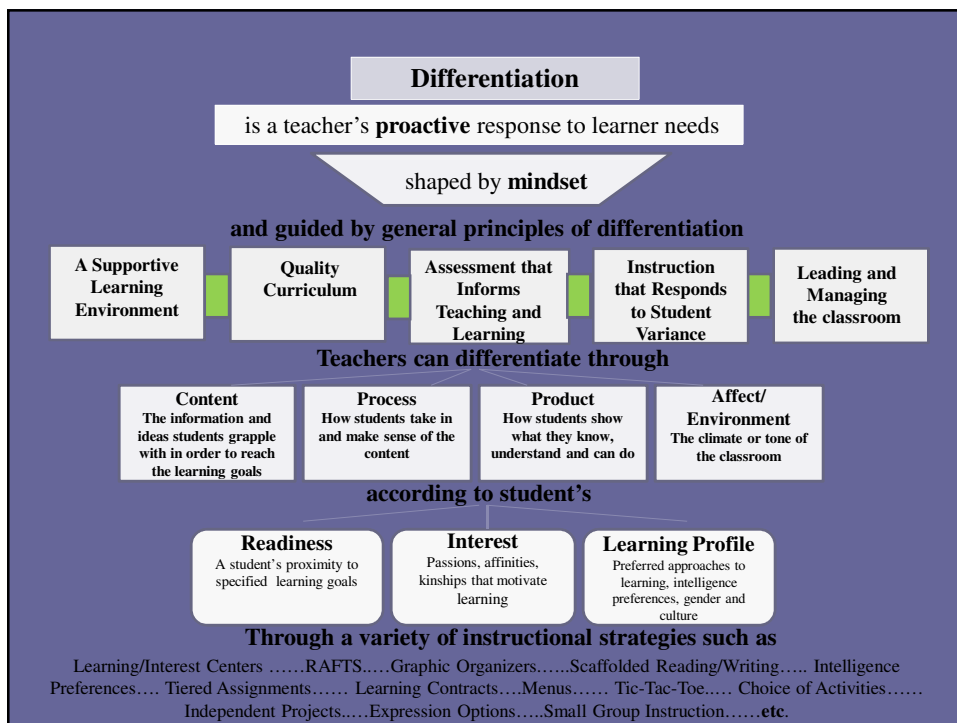




# The Importance of Clear Learning Goals

Marcia B. Imbeau, Ph.D.  
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## It Begins with Good Instruction

**Lynn Erickson:** We know from brain research that students need to see patterns and connections, and any learner is looking at information and trying to pattern and sort it into what they already have in their brains as far as past experience, past learnings. And if they have no way to make sense of this massive amount of information that's coming at them, then they tend to get confused. We also know that they tend to forget a lot of what they have learned. It just becomes "traipsing over trivia" because it doesn't make much sense to them. So, moving to a conceptual level for the structure of that information is going to be beneficial to students.



## It Begins with Good Instruction

***The greatest enemy to understanding is coverage.***

Howard Gardner



# A Look at Clear Learning Goals

## The Common Sense of Differentiation

Ensuring an environment that actively supports students  
in the work of learning (mindset, connections, community)



Absolute clarity about a powerful learning destination—  
(KUDs, engagement, understanding)

Persistently knowing where students are in relation  
to the destination all along the way

Adjusting teaching to make sure each student  
arrives at the destination (and, when possible,  
moves beyond it)

Effective leadership & management of flexible classroom routines



# The Business of school is:

The business of schools is to produce work that engages students, that is so compelling that students persist when they experience difficulties, and that is so challenging that students have a sense of accomplishment, of satisfaction--indeed, of delight--when they successfully accomplish the tasks assigned.



*Inventing Better Schools, Schlechty*

**If you want to build a ship,  
don't drum up people to collect wood  
and assign them tasks,  
but rather teach them  
to long for the  
immensity of  
the sea.**

*Antoine de Saint-Exupery*



## Planet MI Task

V/L	L/M	M/R	B/K
Write a story about your planet	Make a chart that compares your planet to Earth	Make up a song about your planet	Make up or adapt a game about your planet (Saturn ring-toss, etc.)

