for Promoting Student Understanding

<p><u>Absence of Threat:</u> Commitment to Nurturing Reflective Thinking for All Learners</p>	<p><u>Meaningful Content:</u> Purpose and Authenticity</p>	<p><u>Movement Used to Enhance Learning</u></p>
<p><u>Enriched Environment:</u> Learner-Centered and Experiential</p>	<p><u>Choices:</u> Whenever possible, learners can help to shape their own learning decisions and focus.</p>	<p><u>Adequate Time:</u> A core curriculum allows teachers to teach for depth, not coverage.</p>
<p><u>Collaboration:</u> All classrooms are genuine communities of learning and inquiry.</p>	<p><u>Immediate Feedback:</u> Ongoing and multiple forms of assessment.</p>	<p><u>Mastery/ Real-World Application:</u> An ongoing goal for all learners.</p>



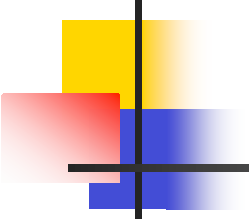
...So What Can We Do About It?

- Come to **consensus** about standards.
- Develop a true **core curriculum** emphasizing depth, not breadth.
- Determine desired results that emphasize **understanding**, not just knowledge-recall.
- Use a range of assessment tools to create a **"photo album,"** not a snapshot, of student achievement.
- Develop instructional activities only **after** you have determined your desired results and assessment evidence.



...What Role Should Differentiation Play?

- In a standards-driven district or school, it is essential not to lose sight of the strengths and needs of the individual learner.
- While students must be held accountable for the same standards, we can assess their achievement of those standards in different ways.
- Similarly, we can teach students according to their individual needs, strengths, and interests.



Key Principles of Differentiation

- Focus on essentials.
- Attend to student differences.
- View assessment and instruction as inseparable.
- Modify content, process, and products to accommodate students' identified readiness levels, interests, and learning profiles.
- Involve every student in "respectful work."
- Balance group and individual norms.
- Create a genuine community of learning.



To What Extent Has Your District Accomplished the Following? (I)

1. Articulated what all students should be able to know, do, **and understand** by the end of each grade level **and** each grading period?
2. Provided **ongoing professional development** to ensure that all staff members, parents, and students are **in consensus** about these content standards?
3. Ensured that its curriculum is "**mapped**" in such a way that instructors have the **time** to teach for deep understanding?
4. Used this mapping process to **organize the curriculum conceptually** via big ideas, enduring understandings, and essential questions?
5. Designed **performance standards** and related **benchmark assessments** (both standardized and teacher-designed) to monitor students' longitudinal progress in relationship to these desired results?



Going Deeper: To What Extent Do You Have the Following in Place? (II)

- 1. Develop and use **appropriate diagnostic assessments** in all courses/grade levels (pre-tests and ongoing feedback against desired results)?**
- 2. Have subject-area committees produce valid and peer-reviewed lists of **"cornerstone assessment tasks"** around which the curriculum will be written and by which the teaching of content will be shaped?**
- 3. Design and implement **recurring tasks and rubrics** related to key performance tasks related to mission and long-term program goals?**
- 4. Regularly **check the gap** between the intended, implemented, and attained curriculum in terms of student achievement on authentic tasks and tests?**
- 5. Have **department/grade-level teams** analyze student achievement deficits in light of cornerstone assessment tasks, and collaboratively plan improvement activities?**

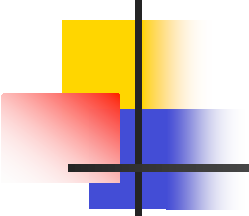


Revisiting the "Backward Design" Process (P. 12)

According to Grant Wiggins and Jay McTighe, the best curriculum and instructional designs are "backwards":

- a. **Stage One**: Determining Desired Results
- b. **Stage Two**: Assessing Results
- c. **Stage Three**: Designing Instructional Activities

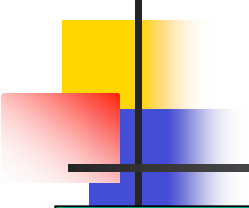
Backward Design at a Glance (P. 12)

- 
- **Stage One: Identify Desired Results:**
 - a. **Content Standards**
 - b. **Enduring Understandings & Essential Questions**
 - c. **Enabling Knowledge Objectives**
 - **Stage Two: Assess Desired Results:**
 - a. **Use a Photo Album, Not Snapshot, Approach**
 - b. **Integrate Tests, Quizzes, Reflections and Self-Evaluations with Academic Prompts and Projects**
 - **Stage Three: Design Teaching and Learning Activities to Promote Desired Results:**
 - a. **W.H.E.R.E.T.O. Design Principles**
 - b. **Organizing Learning So That Students Move Toward Independent Application and Deep Understanding Using Research-Based Strategies**



