Understanding By Design

Leading by Design
Jay McTighe & Grant Wiggins
Dallas 2004

Focus on Understanding
Plan “Backward”
“Work Smarter”

3 Stages of Backward Design
1. Identify desired results.
2. Determine acceptable evidence.
3. Plan learning experiences & instruction.

The UbD Template…
- embodies the three stages of backward design
- provides a common format for creating and sharing curricular designs

Activity Orientation

© Grant Wiggins 2004
“Coverage” Orientation

September ------------------ June

Content standards are the goals, not text coverage.

Use the textbook as a resource -- not the syllabus!

The UBD 1-page template

- Content standards
- ‘big ideas’
- essential questions
- assessments
- learning activities

The challenge: align goals, assessments, lessons

Applying Backward Design

Essential Questions for Staff
- How would people know that we are a “standards-based” school?
- What content must we “cover” and what should we “uncover”?
- Are we assessing everything we value (or just that which is easiest to test and grade)?
- How can our assessments promote learning, not just measure it?
Applying Backward Design

Reflective Questions for Staff

Stage 1
- What do you want students to come to understand?
- What do you want students to know and be able to do?
- How will students come to know what they will be learning?

Reflective Questions for Staff

Stage 2
- What evidence will you collect to determine if students have achieved the desired results?

Stage 3
- In what ways will you help students learn this?

Summary of good design...
- Clear, explicit performance requirements
- Many models and modeling provided
- A genuine challenge/problem frame that stretches you - real, meaningful work, with meaningful purpose (audience/situation) (Authentic assessment)
- Trial and error, reflection and adjustment are expected, encouraged and designed in to the syllabus
- The teacher is more of a facilitator, coach
- Transparency - clarity about the big picture and how current work relates to it
- There is a safe, supportive environment for risk-taking, giving and getting feedback
- Variety, choice, and attention to difference are designed in to all work
- A good mix of group/solo work, collaboration/competition designed in
- Active, immersive, multi-sensory experience - not too verbal

Unit Design Cycles
- In-class observations
- Analysis of formative student work
- Student feedback - what works, what doesn't
- Analysis of summative student work
- Expert review
- Peer review
- Design, based on:
  - Goals/Standards
  - Performance gaps
- Draft: Stage 1
- Stage 2
- Stage 3
- Unit self-assessed against UbD design standards

© Grant Wiggins 2004
“Core Tasks” provide performance priorities

What do the discrete skills and facts enable?

- What is a credible answer to: “Why are we learning this? What does it help you do?”
- What complex tasks do people out in the world get called upon to do - on their own? What are the kinds of challenges and conditions they face in the field?
- What work in the field requires transfer - the thoughtful use of a repertoire, (as opposed to just cued, simple plug-in or rote response)?
- Is this the kind of task that can and must recur K-12 because it is the essence of the ability or program goal?

Don’t confuse the drills with the game (authentic performance)

‘Drill-tests’ - test items/exercises

- Out of context
- Discrete, isolated element
- Unrealistically set up and prompted
- Doesn’t transfer without practice adapting it to the game itself

The ‘game’ - real task, problems

- In context, with all its messiness and interest value
- Requires a repertoire, used wisely
- Prompted: you judge what to do, when

Establishing Transparent Priorities
Explicit “Big Ideas” & “Core Tasks”

Core tasks, cont.

- Ask:
  - What does it mean to do the subject, to have your abilities ‘tested’ in the world?
  - What are authentic options, constraints, and opportunities when doing such work?
  - What are the key genres of performance in your subject(s)?

Core transfer tasks

Examples from various fields:

- Crafting your own narrative about what happened, despite conflicting and incomplete accounts (social studies)
- Successfully writing to a real audience, to achieve a real purpose (lang. arts)
- Figuring out, on your own, what an author might have meant, and saying why (humanities courses)
- Developing models, based on what you see as a pattern, in realistically messy phenomena (math, science, social science)
- Speaking to different audiences and purposes, including highly challenging situations, with poise and polish (many subjects)
Transfer tasks: examples

History
- Make sense of multiple and incomplete primary & secondary sources (e.g. playground fight)
- “How did we get here?” - the history of a present problem/issue/event (e.g. 9/11)
- Build a single coherent and supported “story” out of conflicting facts & artifacts
- Dig beneath national myths to get at the unvarnished truth

Science
- Design and de-bug a worthy experiment from scratch
- Critically evaluate the research of others - peer review
- Show evidence of having carefully considered the ethics of scientific research
- Adapt research to practical solutions/inventions
- Propose and design tests of a novel idea

The Questions & Tasks ARE the core curriculum, not the content!

Framing curricula around questions & tasks helps clarify priorities for learners and teachers
- Don’t confuse ‘teachingvia questions’ with framing a curriculum and assessment system on penetrating and important questions in each field
- Don’t confuse the state’s role as auditor with the local role of designing excellent assessment that does justice to the Standards

Framing a course in World History by tasks:
- 1. The design of a tour of the world’s most holy sites
- 2. The writing of a Bill of Rights for use in Afghanistan, Iraq, and other new democracies
- 3. Report on Latin America to the Secretary of State: Policy analysis and background report on a Latin American country. What should be our current policy, and how effective has recent policy with that country been?
- 4. Collect and analyze media reports from the internet on other countries’ views of US policies in the Middle East. Do we understand the issues?
- 5. Provide a briefing on the AIDS crisis in Africa and how American policy has helped as well as hurt the situation
- 6. Take part in a model UN on the issue of terrorism: you will be part of a group of 2-3, representing a country, and you will try to pass a Security Council resolution on terrorism
- 7. Russia: friend or foe? Provide the Foreign Relations Committee with a briefing on the current state of Russia, the last century of American-Russian relations, and future worries and possibilities
- 8. India and outsourcing: to what extent is the global economy a good thing for America? India? India’s neighbors?

