



Designing an Understanding-based Curriculum

Agenda - Day 1



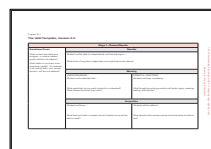
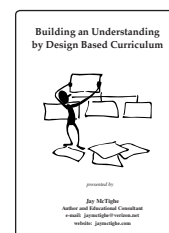
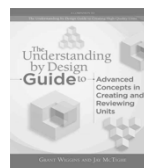
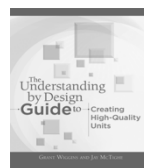
- ✓ The "Big Ideas" of UbD
- ✓ Goal Types
- ✓ Stage 1 - Understandings & EQs
- ✓ -- Design Time --
- ✓ Gallery Walk Sharing
- ✓ UbD Supportive Websites

Agenda - Day 1



- ✓ Gallery Walk Sharing
- ✓ Stage 1 - Tips, Q&A
- ✓ Stage 2 - Assessing Understanding
- ✓ Stage 2 - GRASPS
- ✓ Alignment Check
- ✓ Stage 3 - Learning Plan

Workshop Resources



Three-Minute Pause



Meet in groups of 3 - 5 to...

- ✓ summarize key points.
- ✓ add your own thoughts.
- ✓ pose clarifying questions.

An Understanding-based Curriculum

Teach & Assess for Understanding & Transfer

***Plan Curriculum "backward"
3 Stages of Design***

Understanding by Design

is not...

- a prescriptive program
- an instructional model
- incompatible with some subject areas

What *is* Understanding?



T-Chart Process



**Someone who
really understands**

-
-
-
-
-
-

**Someone who
knows a lot but
doesn't understand**

-
-
-
-
-
-

**Someone who
really understands**

- ✓ Apply
- ✓ Connect
- ✓ Create
- ✓ Critique
- ✓ Explain
- ✓ Interpret
- ✓ Justify
- ✓ Predict
- ✓ Question
- ✓ Solve
- ✓ Teach

**Someone who
knows a lot but
doesn't understand**

- ✦ Recall
- ✦ Identify
- ✦ Retell
- ✦ State
- ✦ Regurgitate
- ✦ Plug in

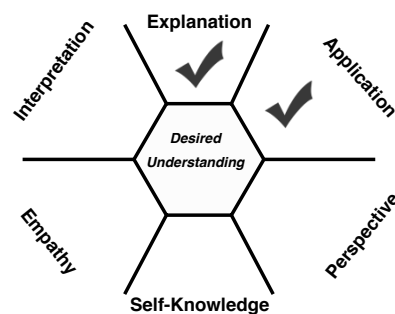
Application

- ✓ Apply
- ✓ Connect
- ✓ Create
- ✓ Critique
- ✓ Predict
- ✓ Question
- ✓ Solve

Explanation

- ✓ Explain
- ✓ Interpret
- ✓ Justify
- ✓ Teach

Facets of Understanding



3 Stages of Backward Design

1. Identify desired results.

2. Determine acceptable evidence.

3. Plan learning experiences & instruction.

The UbD Template...

- ✓ reflects a way of thinking and planning
- ✓ fosters a “mental template” for effective design

Standard(s):	

Stage 1 – Desired Results			
Established Goals What Content Standards, Program and/or Mission related goal(s) will this unit address?	Transfer <i>Students will be able to independently use their learning to...</i> What kinds of long-term, independent accomplishments are desired?		
	Meaning <table border="1"> <tr> <td> UNDERSTANDINGS <i>Students will understand that...</i> What specifically do you want students to understand? What inferences should they make? </td> <td> ESSENTIAL QUESTIONS <i>Students will keep considering...</i> What thought-provoking questions will foster inquiry, meaning making, and transfer? </td> </tr> </table>	UNDERSTANDINGS <i>Students will understand that...</i> What specifically do you want students to understand? What inferences should they make?	ESSENTIAL QUESTIONS <i>Students will keep considering...</i> What thought-provoking questions will foster inquiry, meaning making, and transfer?
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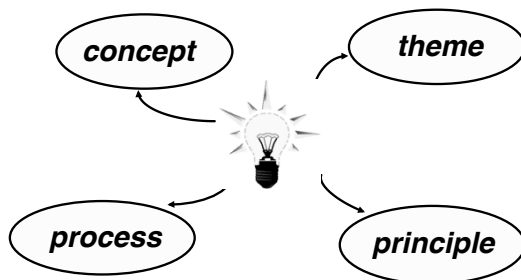
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An Understanding ...



- an abstraction (e.g., a concept, theme, principle)
- a transferrable idea
- has explanatory power

Identify transferrable “big ideas”



From concept to understanding...

Adaptation



Students will understand that...

Understanding:
Living organisms adapt to survive harsh and changing environments.



From theme to understanding...

Friendship



Students will understand that...

Understanding:

True friendship is often revealed during challenging times rather than during happy times.



From a process to understanding...

Writing



Students will understand that...

Understanding:

Writers don't always produce a perfect product on their first try. They draft, proofread, and revise.

