INTRODUCING

depth & complexity

More than Just Pictures

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

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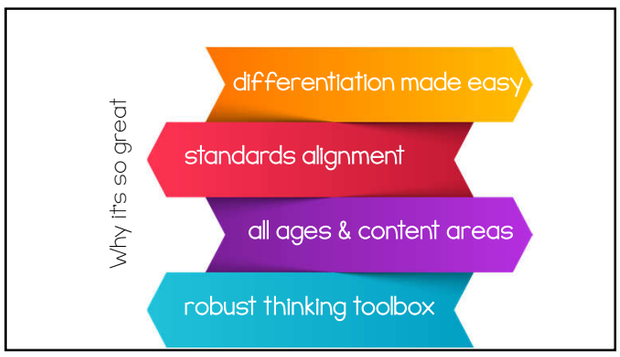
8



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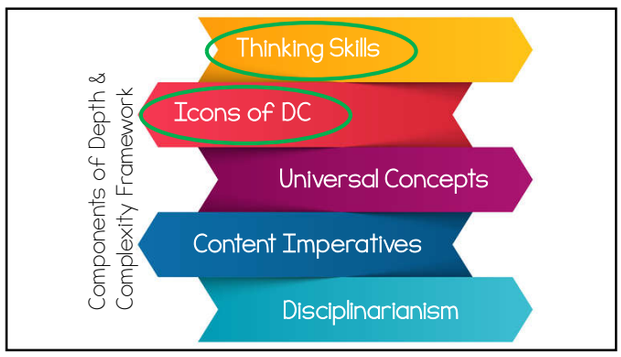

10

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11

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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

Use these

Or these {try emojipedia.org}

19

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

20

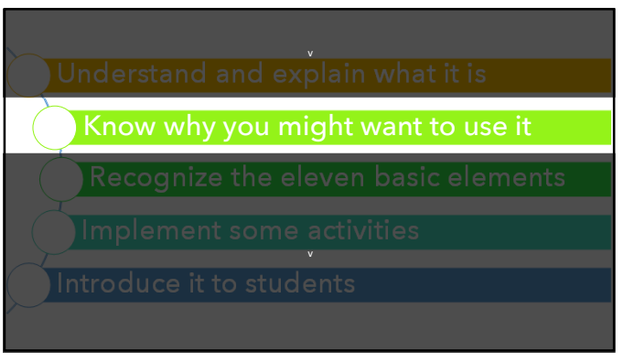
We are looking through a lens that pivots .

21

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

22

23



24

Understand and explain what it is

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25

LANGUAGE OF THE DISCIPLINE

26

What is the specific vocabulary terminology for this content or discipline?

27

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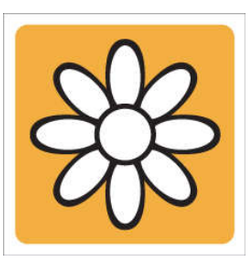
28

DETAILS

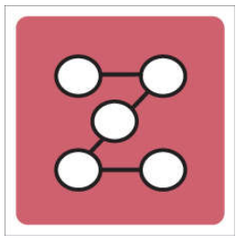


29

What are the features, attributes, factors, or characteristics?

30

PATTERNS



31

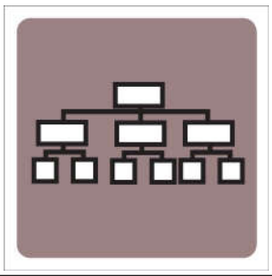
What elements repeat?

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

42

PROS & CONS

43

BIG IDEA

44

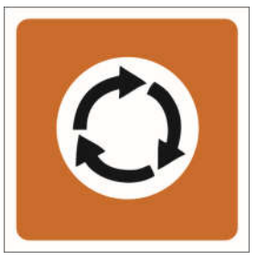
What theory or general statement applies?

What generalizations can be made?

What is the main idea?

45

OVER TIME



46

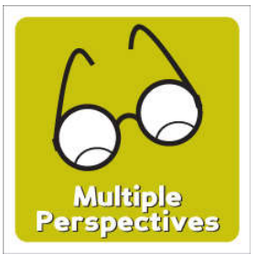
What can be learned by looking at past, present, and future?

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.

54

Some best practices…

55

56

Combine elements with each other.

57

In what three important ways did the characters actions change through the story?

58

How do apex predators see the food chain differently from animals lower on the food chain?

59

Combine elements with high levels of Bloom's.

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

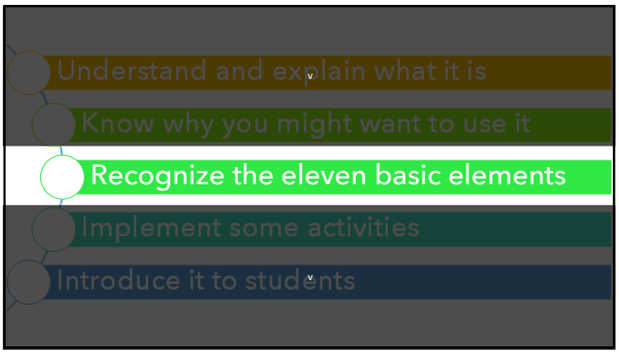
DIFF: Using Wolfram Alfa, create a game that uses numbers from the Fibonacci sequence and the factors of 234.

70

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

Differentiation is about what they're *thinking*.