Essential Questions

for Eng./LA–
- When should I talk? When should I listen? How do I know?
- In the case of misunderstanding, how can I tell when it’s me and when it’s them? What can I do to fix the problem?
- Have I understood the real message? How do I know? What does the feedback and body language suggest? What am I being said that is the real message?
- What should I do when I don’t understand?
- Have I been unintentionally unclear? Rude? How do I know?
- What are the most common but hard-to-spot causes of communication breakdowns? How can I tell when others understand me? What can I do when they are confused?
- What do good speakers do? Are there any consistent aspects to excellent performance, given so many distinctive styles?
- How does the audience affect the way I should speak?
- In what ways does effective speaking require an interaction with the audience?
- Have I been clear? Effective? How do I know?
to teach for understanding is to coach for transfer

Transfer requires ...

- tasks with minimal cues and scaffolding, unlike typical test items: can the learner imagine and judge which knowledge & skills are required here?
  - Local/classroom assessment is consistently too low-level and narrow - not focused on transfer, but ‘plugging in’
  - Learning how to adapt, grapple with new or unfamiliar elements, uses, or obstacles - i.e. teach them how to learn, transfer - “know what to do when they don’t know what to do”

On Transfer: “How People Learn,” Chapter 3

- “Transfer is affected by the degree to which people learn with understanding rather than merely memorize sets of facts or follow a fixed set of procedures…”
- “Transfer is enhanced by instruction that helps students represent problems at higher levels of abstraction…”
- “Research shows that transfer across contexts is especially difficult when a subject is taught only in a single context.”
- “Many approaches look equal when the only measure is memory for information. Differences become more apparent when evaluated from the perspective of how well the learning transfer to new problems.”

MCAS test item: 10th-grade English reading item

A fellow fourth grader broke the news to me after she saw my effort on a class assignment involving scissors and construction paper. “You cut out a purple bluebird,” she said. There was no reproach in her voice, just a certain puzzlement. Her observation opened my eyes — not that my eyes particularly help — to the fact that I am colorblind. In the 36 years since, I’ve been trying to understand what that means. I’m still not sure I do….

Unlike left-handers, however, we seem disinclined to rally round our deviation from the norm. Thus there’s no ready source of information about how many presidents, or military heroes, or rock singers have been colorblind. Based on the law of averages, though, there must have been some. We are everywhere, trying to cope, trying to blend in. Usually we succeed. Until someone spots our purple bluebirds. Then the jig is up.

The most wrong item on the state ELA test: 71% incorrect!

- This selection is best described as
  - A. a biography.
  - B. a scientific article.
  - C. an essay.
  - D. an investigative report.

- Many students said it could not be an essay because “it was funny” and because “it had more than 5 paragraphs.”
Find lots of ideas in the language of the Standards

Key verbs suggest the important tasks

Key nouns reflect the big ideas

- Important to anchor curriculum in core tasks which recur K-12 to avoid overly-discrete teaching of skills
- Big Ideas frame learning goals through essential questions and understandings

LA - US history: middle & high school benchmarks

H-1B-H2: summarizing the process by which the United States was colonized and later became an independent nation;

H-1B-H3: analyzing the development of the American constitutional system;

H-1B-M10: analyzing the changes and regional tensions created by Jacksonian democracy, the industrial revolution, increasing immigration, the rapid expansion of slavery, and the westward movement;

H-1B-M11: explaining and giving examples of the reform movements that occurred during the antebellum period and evaluating their impact on American society.

Focus on Understanding

Plan “Backward”

“Work Smarter”

Apply Design Standards

Emphasize Results

MISSION

GOALS (Standards)

Review Achievement Data

Plan Improvement Actions

Evaluate Impact of Actions

3 Stages of Backward Design

1. Identify desired results.

2. Determine acceptable evidence.

3. Plan learning experiences & instruction.

Backward Design and S.I.P.

Unpack content standards.
Backward Design and S.I.P.

Unpack content standards.

Avoid fixation on high-stakes tests.

something to think about...

“High-stakes testing has radically altered the kind of instruction that is offered in American schools, to the point that ‘teaching to the test’ has become a prominent part of the nation’s educational landscape.”

Misconception Alert:

Beware: fixation on test format

“What we see is behavior geared toward improving test scores rather than behavior geared toward changing what students do.”

Brian Stecher, researcher at RAND Corporation

Caution: Don’t Confuse the Measure with the Goal.

“Practicing for a standardized test is like practicing for your physical exam!”

- Grant Wiggins

Caution: Don’t Confuse the Measure with the Goal.

☛ Focus on the important ideas and processes in the content standards.

☛ Do not fixate on state tests.

Backward Design and S.I.P.

Unpack content standards.

Avoid fixation on high-stakes tests.

Analyze multiple sources of evidence.
Think “Photo Album” versus “Snapshot”

Reliable assessment requires multiple sources of evidence, collected over time.

For further information...

Contact us:
- grant@authenticeducation.org
- jmctigh@aol.com