UbD, Curriculum Mapping and Alignment (pp. 18-22)

- **Page 18: “Developing a UbD Action Plan Using Backward Design”**
- **Page 19: “UbD Curriculum Framework: The Macro View”**
- **Pp. 20-21: “Sample UbD Curriculum Maps”**
- **P. 22: “Curriculum Alignment Through Assessment”**
- **P. 24: “UbD Design Standards”**



UbD Curriculum Framework: The Macro View (I) (P. 19)

District Goals (e.g., communication skills, math problem solving, technology, study and research skills, social interaction skills)

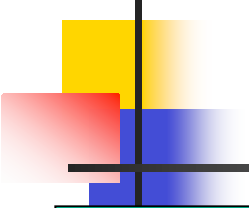
Content Standards Related to:

Programs (e.g., Arts, Science, Social Studies)

Courses/Grade Levels

Units

Lessons



UbD Curriculum Framework: The Macro View (II) (P. 19)

District Goals (enduring understandings, essential questions, and multi-year content and performance standards)

Content Standards Related to:

Programs (e.g., Arts, Science, Social Studies) Plus enduring understandings and essential questions (Program-Level)

Courses/Grade Levels (Plus enduring understandings, essential questions, and performance standards) (course/grade level)

Units (including overarching and topical enduring understandings and essential questions plus know/do objectives based on performance standards)

Lessons (designed to sequence teaching-learning-assessment activities in manageable increments)



Curriculum Development and UbD: Step One

- 1. Review your district mission and vision statements. What do they reveal about the systemic principles and values that should be reflected in our curriculum documents? *To what extent do our mission and vision guide and inform our curriculum decision-making and development processes?***



Curriculum Development and UbD: Step Two

2. Based upon our analysis of our mission and vision statements, how can we articulate the “meta-skills” and competencies that guide and inform our district-level educational system (e.g., communication skills, reasoning skills, problem-solving and decision-making competencies, research and study skills, technology literacy, social-relational and interpersonal skills, etc.)? *To what extent have we articulated long-term district-level educational goals?*



Curriculum Development and UbD: Step Three

3. As we frame our district-level learning goals, how can we “unpack” them into overarching enduring understandings and essential questions? *How can we communicate these enduring understandings and essential questions to such stakeholder groups as administrators, teachers, parents, students, and community members?*



Curriculum Development and UbD: Step Four

4. How well delineated is each of our instructional programs (e.g., social studies, language arts, mathematics, science, world languages, visual and performing arts)? *To what extent have we achieved and communicated consensus about the big ideas and spiraling skills competencies students will revisit as they move within and across grade levels?*



Curriculum Development and UbD: Step Five

5. How can we articulate and communicate the enduring understandings and essential questions students will revisit within each of our instructional programs? *How can we use these understandings and questions to frame our programs and ensure horizontal, vertical, and spiraling alignment within and across grade levels?*



Curriculum Development and UbD: Step Six

6. How can we map our grade-level curriculum designs (including courses) for each content area? *How can we identify and articulate the following key elements: (a) content and performance standards for each course/grade level; (b) enduring understandings for each course/grade level; (c) essential questions for each course/grade level; (d) knowledge and skills for each course/grade level; and (e) benchmark assessments (cornerstone performances) for each course/grade level?*



Curriculum Development and UbD: Step Seven

- 7. How can we “map” our course or grade-level curriculum designs into modular units that provide a “fleshed-out” scope and sequence of recommended desired results (*Stage One*), balanced assessments (*Stage Two*), and teaching-learning activities (*Stage Three*)?**



Curriculum Development and UbD: Step Eight

8. How can we field test units and modify them based upon practitioner use? *This step involves field testing, peer review, editing, and professional development to ensure that all educators understand how to use the various units in relationship to course or grade-level frameworks.*



Curriculum Development and UbD: Step Nine

9. How can we determine the “value added” of the curriculum we develop (units, course/grade-level designs, program designs, and district goals)? *This process involves long-range analysis and evaluation of correlations between high levels of curriculum implementation and parallel student achievement gains.*



Designing Units

**How can we design, develop,
and implement units to
operationalize the scope and
sequence of our curriculum?**



Unit Development

- **How can we use Understanding by Design to create units within a curriculum?**
- **What are the steps in creating effective units that promote student understanding and transfer?**



Creating Your Own UBD Unit (I)

- 1. Determine your topic/focus. (*e.g., the solar system*)**
- 2. Identify your course/content area and grade level. (*e.g., Physical Science, 8th*)**
- 3. Decide during which grading period your unit will be implemented. (*e.g., 2nd grading period*)**
- 4. Determine the duration of your unit (*e.g., ten lessons, 50 minutes each*).**



Creating Your Own UBD Unit (II)

- 6. Determine the materials required for the unit. (*e.g., texts, equipment, software*)**
- 7. Create an “academic” and “hook” title:**
“Our Solar System: Where in the Universe Are We?”