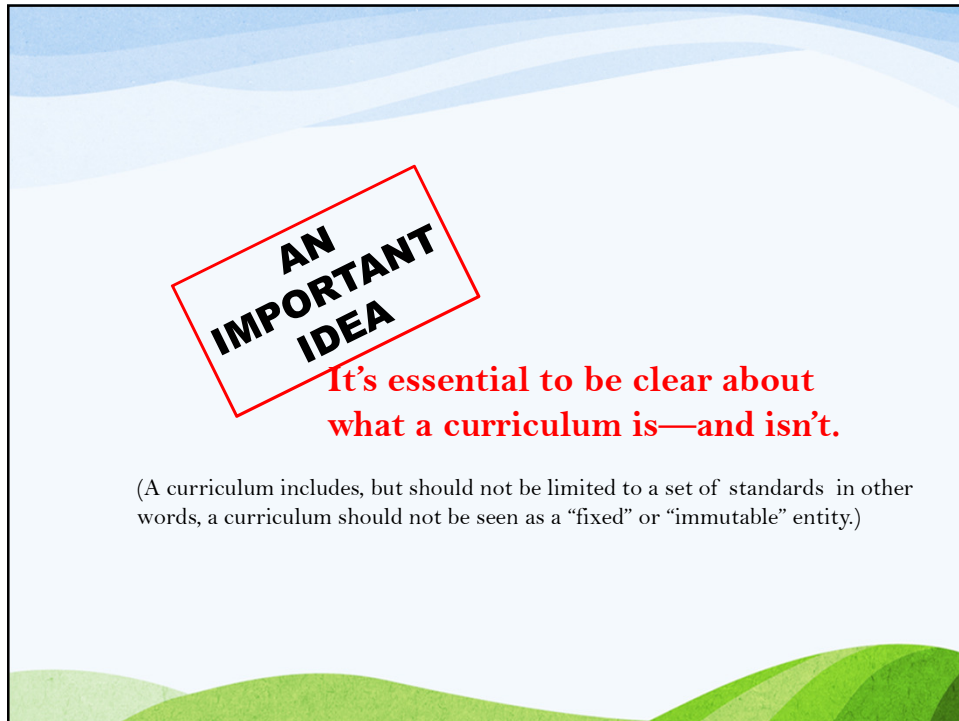


Beware of Twinky DI



WHAT YOU  
DIFFERENTIATE  
MATTERS

**WHAT you differentiate impacts  
both HOW you teach  
and WHO you teach!**



## Important Distinction

Standards are not a curriculum.

A textbook is not a curriculum.

A pacing guide is not a curriculum.

Those things are part of ingredients  
for creating a curriculum.

This is NOT a meal...



It's ingredients for a meal!

You would not take people you care about into the kitchen, point to the ingredients on the counter, and say, "Here's dinner. Eat it."

To make dinner,  
you mix the Ingredients in an  
appetizing and healthful way...



...ensuring the right  
balance of ingredients

**In fact - with the  
same ingredients, you  
can make a base**



Savory Meat Base

**that you can then  
use to make many  
different dishes**



**Depending on the tastes and  
diet needs of your diners.**

**In other words...**

**Standards are mandated ingredients...**

**Important...**

**But not a meal.**

**Planning, preparing and serving the meal requires  
teachers who are thoughtful and creative.**

**Curriculum based on standards also makes room  
for the students who must learn it!**

**Curriculum should never be about “covering standards.”**



It should always be about helping students understand the meaning inherent in the disciplines so that students come to understand the world around them more fully, appreciate the human capacity to learn, and see themselves as responsible contributors to their world.

## **What do you Think...**

About the idea of making dinner vs. serving ingredients?

What do you see as the differences in the two approaches?

Where are you and most of your colleagues now?  
Why do you say so?

What are your most important next steps in making  
dinner vs. dishing out ingredients?



Please talk with a couple of elbow partners about this idea...

## Game Plan for Curriculum

- The curriculum stresses understanding (sense and meaning).  
 \*\*It is organized by understanding/concept/principle.  
 \*\*It keeps those elements in front of the teacher & students.
- It supports teachers in “teaching up.”
- It requires students to use/apply/transfer/ create with what they learn.
- It asks students to consider varied perspectives on key issues.
- It provides “respectful tasks” for all students.
- Tasks ask students to integrate knowledge, understanding, and skill.
- Students feel consistently challenged and supported in the tackling the challenge.



## QUALITY CURRICULUM: THE SHORT VERSION

Do I get  
how this  
works?  
(Understanding)

Does this  
connect to my  
life?  
(Engagement)

Understanding + Engagement + Understanding  
(sense & meaning) = Success



## To Engage Learners...



However we conceive it, every lesson plan should be, at its heart, motivational plan. Young learners are motivated and engaged by a variety of conditions. Among those are:

novelty

cultural significance

personal relevance or passion

emotional connection

product focus

choice

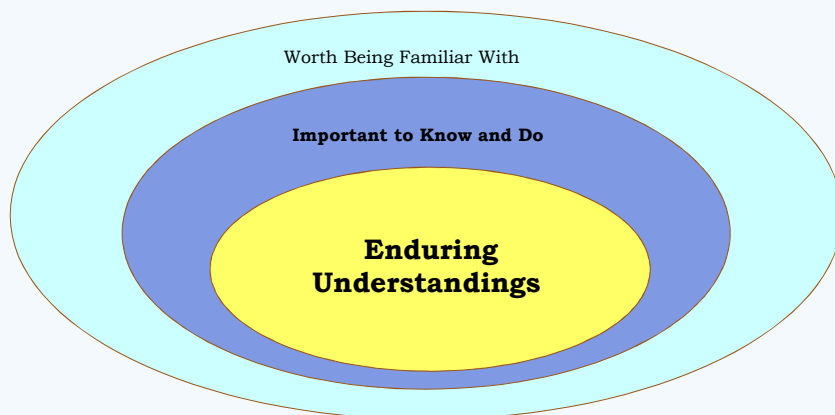
the potential to make a contribution or  
link with something greater than self


Tomlinson • 2003 • Fulfilling The Promise...

*To Ensure Student Understanding*




Teachers Must Distinguish Between:





**Meaning comes from  
“big ideas”  
& leads to:  
durability & usefulness  
of knowledge:  
understanding,  
transfer, critical thought,  
& innovation--  
as well as fostering  
alignment between  
content goals,  
assessment,  
instruction,  
& differentiation.**



1. Quality curriculum helps us grapple with our lives and circumstances. It dignifies learners and learning. It connects us with the world.
2. Quality curriculum engages learners (helps them make meaning).
3. Quality curriculum results in learner understanding (helps them make sense).
3. Quality curriculum supports a LEARNING environment.
4. Quality curriculum has clear, explicit knowledge, skill, and understanding goals.
5. Quality curriculum can both subsume and extend the reach of required content (standards, goals, benchmarks).