71



72

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73

74

30 Ideas in ? Minutes

75

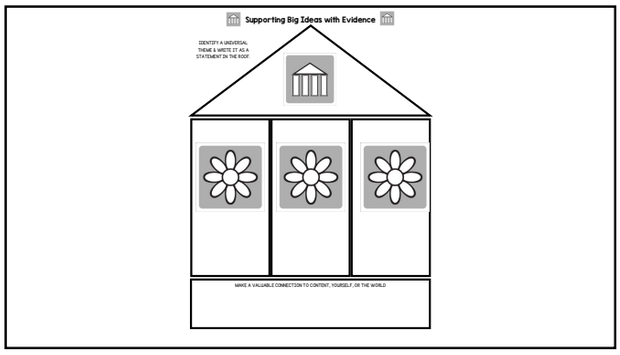
76

IDEA # 1

77

Use the element as a graphic organizer…

78



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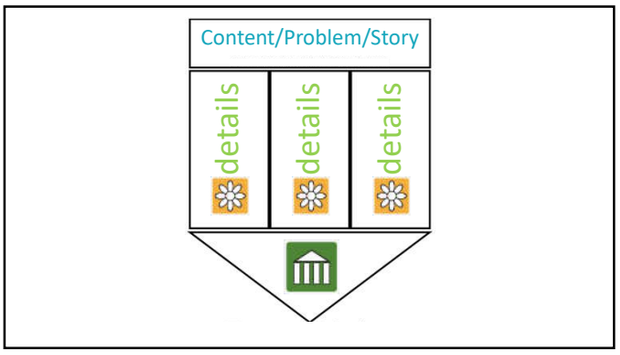

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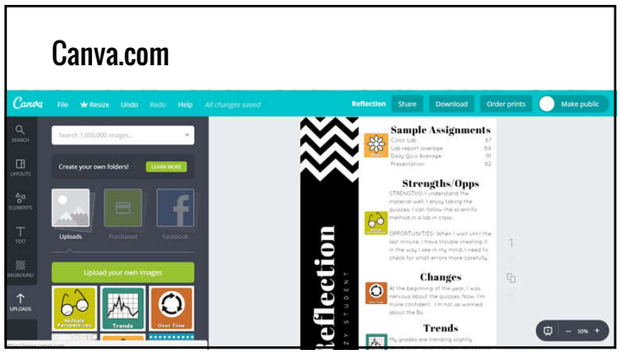

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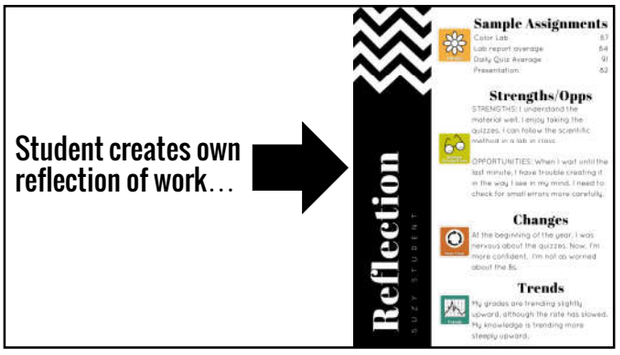

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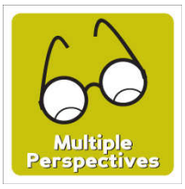
IDEA # 3

85

Write better questions



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

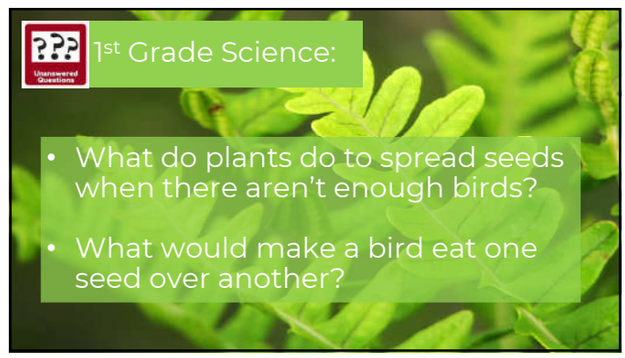
- Do you think this will become more or less important to you over time?
- Why would a test writer think this was worth creating a test question for?
- How different do you think this is from when your parents learned it?
- How different do you think you feel about this than your teacher does?

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



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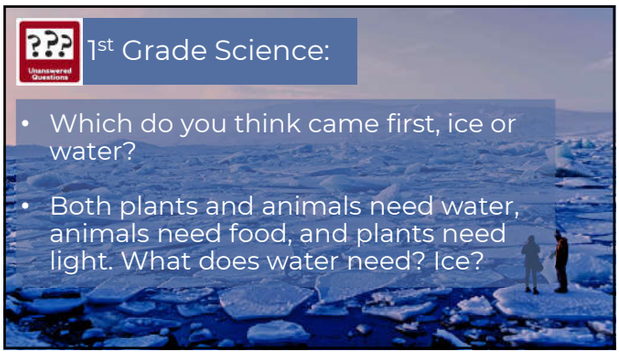

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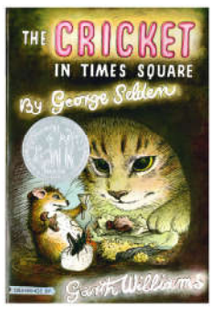
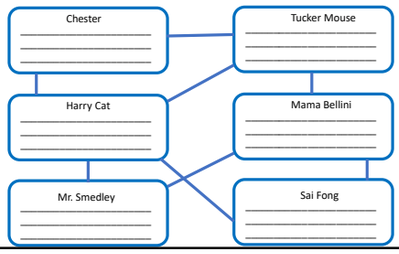


