

**Part I:**

**Advancing Stage Three:  
Promoting Student Understanding—  
“A Conceptual Framework”**

**Dr. John L. Brown, Presenter**

**The Backward-Design Process**  
**(Grant Wiggins and Jay McTighe, *Understanding by Design*)**

1. According to Wiggins and McTighe (2004), the best designs for teaching-learning-assessment “begin with the end in mind” (i.e., start with desired results then move to assessments and only then move to teaching-learning tasks and activities).
2. Students demonstrate their understanding through six interrelated processes (or facets):
  - a. Explanation: forming and supporting claims, assertions, and hypotheses with substantive evidence.
  - b. Interpretation: constructing meaning in response to text and/or life experiences and creating something new and creative with this meaning (e.g., work products, presentations, metaphors, similes, visual representations).
  - c. Application: using knowledge, skills, and understandings independently and authentically without teacher guidance or intervention.
  - d. Perspective: analyzing and comparing differing points of views and perspectives related to a controversial or debatable issue, problem, or problem.
  - e. Empathy: demonstrating an ability to walk in the shoes of another, imagining what it would be like to be that individual or group.
  - f. Self-Knowledge: exhibiting the ability to self-monitor and self-evaluate, including the ability to revisit, revise, rethink, and refine one’s own learning.

3. The backward-design process consists of three interrelated phases or stages:
- STAGE ONE (Identify Desired Results):
    - a. Established Goals (What are our power standards, i.e., the standards students should understand at a deep level of understanding rather than superficial knowledge-recall learning?)
    - b. Enduring Understandings (What are the big ideas—framed as statements—that students will revisit?)
    - c. Essential Questions (What are the big, interpretive questions that students will investigate?)
    - d. Enabling Knowledge Objectives (What will students know and be able to do?)
  - STAGE TWO (Determine Acceptable Evidence):
    - a. Using a balanced, “photo album” approach to assessing student achievement.
    - b. Integrating a combination of assessment tasks to provide a true portrait of what students understand, know, and do by the end of a unit (e.g., tests and quizzes with constructed-response items, reflective assessments, academic prompts, and culminating performance tasks and G.R.A.S.P.S. projects)
  - STAGE THREE (Plan Learning Experiences and Instruction—W.H.E.R.E.T.O. Design Principles):
    - W=Where are we going? Why are we going there? How will we be evaluated along the way?
    - H=How will you hook and hold my attention, interest, and emotional connectivity?
    - E=How will you equip me to succeed through experience-based learning and coaching activities?
    - R=How will you help me to revisit, revise, rethink, and refine my understanding?
    - E=How will you get me to self-evaluate and self-express at key juncture points in the unit?
    - T=How will you tailor what you are doing to accommodate my readiness levels, interests, and learning profile?
    - O=How will you organize my learning so that I move from initial experience toward growing levels of conceptual understanding and independent application?

**Robert Marzano: *Classroom Instruction That Works***

Marzano analyzed 35 years of educational research, encompassing over 20,000 different research studies. He identified nine major instructional strategies confirmed by the research to make a substantive difference in the achievement of students. He organizes these nine “factors” in reverse statistical effect size order:

1. Identifying Similarities and Differences
2. Summarizing and Note-Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Non-Linguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Cues, Questions, and Advance Organizers

### **Robert Marzano: *What Works in Schools: Teacher-Level Factors***

1. Marzano suggests that these nine factors can be used to enhance the achievement of all learners.
2. He recommends that instructors consider three interrelated phases in designing lessons and units:
  - a. INPUT EXPERIENCES AND STRATEGIES: Teaching-learning-assessment tasks and activities designed to: (1) establish unit understandings, knowledge, and skills associated with desired results; (2) frame student understandings of the purpose of the unit and their responsibilities related to it; and (3) help students to know where they are going, why they are going there, and ways in which they will be evaluated along the way.
  - b. STRATEGIES USED AT REGULAR INTERVALS THROUGHOUT A UNIT: Teaching-learning-assessment activities designed to: (1) assist students in acquiring and integrating key unit knowledge and skills; (2) support students to extend and refine their understanding(s) as they move toward growing levels of conceptual understanding; (3) help students to use knowledge meaningfully in independent and authentic ways; and (4) reinforce students' growing habits of mind (e.g., self-regulation, critical thinking, creative thinking).
  - c. STRATEGIES FOR REVIEWING, PRACTICING, AND APPLYING CONTENT: Teaching-learning-assessment activities designed to: (1) reinforce students' review of core knowledge, skills, and understandings to ensure their retention and internalization of core unit content; (2) provide opportunities for students to model, shape, and internalize core skills and processes; and (3) apply content with growing levels of independent proficiency, understanding, and mastery.

## **Part II:**

### **Advancing Stage Three: Promoting Student Understanding— “A Planning Grid”**

**Advancing Stage Three: Promoting Student Understanding—“A Planning Grid for ‘W’”**  
**John L. Brown, Presenter**

<b>W</b>	<p><i>Enduring Understandings for “W”:</i></p> <ul style="list-style-type: none"> <li>• Students learn best when they understand where they are going and why they are going there.</li> <li>• Learning is most effective when students see connections with their world and prior experiences.</li> <li>• The learner must play an active role in self-monitoring, including understanding and applying evaluation criteria.</li> <li>• Diagnosis is essential to effective teaching and learning. Students must be coached to understand naïve assumptions, misconceptions, and incorrect prior learning.</li> </ul>
<b>Stage One: Desired Results-- “W” Planning Issues</b>	<ul style="list-style-type: none"> <li>• At the beginning of the unit, how will you communicate its big ideas, enduring understandings, and essential questions?</li> <li>• As students begin this unit, how will you help them to believe that this content worth learning?</li> <li>• How will you help them to develop an initial understanding of the universal issues, processes, themes, and ideas at the heart of the unit?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Avoid making your instructional goals too specific or confining by incorporating big-idea concepts, enduring understandings, and essential questions. (7) <b>(PLEASE NOTE: Parenthetical numbers reference the specific Marzano factor associated with each strategy or process cited.)</b></li> <li>❑ Decide how you will encourage students to personalize instructional goals at the beginning of the unit, adapting them to their personal needs and experiences (including use of student-teacher contracts). (7)</li> <li>❑ Design questions that you will pose at the beginning of a lesson or unit (especially big, open-ended, and interpretive/essential questions), cueing students into the big ideas and activating prior knowledge related to the lesson or unit. (9)</li> <li>❑ Determine strategies for helping students to make connections between the ideas and essential questions for this unit with the universal ideas and questions they have explored previously. (9)</li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Determine how you will communicate at the beginning of the unit strategies for reinforcing effort and providing opportunities for recognition at regular intervals throughout the unit. (3)</li> <li>❑ Decide how you will use cues and questions to help students focus upon what is important throughout the unit rather</li> </ul>

