

Keys to Learning: Adding Layers of Rigor

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Common Core Standards

Require

- Rigor
- Relevance
- Readiness





A set of words we use as tools to help bring clarity and specificity to concepts & content



Catalysts for Inquiry

Push toward a deeper understanding by focusing and refining questioning

Layers of sophistication

Fact-Based

Analytical/Evaluative



Keys to Questioning... Keys to Learning...

Handout

- Kinds
- Types
- Traits
- Characteristics
- Conditions
- Consequences
- Function
- Purpose
- Evidence
- Motivation
- Influence
- Rationale
- Reasons
- Possibilities
- Significance
- Importance
- Relevance
- Value



Keys & Common Core

- Build familiarity with terms
- Must become part of classroom vernacular for teacher and students
- Increase rigor by layering additional thinking tools

Keys- Good for All

- Not just the gifted
- Not just older students



How Are Keys Used?

- Teachers & students across disciplines
- Generate questions
- Prompt thinking
- Small/Whole group investigation
- Small/Whole group discussion
- Independent study/Research



INTRODUCING KEYS



INTRODUCING KEYS

As Needed

- Define
- Practice with the familiar





Key Questions


Bring clarity and specificity to a concept.





Practice with
the familiar


Guided by Wonder






What are the  Possibilities of cell phones?

Guided by True Curiosity



What are the  Consequences of cell phones?

USE ACROSS DISCIPLINES

LET'S TAKE A CLOSER LOOK!



LITERATURE & CHARACTER ANALYSIS

Start with the End in Mind

1. Get to know the standards
2. Identify embedded keys



Reading- Literature 3.3

- Describe characters in a story (traits, motivations, feelings) and explain how their actions contribute to the sequence of events.





- Define key words
- Model with familiar story



Key Statements

- Goldilocks *influenced* the story by her disregard for others
- Goldilocks is *motivated* to enter the bears' house by/because by her curiosity.
- _____'s *rationale* for _____ was _____.
- _____ is *significant* in the story because _____.


Your Turn!



Generate key statements about, *The Three Little Pigs*

- _____ *influenced* the story by _____.
- _____ is *motivated* to _____ by/because _____.
- _____'s *rationale* for _____ was _____.
- _____ is *significant* in the story because _____.

Prove with Evidence

- Students use story details  to support statements
- Text- dependent
 - Include actions, words, and thoughts
 - Explain what details mean, reveal, suggest, etc
- Focus on main character or other characters

Deductive Reasoning

The wolf is motivated to pursue the pigs by his hunger

How it's revealed:
words,
actions,
thoughts,
etc.

How it's revealed:
words,
actions,
thoughts,
etc.

How it's revealed:
words,
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etc.

Reading- Literature 3.3

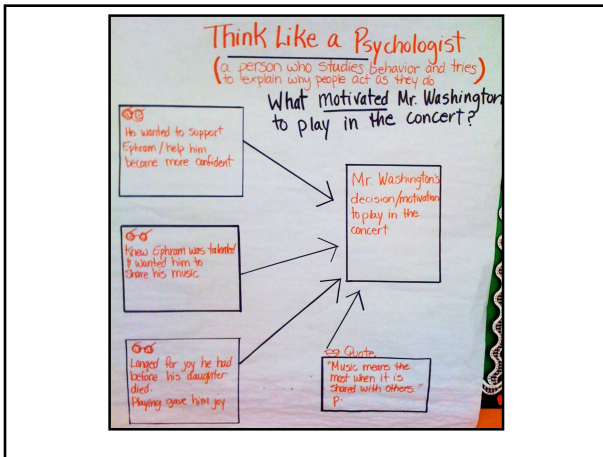
- Describe characters in a story (traits, motivations, feelings) and explain how their actions contribute to the sequence of events.
- Pick a key on which to focus