97

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



98

IDEA # 6

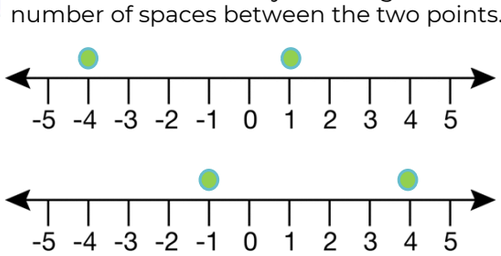
99

Move from fluency to mastery

100

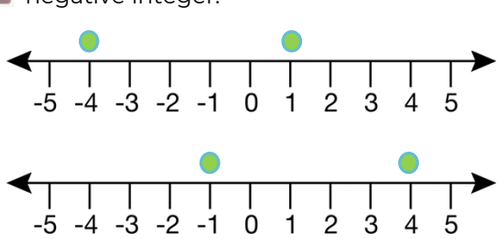
7th Grade Math

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



101

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



102

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

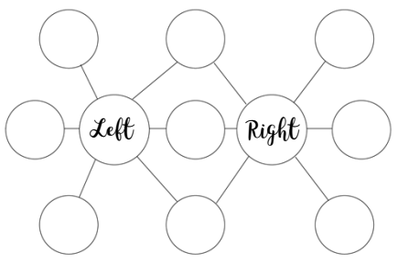
Why is this a good name for this set of numbers?

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.

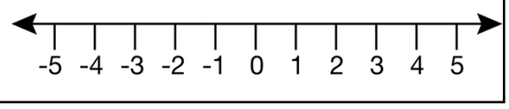


105

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?



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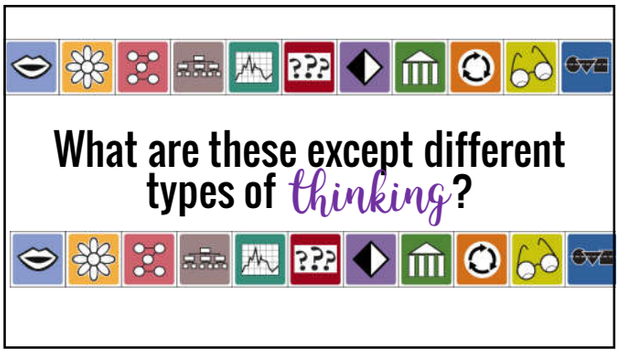

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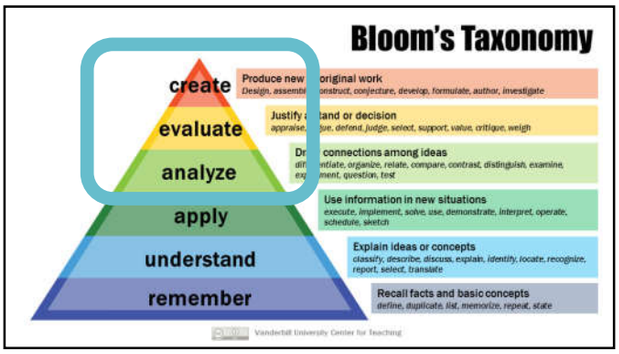
IDEA # 7

108

Moving around Bloom's

109



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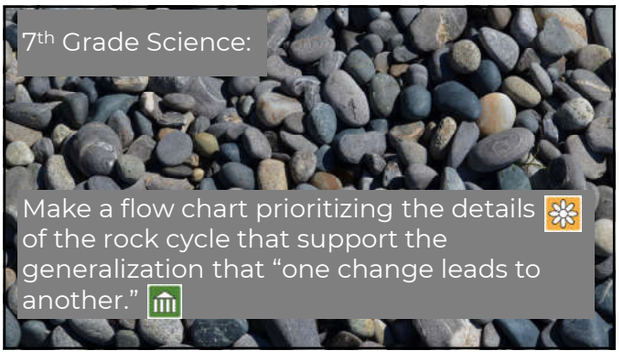
111



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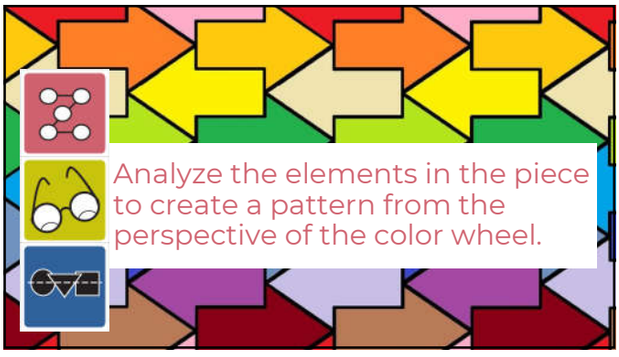


