

KEY PRINCIPLES OF A HIGH QUALITY DIFFERENTIATED CLASSROOM

Key Principle # 1: Start With Good Curriculum

Planning a Focused Curriculum Means Clarity About What Students Should ...

KNOW	UNDERSTAND	BE ABLE TO DO
<ul style="list-style-type: none"> • Facts • Vocabulary • Definitions • Dates • Places 	<ul style="list-style-type: none"> • Principles, generalizations • Big ideas • "I want students to understand THAT....." 	<ul style="list-style-type: none"> • Skills of literacy, numeracy, communication, etc.
<p>KNOW (usually a bulleted list)</p> <ul style="list-style-type: none"> • Number of provinces in Canada • Thomas Jefferson • 1492 • The Continental Divide • The multiplication tables 	<p>UNDERSTAND (I want students to understand THAT...)</p> <ul style="list-style-type: none"> — Multiplication is another way to do addition — People migrate to meet basic needs — All cultures contain the same elements — Entropy and enthalpy are competing forces in the natural world — Voice reflects the author 	<p>BE ABLE TO DO (Begin with a verb)</p> <ul style="list-style-type: none"> • Analyze text for meaning • Solve a problem to find perimeter • Write a well supported argument • Evaluate work according to specific criteria • Contribute to the success of a group or team • Use graphics to represent data appropriately

In the differentiated classroom, the teacher may vary the KNOWS & DOs with caution and based on evidence that a student needs to learn backwards as well as forward to catch up—or that a student needs to move ahead in order to keep learning.

BUT The UNDERSTANDS are the constant fulcrum for all students (Tomlinson, 2008)

The Map of our Journey

Social Studies	Science	Math	Language Arts
<p>Families Long Ago Coming to America</p>	<p>Organisms</p>	<p>Patterns Measurement Addition</p>	<p>Small Moments (Personal Narrative) Process Studies</p>
<p>Smaller parts combine to make up larger wholes.</p>			
<p>Homes and Shelters</p>	<p>Solids and Liquids</p>	<p>Geometry Subtraction</p>	<p>Text Structures Poetry Literary Nonfiction</p>
<p>Structure impacts all areas of life.</p>			
<p>Folk Tales and Fairy Tales</p>	<p>Weather</p>	<p>Problem Solving (Story problems) Time Money</p>	<p>Genre: Folk Tales Point of View Authors as Mentors</p>
<p>People use stories to make meaning of their lives.</p>			

Understanding VS Knowing (Adapted from a PowerPoint by Jay McTigue; June 2006, ASCD Conference on Integrating Differentiated Instruction and Understanding by Design)

It's probably an UNDERSTAND if it...	Example...	Non-example
<ul style="list-style-type: none"> • Represents subtle ideas, ideas that are not obvious upon first glance • Involves multiple layers or multiple meanings • Is an idea that is especially powerful in understanding the discipline & across topics in the discipline • Provides a purpose for the discipline; the reason for studying the discipline; why the discipline is valuable • Raises additional questions or paths of thought within the discipline • Can be understood on a continuum; something that kindergarteners through graduate students could study, albeit at different levels of sophistication • Can be stated in the format: I want students to understand THAT... rather than I want students to understand... • Is a pithy statement that reveals a truth about the study or the practice of the discipline 	<ul style="list-style-type: none"> • Scientists' unique social and educational backgrounds and differences lead to their disagreement about the interpretation of evidence or the development of a theory • Changing the grouping or the order of addends or factors does not change a sum or product. • A person's perspective is shaped in part by his or her past experiences • Dance is a form of communication • Use of specific art materials and style are related • Parts of a system are interrelated • I want students to understand that voice is the writer revealed • Culture shapes people and people shape culture (This is something that anthropologists spend their life studying!) 	<ul style="list-style-type: none"> • Scientists study the world around them. • $2+3 = 3+2$ • The 100 years war lasted from 1337 to 1453. • Dance is important • Monet was an impressionist • A system has more than one part. • I want students to understand writer's voice • There are lots of cultures in the world

