



1

78% of teachers say their students can't think critically

2

30% of Americans are so math averse, they'd rather clean a bathroom than solve a math problem.

3

Nearly 50% of teachers quit within the first five years of teaching.

4


**KEEP CALM
BUT HOUSTON
WE HAVE
A PROBLEM**

5

You're going to be able to:

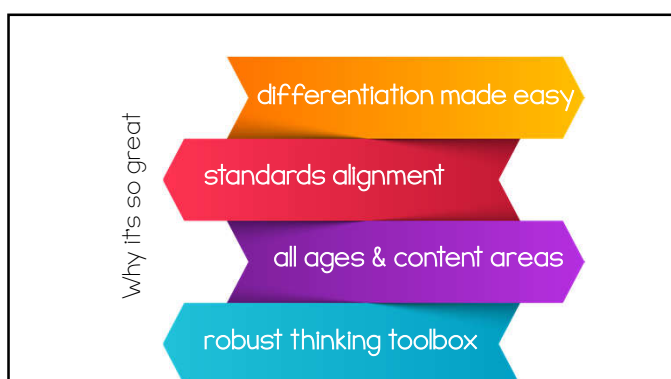
6

- You're going to be able to:
- Understand and explain what it is
 - Know why you might want to use it
 - Recognize the eleven basic elements
 - Implement some activities
 - Introduce it to students

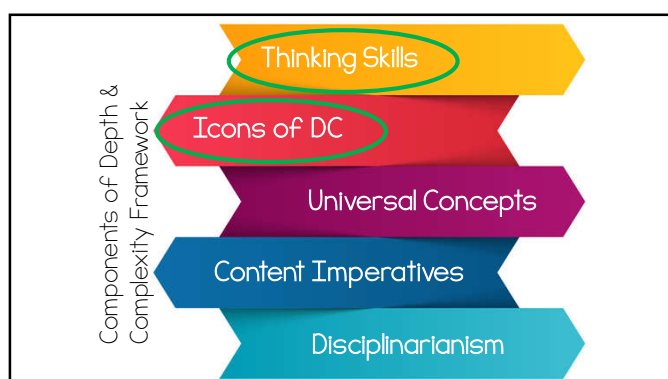
7

- Understand and explain what it is
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- Implement some activities
- Introduce it to students

8



9



10

- Understand and explain what it is
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- Introduce it to students

11

- Understand and explain what it is
- Know why you might want to use it
- Recognize the eleven basic elements
- Implement some activities
- Introduce it to students

12

DEPTH & COMPLEXITY

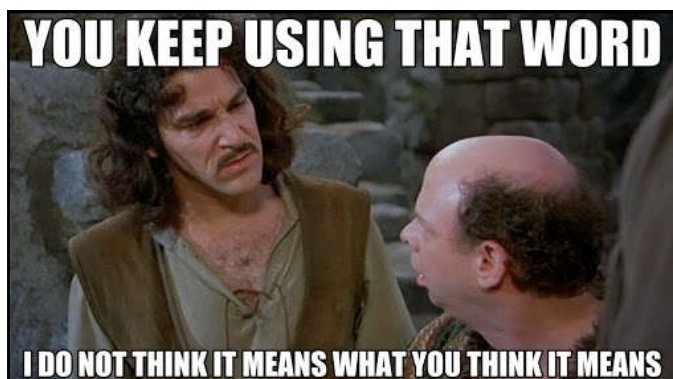
a **FRAMEWORK** for
academic exploration

13

DEPTH & COMPLEXITY

that uses common
LANGUAGE and a set
of universally agreed-
upon **ICONS**

14



15

DEPTH & COMPLEXITY

to guide scholarly
endeavor **ACROSS**
content areas, grade
levels, and standards,

16

DEPTH & COMPLEXITY

in a way that maximizes
instructional time &
saves teachers time &
effort.

17

DEPTH & COMPLEXITY

It's way more than
just pictures.

18



19

We are not teaching about pictures. We are teaching about thinking.

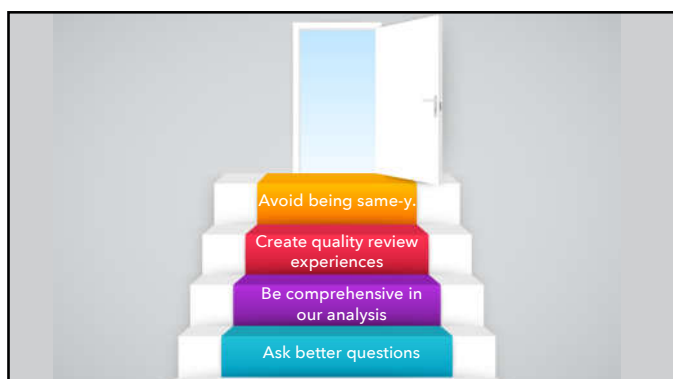
20

We are looking through a lens that pivots .

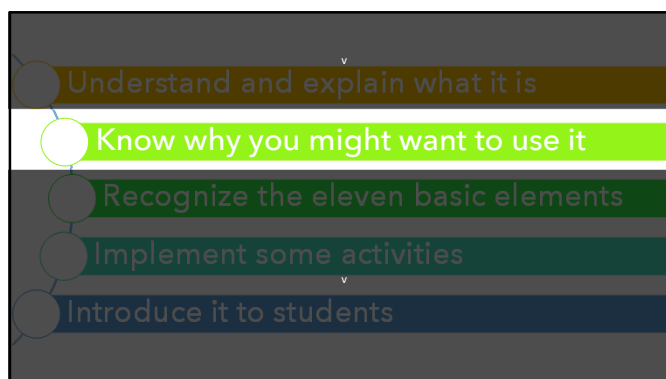
21

If for no other reason, we should use it because it helps us:

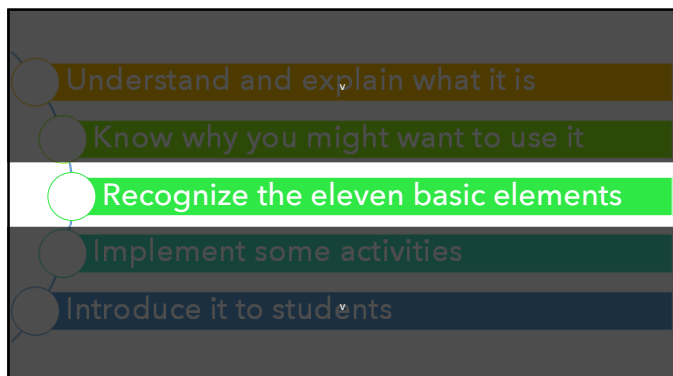
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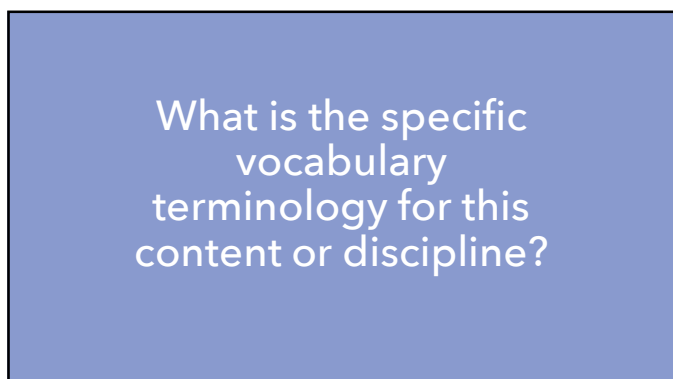
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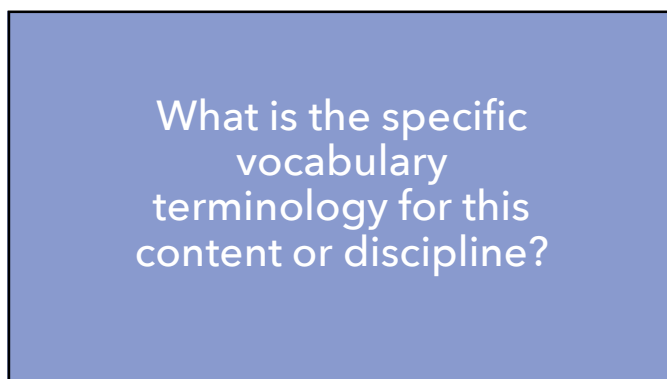
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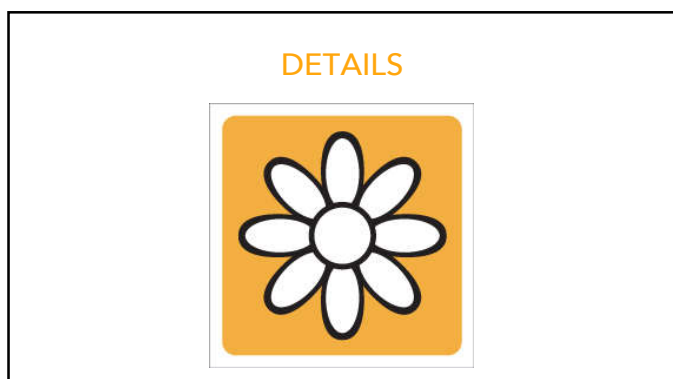
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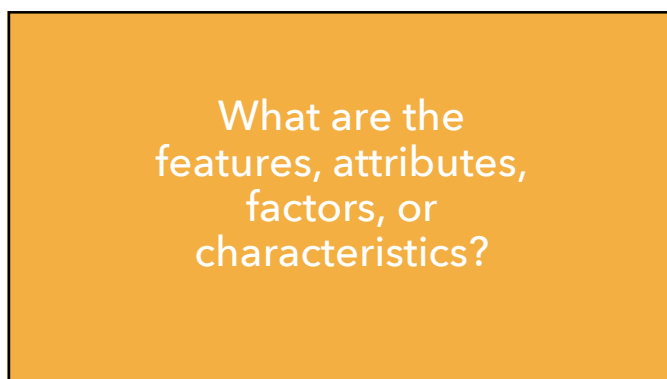
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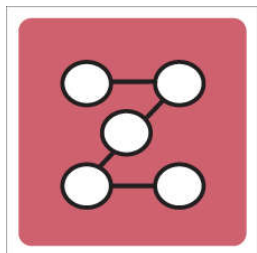