	<p>than what is unusual. (9)</p> <ul style="list-style-type: none"> <li>❑ Think about how you will use advance organizers (Ausubel, 1968) to represent relevant introductory materials in advance of learning. These organizers should present introductory materials, ideas, and related information at a higher level of abstraction, generality, and inclusiveness than the information presented after it. (9)</li> <li>❑ Decide how you plan to use various types of advance organizers (e.g., expository, narrative, and skimming) to help students focus upon what is important, particularly with information that may not be initially well organized or easily accessible. (9)</li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Determine how you will get students to compare and contrast ideas, perspectives, and issues from the beginning to the end of the unit. (1)</li> <li>❑ Decide how you will help students at the beginning of the unit to summarize and take notes about essential content. (2)</li> <li>❑ Plan ways to help students understand at the beginning of the unit how you will reinforce effort and provide recognition. (3)</li> <li>❑ Determine strategies for helping students understand the purpose of upcoming unit tasks and culminating projects as part of your initial process for setting objectives and providing feedback. (7)</li> </ul>
<p><b><u>Planning Notes:</u></b></p>	
<p><b><u>Stage Two:</u> Determining Acceptable Evidence—“W” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>❑ What is expected of students? What criteria and performance standards will be used to evaluate their progress?</li> <li>❑ How will you diagnose where students are coming from (readiness)? For example, how will you assess the extent to which students can respond to essential questions at the beginning of this unit?</li> <li>❑ How will you determine if students have requisite knowledge and skills necessary to complete complex unit tasks?</li> <li>❑ How will you assess students’ misconceptions or misunderstandings as we start the unit? What knowledge, interests, and learning styles students bring to this unit?</li> </ul>

<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Provide opportunities for students to compare and contrast their initial knowledge, understandings, and possible misconceptions with others in the class. <b>(1)</b></li> <li>❑ Determine if students understand the purpose, goals, and objectives of the lesson or unit by asking them to summarize them in some form (orally, in writing, or using some form of graphic representation). <b>(2)</b></li> <li>❑ Have students create a visual organizer to reveal their initial knowledge and understandings. <b>(5)</b></li> <li>❑ Involve students in identify preliminary evaluation criteria. <b>(7)</b></li> <li>❑ Show models and exemplars for expected products and performances. <b>(7)</b></li> <li>❑ Review and ask students to apply scoring rubrics and analytic scoring guides. <b>(7)</b></li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Throughout the unit, use both linguistic and non-linguistic (e.g., graphic representations, flow charts, images and icons) ways to revisit and assess students’ growing understanding of the purposes and key ideas of a particular lesson or unit. <b>(5)</b></li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ For initial diagnostic assessment tasks, determine students’ understanding of requisite knowledge and skills by engaging them in assessment tasks requiring them to confirm their ability to apply key unit content. <b>(7)</b></li> </ul>
<b><u>Planning Notes:</u></b>	
<b><u>Stage Three:</u> Teaching-Learning Activities—“W” Planning Issues</b>	<ul style="list-style-type: none"> <li>❑ How will you communicate where you and your students are going in this unit? How will you express the learning goals for which students are responsible so that they understand and “own” them?</li> <li>❑ What learning experiences and resources will help students to achieve the desired results of the unit? How will you describe these experiences and resources at the beginning of the unit and other juncture points within the unit?</li> </ul>

<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Reinforce students’ understanding of the purpose of a lesson or unit by helping them to identify similarities and differences between and among previous activities and learning and the present learning activities in which they are to participate. <b>(1)</b></li> <li>❑ Begin a lesson or unit by grouping students into cooperative work teams responsible for some form of shared inquiry, problem-solving, and decision-making in order to promote (a) positive interdependence, (b) face-to-face interaction, (c) individual and group accountability, (d) interpersonal and small group skills, and (e) group processing. <b>(6)</b></li> <li>❑ Present unit and course goals, syllabus, and schedule on the first day of the unit/class. <b>(7)</b></li> <li>❑ Help students to set goals by always establishing a direction for their learning. <b>(7)</b></li> <li>❑ Make certain that instructional goals are clearly presented and comprehended by all students. <b>(7)</b></li> <li>❑ Cue students into the purpose of a lesson or unit by helping them to narrow what they focus on. <b>(7)</b></li> <li>❑ Ask students to respond to essential questions early in the unit and revisit their growing fluency in responding to these questions. <b>(7)</b></li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Facilitate students’ generation of hypotheses and subsequent testing of their ideas using both inductive (i.e., drawing new conclusions based on information we know or are presented with) and deductive (i.e., using a general rule to make a prediction about a future action or event) reasoning. <b>(8)</b></li> <li>❑ Frame students’ hypothesis generation and testing using a variety of complex reasoning processes, including: (a) systems analysis, (b) problem solving, (c) historical investigation, (d) invention, (e) experimental inquiry, and (f) decision-making. <b>(8)</b></li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ Model strategies and techniques at the beginning of the unit that students will be asked to use to review, practice, and apply content throughout the unit (e.g., homework and practice [4]; non-linguistic representations [5]; cooperative learning structures [6]; and student responses to academic prompts containing higher-order questions [9]).</li> </ul>
<b><u>Planning Notes:</u></b>	

**Advancing Stage Three: Promoting Student Understanding—“A Planning Grid for ‘H’”**

<h1>H</h1>	<p><b><i>Enduring Understandings for “H”:</i></b></p> <ul style="list-style-type: none"> <li>• Learners must be engaged in what they are doing and connect it to their interests and life experiences.</li> <li>• The brain asks, “Why?” (How does this relate to me? How does this contribute to my survival, well being, and sense of purpose?) Unit designs and instruction must answer these questions.</li> <li>• Effective learning is authentic: Students should be able to understand the connections of what they are learning and doing to the world beyond the classroom.</li> </ul>
<b>Stage One: Desired Results— “H” Planning Issues</b>	<ul style="list-style-type: none"> <li>❑ How will you help students to see the authenticity, purposefulness, and real-world applications of what they are learning at the beginning of key instructional episodes?</li> <li>❑ How will your initial presentation of unit enduring understandings and essential questions reinforce students’ understanding of the purpose and real-world applications of what they are studying?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Determine how you will hook and hold students’ attention at the beginning of a unit. (7)</li> <li>❑ Decide how you will engage students’ interest and enthusiasm at the beginning of a unit in relationship to the enduring understanding and essential questions they will investigate and debate. (7)</li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Plan ways to hook and hold students’ attention as they move through key segments and juncture points within the unit. (7)</li> <li>❑ Decide how you will engage student debate and inquiry about the enduring understanding and essential questions they are expected to investigate throughout the unit. (7)</li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ Consider techniques and strategies that will excite and provoke student interest as they review, practice, and apply key unit content. (7)</li> </ul>
<b>Planning Notes:</b>	