113

IDEA # 8

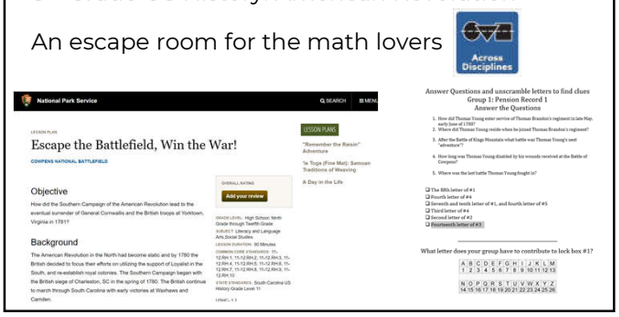
114

let student interest influence task

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

117

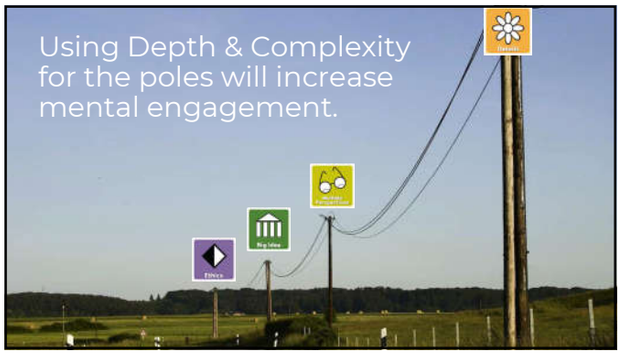
IDEA # 9

118

lesson pacing

119

120



121

IDEA # 10

122

setting up a classroom

123

124

Be sure to share the

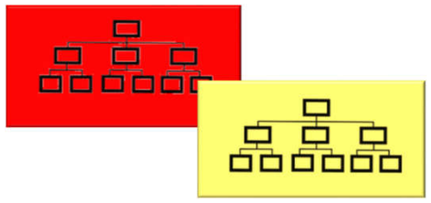
125

IDEA # 11

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

Language of the Discipline

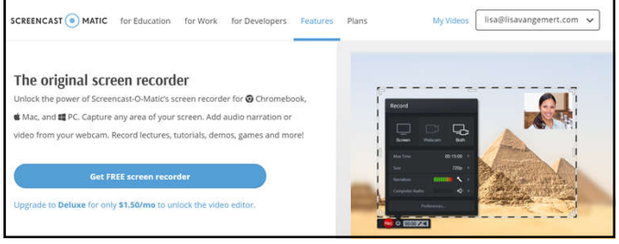
Create a linear array of three terms from the water cycle.

atmosphere → precipitation → infiltration → groundwater storage → ocean

132

Details

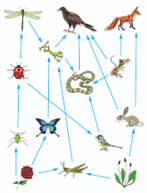
Using Screencast-o-Matic, record a tutorial explaining the top ten facts about the water cycle.



133

Big Idea

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

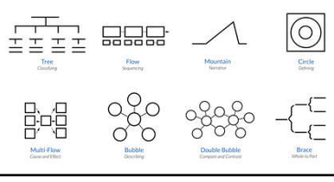


VS.

134

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

Explain why you chose the Thinking Map you did.



135

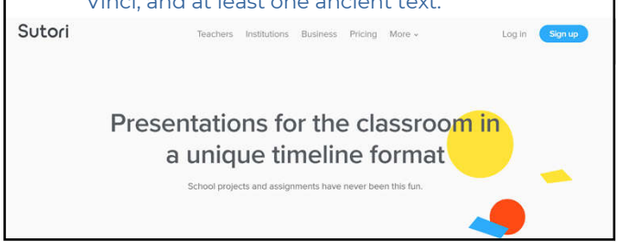
Over Time

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

136

Across Disciplines

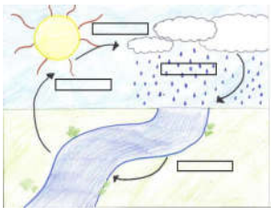
Using Sutori.com, create a timeline showing the changing understanding of the water cycle. Include the views of Bernard Palissy, Leonardo da Vinci, and at least one ancient text.



137

Rules

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



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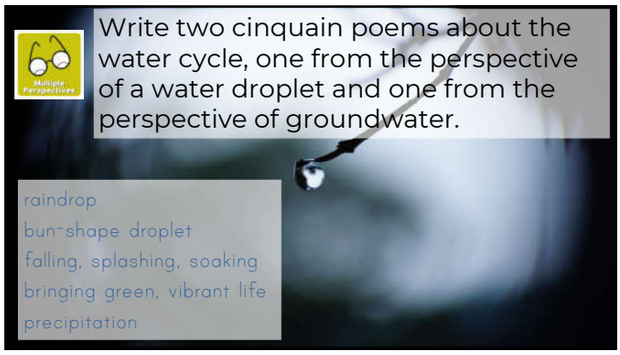

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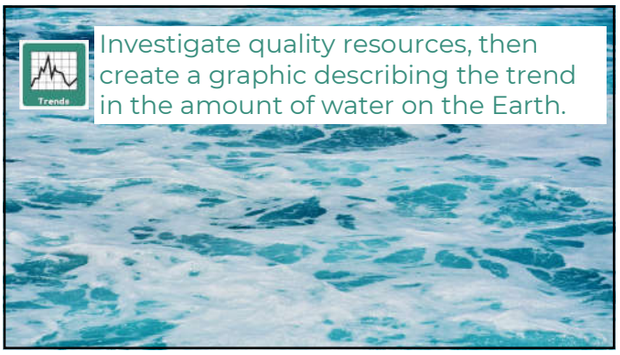