29



30

PATTERNS



31

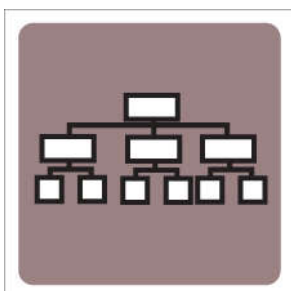
What elements repeat?

What is the sequence or order of events?

What predictions can be made based on past events?

32

RULES



33

What are the rules, structures, relationships, or organizational elements?

34

RULES INCLUDE:



35

TRENDS



36

The general direction in which something is developing or changing

37

Cause and Effect

38

Unanswered Questions




39

What is still uncertain?
What is unexplained?

40

Ethics



41

values *What is Right?*
 fairness philosophies
 controversy
 standards morals
 JUSTICE

42

PROS & CONS

43

BIG IDEA



44

What theory or general statement applies?

What generalizations can be made?

What is the main idea?

45

OVER TIME



46

What can be learned by looking at past, present, and future?

What change is noted?

Where do we see stasis?

47

MULTIPLE PERSPECTIVES



48

How does point of view affect perception?

How else can we look at this?

49

Perspective affects interpretation of events, actions, and even facts.

50

ACROSS DISCIPLINES



51

How do areas of study relate to other subjects within, between, and across disciplines?

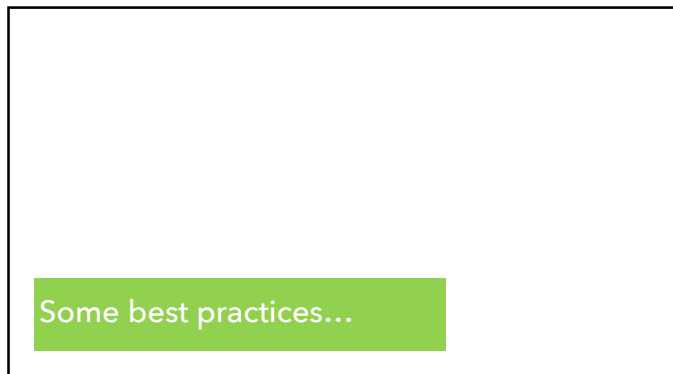
52

This is more than just language arts + history.

53

It's also looking across THIS discipline.

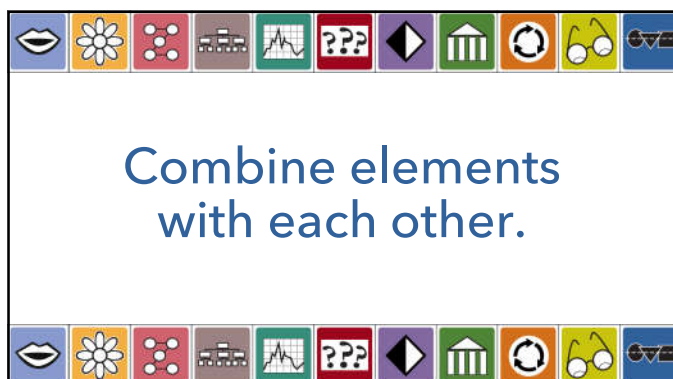
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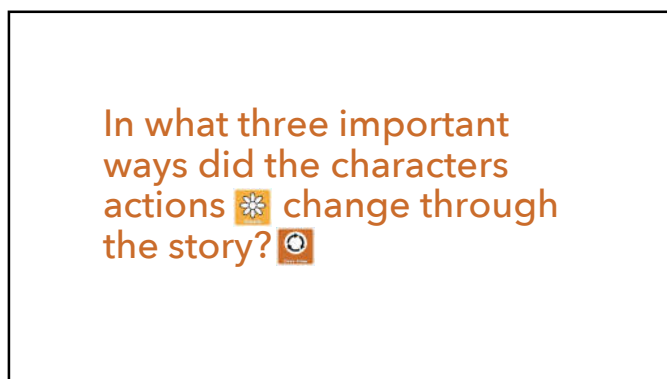
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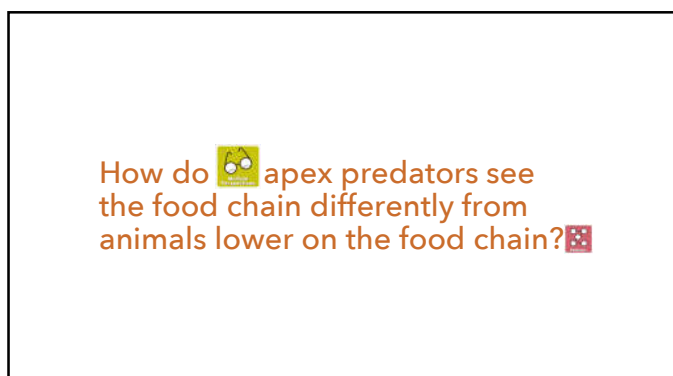
56



57



58




59



60

INSTEAD OF: How much would a pound of butter cost if 25% of a of a pound costs \$1.28?

61

DO THIS: Evaluate the  fairness of charging \$5.50 for a pound of butter if 25% of a pound costs \$1.28.

62

INSTEAD OF THIS:
List four causes of the Civil War.

63

DO THIS: Sketch out a graphic organizer demonstrating how  trends towards industrialization impacted the Civil War .

64

Combine elements with
a quality product.

65

Because saying, "Create a list..."
is still just a list.

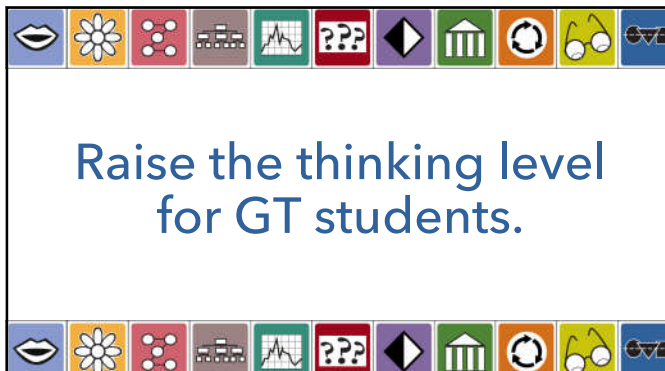
66

Demonstrate with a photo essay
the change in American culture
from the Progressive Era
through the end of
the Vietnam Era.
[Which elements do you see here?]



67

Raise the thinking level
for GT students.



68

ON LEVEL: Using the hundreds
chart, create a game that uses
half of the numbers in three
columns of the chart.



69

DIFF: Using Wolfram Alfa,
create a game that uses
numbers from the Fibonacci
sequence and the factors of
234.