<b>Stage Two: Determining Acceptable Evidence—“H” Planning Issues</b>	<ul style="list-style-type: none"> <li>❑ What evidence will you collect to determine if students are engaged and involved in the learning process?</li> <li>❑ How will you determine if students are “hooked” by the introductory activities in which they engage?</li> <li>❑ How will you assess the level of commitment and involvement among students in grappling with the big ideas and essential questions of the unit?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Engage students’ interest and involvement at the beginning of a lesson by having them create metaphors and/or analogies to reflect their familiarity with and understanding of a lesson topic or issue. <b>(1)</b></li> <li>❑ Establish rules, processes, and symbols to be used to provide recognition and rewards contingent upon the attainment of some standard of performance. <b>(3)</b></li> <li>❑ Ask students to engage in some form of K-W-L to personalize objectives and the learning process (i.e., What do I think I know about this subject? What do I want to learn about it? At the conclusion of this lesson, what have I learned?) <b>(7)</b></li> <li>❑ Cue students into the big ideas of a lesson or unit by posing and having them respond to an essential question. <b>(9)</b></li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Promote student participation through reciprocal teaching activities that begin the lesson and are revisited throughout it. <b>(2)</b></li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ Consistently hook student engagement at the beginning (and throughout the unit) by presenting and using a summarizing strategy involving one or more of the following summary frames: (a) rule-based, (b) narrative, (c) topic-restriction-illustration, (d) definition, (e) argumentation/persuasion, (f) problem/solution, and/or (g) conversation. <b>(2)</b></li> </ul>
<b>Stage Three:</b>	<ul style="list-style-type: none"> <li>❑ How will you hook and hold my attention?</li> </ul>

<b>Teaching-Learning Activities—“H” Planning Issues</b>	<ul style="list-style-type: none"> <li>❑ How will you help me to be engaged in my own learning process?</li> <li>❑ How will you help me to get excited about what I am doing and perceive it as authentic to me?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ At the beginning of the unit, establish rules, processes, and symbols to be used to provide recognition and rewards contingent upon the attainment of some standard of performance. <b>(3)</b></li> <li>❑ Warm up student enthusiasm through some form of introductory cooperative learning interaction/activity. <b>(6)</b></li> <li>❑ Ask students to engage in some form of K-W-L to personalize objectives and the learning process (i.e., <i>What do I think I know about this subject? What do I want to learn about it?</i> At the conclusion of this lesson, what have I learned?) <b>(7)</b></li> <li>❑ Start units with provocative entry questions. <b>(7)</b></li> <li>❑ Cue students into the big ideas of a lesson or unit by posing and having them respond to an essential question. <b>(9)</b></li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Throughout the unit, ask students to compare and contrast odd facts, anomalies, and counterintuitive examples. <b>(1)</b></li> <li>❑ Stimulate students’ imagination and right-hemispheric involvement by having them create at the beginning of a lesson (and revisiting later as they enhance their knowledge, skills, and understandings) graphic representations, physical models, mental pictures, and/or pictographs. <b>(5)</b></li> <li>❑ Have students engage in kinesthetic activities at the beginning of (and throughout) the lesson to engage their procedural and episodic memories. <b>(5)</b></li> <li>❑ Use cooperative learning structures (think-pair-shares, JIGSAWS, student tournaments, carousel brainstorming, etc.) to engage students in the exploration of high-interest issues and motivational tasks related to key unit ideas and questions: e.g., mysteries related to unit content, team challenges, age-appropriate problems and issues, experimental predictions of outcomes, role-playing and simulation activities, sharing personal experiences, allowing student choice, and activities that promote emotional connections. <b>(6)</b></li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ Ask students to engage in some form of K-W-L to personalize objectives and the learning process (i.e., <i>What do I think I know about this subject? What do I want to learn about it? At the conclusion of this lesson, what have I learned?</i>) <b>(7)</b></li> </ul>
<b>Planning Notes:</b>	

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### Advancing Stage Three: Promoting Student Understanding—“A Planning Grid for ‘E’”

<b>E</b>	<p><b><i>Enduring Understandings for “E”:</i></b></p> <ul style="list-style-type: none"> <li>• Students develop understanding when they engage in experiential and inductive learning, rather than only receiving information passively through lecture or teacher-presented information.</li> <li>• Direct instruction should engage students by having them respond to teacher questions and activities that reinforce key declarative and procedural knowledge.</li> <li>• Homework should not emphasize just drill and practice; it should be used as an opportunity for students to extend and refine what they have learned in class that day.</li> <li>• Out-of-class experiences can help students to develop growing levels of understanding about the content they are studying as well as its connections to the world beyond the classroom.</li> </ul>
<b>Stage One: Desired Results— “E” Planning Issues</b>	<ul style="list-style-type: none"> <li>• In what experiential and inductive (inquiry-based) learning will you have students engage?</li> <li>• What information and skills will you teach students through direct instruction?</li> <li>• How will you use homework and other out-of-class experiences to reinforce, extend, and refine student learning?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Determine how you will communicate to students the balance in your unit between and among experiential learning assessment and learning tasks; inductive, inquiry-based activities; direct instruction; and homework and out-of-class experiences. (7)</li> <li>❑ Decide how you help students to understand how you will “anchor” their learning and your teaching activities around a culminating performance task or project (i.e., G.R.A.S.P.S.). (7)</li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Think about how you will revisit with students throughout the unit the purpose(s) of experiential, inductive, direct instruction, homework, and out-of-class experiences relative to your unit’s desired results. (7)</li> <li>❑ Consider how various teaching-learning tasks and activities will help students to explore, debate, and revisit your unit’s enduring understandings and essential questions. (7)</li> <li>❑ Design formal and informal ways for students to give you feedback upon how their learning experiences are helping them to enhance their understanding of the big ideas of your unit. (7)</li> </ul>

<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<p>❑ Decide how each of your teaching-learning tasks and activities (including experiential and inductive learning, direct instruction, homework, out-of-class experiences) will enhance students’ growing understanding and capacity for self-knowledge. <b>(3) and (7)</b></p>
<p><b><u>Planning Notes:</u></b></p>	
<p><b><u>Stage Two:</u> Determining Acceptable Evidence—“E” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>• How will you evaluate the impact and value-added of students’ work with experiential and inductive learning experiences and performance tasks?</li> <li>• How will you determine the impact and effectiveness of unit content taught via direct instruction?</li> <li>• How will you assess the effect of homework upon student understanding, knowledge, and skills?</li> <li>• How will you evaluate the relationship between out-of-class experiences and student learning?</li> </ul>
<p><b>Input Experiences:</b></p>	<p>❑ Determine how you will help students to understand the purposefulness and authenticity of the assessment tasks in which they engage. <b>(3)</b></p> <p>❑ Decide how at the beginning of the unit you will reinforce the relationship between the culminating performance task (G.R.A.S.P.S.) and the teaching-learning-assessment activities that lead up to it. <b>(7)</b></p>
<p><b>Used at Regular Intervals in a Unit:</b></p>	<p>❑ Use student journals and think logs to help students debrief and demonstrate metacognitive awareness at the conclusion of key experiential and inductive learning experiences. <b>(3)</b></p> <p>❑ Always “dignify” students’ homework by doing something with it on the day it is do; help students to see the connection between it and their emerging understanding of unit content. <b>(4)</b></p> <p>❑ Make certain that out-of-class experiences are clearly aligned in students’ minds and experiences with the purposes, goals, and big ideas of your unit. <b>(7)</b></p> <p>❑ Use a three-minute pause (every 10 minutes of direct instruction, stop and have students individually or in pairs debrief about key ideas, questions raised, and issues requiring clarification). <b>(7)</b></p>