## Creating common learning goals

*We have to know where we want all students to end up before we can think intelligently about how we want them to get there!*

*Differentiation is seldom about different outcomes for different kids. It's about different ways to get kids where they need to go.*



***Students can hit any target that they know about and that stands still for them.***

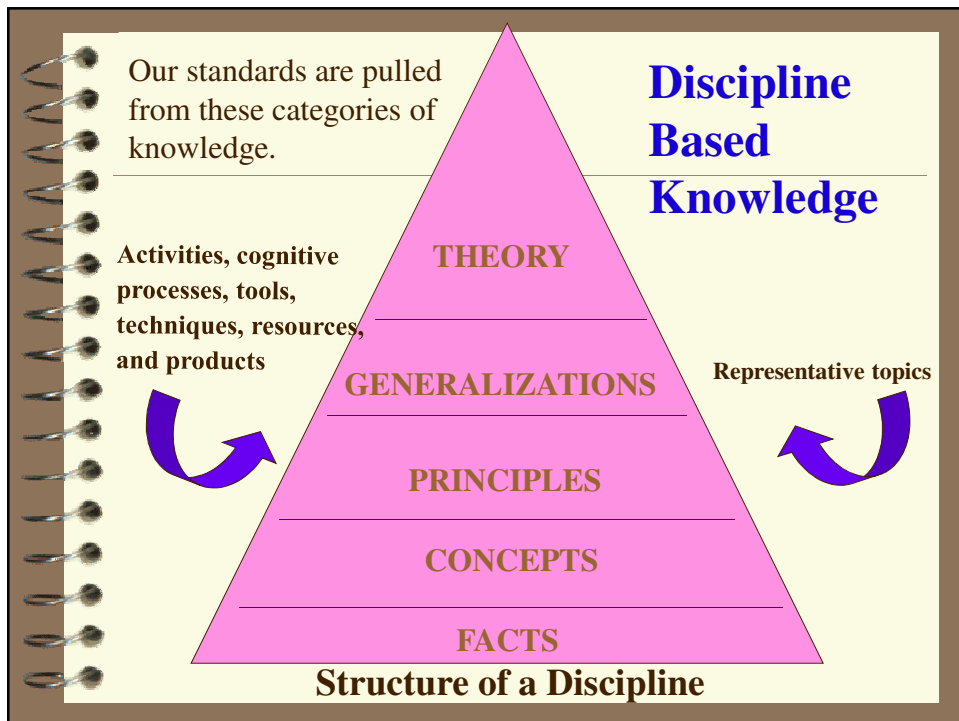
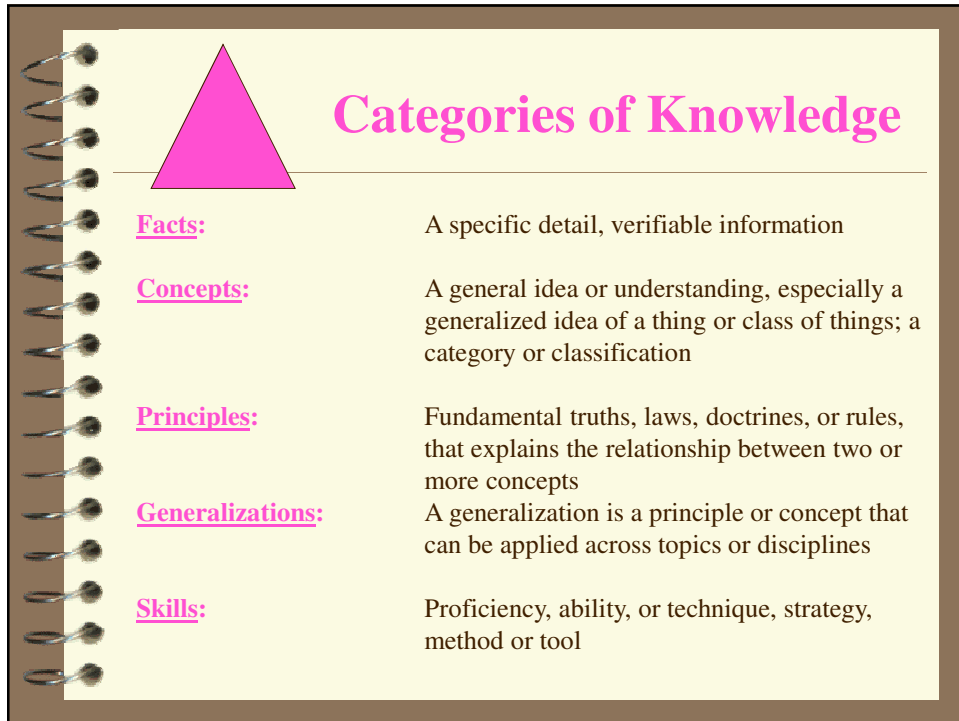
**~Rick Stiggins**




## Categories of Knowledge

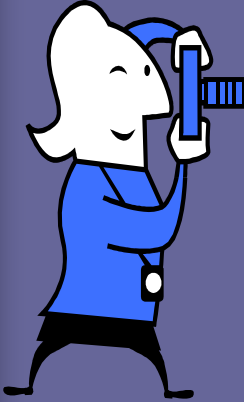


The curriculum we design should help students see how information (**facts**) are organized (**by concepts**), figuring out what is important and true about the concepts (**principles**), monitoring feelings about the ideas (**attitudes**), and using what they've learned to act on important problems (**skills**).