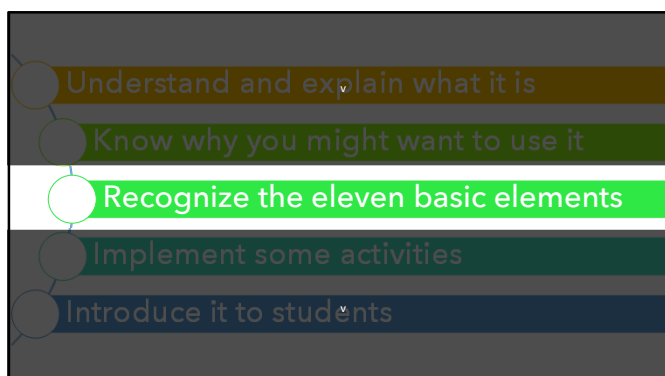


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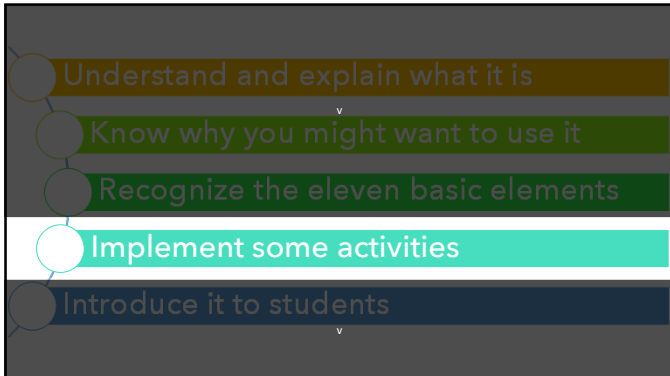
Differentiation is *not*
about what they're
doing.

Differentiation is
about what they're
thinking.

71



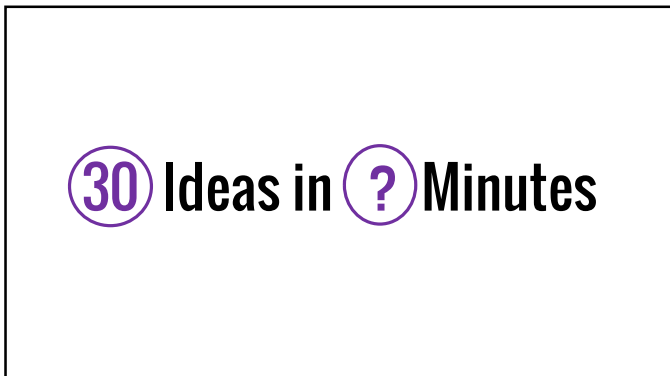
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73



74



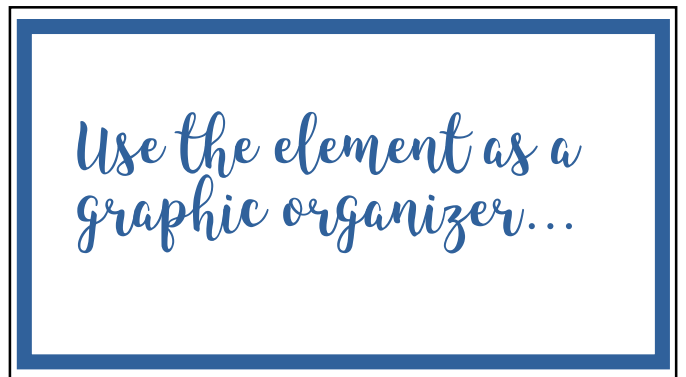
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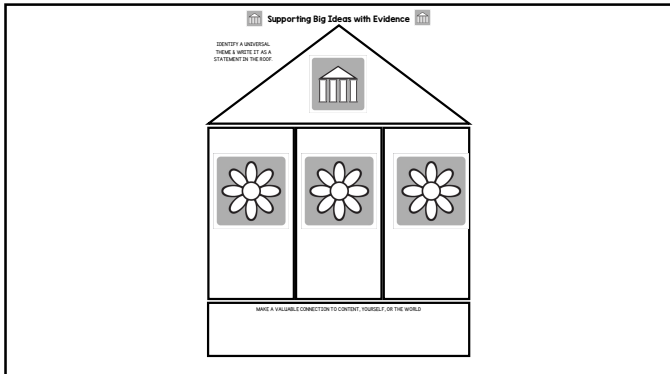
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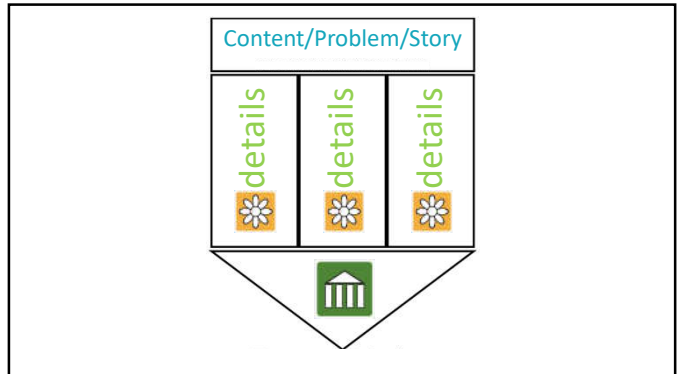
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78



79



80

IDEA # 2

81

student self-reflection

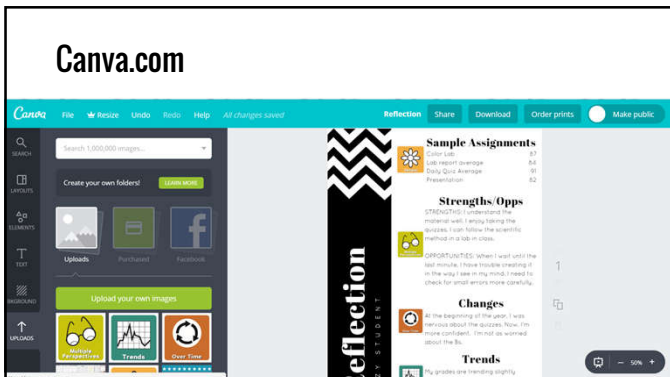
Multiple Perspectives

Details

Trends

Over Time

82



83

Student creates own reflection of work...

Reflection

Sample Assignments

Color Lab	83
Lab report average	84
Daily Quiz Average	91
Presentation	82

Strengths/Opps

STRENGTHS: I understand the material well. I enjoy taking the quizzes. I can follow the scientific method in a lab in class.

OPPORTUNITIES: When I wait until the last minute, I have trouble creating it in the way I see in my mind. I need to check for small errors more carefully.

Changes

At the beginning of the year, I was nervous about the quizzes. Now, I'm more confident. I'm not as worried about the lab.

Trends

My grades are trending slightly upward, although the rate has slowed. My knowledge is trending more steeply upward.

84

IDEA # 3

85

Write better questions







Over Time







Multiple Perspectives

86

-  How would your teacher last year have explained this?
-  Why would you use this in science?
-  When do you think you'll use this again in your future?
-  Is this more important to a writer or an reader?


87


-  Do you think this will become more or less important to you over time?
-  Why would a test writer think this was worth creating a test question for?
-  How different do you think this is from when your parents learned it?
-  How different do you think you feel about this than your teacher does?


88





6th Grade World Cultures: Student Task:
 Develop **five** questions about the growth of urban societies and changes in societies (due to social class divisions, slavery, divisions of labor between men and women) using at least **four** Depth & Complexity elements.

(add Blooms or DOK or constrict to specific elements for even more direction)









89



1st Grade Science:

- What do plants do to spread seeds when there aren't enough birds?
- What would make a bird eat one seed over another?

90

1st Grade Science:

- Which do you think came first, ice or water?
- Both plants and animals need water, animals need food, and plants need light. What does water need? Ice?

91

IDEA # 4

92

Goal-setting

Unanswered Questions, Details, Over Time, Rules, Big Idea

93

Student creates own goals for grading period...

My Goals Tracker

My goals for this grading period are:

- 1.
- 2.
- 3.

These goals are different from my earlier goals in these ways:

- 1.
- 2.
- 3.

What might influence my performance and work?

- 1.
- 2.
- 3.

Some methods and strategies I will use this grading period include:

- 1.
- 2.
- 3.