<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Decide how you can integrate cooperative learning structures and processes to reinforce students’ review, practice, and application of key content. <b>(6)</b></li> <li>❑ Identify summative assessments (e.g., constructed-response test and quiz items, reflective assessments, academic prompts) that will ensure that students are making satisfactory progress toward independent understanding required for successful G.R.A.S.P.S. completion. <b>(7)</b></li> </ul>
<p><b><u>Planning Notes:</u></b></p>	
<p><b><u>Stage Three:</u> Teaching-Learning Activities—“E” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>• What aspects of unit content will be taught via direct instruction?</li> <li>• How will you use experiential and inductive learning activities to promote student understanding?</li> <li>• How will you use homework to reinforce student understandings, knowledge, and skills?</li> <li>• To what extent will you use out-of-class experiences to enhance student learning and achievement of desired results?</li> </ul>
<p><b>Input Experiences:</b></p>	<ul style="list-style-type: none"> <li>❑ Use “concept attainment” activities to introduce and reinforce students’ understanding of big ideas (i.e., a comparison matrix of “Examples” and “Non-Examples” of a key concept or idea which students examine in order to deduce it). <b>(1)</b></li> <li>❑ Establish homework “protocols”: (a) establishing and communicating a homework policy; (b) always reinforcing the purpose and evaluation criteria for homework; and (c) varying approaches to providing feedback. <b>(4)</b></li> </ul>
<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Throughout your lessons, units, and course, ask students to identify similarities and differences. <b>(1)</b></li> <li>❑ In addition to verbal/linguistic formats, present similarities and differences in graphic and symbolic form. <b>(1)</b></li> <li>❑ Make summarizing and note-taking a direct and ongoing part of instructional delivery, encouraging students to analyze information at a deep level and to delete, substitute, and keep information based upon their analysis. <b>(2)</b></li> <li>❑ Use a variety of summarizing strategies and frames, including: (a) determination of rules, (b) narration, (c) topic-restriction-illustration, (d) definition (genus/differentiae model), (e) argumentation/persuasion, (f) problem/solution,</li> </ul>

	<p>and (g) conversation. <b>(2)</b></p> <ul style="list-style-type: none"> <li>❑ Coach students to take notes effectively, using a combination of (a) informal outlines, webbing, and (c) combination techniques (e.g., the three-column note approach). <b>(2)</b></li> <li>❑ Emphasize abstract (rather than concrete) forms of recognition to reinforce effort, including ongoing opportunities for you to acknowledge successful and/or outstanding work progress as well as peer response and feedback options. <b>(3)</b></li> <li>❑ Whenever possible, attempt to personalize praise, including ongoing use of the “pause, prompt, and praise” strategy. <b>(3)</b></li> <li>❑ Ensure that homework is a meaningful complement to and extension of classroom activities and learning with a clearly-stated purpose and outcomes. <b>(4)</b></li> <li>❑ Provide appropriate and continuing opportunities for students to practice and rehearse their use of <b>procedural knowledge</b> (i.e., skills, procedures, processes), including: (a) focused practice with extensive coaching; (b) opportunities for students to adapt and shape what they have learned; and (c) sustained movement toward independent use and application. <b>(4)</b></li> <li>❑ Reinforce students’ mastery of essential procedural knowledge through such practices as (a) charting accuracy and speed; (b) designing practice assignments that focus on specific elements of a complex skill or process; and (c) planning time for students to increase their conceptual understanding of skills and processes. <b>(4)</b></li> <li>❑ Support students’ acquisition and integration of essential knowledge through non-linguistic representations: (a) graphic organizers, (b) physical models, (c) generating mental pictures, and (d) drawing pictures and pictographs. <b>(5)</b></li> <li>❑ Whenever possible, integrate physical movement and related kinesthetic activities to promote student ownership of curriculum content. <b>(5)</b></li> <li>❑ Promote students’ processing of key information and skills via cooperative learning activities which: (a) use a variety of criteria for grouping students, (b) include informal, formal, and base groups, and (c) are used consistently and systematically without overuse. <b>(6)</b></li> <li>❑ Integrate a coaching approach to providing feedback, with feedback: (a) corrective in nature, (b) provided in a timely manner, and (c) specific to an evaluation criterion. <b>(7)</b></li> <li>❑ Provide students with extensive opportunities to self-assess as well as provide peer feedback and coaching, with practice in: (a) criterion-referenced feedback, (b) feedback for specific types of knowledge and skills, and (c) peer response group activities. <b>(7)</b></li> <li>❑ Encourage students to generate and test hypotheses in a variety of settings (from the natural sciences to social studies to reading for deep understanding). <b>(8)</b></li> <li>❑ Teach students directly and consistently how to respond to and understand higher-level questions, including those that require inferences and deductions (i.e., about things, people, actions, and states of being) and analysis (i.e., analyzing perspectives, analyzing errors, and constructing support). <b>(8)</b></li> <li>❑ Use enduring understandings and essential questions as cueing devices to frame students’ inquiry and exploration of</li> </ul>
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	<p>big ideas and concepts. <b>(8)</b></p> <ul style="list-style-type: none"> <li>❑ Integrate advance organizers into all aspects of instructional delivery to help students cue into what is important and significant for them to retain and understand. <b>(9)</b></li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ Reinforce students' support of claims, assertions, and conclusions with valid and complete evidence, including: (a) providing students with templates for reporting and explaining their work; (b) providing sentence stems for students (especially young ones) to help them articulate their explanations; (c) providing—and/or developing with students—rubrics so that they understand the criteria on which their explanations will be evaluated; and (d) setting up opportunities for students to defend and explain orally their hypotheses and explanations. <b>(8)</b></li> </ul>
<b><u>Planning Notes:</u></b>	

### Advancing Stage Three: Promoting Student Understanding—“A Planning Grid for ‘R’”

<b>R</b>	<p><i>Enduring Understandings for “R”:</i></p> <ul style="list-style-type: none"> <li>• Understanding develops and depends as a result of rethinking and reflection.</li> <li>• Effective instruction and assessment build in opportunities for students to revisit and refine their thinking and understanding.</li> <li>• Effective students are proficient in reflecting upon what they are learning and revising and refining their thinking.</li> </ul>
<b>Stage One: Desired Results— “R” Planning Issues</b>	<ul style="list-style-type: none"> <li>• What big ideas and essential questions will you help students to rethink?</li> <li>• What challenges and processes will you use to help learners rethink these big ideas?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Determine how you will explain to students specific strategies and tasks that will help them to rethink their understandings throughout the unit. (7)</li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Decide how you will help students to understand the purpose of learning activities and tasks that will help students to revise and refine their thinking throughout the unit. (7)</li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Determine ways you will reinforce for students the significance and importance of reflection and self-monitoring, including previewing specific techniques you will emphasize in this particular unit. (7)</li> </ul>
<b><u>Planning Notes:</u></b>	