Types of Questions



Leading

What are the names of the four food groups?

Guiding

What do we mean by a "balanced" diet?

Hook

Can what you eat help prevent zits?

Essential

What should we eat?

Sample Essential Questions:



- How does art reflect, as well as shape, culture?
- How are "form" and "function" related in nature?
- In what way do effective writers hook and hold their readers?
- Who were the "winners" and who were the "losers" in the Industrial Revolution?

Concept Attainment



1. Compare examples (+) and non-examples (-) of a concept.
2. Identify the distinguishing characteristics of each.
3. Test your working definition against new cases.
4. Refine your concept definition.

What is the relationship between popularity and greatness in literature?

YES NO

☒ ☐

When was the Magna Carta signed?

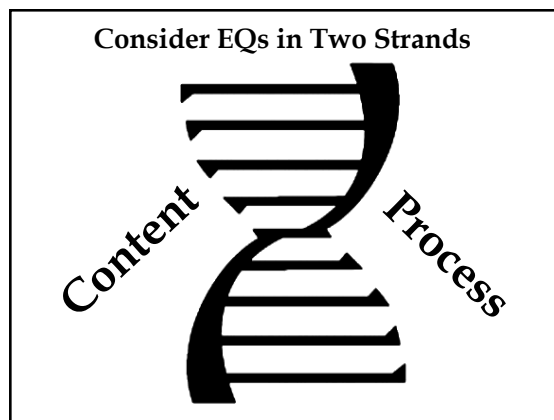
☐ ☒

Crustaceans - what's up with that?

☐ ☒


	YES	NO
Which Canadian prime minister will have the most disappointing legacy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
What's the pattern?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
To what extent are science and common sense related?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

It depends on intent!




Common Core Standards
Mathematics

**Model with
mathematics.**

Mathematical modeling 

'Big Idea' Understandings:

- **Mathematicians create models to** interpret and predict the behavior of real world phenomena.
- Mathematical models have limits and sometimes they distort or misrepresent.

Mathematical modeling 

Essential Questions:

- *How can we best model this (real world phenomena)?*
- *What are the limits of this model?*
- *How reliable are its predictions?*

21st Century Skills

Critical Thinking

Critical Thinking



'Big Idea' Understandings:

- A critical thinker does not simply believe whatever they read, hear or view. They remain skeptical, ask critical questions, and seek alternative points of view.

Critical Thinking



Essential Questions:

- *How do I know what to believe in what I read, hear and see?*
- *Is this a credible and unbiased source?*
- *What other perspectives should I consider?*

Connect Essential Questions with Desired Understandings

Stage 1 – Desired Results	
ESTABLISHED GOALS	Transfer <i>Students will be able to independently use their learning to...</i>
	Meaning
	UNDERSTANDINGS ESSENTIAL QUESTIONS
	Acquisition <i>Students will know...</i> <i>Students will be skilled at...</i>
Stage 2 – Evidence	

U < - - > EQ

Performance goal - Stage 1



- Work with a partner or team.
- Develop several essential questions & understandings and for an identified topic.
- Record your ideas on chart paper.

Align Understandings and EQs

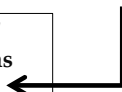
UNDERSTANDING

ESSENTIAL QUESTION

~~People lead change.~~

Why do people rebel?

People rebel as a result of significant dissatisfactions with the political, social, cultural and/or economic status quo.



Things are always changing.

So what?

Things are always changing, often in predictable patterns.

So what?

Recognizing patterns of change allows us to predict and prepare.

It's important to know what your body is doing.

Why?

- *to get feedback on mechanics and performance to help prevent injuries*

Monitoring what your body is doing can enhance performance and help prevent injuries.

Tips for Using Essential Questions:



- ✓ use E.Q.s to organize programs, courses, and units of study
- ✓ "less is more"
- ✓ edit to make them "kid friendly"
- ✓ post the questions
- ✓ invite student questions

3 Stages of Backward Design

1. Identify desired results.

2. Determine acceptable evidence.

3. Plan learning experiences & instruction.

Think like an assessor, not an activity designer!



Design assessments *before* you design lessons and activities.

Be clear about what evidence of learning you seek.

Check for Alignment

Cover Stage 1
Can people infer your goals by only seeing your assessments?

Stage 2 – Evidence		
Coding	Evaluative Criteria	Assessment Evidence
		PERFORMANCE TASK(S)
	- accurate illustration of balanced diet - accurate depiction of health problems - clear and complete explanation - neat and well crafted	<p>You Are What You Eat: Create a picture book to teach 1st graders about "healthful" eating and health problems that may result from poor nutrition.</p> <p>Camp Menu: Design a "balanced" 3-day menu for meals and snacks for a weekend camping trip. Explain why your menu plan is both healthy and tasty.</p>
		OTHER EVIDENCE
	- accurate - reflections reveal healthy choices	<ul style="list-style-type: none"> • Quiz on the food groups and their nutritional benefits. • Skill check on interpreting nutrition information on food labels. • Test on health problems caused by poor eating. • Daily eating journal with reflections on choices made.