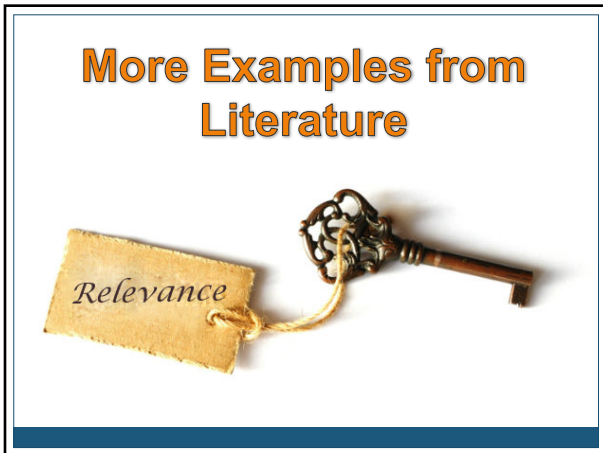


Motivation – Link to story characters

Story characters, just like people in real life, are motivated by a variety of factors. These include:

Greed /money	Pride
Revenge /Anger	Freedom
Fame	Hope
Power	Shame
Fear	Love /desire





Gathering Evidence/ Details

The Giving Tree Character: The Boy

The Boy was influenced by greed and money.

Evidence: Actions, words or thoughts	What the evidence shows/reveals/suggests...
<p>Actions: He (the Boy) collected all the apples to sell for money.</p> <p>Patterns in the language - "I want..." "I need..."</p> <p>Patterns in actions - Every time the boy wanted something new he went back to the Tree and asked for it.</p>	<p>This shows that he was willing to take advantage of the tree's love for him.</p> <p>The Boy never considered the Tree's feelings. Even though he asked for many things, he never said, "thank you". This shows that the Boy was selfish and only thought about what he could get.</p> <p>He was never content with what he had. Each time he came back to the tree, he was harder to please. He became more demanding over time until he finally took everything she had.</p>

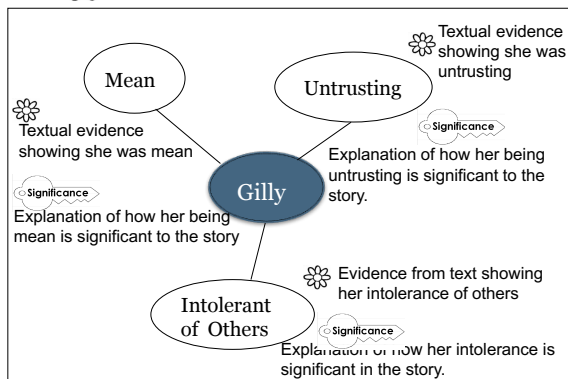
Prove with Evidence

•Class Generated Example: *Marven of the Great North Woods*

- ✦ Jean Louis is significant in the story because he befriends Marvin and helps him adapt to life in the logging camp.
- ✦ Students used details about Jean Louis' actions, words and thoughts to prove his significance.

Using Keys to Unlock Story Characters	
Story/Text	Character
Marven of the Great North Woods	Jean Louis
Jean Louis is significant in the story because he befriends Marven and helped him learn to fit in at the camp. He acted as a guide and provided structure and acceptance for Marven.	
Evidence: Actions, Words, or Thoughts	What the evidence shows, reveals, suggests...
<p>Words: "An morn petit, you dy!"</p> <p>Actions: Jean Louis took off his glove and rubbed his huge thumb down Marven's cheek.</p> <p>IP436</p> <p>Actions: Jean Louis went with Marven all the way to the train station. He carried Marven, skis and all, across the muddy creek and he helped him go to the train station.</p> <p>IP438</p> <p>Words: Jean Louis tells Marven, "you are a woodsman now."</p> <p>Actions: He gives Marven a gift on his last day - a brand new ax.</p>	<p>IP436- Jean Louis is observant and notices that Marven had tears rolling down his cheek. He feels bad for Marven and rubs away his tears because he cares for him.</p> <p>IP437- Jean Louis thinks about how Marven might feel. He carries him across because he doesn't want Marven to get wet and cold.</p> <p>IP438- Jean Louis thought about how much he was going to miss Marven. He wanted Marven to feel like he was a woodsman, just like Jean Louis, and to feel like he was no longer an outsider. The gift represents Marven's growth at the camp.</p>

Patterns in Behavioral Traits

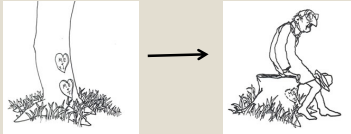


“Significance” Beyond Story Characters

- The Giving Tree

“Me + T” on stump at end of story-

“This is significant because it shows the love that he shared with his girlfriend would go away, but the tree’s love would stay forever.”