<p><b>Stage Two: Determining Acceptable Evidence—“R” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>• How will you help your students to practice and rehearse key skills and procedures?</li> <li>• How will you help students to improve upon and revise products and performances?</li> </ul>
<p><b>Input Experiences:</b></p>	<ul style="list-style-type: none"> <li>❑ Help students rethink by having them consider and reconsider key assumptions. <b>(1)</b> and <b>(3)</b></li> <li>❑ Ask students to reflect upon areas of the content being studied where they consider themselves to be naïve or limited in their background knowledge. Ask them to monitor how their understanding grows during the unit. <b>(7)</b></li> </ul>
<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Use a variety of reflective assessment tasks and activities throughout your unit, including: (a) reflective journals, (b) think logs, (c) self-evaluation, (d) peer response groups, and (e) interviews. <b>(7)</b></li> <li>❑ Engage students in reflective, meta-cognitive self-assessment through such strategies as the following: shifting perspectives, reconsidering key assumptions, confronting alternative versions, taking the role of..., playing devil’s advocate, reexamining arguments and evidence, conducting research about key issues and ideas, considering new information, debating, and confronting surprises and anomalies. <b>(3)</b> and <b>(7)</b></li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Help students to revise and refine their learning and understanding through such reflective and refining strategies as the following: drafting and editing sessions, peer critiques, rehearsals, peer response groups, practice sessions, and self-assessments. <b>(3)</b> and <b>(7)</b></li> <li>❑ As summative assessments to reinforce reflection and self-monitoring, use such strategies as the following: reflective journals and think logs, regular self-assessments based upon rubrics or scoring guide criteria, metacognitive prompts, think-alouds, and I-Search papers. <b>(7)</b></li> </ul>
<p><b>Planning Notes:</b></p>	

<p><b><u>Stage Three:</u></b>  <b>Teaching-Learning Activities—“R” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>• How will you encourage students to reflect upon their learning and thinking, including their evolving understanding and growing ability to use key strategies?</li> <li>• How will you help students to become more self-regulating and “meta-cognitive”?</li> </ul>
<p><b>Input Experiences:</b></p>	<ul style="list-style-type: none"> <li>❑ Get students to discover patterns in the lesson or unit (e.g., big ideas, themes, recurrent issues, unresolved conflicts and perspectives) and find ways to classify them according to their common attributes. <b>(1)</b></li> </ul>
<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Help students synthesize their learning and reinforce their understanding through summarizing and note-taking using both verbal/linguistic and non-verbal representations. <b>(2, 5)</b></li> <li>❑ Help students reinforce their own effort and recognize their own progress through such metacognitive tools as reflective journals, think logs, and peer response groups. <b>(3)</b></li> <li>❑ Use homework as a vehicle for students’ independent application and refinement of the work they have done in class. <b>(4)</b></li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Organize cooperative learning cohorts at the conclusion of lessons and units to allow students to summarize, reflect, revisit, and refine their shared perceptions and conclusions about curriculum content. <b>(6)</b></li> <li>❑ Have students revisit big ideas, enduring understandings, and/or essential questions as closure activities for lessons and units. <b>(9)</b></li> </ul>
<p><b><u>Planning Notes:</u></b></p>	

## Advancing Stage Three: Promoting Student Understanding—“A Planning Grid for ‘E’”

<b>E</b>	<p><b><i>Enduring Understandings for “E”:</i></b></p> <ul style="list-style-type: none"> <li>• The more students are involved in evaluating their own progress, the greater the likelihood they will “own” their learning process.</li> <li>• Students need to understand and consistently apply the evaluation criteria for which they are accountable.</li> <li>• Rubrics and analytic scoring criteria should be clearly communicated to students; in turn, they should be required to apply those criteria to their own work as well as that of peers.</li> <li>• Students benefit from regular opportunities to self-express, including presenting their understandings and insights via oral, written, and electronic tasks and formats.</li> </ul>
<b>Stage One: Desired Results— “E” Planning Issues</b>	<ul style="list-style-type: none"> <li>• How will you encourage students to self-evaluate in response to unit evaluation criteria?</li> <li>• How will you help students to know “up front” the evaluation criteria for which they are accountable?</li> <li>• How will you help students to understand their responsibilities for self-evaluation from the beginning to the end of the unit?</li> <li>• How will you help students to express themselves and their understandings via written, oral, and electronic tasks and formats?</li> <li>• How will you design tasks that reinforce students’ ability to self-evaluate and self-express?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Determine the tasks and activities that you will use to encourage self-evaluation. <b>(3)</b></li> <li>❑ Identify and determine how you will communicate to students the evaluation criteria for which they are accountable. <b>(7)</b></li> <li>❑ Select (or ask students to help you design) rubrics or other scoring tools (e.g., analytic guides, checklists) that can be used to help them self-evaluate and self-monitor. <b>(7)</b></li> <li>❑ Decide how you will help students to understand the big ideas and essential questions they will explore in this unit. <b>(7)</b></li> <li>❑ Plan for ways in which you will communicate “up front” to students the written, oral, and electronic formats and tasks they will use to communicate their growing understanding(s) throughout the unit. <b>(7)</b></li> </ul>

<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Decide how you will encourage students to summarize and synthesize their achievement of desired results. <b>(2)</b></li> <li>❑ Plan ways to reinforce effort and provide recognition to students as they demonstrate growing understanding, knowledge, and skills throughout the unit. <b>(3)</b></li> <li>❑ Plan for homework activities that will help students to extend and refine their understanding. <b>(4)</b></li> <li>❑ Plan for activities requiring students to self-evaluate and self-express. <b>(7)</b></li> <li>❑ Determine the strategies and tasks you will use to help students self-evaluate throughout the unit. <b>(7)</b></li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Do “up-front” planning to help students compare and contrast their degrees of understanding over the course of the unit. <b>(1)</b></li> <li>❑ Determine strategies involving summarizing, paraphrasing, and note-taking designed to help students synthesize important ideas, generalizations, and understandings. <b>(2)</b></li> <li>❑ Decide how homework and practice will be used to reinforce students’ self-monitoring and self-expression. <b>(4)</b></li> <li>❑ Anchor students’ work around preparation for culminating tasks and performance-based projects that require independent understanding and real conceptual understanding. <b>(7)</b></li> </ul>
<p><b><u>Planning Notes:</u></b></p>	
<p><b><u>Stage Two:</u> Determining Acceptable Evidence—“E” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>• How will you monitor and assess students’ growing ability to evaluate their own progress?</li> <li>• How will you assess students’ ability to self-reflect and self-regulate?</li> <li>• How will you help students to assess and monitor their growing understanding of the big ideas and essential questions of the unit?</li> </ul>
<p><b>Input Experiences:</b></p>	<ul style="list-style-type: none"> <li>❑ Discuss with students the value of their taking an active role in self-evaluation. <b>(3)</b></li> <li>❑ At the beginning of units, reinforce students’ understanding of their responsibilities for self-evaluation and self-monitoring. <b>(7)</b></li> <li>❑ Articulate clearly at the beginning of units the evaluation criteria for which students are responsible. <b>(7)</b></li> </ul>