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Stage 1 – Desired Results	
Established Goals	Transfer
<p>Students will use a knowledge of nutrition to plan appropriate diets for themselves and others.</p> <p>Standard 6-c</p>	<p>Students will be able to independently use their learning to...</p> <p>consistently make healthful and appropriate dietary choices.</p>
	<p>Meaning</p> <p>UNDERSTANDINGS Students will understand that...</p> <ul style="list-style-type: none"> • A balanced diet contributes to mental and physical health. • Healthy eating requires people to make conscious choices that may challenge comfortable habits.
	<p>ESSENTIAL QUESTIONS Students will keep considering...</p> <ul style="list-style-type: none"> • What should we eat? • Why are there so many nutritionally-related health problems despite all we know?
<p>Acquisition of Knowledge & Skill</p> <p>Students will know...</p> <ul style="list-style-type: none"> • nutrition vocabulary • food groups • nutrition-related health problems 	
<p>Students will be skilled at...</p> <ul style="list-style-type: none"> • interpret nutrition info. on food labels • analyze & evaluate diets • plan a balanced diet 	

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example:

Provincial Tour



The Provincial Department of Tourism has asked your help in planning a four-day tour of British Columbia for a group of foreign visitors. Plan the tour to help the visitors understand the province's history, geography and its key economic assets.

You should prepare a written itinerary, including an explanation of *why* each site was included on the tour.

Science Investigation



The Pooper Scooper Kitty Litter
Company claims that their litter is 40% more absorbent than other brands.

You are a Consumer Advocates **researcher** who has been asked to evaluate their claim. Develop a plan for conducting the investigation. Your plan should be specific enough so that the lab investigators could follow it to evaluate the claim.

example:

The Best Deal



Your friend has told you that he has just upgraded his cell phone plan with BS&S. The plan offers unlimited calls and texts for a fixed monthly fee. Your current plan is based on a price per call (in minutes) and text (mbs). He insists that his new plan is the best plan available and you should choose this same plan. Is he correct in his assumption that this is the best plan for you? Why or why not? Explain your position, cite your mathematical reasons, and show table(s)/graph(s) and equation(s) to support your recommendation.

example:

What's Wrong with Holden?



You are a member of Holden Caulfields case-review committee at the hospital from which Holden is telling his story. Your task is to write:

- 1) a diagnostic report for the hospital, OR
- 2) a letter to Holden's parents explaining what's wrong with him.

Base your analysis on Holden's own words.

example:

Personal Trainer



As a fitness trainer, your task is to design a personalized plan to help a client meet their fitness goal. (Client goals and characteristics are provided.)

Your fitness plan should include aerobic, anaerobic and flexibility exercises along with a proposed nutrition regimen.

example:

What's Your Position?



After reading _____ (literature or informational texts), write _____ (essay or substitute) that compares _____ (content) and argues _____ (content). Be sure to support your position with evidence from the texts.

example:

What's Your Position?



After researching school policies and student & staff opinions on Internet filters in schools, write a (blog, letter to the School Board, editorial for the school paper) that argues for your position. Support your position with evidence from your research. Be sure to acknowledge competing views.

example:

What's Your Position?



What makes something funny?
After reading selections from Mark Twain and Dave Barry, write a review that compares their humor and argues which type of humor works for a contemporary audience and why. Be sure to support your position with evidence from the texts.

Designing Task Scenarios



- G** ♦ What is the goal in the scenario?
- R** ♦ What is your role?
- A** ♦ Who is the audience?
- S** ♦ What is your situation (context)?
- P** ♦ What products/performances will you prepare?
- S** ♦ By what success criteria will your work be judged?

Performance Goal



Design a performance task and associated set of criteria/rubric for an identified unit/course topic.
Share tasks with others. Give and receive feedback.

Subject(s) <u>Health - Nutrition</u> Grade(s) <u>8</u>		TASK TEMPLATE	
Designer(s) <u>Jay McTighe</u>			
What standards, understandings or transfer goals will be assessed through this task?			
➔	Students will demonstrate an understanding of a balanced diet.		
<small>Task Directions (G.R.A.S.P.S. – goal, role, audience, scenario, products/performances, standards)</small>			
➔	Since we have been learning about nutrition, you have been asked to help other students your age learn about healthful eating. Your task is to prepare an illustrated brochure to help them to understand what a "balanced diet" is. Present two examples of nutritionally balanced meals and explain why they reflect healthful eating. Describe and show three possible health problems that might arise as a result of poor eating choices. Explain how these problems could be avoided by following a proper diet.		
➔	What student product(s)/performance(s) will provide evidence of learning?		
➔	picture book/illustrated brochure	oral explanation	
<small>By what criteria will student products/performances be evaluated?</small>			
➔	<ul style="list-style-type: none"> pictures accurately show nutritionally balanced meals examples correctly show two possible health problems 	<ul style="list-style-type: none"> clear, complete and effective explanation of a balanced diet 	