Creating Your Own UBD Unit (III)

8. **Select the content standards which you will address in this unit:**
 - *Students will write effective narrative compositions.*
 - *Students will identify and describe cause and effect patterns associated with physical and chemical changes in matter.*
 - *Students will use correct order of operations to solve equations.*



Creating Your Own UBD Unit (IV)

9. ***"Unpack"*** your standards by underlining their big ideas (i.e., one-word ideas & phrases with a high level of abstraction and significance):

- ***Students will write coherent and well-organized narrative compositions.***
- ***Students will identify and describe cause and effect patterns associated with physical and chemical changes in matter.***
- ***Students will use correct order of operations to solve equations.***



Creating Your Own UBD Unit (V)

10. Begin to identify patterns and connections among the concepts:

Students will identify and describe cause and effect patterns associated with physical and chemical changes in matter.

Key Conceptual Patterns:




- a. cause and effect
- b. physical and chemical changes
- c. matter



Creating Your Own UBD Unit (VI)

- 11. Create enduring understandings by using one or more of the concepts you identified to complete the following stem:**

Students will understand THAT:

-  Cause and effect patterns related to changes in the composition of matter may be physical but not necessarily chemical in nature.
-  Physical changes in matter involve a shift in the external form but not the chemical composition of matter.
-  Chemical changes involve transformations that modify the molecular composition of matter, not just its form or external structure.



Creating Your Own UBD Unit (VII)

Students will write coherent and well-organized narrative compositions.




Key Conceptual Patterns:

- a. writing
- b. coherence
- c. organization
- c. narration



Creating Your Own UBD Unit (VIII)

Students will understand THAT:

-  Writing is coherent when it addresses its purpose and audience with clarity, consistency, and appropriateness.
-  Effective organization in writing requires that all evidence and supporting details relate to and reinforce the author's main idea or purpose.
-  Narrative writing presents events and ideas in a chronological sequence using concrete sensory details to create a unified controlling impression.



Creating Your Own UBD Unit (IX)

Students will use correct order of operations to solve equations.




Key Conceptual Patterns:

- a. order of operations
- b. solve
- c. equations



Creating Your Own UBD Unit (X)

Students will understand THAT:

-  The solution to all mathematical equations requires us to follow a set order of operations.
-  The order of operations represents a prescribed pattern or sequence that will allow us to “unlock” solutions to equations.
-  If we fail to follow this universal order of operations, we will miscalculate and arrive at the incorrect solution to an equation.



Creating Your Own UBD Unit (XI)

Finally, for Stage One, create objectives for your enabling knowledge:

i.e., what should all students know and be able to do in order to ensure their mastery of the understandings you have identified?



Enabling Knowledge

Declarative (KNOW)

- Facts
- Concepts
- Generalizations
- Principles

Procedural (DO)

- Skills
- Procedures
- Processes



Enabling Knowledge Objectives

Students will be able to:

- 1.** Explain...by...
- 2.** Apply...by...
- 3.** Interpret...by...
- 4.** Analyze perspectives...by...
- 5.** Express empathy...by...
- 6.** Demonstrate self-knowledge...by...



Creating Your Own UBD Unit (XII)

Stage Two: Now that you have identified your desired results, how will you monitor, assess, and evaluate the extent to which students know, do, and understand your Stage One results?



Creating Your Own UBD Unit (XIII)

Key Idea: *With your students, create a photo album, not a snapshot, of student achievement relative to your desired results.*



Creating Your Own UBD Unit (XIV)

- 1. Tests and quizzes with constructed-response items**
- 2. Reflective assessments**
- 3. Academic prompts with a FAT-P**
- 4. Culminating G.R.A.S.P.S. performance tasks and projects**
- 5. Portfolio assessment**



Creating Your Own UBD Unit (XV)

***Stage Three: How will you
organize your instructional
activities so that all students
achieve Stage One desired
results and do well on your
Stage Two assessments?***



Creating Your Own UBD Unit (XVI)

- Begin with your W.H.E.R.E.T.O. blueprint.
- Then, organize your activities in an appropriate sequence.



Creating Your Own UBD Unit (XVII)

- **W**=Where are we going? Why are we going there? In what ways will we be evaluated?
- **H**=How will you hook and engage my interest?
- **E**=How will you equip me for success?
- **R**=How will you help me revise, rethink, refine, and revisit what I am learning?
- **E**=How will I self-evaluate and self-express?
- **T**=How will you tailor your instruction to meet my individual needs and strengths?
- **O**=How will you organize your teaching to maximize understanding for all students?