The most important thing I need to focus on to achieve my goals is:

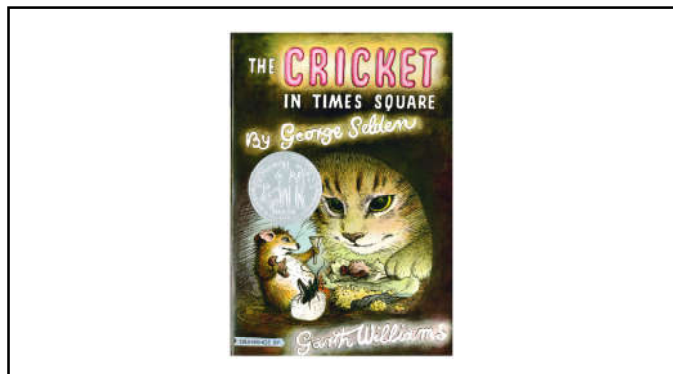
94

IDEA # 5

95

sociograms with Details

96



97

List three traits of each character and then show how that character is connected to the character(s) with whom they share connectors.

```

    graph TD
      Chester[Chester] --- TuckerMouse[Tucker Mouse]
      Chester --- HarryCat[Harry Cat]
      TuckerMouse --- MamaBellini[Mama Bellini]
      HarryCat --- MamaBellini
      HarryCat --- MrSmedley[Mr. Smedley]
      MamaBellini --- SaiFong[Sai Fong]
      MrSmedley --- SaiFong
  
```


98

IDEA # 6

99

Move from fluency to mastery


100

 Find the distance between the two points on each number line by counting the number of spaces between the two points.

Number line 1: Points at -4 and 1. Distance is 5 units.

Number line 2: Points at -1 and 4. Distance is 5 units.

101

 Write a rule that explains how to find the distance between a positive integer and a negative integer.

Number line 1: Points at -4 and 1. Distance is 5 units.

Number line 2: Points at -1 and 4. Distance is 5 units.

102

The word "integer" is from the Latin from *in-* "not" + root of *tangere* "to touch." It means "whole" or "untouched."

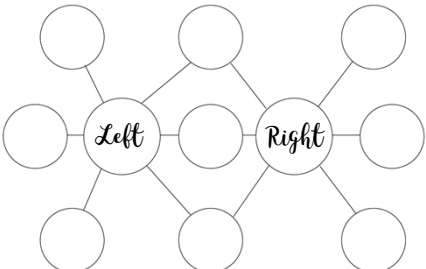
Why is this a good name for this set of numbers?

103

The section of the number line between two numbers is called an "interval." What would be another word that would be a good term for this?

104

Compare & contrast the numbers to the left and right of zero on the number line.

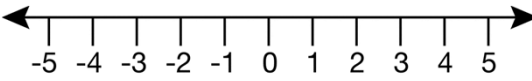


105

What would happen if a number line were not a straight line?

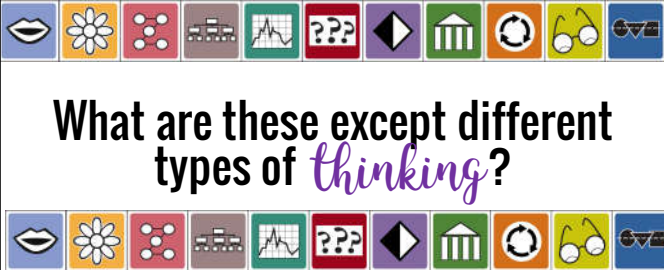
Create a visual representation of real numbers that is not a straight line.

What are the advantages and disadvantages of your representation?



106

What are these except different types of *thinking*?



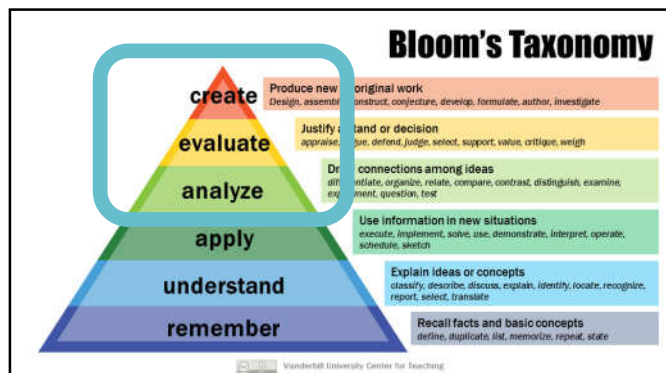
107

IDEA # 7

108



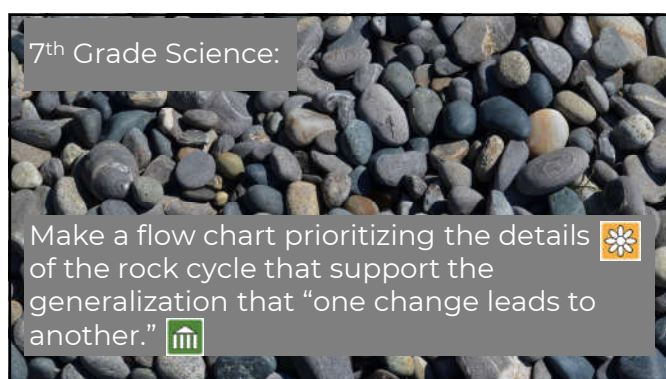
109



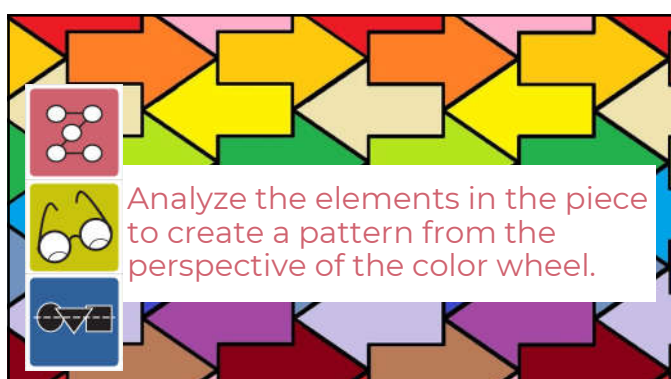
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111



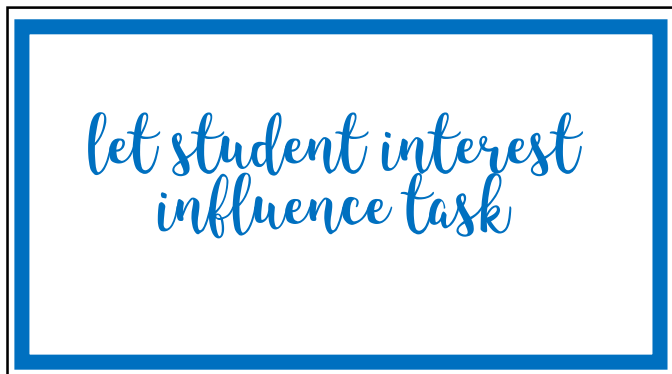
112



113



114



115

8th Grade US History: American Revolution

An escape room for the math lovers

116

A scavenger hunt for struggling learners

Artsy students create a rebus of the Declaration

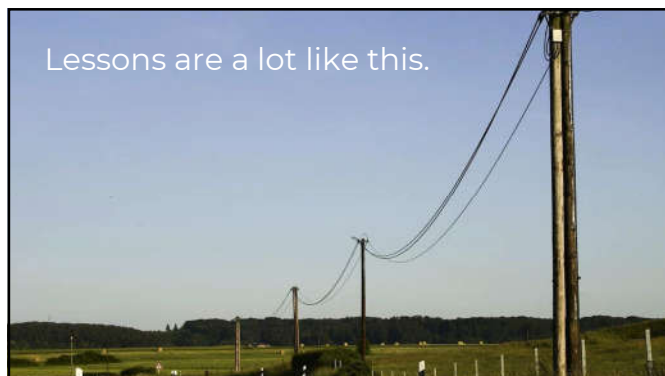
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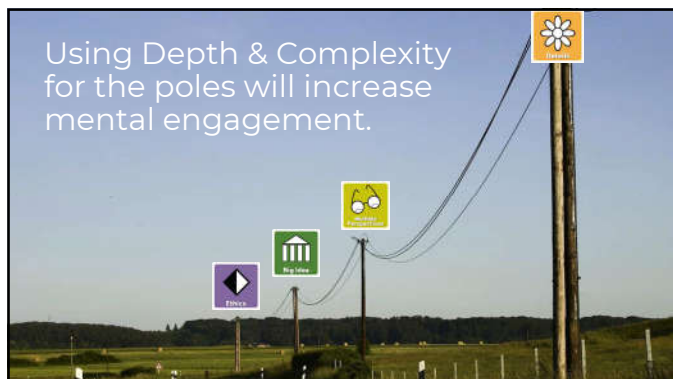
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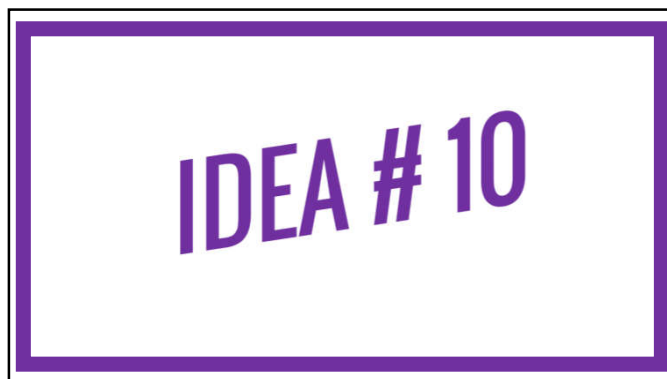


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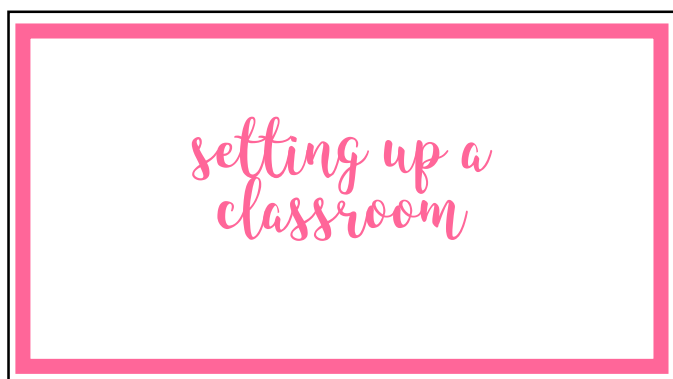


Using Depth & Complexity for the poles will increase mental engagement.