MAKING COGNITIVE CONNECTIONS USING KEYS

- I’m unsure about the reasons behind...
- I wonder what the consequences would have been if...
- I’m interested in the function/role _____ plays in...
- I’m curious about _____’s rationale for ...
- I found it interesting that _____ was motivated to ...
- I was surprised by the influence _____ had on...

SOCIAL STUDIES

Start with the End in Mind

1. Preview content /standard
2. Select key(s)
3. Create questions/prompts
4. Consider layering thinking tools and/or cognitive maps



5th Grade Social Studies

Students trace the colonization, immigration and settlement patterns of the American people from 1789 to the mid 1800's, with emphasis on the role of economic incentive, effects of the physical and political geography, and transportation systems.



Key Questions Social Studies

- What was the motivation for people to immigrate to America?
- How did economics influence immigration and settlement in Colonial America?

FOR ADDED RIGOR LAYER THINKING TOOLS



Purpose			Explain the significance of the pattern in ...
Traits			
Significance	1		
Conditions			
Value			
Relevance			
Reaction			What rationale did they give for why the old rules needed to change?
Evidence			Defend the importance of understanding the origin of the conflict through different perspectives.
Rationale	2		
Motivation			
Importance	3		
Possibility			

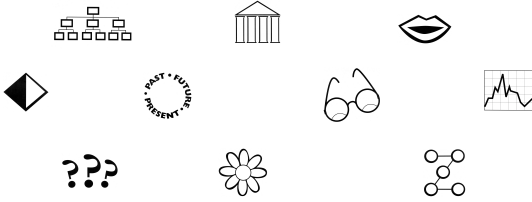
Start With a Key Question

- How did economics influence immigration and settlement in Colonial America?



Layer With Thinking Tools

- How did economics influence immigration and settlement in Colonial America?



Layer With Thinking Tools

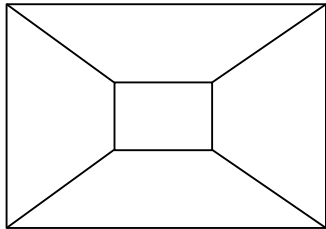
- How did economics influence immigration and settlement in Colonial America?



- How did economics influence patterns of immigration and settlement in Colonial America?

Keys & Frames

5th Grade Social Studies Standard: Describe how geography and climate influenced the way various nations lived and adjusted to the natural environment, including locations of villages, the distinct structures that they built, and how they obtained food, clothing, tools, and utensils.



Discuss the influence of climate and geography on the types of foods Native Americans in your region ate.

Explain the characteristics of the natural resources found in your region and the paradoxes ☒ they might have created.

Discuss the significance of the natural environment in the kinds of houses Native Americans built.

How did geography & climate influence the way early Native Americans lived?
Region: _____

Discuss the details of climate and geography and prove with evidence how these factors dictated the type of technology found in your region.

Power is the Ability to Influence!

<p>George Wash - military crossing the Delaware - Pose (tall/proud) - no looks, fearless - Many boats & soldiers following him - Light focused on Washington</p>	<p>King George III - Light focused on King George - fancy clothes - large sword - Pose (tall/proud)</p>	<p>British - cartoon of French soldiers - skinny legs - big heads & noses - no silly image</p>
<p>Shaw George - Washington as a brave hero - Dedicated to defeating British - Power! George will win.</p>	<p>Threat to - shows King G is important - Power</p>	<p>British - trying to show the French are hopeless and unsuccessful - French are the enemy - make fun of them.</p>

How do keys help facilitate thinking like a Disciplinarian?

Same academic terms used by experts in the field

Keys to Questioning... Keys to Learning...

- Kinds
- Types
- Traits
- Characteristics
- Conditions
- Consequences
- Function
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Dr. Martin Luther King Jr.