ART**KNOW**

- Color wheel – primary and secondary colors
- The color wheel arranges colors in a logical sequence, helping artists make informed decisions about the colors they use in a painting or other work of art

UNDERSTAND**BE ABLE TO DO**

- Use the color wheel to make and justify decisions for color choice and placement in a work of art

KNOW

- Characteristics of self portrait as genre
- Appropriate use of art materials
- Principles of design
- Definition of artistic expression

UNDERSTAND

- Each artist has a personal style that reflects the individual's culture, time, and personal experiences
- Use of materials and style are related

BE ABLE TO DO

- Analyze an artist's personal style and use of materials
- Describe the relationship between style and materials

SOCIAL STUDIES**KNOW**

- Places and roles in a community
- Community vocabulary including need, want, goods, services

UNDERSTAND

- People have needs and wants that are met by different roles within a community

DO

- Explain the different components of a community
- Compare, contrast and evaluate community roles

KNOW

- The elements of culture

UNDERSTAND

- All cultures contain some of the same elements

BE ABLE TO DO

- Identify elements of culture in various settings and times
- Recognize similarities and differences in cultures

SCIENCE**KNOW**

- Vocabulary such as precipitation, rain, drizzle, snow, etc.
- The four main types of clouds

UNDERSTAND

- Natural signs can be used to predict the weather.
- Clouds can be indicators of different weather.

BE ABLE TO

- Predict weather using knowledge of clouds.
- Identify the different types of clouds.

KNOW

- Vocabulary words: producer, consumer, herbivore, carnivore, decomposer, food chain, and food web.
- How energy flows in an ecosystem.
- The different roles that organisms have in food webs.

UNDERSTAND

- Food webs are multiple food chains.

- Each life form is dependent on other life forms for survival.

BE ABLE TO

- Arrange organisms into a food chain or web.

- Explain the roles of organisms in a food chain or web.

- Trace the transfer of energy from the sun to the highest consumer.

- Define relationships between organisms in a food chain or web.

- Use a food chain or web to make decisions.

LANGUAGE ARTS**KNOW**

- Capital and lowercase letters
- Letter sounds

UNDERSTAND

- Specific sounds correspond to letters in the alphabet
- Words are composed of letters
- The alphabet gives us a way to communicate

DO

- Identify capital and lowercase letters
- Identify and apply beginning sounds of words

KNOW

- Elements of characterization

UNDERSTAND

- Passages from texts can reveal a character's personality

DO

- Analyze character actions and statements

KNOW

- Characteristics of the genre of historical fiction

UNDERSTAND

- Authors of historical fiction blend both fact and fiction to engage their readers

BE ABLE TO DO

- Analyze literature for the techniques used by authors of historical fiction

MATH**KNOW**

- Coin names and values

UNDERSTAND

- We can combine coins in different ways to make the same amount of money

BE ABLE TO DO

- Given a supply of pennies, nickels, dimes and quarters, combine the coins in more than one way to make a set amount of money (e.g. 40 cents)

KNOW

- Geometry vocabulary

UNDERSTAND

- Using geometric terms is one way to describe the structure of our environment

DO

- Describe, draw, compare and classify geometric objects

KNOW

- The definition of slope and how to calculate it

UNDERSTAND

- Slope represents the rate of change of one variable with respect to another

BE ABLE TO DO

- Find the slope of a line to solve a real-world problem

BUSINESS**KNOW**

- Different forms of business ownership; definitions of key business terms

UNDERSTAND

- that each type of ownership presents unique advantages and disadvantages

BE ABLE TO

- Select and explore a form of business ownership that complements their personal characteristics; explain the inner workings of one business form.

**FOODS
KNOW**

- Macronutrients, calorie intake, ration of body mass to fat
- Foods that are healthy for teens

UNDERSTAND

- Keeping your body healthy involves an understanding of the roles of nutrition and exercise

BE ABLE TO DO

- Evaluate own diet and exercise regimen to maximize health

PE

KNOW

- How to dribble and pass

UNDERSTAND

- Practice makes better!