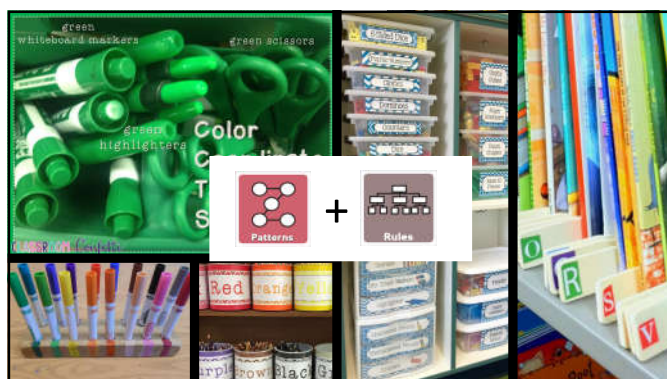
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122



123



124



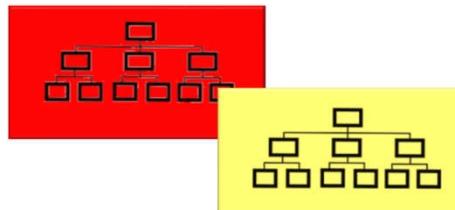
125



126

*classroom
management*

127



128

Thank you for making a better choice.

You have the power to choose:

1. Talk with me.
2. I talk with a parent.
3. You talk with the principal.

129

IDEA # 12

130

*Let's go through the
whole list o' elements!*

131




Create a linear array of three terms from the water cycle.



132


Using Screencast-o-Matic, record a tutorial explaining the top ten facts about the water cycle.



Unlock the power of Screencast-O-Matic's screen recorder for Chromebook, Mac, and PC. Capture any area of your screen. Add audio narration or video from your webcam. Record lectures, tutorials, demos, games and more!


[Get FREE screen recorder](#)

Upgrade to Deluxe for only \$1.50/mo to unlock the video editor.

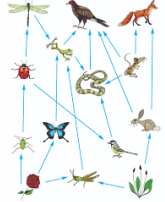



133

Compare a Big Idea of the water cycle to a Big Idea of the food web. Present your findings in an infomercial.

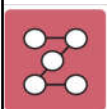


VS.

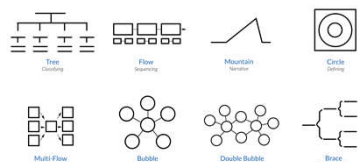




134

Using the Thinking Map of your choice, illustrate the water cycle.



Explain why you chose the Thinking Map you did.


135

Follow the water cycle over the course of two days in this demonstration.




136

Using Sutori.com, create a timeline showing the changing understanding of the water cycle. Include the views of Bernard Palissy, Leonardo da Vinci, and at least one ancient text.


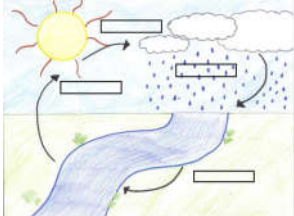


Presentations for the classroom in a unique timeline format


School projects and assignments have never been this fun.

137

Give them the water cycle out of order and have them correct it.

138



Write two cinquain poems about the water cycle, one from the perspective of a water droplet and one from the perspective of groundwater.


raindrop
 bun~shape droplet
 falling, splashing, soaking
 bringing green, vibrant life
 precipitation

139



Investigate quality resources, then create a graphic describing the trend in the amount of water on the Earth.

140




How many kinds of ice are there?

Why do some bodies of water get polluted while others don't?

Which is more valuable to animals, a river or a lake?

141



Is it fair to interfere with the water cycle by building dams, even though they often provide a clean energy source?

142


IDEA # 13

143

self-differentiate
 math

144


6 8 16
2 =
7 4 9



145

6 8 16
2 =
7 4 9

Annotations:
 - 6 to 2: $-4 =$
 - 8 to 2: $-6 =$
 - 7 to 2: $+8 =$
 - 4 to 2: $+7.5 =$
 - 16 to 2: $\div 8 =$



146


IDEA # 14

147

strengthen existing resources

148

What I used to do

-am Tam Likes Jam 

Tam likes jam.
 Tam likes ham.
 She likes to eat jam and ham.
 Here, Tam, get some jam.
 Here, Tam, get some ham.
 Do you like yams?
 No, Tam likes jam and ham.

1. Tam likes _____.
 buns
 eggs
 jam

2. Does Tam like yams?
 yes
 no

3. Tam likes _____.
 eggs
 ham
 buns

4. Who likes jam?

149

Result

M	O	E	P	S	X	U	B	K	Z	N	G	A
J	R	D	I	Q	W	F	C	Y	L	H	V	T
m	o	e	p	s	x	u	b	k	z	n	g	a
j	r	d	i	q	w	f	c	y	l	h	v	t
m	o	e	p	s	x	u	b	k	z	n	g	a
j	r	d	i	q	w	f	c	y	l	h	v	t
th	sh	ch	ow	oo	ing	or	oy	oy				
mom	dad	dog	rat	cut	pet	fin						
hem	sad	vet	win	nod	cut	job						

150

What I do now

"We're learning the -am pattern."

"How does Tam feel about yams?"

"What kind of jam do you think is Tam's favorite?"

151

Note: We need this level, but we **cannot stay** there.

When they can't read or write responses to the high level questions, **record** your questions & let them record their answers.

152

Result [track differences]

Identify letters												
M	O	E	P	S	X	U	B	K	Z	N	G	A
J	R	D	I	Q	W	F	C	Y	L	H	V	T
m	o	e	p	s	x	u	b	k	z	n	g	a
j	r	d	i	q	w	f	c	y	l	h	v	t
Letter sounds												
m	o	e	p	s	x	u	b	k	z	n	g	a
j	r	d	i	q	w	f	c	y	l	h	v	t
th	sh	ch	ow	oo	ing	or	oy	oy				
Reading words												
mom	dad	dog	rat	cut	pet	fin						
hem	sad	vet	win	nod	cub	job						

153

IDEA # 15

154

Half-way there!

Isn't this just so fun? #teacherhack


155

Be generous

156

Store your stuff.

Choose the right Dropbox for you



For individuals		For teams	
Plus	Professional	Standard	Advanced
Get started	Get started	Try for free <small>or purchase now</small>	Try for free <small>or purchase now</small>

157

And then share it.

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158

Want to really get into it? Share with the socials.



159

IDEA # 16

160

find a friend



Across Disciplines

161



Who would be open to collaboration?

162



163



164



165



166



167

The Allegorical Meaning of Animals
 See if you can determine the commonly accepted allegorical meanings of the following animals. Fill in the table as comprehensively as possible.

Animal	Characteristic/Quality
Donkey	
Pig	
Fox	
Owl	

HAND OUT the worksheet *The Allegorical Meaning of Animals* and instruct students to work through it in pairs, filling it in as comprehensively as possible.

FEEDBACK and discuss what the students have decided for the animals. Some might have slightly different answers – this doesn't matter, as long as they all identify that there are human qualities often ascribed to animals (*dog – loyalty, lion – bravery, owl – wisdom* etc.).

Wolf	
Chicken	
Dog	
Eagle	
Can you think of any others?	
Can you think of any others?	


© 2010 by Linda Ward Beech

168

The Filigorical Meaning of Animals
See if you can determine the primary, secondary, or figurative meanings of the following animals. Fill in the table as comprehensively as possible.