140

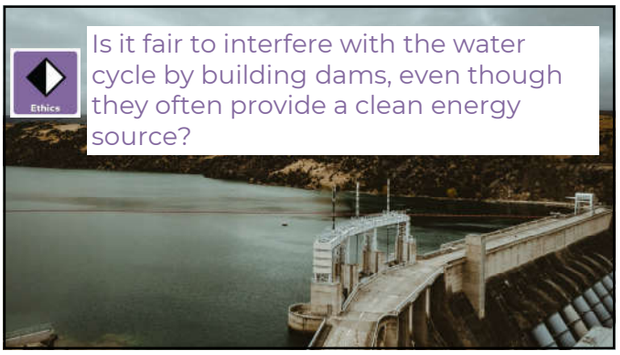
Unanswered Questions

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



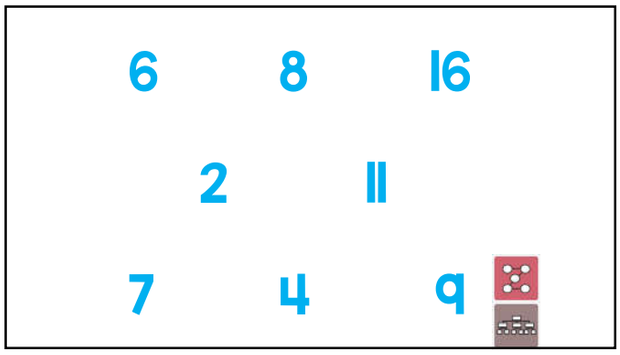
142

IDEA # 13

143

self-differentiate math

144



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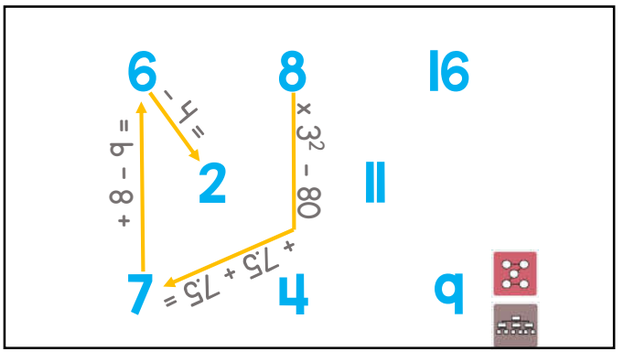


146

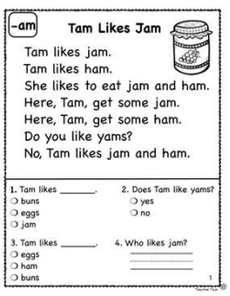
IDEA # 14

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

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

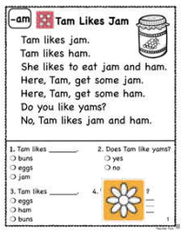
th	sh	ch	ow	oo	ing	ar	oy	ay

Blending Sounds

mom	dad	dog	rat	cut	pet	fin
hem	sad	vet	win	nod	cub	job

150

What I do now

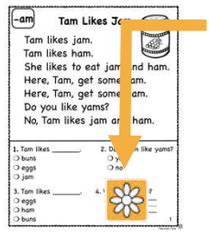


"We're learning the –am pattern."

"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]

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	ar	oy	ay

mom	dad	dog	rat	cut	pet	fin
hem	sad	vet	win	nod	cub	job

153

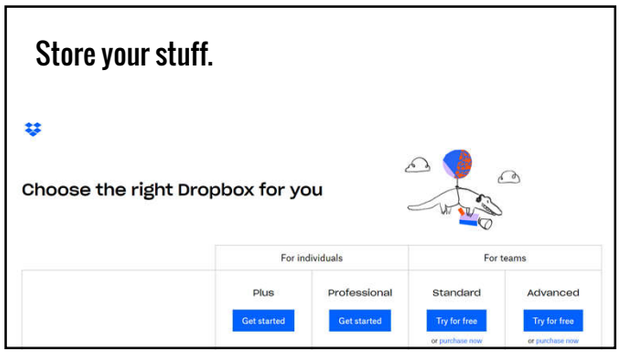
IDEA # 15

154

155

Be Generous

156



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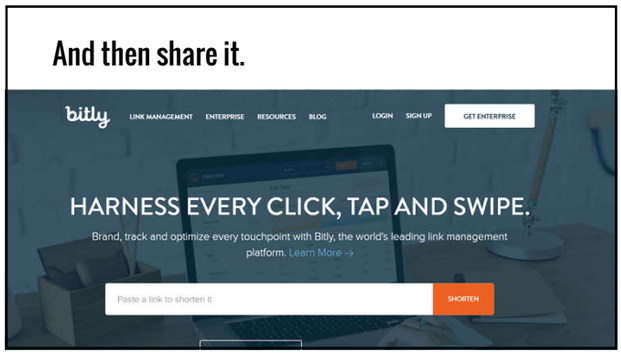


158

159

160

161

162

163

164

165

IDEA # 17

166

personalize

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.

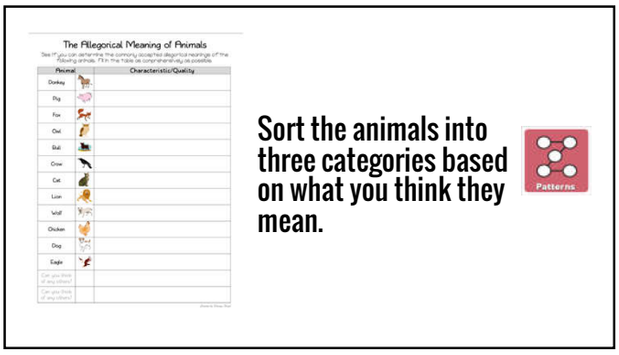
Animal	Characteristic/Quality
Donkey	
Pig	
Fox	
Owl	

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?	