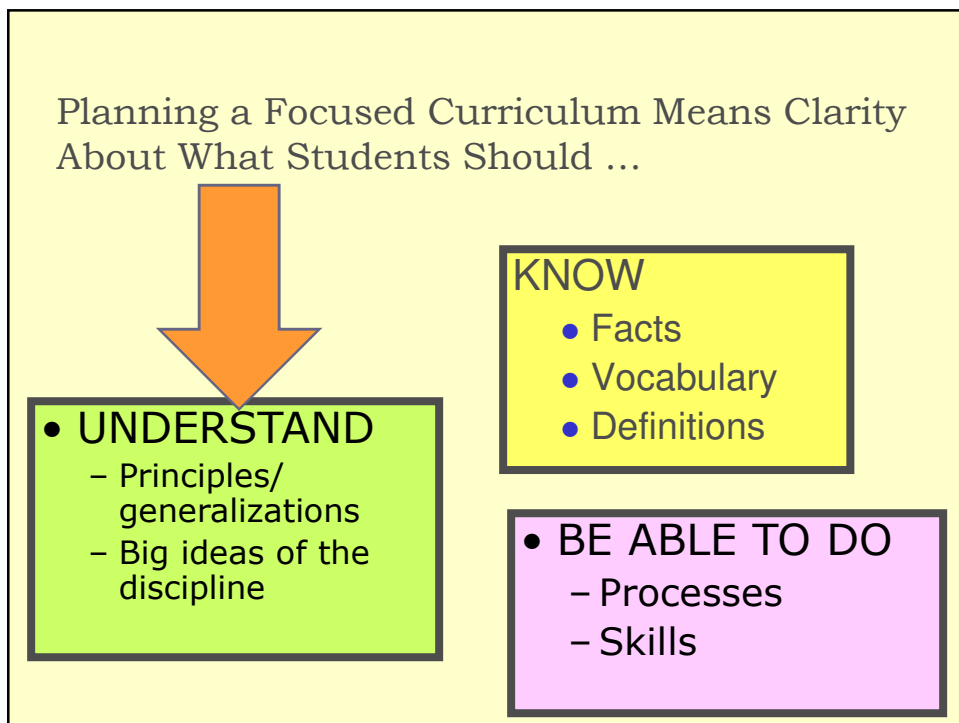



First Step in Designing  
Differentiated Curriculum is...




...**FOCUS!**

Learning Goals:  
*Knows, Understands,  
Be able to Do*






# Know




These are **the facts, vocabulary, dates, places, names, and examples** you want students to give you.

The know is massively forgettable.

“Teaching facts in isolation is like trying to pump water uphill.” Carol Tomlinson



# Understand




## Major Concepts and Subconcepts

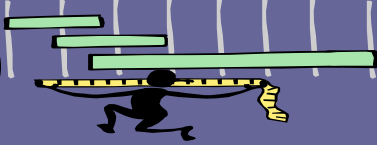
These are the written **statements of truth**, the core to the meaning(s) of the lesson(s) or unit. These are what **connect the parts of a subject** to the student’s life and to other subjects.

It is through the understanding component of instruction that we teach our students to truly grasp the **“point”** of the lesson or the experience.

Understandings are purposeful. They focus on the **key ideas** that require students to understand information and **make connections** while evaluating the relationships that exist within the understandings.



## Able to Do Skills



These are the basic skills of any discipline. They include the thinking skills such as analyzing, evaluating, and synthesizing. These are the skills of planning, the skills of being an independent learner, the skills of setting and following criteria, the skills of using the tools of knowledge such as adding, dividing, understanding multiple perspectives, following a timeline, calculating latitude, or following the scientific method.

The skill portion encourages the students to “think” like the professionals who use the knowledge and skill daily as a matter of how they do business. This is what it means to “be like” a doctor, a scientist, a writer or an artist.



### Knowledge/Understanding/Skill

Study the following items. Talk with your partners and determine if each of the items represents something that would go in the knowledge, the understanding, or the skill column of curriculum planning.

1. The physical geography of a region directly impacts the development of the civilization that settles in that particular region.
2. Christopher Columbus discovered America in 1492.
3. Locate places on a map using a geographic grid including latitude and longitude.
4. Fair play is an essential part of all sports.
5. The United States of America is divided into specific regions, each of which has unique geographic features and natural resources.
6. Scientists record the results of their experiments in a careful and detailed manner.
7. Count to one hundred in units of ten.
8. Analyze the causes of the American Revolution.
9. Describe the rising action in a dramatic story.
10. Writers use a variety of literary elements to inform, persuade, describe, and entertain readers.
11. Write descriptive text that describes people, places, and events.
12. Good writers use the skills of logical organization and strong voice to convey a message to the reader.
13. You can find the decimal for  $\frac{3}{8}$  by using equivalent fractions.

# Don't Take the Meaning out of Learning!!

**We're raising a generation of stoplight readers.**

**We need to be creating a generation of  
flashlight readers.**



Katherine Patterson

## Concept-Based Teaching

### Concept:

“A concept serves as an integrating lens” and encourages the transfer of ideas within and across the disciplines “as students search for patterns and connections in the creation of new knowledge.”<sup>1</sup>

**Examples: Change, Culture, Systems,  
Interdependence, Organization**

<sup>1</sup> Lynn Erickson – *Concept-Based Curriculum and Instruction*, 2002

# Concepts



Some concepts....