- There is more than one way to get better at a skill.

DO

- Improve skill in dribbling and passing

**FRENCH
KNOW**

- Definition of verb and subject
- How to conjugate verbs

UNDERSTAND

- Language is made up of patterns; if you can recognize the pattern you can make a good guess about the form

DO

- Conjugate verbs to match subject

KNOW

- Author of Le Petit Prince and overview of his life experience

- Characters, setting, plot, and themes of Le Petit Prince

- New vocabulary words

- Verb tenses used in text

UNDERSTAND

- Reading literature in the target language is one way to improve vocabulary and increase fluency.

- It is possible to read for pleasure in more than one language!

- As in native language literature, it is possible to see reflections of ourselves in target language literature

BE ABLE TO DO:

- Read fluently in target language

- Demonstrate improved grammatical accuracy in writing and speaking

- Incorporate new vocabulary into discussion and writings

- Discuss literary elements in the target language

- Analyze a theme found in the book

- Examine your own beliefs and values through a textual lens

YOUR TURN

What do you want students to know, understand, and be able to do?

KNOW (facts, dates, definitions, people, places)

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-
-
-

UNDERSTAND (I want students to understand that...)

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-

BE ABLE TO DO (specific skills; start with a verb; NOT the classroom activities)

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-
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Extended SAMPLE KUDs

SAMPLE UNIT KUD: GOVERNMENT

KNOW (facts, dates, definitions, rules, people, places)

- Vocabulary: Constitution, Bill of Rights, liberty, justice, human dignity, equality, rule of law, government, rights, common good, etc.
- Key people involved in setting up US system of government in the past and in keeping the government working today
- Key values and principles of the Constitution & Bill of Rights
- Significance of the Constitution & Bill of Rights
- Basic structure of US government
- Role and purpose of each branch of government

UNDERSTAND: (big ideas, principles, generalizations, rules, the “point” of the discipline or topic within the discipline)

I want students to understand that...

- Specific documents set forth the shared values, principles, and beliefs of the government of the United States.
- Government roles, practices and concerns may change over time, but should remain faithful to the values, principles, and beliefs set forth in these documents.
- For the US government to work as envisioned by the forefathers, all branches must carry out their assigned role.

BE ABLE TO DO (Skills of literacy, numeracy, communication, thinking, planning, production, etc.; Start with a verb such as: describe, explain, show, compare, synthesize, analyze, apply, construct, solve, etc.)

Identify the key values, principles, and beliefs of the Constitution and Bill of Rights

- Analyze the significance of the Bill of Rights.
- Show how these values, principles, and beliefs helped to form US government and how they influence current government practices
- Examine how the national government and our Constitution have worked and continue to work to protect individual rights and promote the common good.

SAMPLE KUD: Math

KNOW (Facts, dates, definitions, rules, people, places, etc.)

- What data is and why we collect, interpret and display it
- Different ways to display data: graphs and charts

UNDERSTAND (Big ideas, principles, generalizations, rules, the "point" of the discipline or topic within the discipline)
I want students to understand that...

- You can pack a lot of information into a small space by using graphs and charts.
- There is usually more than one way to represent the same data.
- Different representations are more useful than others depending on the type of data, the audience the data is designed for, and the message to be communicated.

BE ABLE TO DO (Skills of literacy, numeracy, communication, thinking, planning, production, etc.; Start with a verb such as: describe, explain, show, compare, synthesize, analyze, apply, construct, solve, etc.)

- Collect data
- Analyze data
- Display data appropriately
- Interpret charts and graphs

SAMPLE KUD: Technology: Searching the Web

KNOW (Facts, dates, definitions, rules, people, places, etc.)

- Common search engines and how they work
- How to make sense of the results
- What to look for when choosing sources

UNDERSTAND (Big ideas, principles, generalizations, rules, the "point" of the discipline or topic within the discipline)
I want students to understand that...