<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Ask students to compare and contrast their understanding(s) at the beginning of the unit and throughout the unit as they complete formative and summative assessment tasks. <b>(1)</b></li> <li>❑ Have students compare their pre/post-progress as they move through a lesson or unit: How am I now vs. where I started? <b>(1)</b></li> <li>❑ Have students express in written, oral, and visual formats their perceptions and evaluations of how they are doing in relationship to mastering lesson/unit/course objectives. <b>(7)</b></li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Have students self-evaluate in product-based (written products, logs, journals) and dialogue-based ways (think-pair-shares, small group feedback discussions, peer response groups), assessing the extent to which they perceive themselves as mastering identified content standards and performance objectives. <b>(7)</b></li> <li>❑ Help students to extend and apply complex reasoning processes (e.g., systems analysis, problem solving, decision making, investigation, experimental inquiry) by applying class rubrics to their own work and that of their peers. <b>(8)</b></li> <li>❑ Backward map your assessments from the culminating project (G.R.A.S.P.S.) or real-world, authentic performance tasks that reinforce students' ability to apply their understandings. <b>(8)</b></li> <li>❑ Use cues, higher-order questions, and advance organizers to help students synthesize information and reflect upon their evolving understanding. <b>(9)</b></li> </ul>
<p><b><u>Planning Notes:</u></b></p>	
<p><b><u>Stage Three:</u> Teaching-Learning Activities—“E” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>• What teaching and learning tasks will you use at key juncture points to reinforce students' self-evaluation and self-regulation?</li> <li>• What teaching and learning tasks will reinforce students' opportunities for self-expression?</li> <li>• How will you use written, oral, and electronic tasks and activities to reinforce students' demonstration of their understanding of your unit's big ideas and essential questions?</li> </ul>

<p><b>Input Experiences:</b></p>	<ul style="list-style-type: none"> <li>❑ Ask students to compare and contrast their initial understandings of the big ideas and essential questions for the unit to their evolving understandings throughout the unit. <b>(1)</b></li> <li>❑ Use a K-W-L activity to elicit students' perceptions of what they know and want to learn at the beginning of the unit. <b>(2)</b></li> <li>❑ Encourage students to be self-evaluative and self-expressive by discussing the importance of internal motivation at the beginning of a unit. <b>(3)</b></li> <li>❑ Explain to students at the beginning of a unit the role that homework and practice will play in reinforcing their achievement of desired results throughout the unit. <b>(4)</b></li> <li>❑ Have students complete graphic organizers, pictographs, and other forms of visual representation at the beginning of a unit to represent their perceived understandings, knowledge, and skills. <b>(5)</b></li> <li>❑ Use up-front seminars and other forms of cooperative learning interaction groups to help students explore their initial understandings and perceptions relative to the unit's enduring understandings and essential questions. <b>(6)</b></li> <li>❑ Ask students to articulate their personal goals and interests related to unit content at the beginning of the unit. <b>(7)</b></li> <li>❑ Have students generate and test hypotheses at the beginning of the unit and modify their understandings as the unit progresses. Structure the hypotheses around complex reasoning skills essential to the unit: e.g., problem-solving, decision-making, investigation, systems analysis, invention. <b>(8)</b></li> </ul>
<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ According to Jay McTighe and Grant Wiggins (2004. <i>Understanding by Design Workbook</i>, P. 223), students can be encouraged to self-evaluate and self-express by responding to such questions as the following: <ul style="list-style-type: none"> <li>• What do you really understand about:</li> <li>• What questions and uncertainties do you still have about:</li> <li>• What most effective in:</li> <li>• How could you improve:</li> <li>• What are your strengths in:</li> <li>• What are your deficiencies in:</li> <li>• How difficult was:</li> <li>• How does your preferred learning style influence:</li> <li>• What would you do differently next time:</li> <li>• What are your most proud of? Why?</li> <li>• What are you most disappointed in? Why?</li> <li>• How does what you've learned connect to other learnings?</li> <li>• How has what you've learned changed your thinking?</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• How does what you've learned changed your thinking?</li> <li>• How does what you've learned relate to the present and future?</li> <li>• What follow-up is needed?</li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Ask students to compare and contrast their understanding(s) over the course of the unit. <b>(1)</b></li> <li>❑ Use the three-column note-taking process to have students synthesize key ideas, summarize important understandings and questions, and visually represent key information and skills. <b>(2)</b></li> <li>❑ Ask students to self-evaluate their progress at the end of the unit using the key evaluation criteria from the unit. <b>(3)</b></li> <li>❑ Use homework as an opportunity for students to extend and refine their learning through meaningful and creative practice tasks. <b>(4)</b></li> <li>❑ Have students complete graphic organizers and other forms of visual representation to summarize their achievements and insights at the end of a unit. <b>(5)</b></li> <li>❑ Employ cooperative structures such as small-group seminars to have students debrief at the conclusion of a unit, especially in relationship to their response to essential questions. <b>(6)</b></li> <li>❑ Have students communicate their successes and achievements during the unit—especially related to the culminating performance task or project—in written, oral, and electronic formats. <b>(8)</b></li> <li>❑ Ask students to create an advance organizer for future students based upon their culminating understandings at the conclusion of the unit. <b>(9)</b></li> </ul>
<p><b><u>Planning Notes:</u></b></p>	

**Advancing Stage Three: Promoting Student Understanding—“A Planning Grid for ‘T’”**  
**John L. Brown, Presenter**

<b>T</b>	<p><i>Enduring Understandings for “T”:</i></p> <ul style="list-style-type: none"> <li>• Student learning varies because students bring different life experiences, interests, background knowledge, and learning style preferences to the learning process.</li> <li>• Teaching-learning-assessment tasks require teachers to tailor tasks based upon students’ readiness levels, interests, and learning profiles.</li> <li>• Differentiation (tailoring) involves modifying content, process, and product(s) based upon students’ readiness, interests, and learning styles.</li> </ul>
<b>Stage One: Desired Results— “T” Planning Issues</b>	<ul style="list-style-type: none"> <li>• How will you tailor (differentiate) unit content to address students’ readiness level, interests, and learning style preferences?</li> <li>• How will you vary students’ learning experiences and your teaching processes to address their readiness, interests, and learning style preferences?</li> <li>• To what extent will you permit students to have choices about products they create, particularly to demonstrate understanding?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Determine how you will elicit student feedback concerning interests related to unit content. <b>(3)</b></li> <li><input type="checkbox"/> Help all learners to find relevance and personal ownership related to your unit’s big ideas and essential questions. <b>(3)</b></li> <li><input type="checkbox"/> Develop ways for students to give you feedback about how their learning profiles and needs can be addressed during the unit. <b>(3)</b></li> <li><input type="checkbox"/> Delineate the requisite knowledge and skills you assume students should have mastered as they start the unit. <b>(7)</b></li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Decide how you will differentiate content to accommodate readiness levels, interests, and learning profiles. <b>(3)</b></li> <li><input type="checkbox"/> Determine specific instructional processes you may use to accommodate individual student differences (e.g., compacting, tiering, centers, independent investigation, orbital studies). <b>(7)</b></li> <li><input type="checkbox"/> Develop unifying cues, questions, and advance organizers to help students see the “big picture” of your unit. <b>(9)</b></li> </ul>