- span across several subject areas
- represent significant ideas, phenomena, intellectual process, or persistent problems
- are timeless
- can be represented through different examples, with all examples having the same attributes
- and universal



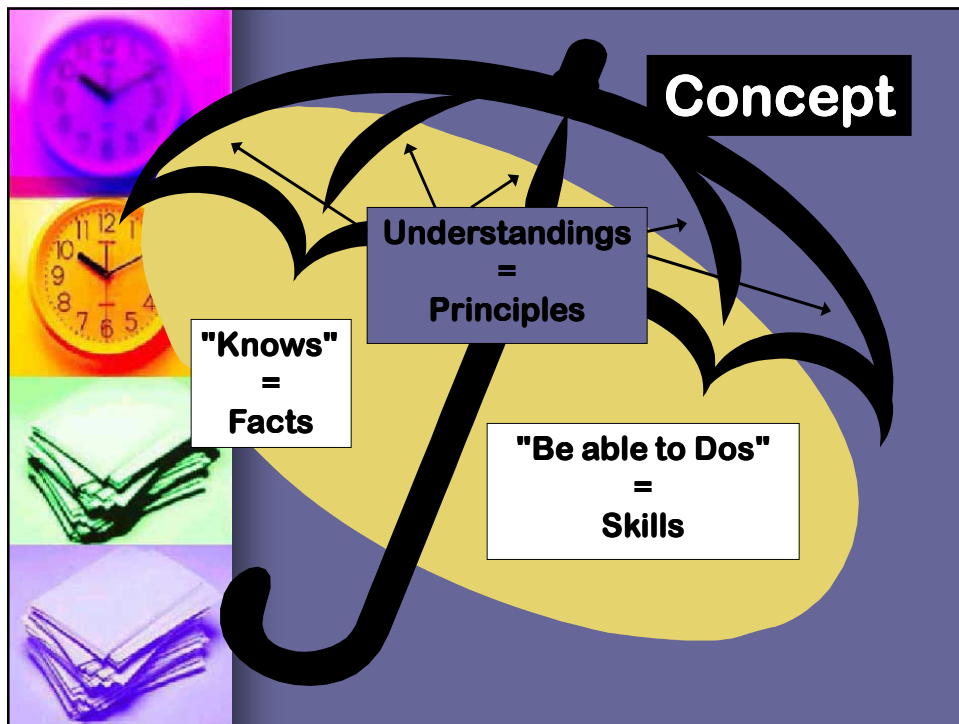
For example, the concepts of patterns, interdependence, symmetry, system, and power can be examined in a variety of subjects or even serve as concepts for a unit that integrates several subjects.



Power	Revolution	System
Courage	Tradition	Constancy
Change	Evil	Cycles
Responsibility	Tolerance	Interdependence
Destruction	Infinity	Myth
Relationship	Eternity	Voice
Justice	Patterns	Culture
Fairness	Exploration	Identity
Freedom	Discovery	Perspective
Adaptation	Beauty	Classification
Survival	Truth	Idea
Ownership	Conservation	Rituals
Individuality	Empathy	Fantasy
Perspective	Extinction	Migration
Ethics	Value	Cause and Effect
Commitment	Equality	Persuasion
Violence	Loyalty	Altruism
Conflict	Spirituality	Equilibrium
Resolution	Invention	Communication
Community	Connections	



Examples of Concepts



## Understandings

Examples: Students will understand that...

Social studies:

- ❑ ...all cultures have beliefs, roles, traditions, economies, and technologies.
- ❑ ...a people changes and is changed by its culture.\*

Science:


- ❑ ...an ecosystem is comprised of interdependent parts.\*
- ❑ ...change to one part of an ecosystem results in change in its other parts.\*

English

- ❑ ...each of a system's (story's) elements exists in an interdependent relationship with the other elements.
- ❑ ...changing even one element will alter the story's organization and outcome in some way.\*

\*=Generalizations: Understandings that show the relationship between two or more concepts

<sup>2</sup> Wiggins and McTighe – *Understanding by Design*, 2<sup>nd</sup> Edition, 2005



# Interdependence

**Understanding:**  
Change to one element of a story will result in change to the other elements.

**Facts:**  
Definitions of setting, plot, point of view, conflict...

**Skills:**  
 • Analyze the impact of historical perspective on a piece of writing.  
 • Determine the effects of a story's point of view.

**Activities:**  
 • Write a modern-day version of a legend or myth.  
 • Rewrite a fairy tale from the perspective of a different character.



# Reminder...


- **Knows** – Facts, names, dates, places, information
  - The original inhabitants of the Americas migrated from Asia into North America over the Bering land bridge.
  - The multiplication tables
- **Understands** -- Essential truths that give meaning to the topic; Ideas that transfer across situations; can be phrased, "Students should understand THAT..."
  - Migration enables organisms to meet basic needs.
  - Multiplication is another way to do addition.
- **Does** -- Skills (basic skills, skills of the discipline, skills of independence, social skills, skills of production); usually *verb phrases*.
  - Trace and explain the migratory path of the original Americans
  - Use multiplication to solve story problems
  - Work collaboratively in a group to complete an assigned task.



**Are These Knows, Understands, or Dos?**  
Based on NC's EOG's

- ENGLISH
  - An author's voice reflects his/her perspective.
  - *Point of view* refers to the authors choice of narrator for his/her story.
  - Project the student's voice into his/her work through reflective interpretation of prior events
- MATH
  - Apply geometric properties and relationships, including the Pythagorean theorem.
  - The formula for the area of a triangle is  $(\frac{1}{2})bh$ .
  - The dimensions of a figure exist in an interdependent relationship with the figure's perimeter, area, and volume.