168



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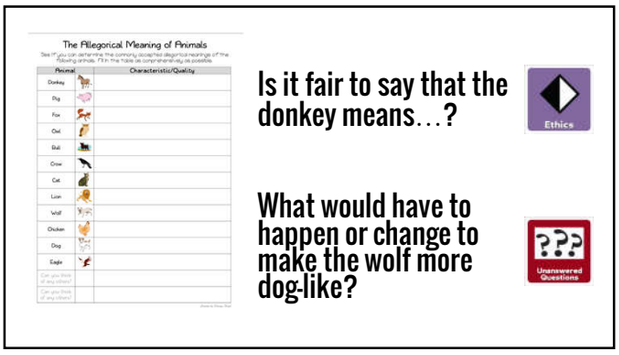

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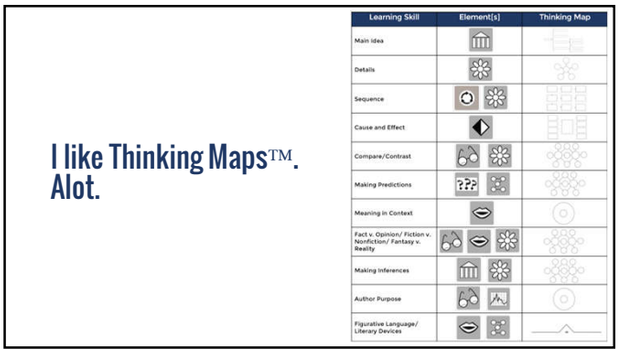
171

172



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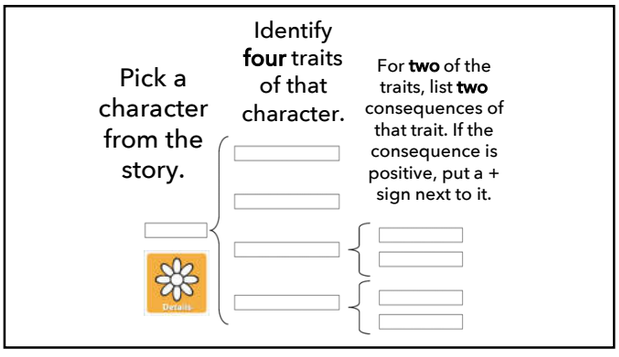


174

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?

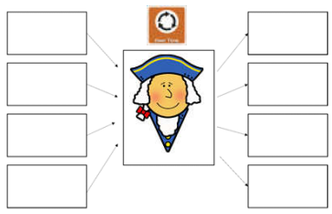
175

sign next to it.

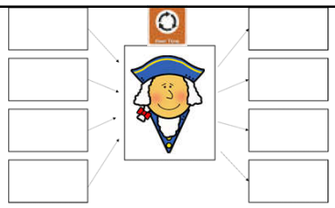
Thinking of what you just identified and considered, do you think the character's traits were a hindrance or a help to him/her and why?

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.

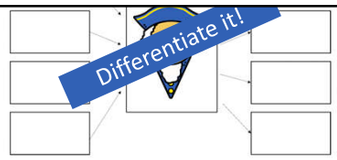


177



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



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?

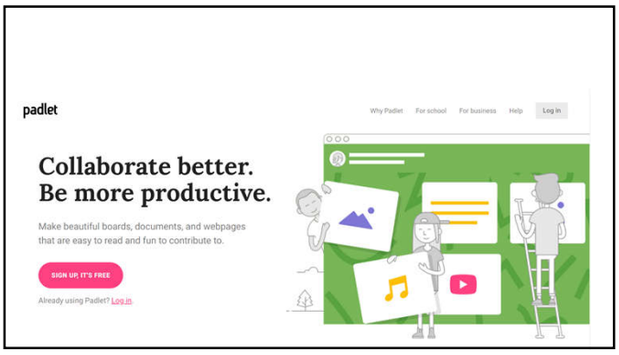
179

IDEA # 19

180

use with digital activities

181



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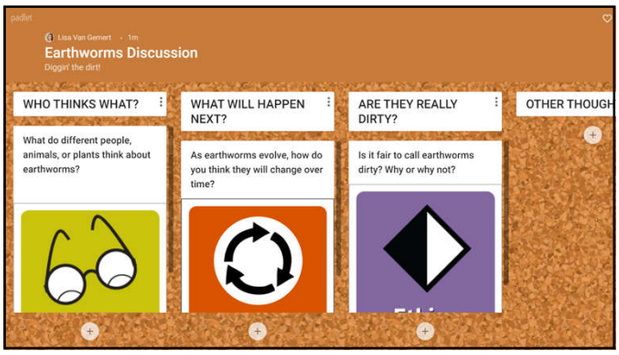