Animal	Characteristic/Quality
Donkey	
Dog	
Fox	
Owl	
Bat	
Cow	
Cat	
Lion	
Wolf	
Chicken	
Dog	
Eagle	

Sort the animals into three categories based on what you think they mean.




169


The Filigorical Meaning of Animals
See if you can determine the primary, secondary, or figurative meanings of the following animals. Fill in the table as comprehensively as possible.

Animal	Characteristic/Quality
Donkey	
Dog	
Fox	
Owl	
Bat	
Cow	
Cat	
Lion	
Wolf	
Chicken	
Dog	
Eagle	

Is it fair to say that the donkey means...?



What would have to happen or change to make the wolf more dog-like?



170

IDEA # 18

171

combine with graphic organizers

172

I like Thinking Maps™. A lot.


Learning Skill	Element(s)	Thinking Map
Main Idea		
Details		
Sequence		
Cause and Effect		
Compare/Contrast		
Making Predictions		
Meaning in Context		
Fact v. Opinion/ Fiction v. Nonfiction/ Fantasy v. Reality		
Making Inferences		
Author Purpose		
Figurative Language/ Literary Devices		

173

Pick a character from the story.

Identify **four** traits of that character.

For **two** of the traits, list **two** consequences of that trait. If the consequence is positive, put a + sign next to it.



174

sign next to it.

Thinking of what you just identified and considered, do you think the character's traits were a hindrance or a help to him/her and why?

175

sign next to it.

Thinking of what you just identified and considered, do you think the character's traits were a hindrance or a help to him/her and why?

176

Think of four reasons George Washington should have been a king instead of the president. Then, on the **other** side, think of four future consequences that would have happened if he had become a king.

177

Is it fair for one person to be the king or queen for life? Why would it be better or worse to take turns?

178

Differentiate it!

Is it possible for a truly free people to have a king or queen? If not, is England really free? Would the English agree they are less free?

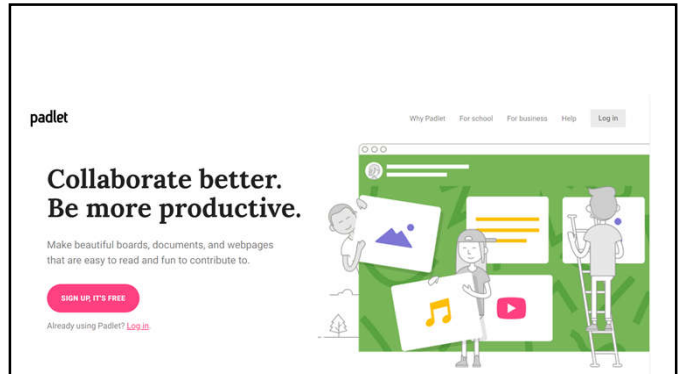
179

IDEA # 19

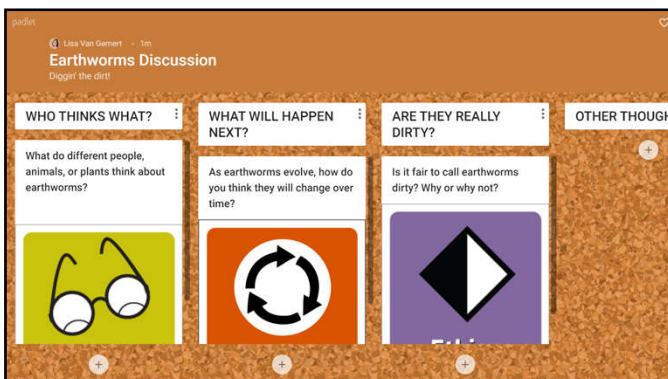
180



181



182



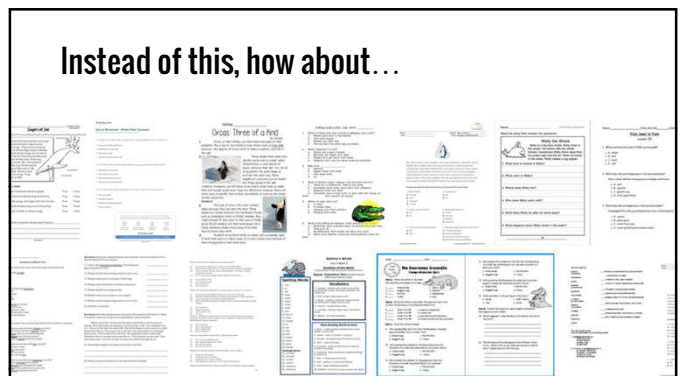
183



184



185



186

What would happen if you moved the blue whale up one level in the food chain?

What do you think is a blue whale's favorite number and why?

What animal is the closest land animal to the blue whale in size AND personality?

Why is it a good idea or not for one animal to be so much bigger than the other animals in the ocean?

187

IDEA # 21

188

better than KWL

189

Go to www.menti.com and use the code 24 80 78

Which thing in the picture is the most important thing to Bud?

190

Go to www.menti.com and use the code 24 80 78

Which thing in the picture is the most important thing to Bud?

Option 1 Option 2 Option 3

191

IDEA # 22

192

Making it easier for absent students to catch up

193

The *problem*(s):

- Absent students often didn't complete the make-up work.
- Students said they didn't do the make-up work because they "didn't understand it."

194

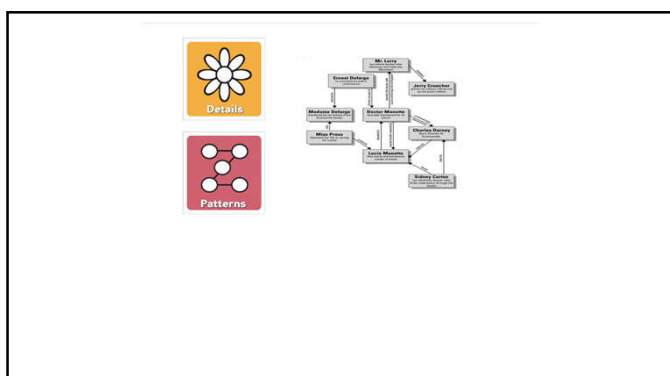
The *solution*!

195

Use it with screencasting for when kids are absent...it clues in on thinking, not just doing!



196



197






IDEA # 23

198

use with hyperdocs

199

Hyperdocs

Engage	
 Click on the image How wolves change rivers	Discuss with a partner: What observations can you make from this?  Patterns  Over Time
Explore/Explain	
What is a watershed? 	What is a watershed? In your own words write the definition of watershed:  Language Discipline
Watershed Model 1	List the parts of watershed List at least 4 human factors that affect watershed

by Halina HC2465@gmail.com

200

Apply

Make your own watershed 	Hands on Activity: Please gather: one sheet of paper, green, yellow, blue and brown crayola markers <i>For teachers only</i> , this is a link to the directions for the activity and , please remove the link when creating student copy
 Google maps	Copy the map (on the left) and create your own interactive watershed map. Tools Across Disciplines  Rules Mark and label on the map: • our school



201

HyperDocs

Home About Resources Learn More Teachers Give Teachers

The Art of teaching with HyperDocs: Student Centered Lessons that Inspire Curiosity and Creativity

Submitted by Kelly Wilson on Sat, 01/10/2018 - 12:34

Connect

 The HyperDoc Girls


202



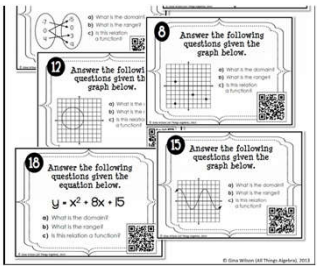
IDEA # 24

203

give lots of different kinds of practice

204



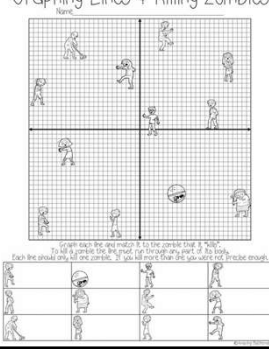
First: Task Cards

205



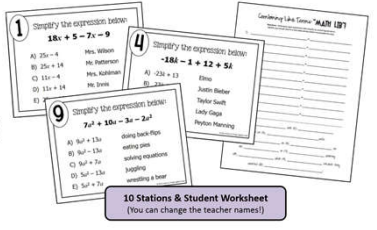
Graphing Lines & Killing Zombies

First: Graphing Lines & Killing Zombies

206

Next: Mad Libs!

207

An important way to check if you've given multiple, different possible ways to arrive at the skill or content mastery is to evaluate

how many lenses of the framework

you've used.