*Also – Identify the **concepts** present in the Understands.*



**Are These Knows, Understands, or Dos?**  
Based on NC's EOG's

ENGLISH

- An author's voice reflects his/her perspective. (UNDERSTAND)
- *Point of view* refers to the authors choice of narrator for his/her story. (KNOW)
- Project the student's voice into his/her work through reflective interpretation of prior events. (DO)

MATH

- Apply geometric properties and relationships, including the Pythagorean theorem. (DO)
- The formula for the area of a triangle is  $(\frac{1}{2})bh$ . (KNOW)
- The dimensions of a figure exist in an interdependent relationship with the figure's perimeter, area, and volume. (UNDERSTAND)



**Are These Knows, Understands, or Dos?**  
*Based on Virginia's SOLs*

- SCIENCE
  - Design an experiment in which one variable is manipulated over many trials.
  - An experiment is a structured test of a hypothesis.
  - The accuracy of evidence determines the reliability of conclusions.
- HISTORY
  - Formulate historical questions and defend findings based on inquiry and interpretation.
  - Exploration and colonization result in the redistribution of population.
  - The Middle Atlantic region was settled chiefly by English, Dutch, and German-speaking immigrants seeking religious freedom and economic opportunity.

*Also – Identify the **concepts** present in the Understands.*




**Are These Knows, Understands, or Dos?**  
*Based on Virginia's SOLs*

SCIENCE

- Design an experiment in which one variable is manipulated over many trials. (*DO*)
- An experiment is a structured test of a hypothesis. (*KNOW*)
- The accuracy of evidence determines the reliability of conclusions. (*UNDERSTAND*)


HISTORY

- Formulate historical questions and defend findings based on inquiry and interpretation. (*DO*)
- Exploration and colonization result in the redistribution of population. (*UNDERSTAND*)
- The Middle Atlantic region was settled chiefly by English, Dutch, and German-speaking immigrants seeking religious freedom and economic opportunity. (*KNOW*)



## Developing KUDs Can Be Challenging for Teachers to Create

- Let's Look at a Couple of Examples



**AN  
IMPORTANT  
IDEA –**  
When Something is New for Us –  
It Takes Practice to Get it Right


© 2014 ASCD



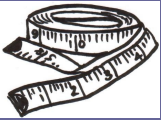
## Remember.....

- Knows – Facts, names, dates, places, information
- Understand -- Essential truths that give meaning to the topic; Ideas that transfer across situations; Phrased as “*Students should understand THAT...*”
- Do -- Skills (basic skills, skills of the discipline, skills of independence, social skills, skills of production); usually verb phrases.

Tomlinson, C.A. & Eidson, C.C. (Eds.) (2003). *Differentiation in practice: A resource guide for differentiating curriculum. Grades K-5*. Alexandria, VA:ASCD.




**From Differentiation at Work, K-5  
Principles, Lessons, and Strategies**  
by Lane Narvaez and Kay Brimjoin, Corwin Press, 2010




- Examples of Teacher's at Work (p. 25)
  - Original Understands (5<sup>th</sup> grade Measurement)
    - Measuring objects accurately is an important math skill that is used in many other areas of our lives.
    - Estimating the length of objects is an important math skill and helps you when you measure objects. Estimating is important not only in measuring but in other areas in mathematics.


If this was your colleague, what suggestions would you offer her for improvement?



**From Differentiation at Work, K-5  
Principles, Lessons, and Strategies**  
by Lane Narvaez and Kay Brimjoin, Corwin Press, 2010



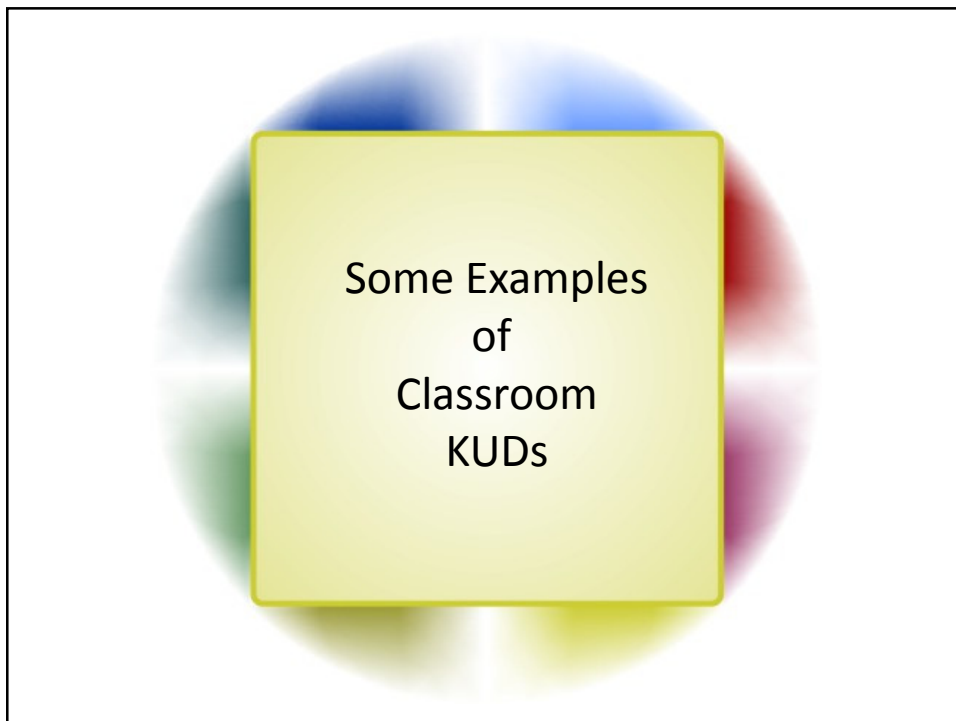
- Examples of Teacher's at Work (p. 25)
  - Revised Understands (Linda - 5<sup>th</sup> grade Measurement)
    - Accurate estimation relies on knowledge of all units of measurement.
    - Using the correct measurement tool can save time and improve accuracy.
    - Labels attach meaning to numbers and must be used to when solving problems and designing projects (blueprints, models, scale, measuring length).
    - Measurement helps us understand and describe our world.