183

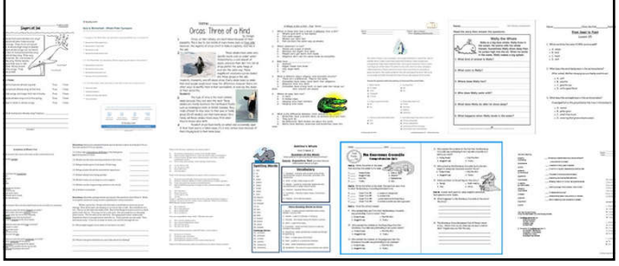
IDEA # 20

184

use instead of a quiz

185

Instead of this, how about…



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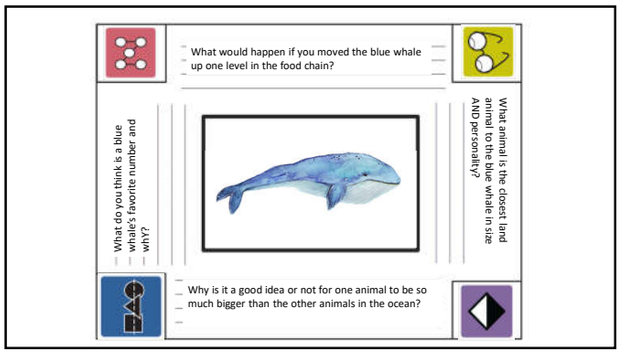
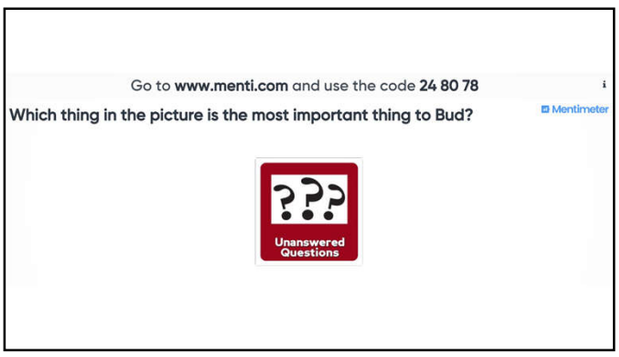


187

188

189



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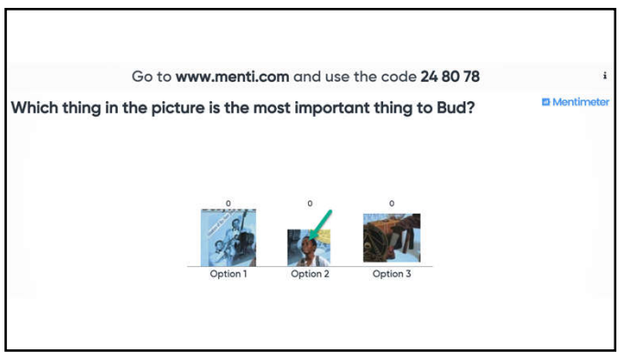


191

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."

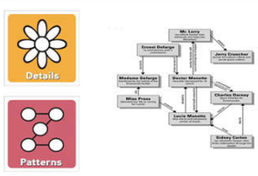
194

The solution!

195

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

196



197

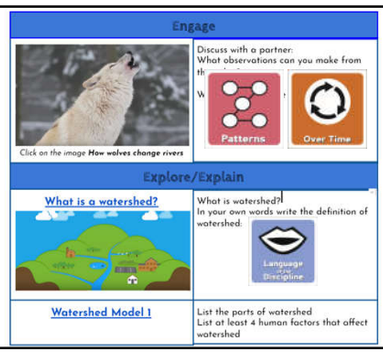
IDEA # 23

198

use with hyperdocs

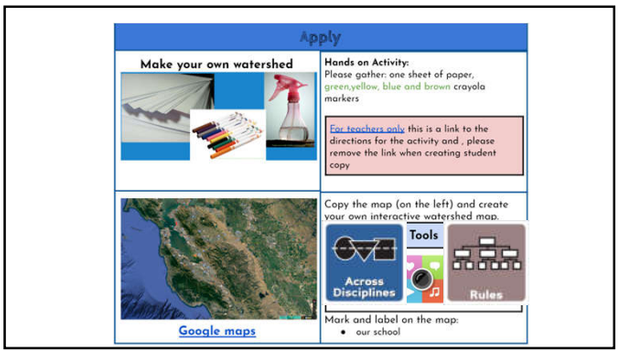
199

Hyperdocs



by Halina HG2465@gmail.com

200



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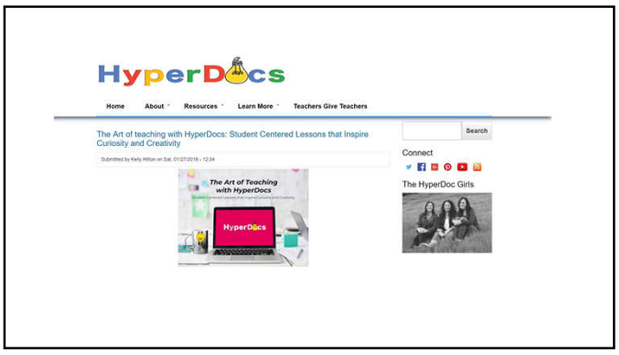


202

IDEA # 24

203

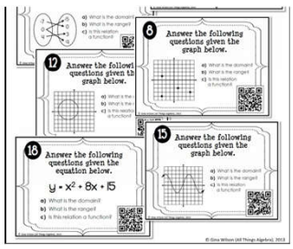
give lots of different kinds of practice

204

First: Task Cards

Rules

Details

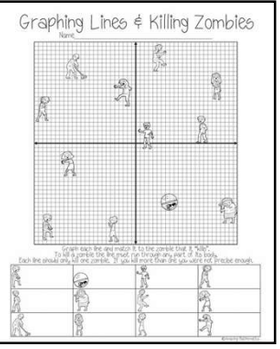


205

First: Graphing Lines & Killing Zombies

Rules

Details

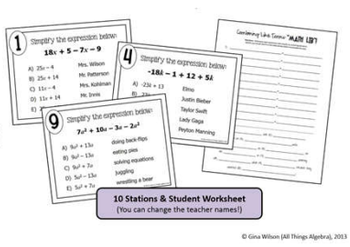


206

Next: Mad Libs!