208



IDEA # 25

209

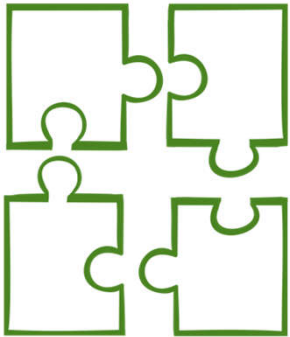
diversifying an activity

210

What are the three basic ways animals get food in the food chain?


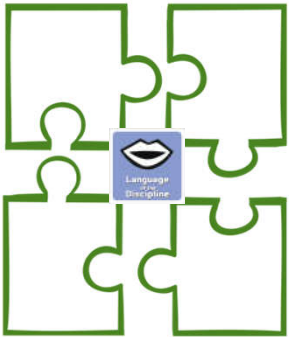



List them in a puzzle piece.



211


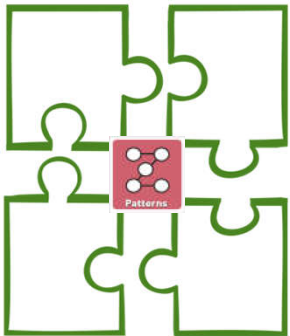
Define an apex predator on the back of a puzzle piece & draw one on the front of the puzzle piece.

212


Create a food pyramid of specific animals with five trophic levels.

List the animals in order on a puzzle piece, apex predator on top.





213


On the last puzzle piece, you may choose to do any of the following:



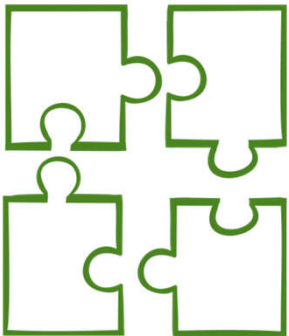
Write an epitaph for the grave of a decomposer.



Describe what would happen to your food chain if your apex predator became extinct.



Investigate & share your findings on which is more vulnerable to climate change, producers or consumers?



214










IDEA # 26

215

making choice menus stronger

216

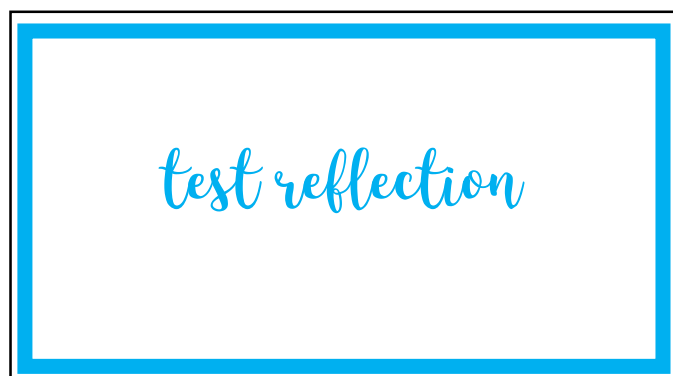
menus!

Draw a triangular prism. Label how many faces, edges, and vertices it has. 	Which stop sign do you think most drivers prefer, the octagon, or the circle with an inverted triangle & why? 	Create a map using a rhombus, a pentagon, a hexagon, an octagon, and a decagon. 
Create a riddle involving a hexagon. 	Following the naming convention, name the polygons with 65, 47, and 82 sides. 	Why should/should not monogons and/or digons be recognized as polygons? 
Draw three non-examples of a polygon. 	Describe the connection between polygons and honeybees or lava. 	Create a t-chart naming five shapes and their number of vertices. 





217



218



219

Ian's Idea:    

Reflecting With Depth and Complexity

Do you ask your students to look back at their work and reflect on their progress? If so, are you integrating the tools of depth and complexity into these reflections?

- Ask students to *examine the change over time* in their scores.
- Tell students to *look for patterns* in the type of questions missed.
- Encourage them to notice if they simply *misunderstood a rule*.
- Perhaps students need to *notice a recent trend* in their work.

220



221

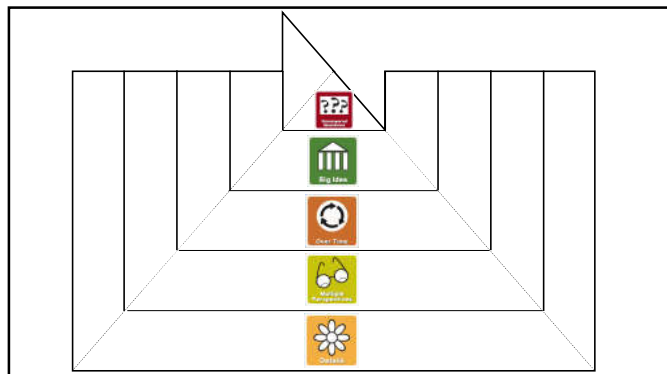


222

Use it to organize foldables for interactive notebooks!



223



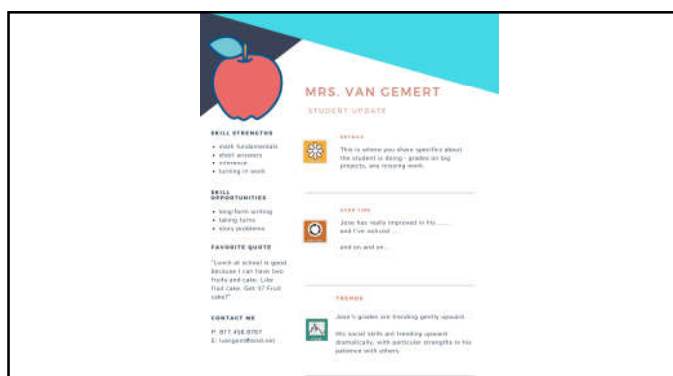
224

IDEA # 29

225

communicate with parents

226



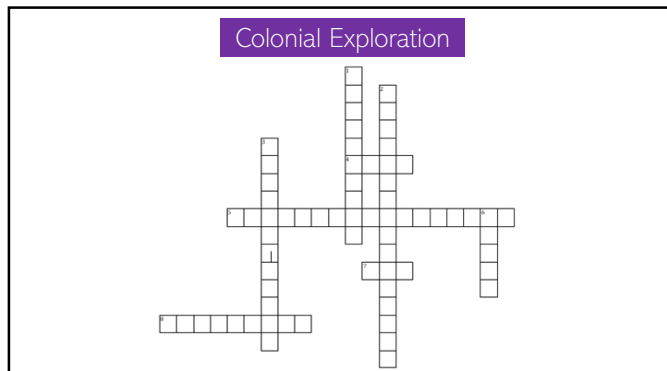
227

IDEA # 30

228



229



230

Across	Down
<ul style="list-style-type: none"> 4. monetary motivation for exploration 5. the transfer of plants, animals, culture, and humans and the transfer of disease and invasive species 7. religious motivation for exploration 8. founded in 1607 	<ul style="list-style-type: none"> 1. slave trade - movement of slaves, crops, and goods among European, East African, and colonial ports 2. 1620 beginning of self-governance by the colonists 3. of 1763 forbade settlement west of the Appalachians 6. fame and international recognition motivation for exploration

231

- Understand and explain what it is
- Know why you might want to use it
- Recognize the eleven basic elements
- Implement some activities**
- Introduce it to students

232

- Understand and explain what it is
- Know why you might want to use it
- Recognize the eleven basic elements
- Implement some activities
- Introduce it to students**

233

We are surrounded by symbols.

234

SYMBOLS:

- share information
- create expectation
- give a common vocabulary
- tell us what to do/not do
- can change meaning

235



236

Think of a Symbol.

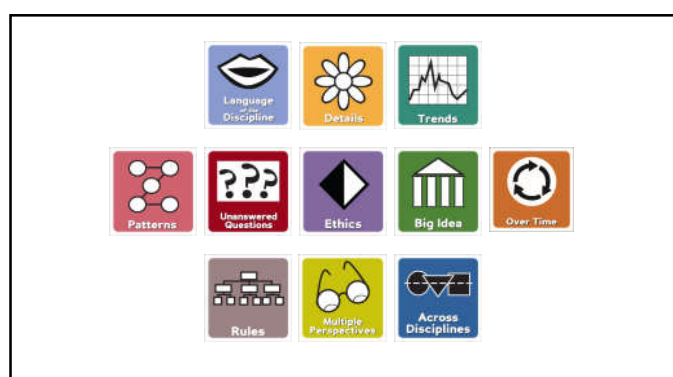
Criteria:

- easily recognizable
- emotion level ≥ 6
- be able to describe its effect (create expectation; convey info, etc.)

237

We're going to use
11 symbols to help
 us engage with our
 learning.