- Different search engines produce different results due to the way in which they classify, sort and prioritize information
- The more you can refine your search parameters, the more useful the results
- Not every site on the web is created equal. The burden is on the reader to establish the validity, authorship, timeliness, and integrity of what you find.

BE ABLE TO DO (Skills of literacy, numeracy, communication, thinking, planning, production, etc.; Start with a verb such as: describe, explain, show, compare, synthesize, analyze, apply, construct, solve, etc.)

- Use common search engines
- Choose the appropriate search engine for a particular task
- Refine a general search to seek more specific information
- Evaluate the usefulness of a website as a resource

- SAMPLE KUD: Science**
KNOW (Facts, dates, definitions, rules, people, places)
- What a plant is
 - The parts of a plant
 - What plants need to be healthy
 - Life cycle of a plant
 - Why and how humans use plants

UNDERSTAND (Big ideas, principles, generalizations, rules, the “point” of the discipline or topic within the discipline)
 I want students to understand that...

- Living things are both similar to and different from each other
- Each part of a plant has a specific role to play
- For a plant to be healthy, all parts of the plant must be healthy
- Living things follow a set cycle of growth
- Many animals, including humans, depend on plants for food

BE ABLE TO DO (Skills of literacy, numeracy, communication, thinking, planning, production, etc.; Start with a verb such as: describe, explain, show, compare, synthesize, analyze, apply, construct, solve, etc.)

- Explain the difference between a plant and an animal
- Label the parts of a plant
- Explain the purpose or role of each plant part
- Describe the life cycle of a plant
- Tell how to keep a plant healthy and why we might wish to do so

SAMPLE KUD: Middle School English

KNOW (Facts, dates, definitions, rules, people, places, etc.)

- General:
 - General literary vocabulary: plot, setting, characters, theme, tone, point of view, protagonist, conflict, climax
 - Difference between text to text, text to self and text to world connections
- Specific to Novel:
 - Author of The Giver
 - Characteristics of author's voice
 - Context of novel
 - Novel's plot, setting, characters, theme, tone, point of view, protagonist, conflict, climax

UNDERSTAND (Big ideas, principles, generalizations, rules, the "point" of the discipline or topic within the discipline)
I want students to understand that...

- General:
 - There are specific tools that authors use when writing a novel.
 - All good novels include many of the same or very similar literary elements.
 - An author's voice is influenced by his or her own experiences and by their intended audience.
 - Literature is a reflection of ourselves and our society
- Specific to Novel
 - Memory plays a key role in the continuation of a culture.
 - There is a relationship between pain and pleasure. If one is missing, the other is likely to also be missing.
 - Individuals can make a difference in a society

BE ABLE TO DO (Skills of literacy, numeracy, communication, thinking, planning, production, etc.); Start with a verb such as: describe, explain, show, compare, synthesize, analyze, apply, construct, solve, etc.)

- General:
 - Define the following literary elements: plot, setting, characters, theme, tone, point of view, protagonist, conflict, climax
 - Explain what makes a "good" novel
 - Make text to text, text to self, and text to world connections
- Specific to novel
 - Identify the novel's author and her context for writing the novel
 - Summarize the novel's plot
 - Identify the novel's setting, characters, theme, tone, point of view, protagonist, conflict, climax
 - Evaluate the overall message of the novel

Checking your KUD

After you fill in each separate Know, Understand and Do, draw a line from each Know and Do statement to the corresponding Understand statement. If you have a Know or Do statement that does not relate to any Understand statements, either eliminate it or add an Understand statement that gives it meaning and content.

Know

Understand

Do

YOUR TURN

What do you want students to know, understand, and be able to do?

KNOW (facts, dates, definitions, people, places)

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-
-
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UNDERSTAND (I want students to understand that...)

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BE ABLE TO DO (specific skills; start with a verb; NOT the classroom activities)

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