From Differentiation at Work, K-5  
Principles, Lessons, and Strategies  
by Lane Narvaez and Kay Brimijoin, Corwin Press, 2010

- Examples of Teacher's at Work (p. 32)
  - Original Understands (Donna – 4/5<sup>th</sup> grade Unit on African-American Inventors and Inventions)
    - History may not be as written and what may cause that to be a result.
    - Inventions have positive and negative effects.
    - Each culture needs to be recognized; people identify themselves within a form of a culture or more than one culture.
    - Attributes can create a system/framework/group.
    - Taking perspectives allows one to be more informed.

What suggestions would you offer Donna for improvement?



Some Examples  
of  
Classroom  
KUDs

### **KNOWs**

Facts, names, places, dates, lists, information, steps in a process or sequence  
Noun-heavy

### **UNDERSTANDs**

Big ideas, statements of truth, insights, ahas, principles, generalizations  
Written as a complete sentence  
The sentence must be able to begin with the stem, I want my students to understand **that...** (**not** understand **how**, understand **what**, understand **wh**)

### **DOs**

Actions students will perform  
Verbs or verb phrases  
Not the whole activity

**heads up**

## A Street Through Time: An Elementary Social Studies Lesson

*As a result of this lesson, students should:*

### **KNOW:**

Definition of culture  
Elements of culture (explain, illustrate)

### **UNDERSTAND:**

All cultures share common elements.  
Each cultural element is shaped by time, place, and each other cultural element.  
People shape their culture and are shaped by it.

### **BE ABLE TO:**

Gather information  
Organize information  
Use information to draw informed conclusions  
Evaluate conclusions based on evidence



Tomlinson '03

# Music KUDs

## *Grade 5 Orchestra*

### **Know**

Parts of an instrument  
Care of an instrument  
Basic procedures/processes of a rehearsal  
Note on the scale at a beginner's range  
Note values (rhythm) at a beginner's range  
Ways posture and playing position affect tone production  
Ways parts can interact rhythmically and harmonically at a basic level)  
(imitation, unison, contrast, harmony, melody, accompaniment)



### **Understand**

Making music is a way of joining the human quest for mastery, meaning, & connection.  
Writing music down lets people share their ideas over time.  
Technical skills make musical expression possible.  
Musicians break down complex music by isolating different elements (e.g., rhythm, notes, tone).  
Notes and clefs are a way of organizing the sound world.  
Rhythm organizes the time and energy of sound and silence.

### **Do**

Identify, decode, and perform notes on the clef relevant to their instrument at a beginner's range  
Identify, decode, and perform rhythms using whole, half, quarter notes, and pairs of eighth notes  
Follow basic procedures of a rehearsal  
Produce a solid, characteristic tone on an instrument  
Play a part in an ensemble of different parts  
Generate contrast in dynamics and articulation



ASL Music Teacher 2012

### KUDs for a High School Math Unit on Number Theory

**Know:**

The layout of a number line  
How to model integers and integer operations with two-colored counters  
Notation of negative numbers  
How to add, subtract, multiply and divide integers  
Definitions of: Integer, Positive, Negative, Absolute Value  
Number system

**Understand:**

A negative in mathematics always means “the opposite.”  
Any number is a member of one or more number systems.  
Each number system has clearly defined properties including basic operations.  
Mathematical operations apply to and follow the same patterns within our  
number systems and mathematical disciplines.

**Do:**

Model integers and integer operations in different ways  
Apply and compute operations with Integers  
Explain the relationships among positive and negative numbers  
Apply integers to and solve real world situations

Nanci Smith

### Crosscutting Concepts for Science and Engineering

1. *Patterns.*

- Observed patterns of forms and events guide organization and classification.
- Observed patterns prompt questions about relationships and the factors that influence them.

2. *Cause and effect: Mechanism and explanation.*

- Events have causes, sometimes simple, sometimes multifaceted.
- A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated.
- Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.

3. *Scale, proportion, and quantity.*

- In considering phenomena, it is critical to recognize what is relevant at different measures of size, time, and energy.
- It is critical to recognize how changes in scale, proportion, or quantity affect a system’s structure or performance.



National Academy of Sciences (2012). A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas. Washington, DC: National Academies Press.

4. *Systems and system models.*

- Defining the system under study—specifying its boundaries and making explicit a model of that system—provides tools for understanding and testing ideas that are applicable throughout science and engineering.

5. *Energy and matter: Flows, cycles, and conservation.*

- Tracking fluxes of energy and matter into, out of, and within systems helps one understand the systems' possibilities and limitations.

6. *Structure and function.*

- The way in which an object or living thing is shaped and its substructure determines many of its properties and functions.



7. *Stability and change.*

- For natural and built systems alike, conditions of stability and determinants of rates of change or evolution of a system are critical elements of study.





