The Essence of UbD

- How do we *design* instruction so that students really *understand*?

- Avoid Model #1: Coverage

- Avoid Model #2: Activities without purpose
Essential Vocabulary

- “Big Ideas” = concept, theme, issue that imparts meaning to facts, skills
- “Curriculum” = appropriate experiences, assignments, and assessments to achieve goals
- “Assessment” = giving and using feedback based on standards
Vocabulary, Continued

- “Evaluation” = implies summation, credentials, grade
- “Desired results” = intended outcomes, targets, performance standards
- “Understanding” = binding knowledge in order to make sense of things
Knowledge vs. Understanding

- Knowledge:
  - Facts
  - Body of coherent facts
  - Verifiable claims
  - Right/wrong
  - I know something to be true
  - I respond on cue with what I know

- Understanding:
  - Meaning of the facts
  - Theory that binds the facts
  - Fallible, in-process theories
  - A matter of degree or sophistication
  - I understand why it is, what makes it knowledge
  - I judge when to and when not to use what I know
Understanding is about transfer!
Examples of Non-Transfer

From students:

- “How can 4.28 + 2.72 = 7? Seven isn’t a decimal!”
- A high school history student asked her teacher quietly at the end of the unit, “So just what did Louisiana purchase?
- A 4th grade student was irritated when she did not see lines of longitude and latitude on a cross-country flight.
Backward Design

- Stage 1: Identify desired results.
- Stage 2: Determine acceptable evidence.
- Stage 3: Plan learning experiences and instruction.

(See page 12 in workbook.)
Getting a Sense of the "Whole"

1-Page Template with Design Questions

(See pages 30 and 31 in workbook.)
Simplistic Example of 3 Stages

- **Desired result:** Understand that pioneers endured hardships to settle the West

- **Acceptable evidence:** Diary entries depicting a week in the life of a pioneer family OR create drawings showing hardships

- **Learning experiences:** Reading/discussing primary and secondary sources, reading relevant literature, using computer simulations, research, etc.
Notes on the Design Process

- The performance tasks are chosen before lessons are fully developed.
- Activities previously used may need to be modified.
- Teaching methods and materials are chosen last.
- Textbook may become a support rather than the sole source.
Consult Design Web for Stage 1, Page 62

G = goals
Q = questions
U = understandings
K = knowledge
S = skills
G = Goal(s), Big Ideas

- “Conceptual Velcro”
- Linchpin
- Broad, not topical
- Universal in application
- Timeless

- A conceptual lens for study
- Point to ideas at the heart of a subject, discipline
- Have great transfer value
- (See page 69 in workbook.)
Sources of Goals

- State content standards
- District program goals
- Departmental objectives
- Exit-level outcomes
- Standards established by professional organizations
See page 72 in the workbook for examples of big ideas that should be included in goals.
Problems with Goals

- Too many, too little time
- Too big
- Too discrete ("factlets")
- Too vague (nebulous)
“The student will analyze the regional development of Asia, Africa, the Middle East, Latin America, and the Caribbean, in terms of physical, economic, and cultural characteristics and historical evolution from 1000 A.D. to the present.”
“Unpacking the Standards”

Look for recurrent nouns, adjectives, and verbs
“The student will be able to analyze how geography, climate, and natural resources of a region influence the lifestyle, culture, and economy of its inhabitants.”
Clarifying Content Priorities

1. Worth being familiar with

2. Important to know and do

3. Big ideas and core tasks
Label as a 1, 2, or 3
1 = Worth being familiar with
2 = Important to know and do
3 = Big ideas, understandings

- Data displays (bar graph, line plot)
- Blaise Pascal
- Interquartile range
- Statistical analysis often reveals patterns that prove useful or meaningful
- Reliable data
- Statistics can conceal as well as reveal
- Various statistical formulae and techniques
- Lewis Terman
- Measures of central tendency: mean, median, mode, range, standard deviation
U = Understandings

*What is the value of studying ____________________?*
An enduring understanding is...

- an important inference
- transferable
- abstract
- acquired by doing
- used in skill areas
Understandings: Examples and Nonexamples

- Water covers three-fourths of the earth’s surface.
- Decoding is necessary but not sufficient in reading for meaning.
- When liquid water disappears, it turns into water vapor and can reappear as liquid if the air is cooled.
- Sounding out, looking at pictures
Understandings: Two Types

- Overarching
  - Broader and serve as a bridge to other units and courses

- Topical
  - Unit-specific
Overarching or Topical?

1. A president is not above the law.
2. Watergate was a major constitutional crisis, not a “third-rate burglary”.
3. A baseball’s card’s worth depends on who wants it, not just its condition or the number of similar ones available.
4. In a free market economy, price is a function of demand versus supply.
Writing “Understandings”

- Use this template:
  - Students will understand that...

(See pages 108-110 for examples of enduring understandings in specific subject areas.)
Q = Questions

“If the textbook contains the answers, then what are the questions?”
An essential question ...

- recurs throughout life.
- is an important part of a discipline.
- is needed to understand core content.
- will engage learners in inquiry.

(See page 91 in the workbook.)
Consult pages 89 and 90 for samples of essential questions pertaining to a specific discipline.
Essential Questions: Examples and Nonexamples

- How do effective writers hook and hold their readers?
- How are “form” and “function” related in biology?
- How would life be different if we couldn’t measure time?
- How many legs does a spider have?
- How many minutes are in an hour?
- What is the original meaning of the term “technology” (from its Greek root, *techne*)?
Questions: Two Types

- **Over-arching**
  - Point beyond a unit to enduring understandings
  - Example: How do artists choose tools, techniques, and materials to express their ideas?

- **Topical**
  - Are subject- and topic-specific; frame a unit of study
  - Example: What tools, techniques, and materials are used in creating masks from different cultures?
Tips for Using Essential Questions

- Organize units of study around the questions.
- Link assessment tasks to the questions.
- Suggested: 2-5 questions per unit
- Frame the questions in “kid language” and post in the classroom.
- Help students to personalize the questions.

(Consult pages 93-105 in workbook for examples for each discipline.)
K = Knowledge, S = Skill
Definitions (p. 119)

- **Knowledge**
  - Vocabulary
  - Terminology
  - Definitions
  - Key factual information
  - Formulas
  - Critical details
  - Important events and people
  - Sequence and timelines

- **Skills**
  - Basic skills
  - Communication
  - Thinking skills
  - Research, inquiry, investigation
  - Study
  - Interpersonal, group
Express $K$ in terms of nouns. Express $S$ in terms of verbs.
Assignment: Read “Frequently Asked Questions About Stage 1”

(See p. 131-132 in workbook.)
Practice Exercise