<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Plan for tasks and activities you will use throughout the unit to determine how well students are eliminating gaps in their knowledge and skills. <b>(7)</b></li> <li>❑ Determine in advance the areas of your unit where students will be allowed flexibility about products and processes as they move through the unit. <b>(7)</b></li> </ul>
<p><b><u>Planning Notes:</u></b></p>	
<p><b><u>Stage Two:</u> Determining Acceptable Evidence—“T” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>❑ How will you assess how to tailor teaching-learning-assessment tasks to address the varying readiness levels of your students?</li> <li>❑ How will you determine when to provide remediation and coaching to students?</li> <li>❑ How will you assess areas in which certain students may require acceleration or independent study?</li> <li>❑ How will you evaluate the implications of various students’ learning style preferences?</li> <li>❑ How will you determine how to incorporate student interests and background knowledge into your teaching-learning-assessment design?</li> </ul>
<p><b>Input Experiences:</b></p>	<ul style="list-style-type: none"> <li>❑ Use a variety of formative assessments (e.g., tests or quizzes, reflective assessments, academic prompts, and/or performance tasks) to determine where students are as they begin the lesson or unit, assisting them to self-classifying according to their specific strengths, needs, and interests. <b>(1)</b></li> <li>❑ At the beginning of a unit, assess students’ prior knowledge and skills; subsequently, develop differentiated activities to accommodate different knowledge and skill levels (Wiggins and McTighe, 2004). <b>(3)</b></li> <li>❑ Assess and address at the beginning of units students’ preferred learning modalities (e.g., written, oral, visual). <b>(7)</b></li> </ul>
<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Review with students (individually, small group, whole group) their summarizing and note-taking processes related to key lesson/unit information and skills, using emergent issues and problems as a tool for re-teaching and revisiting material as needed. <b>(2)</b></li> <li>❑ Use a variety of tools and media to provide ongoing feedback to students concerning their progress toward mastering</li> </ul>

	<p>lesson and unit objectives, including allowing them to help you create and apply rubrics and scoring tools. (7)</p> <ul style="list-style-type: none"> <li>❑ Observe and assess students’ response to instructional cues, questions, and follow-up probes to determine when individuals need special assistance or coaching to correct misunderstandings and errors. (8)</li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Use a variety of differentiated approaches to assessment to monitor how students are progressing and to allow for them to confirm growing understandings, knowledge, and skills (derived from Carol Ann Tomlinson) (7):       <ol style="list-style-type: none"> <li>1. Tiered lessons (organizing lessons according to growing complexity, with allowance for independent acceleration).</li> <li>2. Tiered centers (organizing centers to accommodate individual and small group student interests based upon their initial mastery of core knowledge and skills).</li> <li>3. Interest centers (centers designed to allow individuals and small groups to investigate topics and issues of personal interest but related to core unit content).</li> <li>4. Interest groups (cooperative learning structures that allow students with similar interests to investigate and discuss shared interests related to unit content).</li> <li>5. Complex instruction (multiple approaches and pedagogical strategies).</li> <li>6. Aligning products with multiple intelligences (e.g., spatial, linguistic, logical-mathematical, naturalistic, interpersonal, intrapersonal, mechanical, etc.).</li> <li>7. Learning contracts (aligned with unit outcomes, but allowing for individual student input and goals).</li> <li>8. Varied homework (adjusted to address the readiness levels and interests of learners).</li> <li>9. Cooperative learning JIGSAWS (with expert groups formed to be responsible for investigating and teaching key aspects of the unit).</li> <li>10. Orbital studies (beginning with central or core content and “orbiting out” by individuals and small groups, based upon their personal interests and goals relative to unit outcomes).</li> <li>11. Curriculum compacting (determining essential knowledge, skills, and understandings—and allowing students who demonstrate initial proficiency to move toward work with tiered centers, interest centers, and independent readings and investigations).</li> <li>12. Anchored activities accompanied by varied texts and materials (allowing students to use different types and levels of materials to study the same content).</li> <li>13. Independent study (to allow students to extend and refine their mastery of unit understandings, knowledge, and skills)</li> <li>14. Varied journal prompts (designed to elicit student feedback and reflection on their insights, observations, conclusions, and questions).</li> <li>15. Multiple learning modality options (accommodating differing preferences for particular modalities and processes).</li> </ol> </li> </ul>

<b><u>Planning Notes:</u></b>	
<b><u>Stage Three:</u> <b>Teaching-Learning Activities—“T” Planning Issues</b></b>	<ul style="list-style-type: none"> <li>• How will you differentiate (tailor) content to accommodate individual students’ readiness levels, interests, and learning profiles?</li> <li>• How will you differentiate (tailor) teaching-learning processes and tasks to accommodate these three priorities?</li> <li>• How will you differentiate (tailor) the culminating products and performances to accommodate these three priorities?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ Ask students to develop and test their own hypotheses about key unit content. <b>(8)</b></li> <li>❑ Encourage students to develop their own research questions for in-depth exploration of key ideas and questions. <b>(9)</b></li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Throughout the lesson/unit, find ways to reinforce effort and provide recognition related to students’ individual progress and achievement of their “personal best.” <b>(3)</b></li> <li>❑ Use a variety of resource materials (e.g., multiple reading selections at different levels) to help students understand difficult concepts and essential questions. <b>(3)</b></li> <li>❑ Integrate one-on-one and small group coaching opportunities as students rehearse, practice, and apply independently the knowledge and skills they are acquiring. <b>(4)</b></li> <li>❑ Use students’ creation of non-linguistic representations (e.g., graphic organizers, models, pictographs) of the material they are learning as a vehicle for identifying and addressing emergent strengths, needs, and misunderstandings. <b>(5)</b></li> <li>❑ Balance cooperative learning cohorts to ensure that all students can express their respective strengths, needs, and talents. <b>(6)</b></li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ Accommodate students with different learning styles by providing opportunities for them to work alone and in groups. <b>(6)</b></li> <li>❑ Where appropriate, provide students with options for demonstrating understanding through various products and performances without compromising the goals or standards for the unit (Wiggins and McTighe, 2004). <b>(7)</b></li> </ul>

	<ul style="list-style-type: none"><li>❑ Anchor culminating tasks and projects around student-generated research questions and/or hypotheses, allowing them to extend, refine, and use independently their growing understandings and interests. <b>(8)</b></li></ul>
<b><u>Planning Notes:</u></b>	

## Advancing Stage Three: Promoting Student Understanding—“A Planning Grid for ‘O’”

**John L. Brown, Presenter**

<b>O</b>	<p><i>Enduring Understandings for “O”:</i></p> <ul style="list-style-type: none"> <li>• The organization and sequence of teaching-learning-assessment activities within a unit will reinforce and support students’ growth toward understanding and independent use of what they are learning.</li> <li>• Teachers need to determine what students should know, do, and understand by the end of the unit; how they will assess and evaluate students’ progress in achieving desired results; and how learning tasks will lead students toward doing well on these assessments to ensure they have achieved desired results.</li> <li>• The best organizational designs begin with students’ experience-based exploration of and inquiry into the big ideas and essential questions of the unit. These initial experience-based inquiries should lead to growing levels of conceptual understanding and independent application.</li> </ul>
<b>Stage One: Desired Results— “O” Planning Issues</b>	<ul style="list-style-type: none"> <li>• How will you determine the sequence that will offer students the most effective and engaging learning?</li> <li>• In this unit what is most appropriately and effectively covered in a linear and didactic fashion?</li> <li>• In this unit what is most appropriately and effectively “uncovered” in an inductive, inquiry-oriented, and/or experiential manner?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ According to Wiggins and McTighe (2004), think of the unit as an unfolding story or problem rather than as a guided tour or an encyclopedia article. (7)</li> <li>❑ Determine how you can begin with a “hook” and teach on an as-needed basis. Don’t front load all of the information before application (Wiggins and McTighe, 2004). (7)</li> <li>❑ When using direct instruction, present information in a logical, step-by-step fashion, acting as a tour guide for your students. (7)</li> <li>❑ Front-load the advanced concepts and processes students will learn, helping them to see how the discrete information and skills they will learn are related to these organizing components. (7)</li> </ul>
<b>Used at Regular Intervals in a Unit:</b>	<ul style="list-style-type: none"> <li>❑ Make the sequence more surprising and less predictable for students (Wiggins and McTighe, 2004). (3)</li> <li>❑ Ensure that there are ongoing cycles of modeling, practice, feedback, and adjustment built into the unit</li> </ul>