## A recent Language Arts Unit - Connections

- Communities are all around us and come in a variety of types and sizes.
- The connections we have to a variety of people, places, events and communities can have tremendous influence on our lives.
- People, places, events and communities can inspire us in important ways.
- It is sometimes easy to mistrust people when we don't know them very well.
- Because we see people through our own cultural lenses, we often stereotype and misjudge people from other cultures or groups.
- Writers can help us see ourselves through the stories they tell.
- We write our own lives.

What might be some **Ks** and **Ds** that would work for this unit?



## Zoom! activity description


- Brainstorm with a neighbor a concept or big idea that you see presented in *Zoom*.
- Think about a lesson *topic* that you might teach your students centered around this concept.
- What would you want students to know, understand, and be able to do as a result of this lesson? Write these out.

cust-rec



## Zooming in on KUDs





## Literature Example

**Concept:** Perspective

**Lesson Topic:** Point of View in *To Kill a Mockingbird*

**Know:** Definition of Point-of-view

**Understand:** Truth can look different from different perspectives.

**Do:** Rewrite a scene from a perspective other than the narrator's.



## Secondary Science Example

- Concept: Perspective
- Lesson Topic: History of Science
- Know:
  - Theory (def.), evidence (def.), steps of the scientific method
- Understand:
  - Our perspective of the world changes as our knowledge advances.
- Do:
  - Explain how a theory has changed over time due to the acquisition of new evidence
  - Explain how technology influences the ability of scientists to collect evidence and use it to shape perspectives of how the world works.



## Elementary Social Studies Example

- Concept: Culture
- Lesson Topic: Country Study
- Know:
  - Foods, celebrations, clothing, and jobs representative of specified countries
- Understand:
  - Every culture has its own unique beliefs, traditions, and behaviors.
- Do:
  - Compare and contrast the foods, clothing, jobs, and celebrations of different countries.
  - Recognize similarities and differences among people of different cultures.



### English/Social Studies Example

- Concept: Perspective
- Lesson Topic: Consumerism
- Know:
  - Definition of point of view
  - Point of view is used as a tool in advertising
- Understand:
  - Perspective influences decision making.
- Do:
  - Explain and analyze advertising
  - Use point of view strategically in creating an ad
  - Critique other ads' use of point of view to achieve purpose/influence decision making.



### Writing Example

- Concept: Perspective
- Lesson Topic: Writer's Voice
- Know:
  - Definition of voice
  - Techniques used to communicate voice
- Understand:
  - A clear writer's voice communicates the writer's perspective
- Do:
  - Identify and describe writers' voices in literature
  - Hypothesize/explain the relationship between writers' perspectives and their voices
  - Develop writer's voice in order to communicate one's perspective



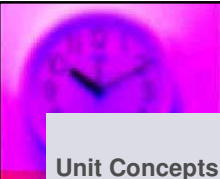

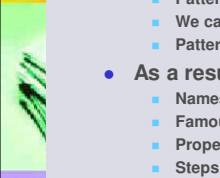
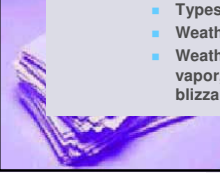



## What's the Weather?

What might be appropriate concepts and KUDs for this unit?

- In this unit of study, I want my students to
- Know....
- Understand *that*....(concepts & principles)
- Be Able to Do.....




## Weather's A System

### Unit Concepts and Generalizations

- Cause and Effect, Patterns ( main concepts), Systems, Cycles, Order, Change, Influence
  - A cause can have multiple effects.
  - An effect can have multiple causes.
  - We can examine causes to predict effects.
  - By changing a cause, we can impact effect.
  - There are some cause-and-effect relationships that we can only witness and not control.
  - Patterns repeat.
  - We can make predictions based on patterns.
  - Patterns give order to our world.
- As a result of the this unit, the students will know
  - Names of common weather instruments and how to use them.
  - Famous examples of extreme weather.....such as.....
  - Properties of air.
  - Steps in the water (hydrologic) cycle.
  - Types of clouds.
  - Weather symbols used on maps.
  - Weather related vocabulary, including air pressure, air mass, front (warm and cold), water vapor, precipitation, condensation, evaporation, transportation, molecule, hurricane, tornado, blizzard, drought, satellite, radar, and meteorologist



## Weather's A System

### ■ As a result of this unit, the students will *understand that*

- There are patterns in global and local weather that enable us to predict weather occurrences with some accuracy.
- Understanding cause-and-effect relationships helps us to make more accurate weather predictions.
- Even though we may understand cause and effect relationships, we cannot always control them.
- We can control to some degree how weather impacts us as individuals and as societies.

### ■ As a result of this unit, the students will *be able to*

- Make observations.
- Make predictions based on observations.
- Use weather instruments accurately and appropriately.
- Read weather maps.
- Explain the steps in the water cycle.
- Explain cloud formation.
- Relate global weather trends to local weather conditions.
- Demonstrate appreciation for the forces of weather.
- Justify people's interest in the weather.
- Read for information.
- Apply the scientific method.



Tomlinson, C.A. & Eidson, C.C. (Eds.) (2003). Differentiation in practice: A resource guide for differentiating curriculum. Grades 5-9. Alexandria, VA: ASCD.

I like this class because there's something different going on all the time. My other classes, it's like peanut butter for lunch every single day. This class, it's like my teacher really knows how to cook. It's like she runs a really good restaurant with a big menu and all.



*Comment from a course evaluation written by a 7th grader.*