238

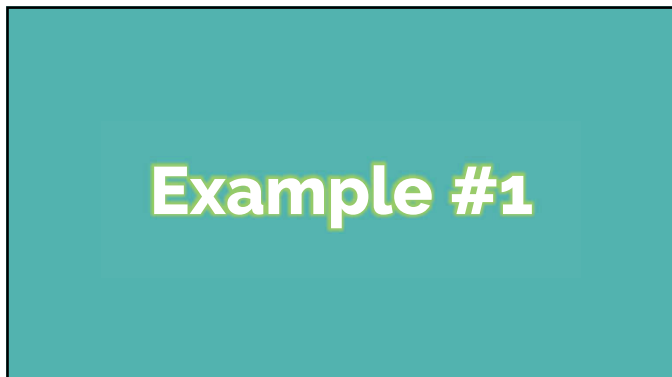


239

And they will...


- share information
- create expectation
- give common vocabulary
- tell us what to do/not do
- change meaning

240



241

What makes you you?




- family
- hobbies
- profession
- physical features
- education
- personal history
- seen/unseen

242



243


Details




- characteristics
- unique features
- essential nature
- data
- specifics
- parts

244

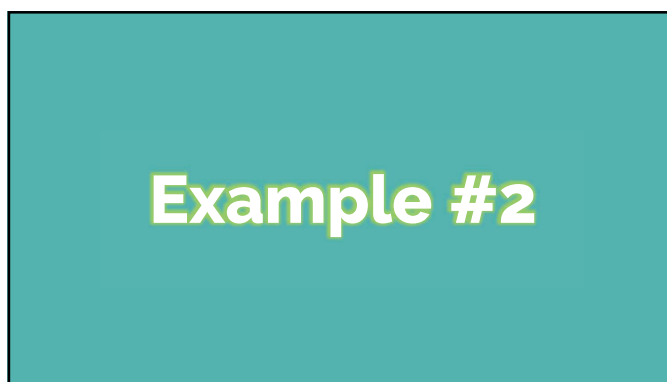
Details



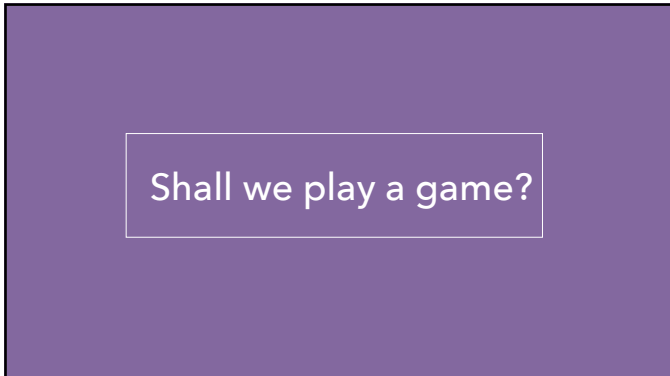
- characteristics
- unique features
- essential nature
- data
- specifics
- parts



245



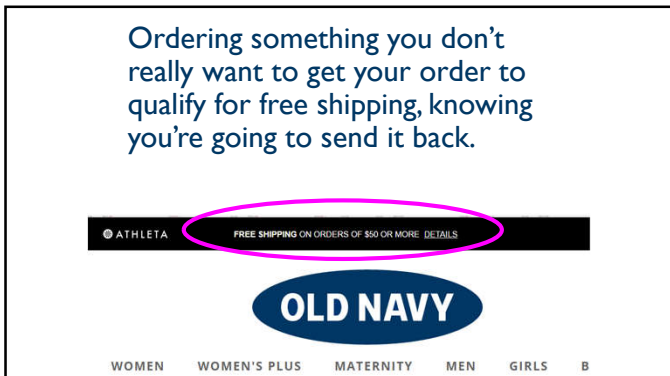
246



247



248



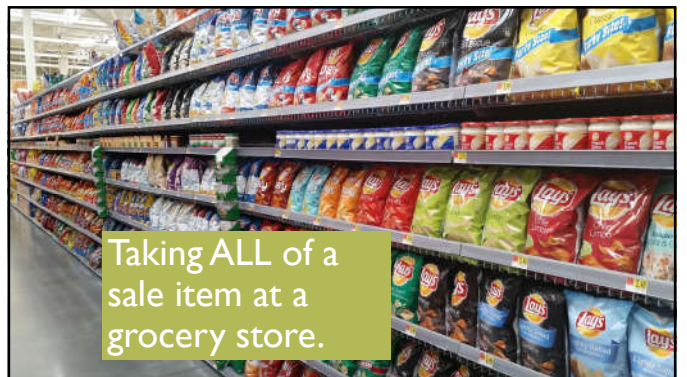
249



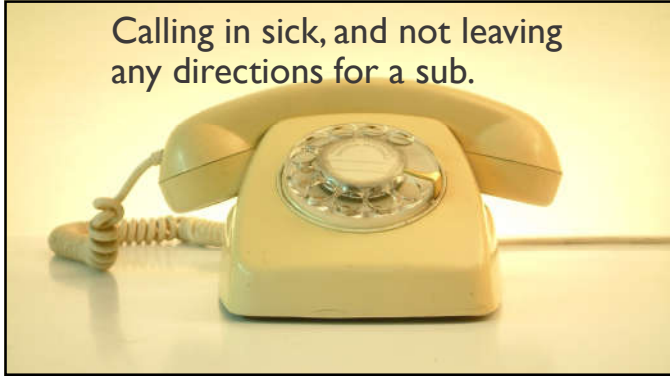
250



251



252



Calling in sick, and not leaving any directions for a sub.

253



Using your neighbor's unsecured wifi.

254



Turn in a friend who is breaking the law.

255



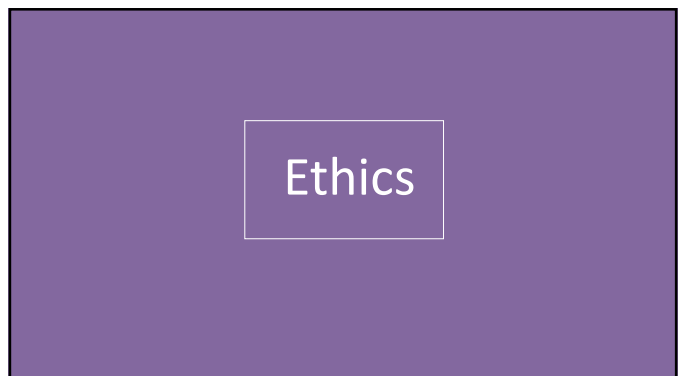
Turn in a friend who is breaking the law in a way that harms another friend.

256



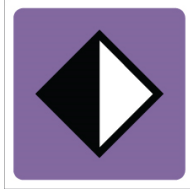
wear for a special occasion, and leaving the tag on so you can return it after the event.

257



258

Ethics



259

Move from known content to unknown, rather than new element + new content.

260

Introduce **EITHER** new content or a new element, not both.

261

Onboard students to each element.



262

Avoid marching students through a bunch of elements.

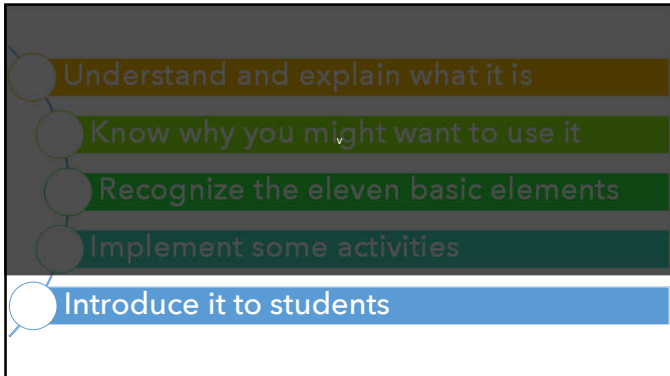


263

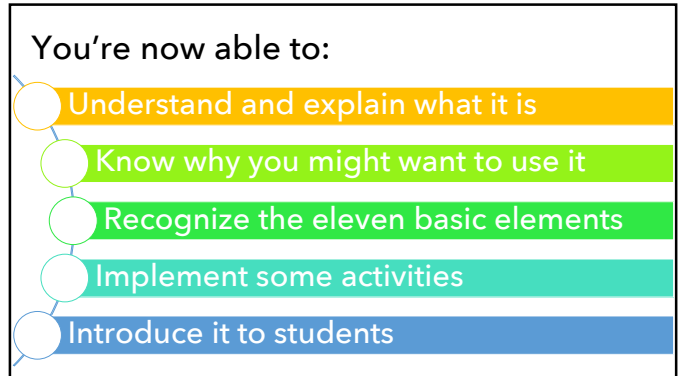
Intro s-l-o-w-l-y and deeply.



264



265



266