	<p>(Wiggins and McTighe, 2004). (3)</p> <ul style="list-style-type: none"> <li>❑ Focus on transferable, big ideas and essential questions (Wiggins and McTighe, 2004). (7)</li> <li>❑ Determine how you will move back and forth between the whole and the parts rather than teaching all the little bits first, out of context (Wiggins and McTighe, 2004). (7)</li> </ul>
<b>Reviewing, Practicing, and Applying Content:</b>	<ul style="list-style-type: none"> <li>❑ Plan in advance which aspects of your curriculum content students will learn experientially since hands-on exploration requires time and resources. (3)</li> <li>❑ Organize and sequence activities so that students move from modeling to shaping and internalizing key procedural knowledge (skills, procedures, processes). (7)</li> <li>❑ Organize and sequence activities so that students construct meaning, mentally organize, and internalize (i.e., commit to long-term memory) key declarative knowledge (facts, concepts, generalizations, rules, theories, principles). (7)</li> </ul>
<b>Stage Two: Determining Acceptable Evidence—“O” Planning Issues</b>	<ul style="list-style-type: none"> <li>• How will you evaluate students’ growing conceptual understanding?</li> <li>• How will you determine if students have achieved the ability to use their understandings, knowledge, and skills with a level of independence and automaticity?</li> <li>• How will you anchor the assessment of students’ progress around culminating performance tasks and projects?</li> <li>• How will you know if your students have internalized the big ideas and essential questions that were the connecting threads of your unit?</li> </ul>
<b>Input Experiences:</b>	<ul style="list-style-type: none"> <li>❑ At the beginning of key juncture points in your unit, ask students to create non-linguistic representations of what they think they know and understand about core unit content (e.g., pictographs, graphic organizers, webs, advance organizers). (5) and (9)</li> <li>❑ Observe students’ work in cooperative learning structures such as seminar groups to discern how well they can respond at the beginning of the unit to one or more of your essential questions. (6)</li> <li>❑ Determine at the beginning of your unit what students know and are able to do relative to the unit’s established goals (power standards). (7)</li> <li>❑ Use constructed-response pre-test items to assess students’ initial conceptual understandings of the big ideas and essential questions for your unit. (7)</li> <li>❑ Engage students in introductory experiential assessment tasks (e.g., collaborative problem-solving, decision-making, investigation, systems analysis, invention) to monitor their initial understandings and insights. (8)</li> </ul>

<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Monitor students’ growing understanding, knowledge, and skills by engaging them in ongoing activities involving comparison and contrast, esp. related to the big ideas and essential questions of your unit. <b>(1)</b></li> <li>❑ Throughout the unit, ask students to summarize and respond using three-column notes to synthesize their understanding of key unit content. <b>(2)</b></li> <li>❑ Engage students in peer coaching and peer review activities to reinforce their ability to explain and apply what they are learning. <b>(3)</b></li> <li>❑ Use homework and in-class practice opportunities to extend and refine students’ conceptual understanding and ability to apply what they are learning via real-world, authentic scenarios, role-playing, and simulation tasks. <b>(4)</b></li> <li>❑ Use a variety of cooperative learning activities to monitor students’ growing understanding. <b>(6)</b></li> </ul>
<p><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ Provide homework and practice opportunities for students to display their growing levels of conceptual understanding and capacity for independent use of core unit content. <b>(4)</b></li> <li>❑ Anchor your monitoring and assessing of students’ internalization of unit big ideas and essential questions via performance tasks and culminating G.R.A.S.P.S. projects. <b>(7)</b></li> </ul>
<p><b>Stage Three: Teaching-Learning Activities—“O” Planning Issues</b></p>	<ul style="list-style-type: none"> <li>• How will you ensure that the work unfolds in a natural progression so that new teaching and learning activities seem appropriate rather than arbitrary or meaningless?</li> <li>• How will you organize and sequence the learning activities in which students engage?</li> <li>• How will you organize learning activities to help students achieve the desired results for this unit?</li> <li>• How will you organize and sequence teaching-learning-assessment tasks so that students begin with initial experience-based inquiry and move toward growing levels of conceptual understanding and independent application?</li> </ul>
<p><b>Input Experiences:</b></p>	<ul style="list-style-type: none"> <li>❑ Scaffold learning experiences so that students begin with tangible, concrete, and relevant experiences that reinforce the purposefulness and authenticity of what they are being asked to learn. <b>(3)</b></li> <li>❑ Begin units with appropriate tasks to motivate and engage students’ interests and background knowledge. <b>(3)</b></li> </ul>
<p><b>Used at Regular Intervals in a Unit:</b></p>	<ul style="list-style-type: none"> <li>❑ Ask students to compare their pre-/post-progress in understanding core unit content (esp. big ideas and essential questions) as they progress through the unit. <b>(3)</b></li> </ul>

	<ul style="list-style-type: none"> <li>❑ Move students along a continuum of understanding by monitoring their growing ability to use unit content via the six facets of understanding: explanation, application, interpretation, perspective, empathy, self-knowledge. <b>(3)</b> and <b>(7)</b></li> <li>❑ Use opportunities for students to summarize, paraphrase, and internalize unit content via the three-column note-taking process. <b>(2)</b></li> <li>❑ Reinforce student effort and provide recognition through tangible and non-tangible rewards and positive feedback, especially acknowledging students' insights and growing understandings. <b>(3)</b></li> <li>❑ Assign homework and in-class practice sessions designed to monitor their growing ability to demonstrate conceptual understanding and the capacity for independent application of core unit content. <b>(4)</b></li> <li>❑ Throughout the unit, ask students to compare non-linguistic representations of core unit content and understandings with peers in small and whole-group settings. <b>(5)</b></li> <li>❑ Use a variety of cues, higher-order questions, and advance organizers to frame and focus student understandings. <b>(9)</b></li> </ul>
<p style="text-align: center;"><b>Reviewing, Practicing, and Applying Content:</b></p>	<ul style="list-style-type: none"> <li>❑ At key points in your unit, reinforce student effort and provide recognition as students review their progress and assess their growing insights and understandings. <b>(3)</b></li> <li>❑ Provide multiple opportunities for students to receive your coaching (and that of peers) as they practice and rehearse their use of key declarative and procedural knowledge. <b>(4)</b></li> <li>❑ Integrate cooperative learning structures to reinforce students' application of unit content (e.g., Student Teams and Tournaments, JIGSAWS). <b>(6)</b></li> <li>❑ Ask students to communicate to the class (or in small group debriefing sessions) how their understanding has grown over the course of the unit, esp. their testing of key hypotheses formulated and modified from the beginning to the end of the unit. <b>(8)</b></li> </ul>
<p style="text-align: center;"><b><u>Planning Notes:</u></b></p>	