I Have a Dream

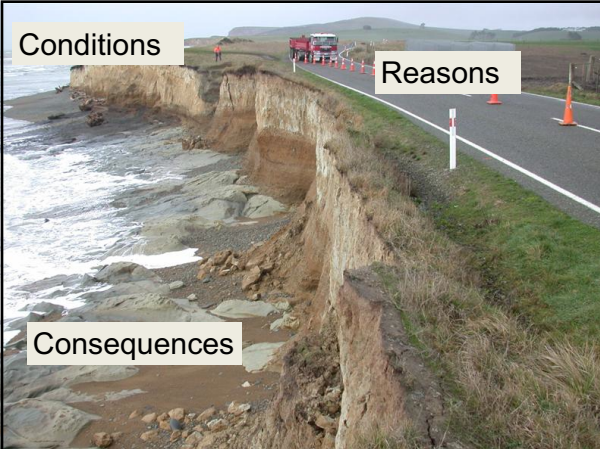
Consequences



Motivation

Possibilities



Conditions



Reasons

Consequences

Vincent Van Gogh: Starry Night

Evaluate the *types* of 🌟 detail (color, patterns, etc) used in Starry Night. Consider the reasons the artist might have had in creating these details.

HANDING OVER THE KEYS



Student Generated Questions/Prompts

- Teacher can suggest and define key(s)
- Book-walk/image- hook/standard
- Student groups generate key questions to share out
 - ★ Teacher acts as scribe (filter)
- Groups select question(s) to answer & present findings

Selection and Definition of Keys



The quality of being important



The power to cause an effect, sway, persuade



Distinguishing feature or quality

Book Walk to Stimulate Inquisitiveness

What are the jobs of the different parts of a cell?

Every cell has a job that it has to do.

Animal Cells
Look inside the cell. What is it?

Plant Cells
Look outside the cell. What is it?

Consider Author's Purpose- Compare & Contrast

Animal Cell

nucleus (nu-klee-us)-This large, round part controls what happens in a cell by sending signals to all other parts of the cell. Nickname: Control center

cytoplasm (sigh-nuh-vay-um)-This gel-like material inside a cell holds all the inner parts of a cell. Nickname: Packing material

vacuole (vuh-kyoo-ul)-This sac stores food and water until a cell needs them and collects wastes until the cell gets rid of them. Nickname: Storage bin

mitochondrion (migh-toe-kree-dee-on)-This small organelle releases energy from food for the cell to use. Nickname: Power plant

cell membrane (seh-mem-brayn)-This thin outer layer of a cell lets things in and out of the cell. Nickname: The fence

Plant Cell

vacuole (vuh-kyoo-ul)-larger than a vacuole in an animal cell, this is a cell part that holds a lot of water and gives shape to the cell. (When it releases water, the cell shrinks and the plant wilts.) Nickname: Shape keeper

mitochondrion

nucleus

cytoplasm

cell membrane

chloroplast (kloh-ro-plast)-a part of a plant cell that uses energy from sunlight to make food. Nickname: Food factory

cell wall-a hard outer layer of a plant cell that protects the cell and provides support. Nickname: The wall

Question Stem

What....

Why....

How...

What is/are the

How are the...

How might...

+

KEY

Purpose

Significance

Kind

Evidence

Reasons

Types

Influences

Function

Consequences

Characteristics

Role

+

TOPIC

plant and animal cells

How do the characteristics of an animal cell differ from a plant cell?

What is the significance of the different organelles in a plant cell?

Plant Cell

Cell Wall - The cell wall is the outermost layer of a plant cell. It is made of cellulose and gives the cell its shape. Nickname: The wall

Vacuole - A large, clear, fluid-filled sac that stores water and other substances. Nickname: The water tank

Chloroplast - A green organelle that captures light energy and converts it into food for the cell. Nickname: The food factory

Mitochondrion - A small organelle that releases energy from food. Nickname: The power plant


Nucleus - The control center of the cell. Nickname: The brain

Cytoplasm - The gel-like fluid that fills the cell. Nickname: The packing material

Cell Membrane - The thin layer that separates the cell from its environment. Nickname: The fence

Brianna #17, Henry #27, Emily #11, Aaron #13, Matthew #28, Autumn #16, Julia Ly, Garrett, Bonghwa

**Key Question with
Thinking Tool**

What are some ethical issues  surrounding the consequences of running out of water?

How might you use keys to in your classroom?

**Unanswered Questions
???**

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