Language Arts Discipline

Details



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

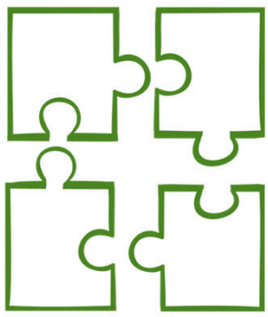
209

diversifying an activity

210

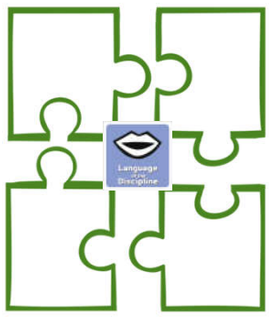
What are the three basic ways animals get food in the food chain?

List them in a puzzle piece.



211

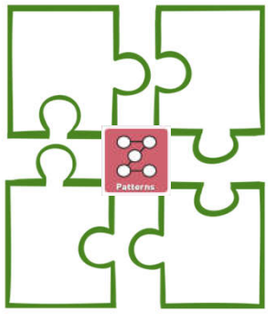
Define an apex predator on the back of a puzzle piece & draw one on the front of the puzzle piece.



212

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

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



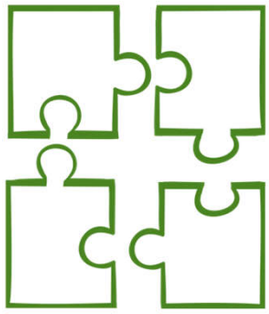
213

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

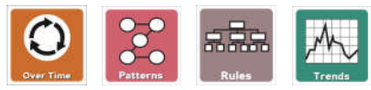
IDEA # 27

218

test reflection

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 the simply *misunderstood a* ***rule.***
- Perhaps students need to *notice a recent* ***trend*** in their work.

220

IDEA # 28

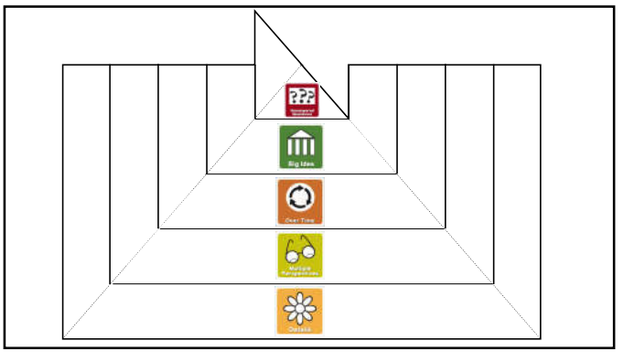
221

with foldables

222

Use it to organize foldables for interactive notebooks!

223



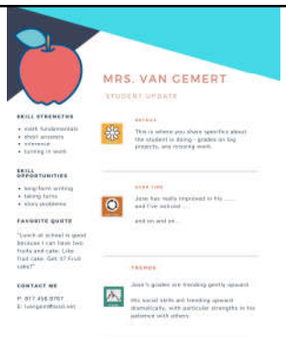
224

IDEA # 29

225

communicate with parents

226



227

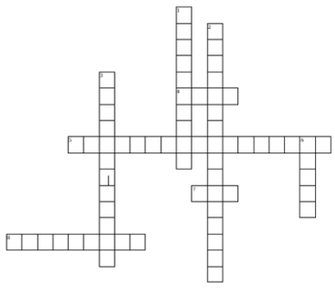
IDEA # 30

228

balancing crosswords

229

Colonial Exploration



230

Across

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

Down

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 a particular set of 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

Example #1

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

Example #2

246

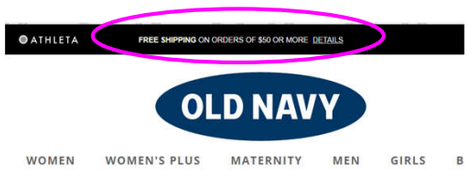
Shall we play a game?

247

Okay/Not Okay

248

Ordering something you don't really want to get your order to qualify for free shipping, knowing you're going to send it back.



249

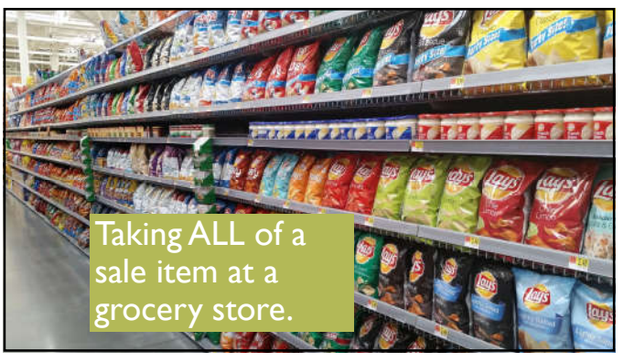
Taking shampoo/ conditioner/ soap from hotel rooms, even if you didn't use it while you were there.

250

Not really stopping at a stop sign out in the middle of nowhere.

251

Taking ALL of a sale item at a grocery store.



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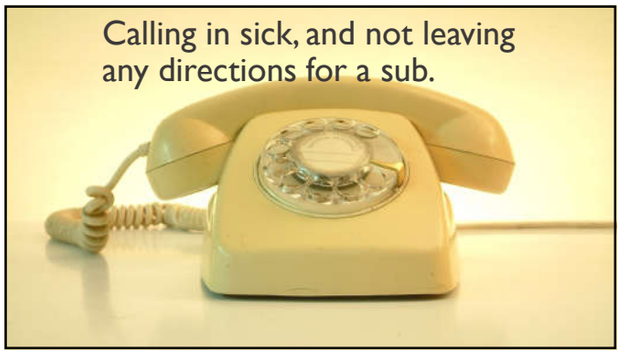

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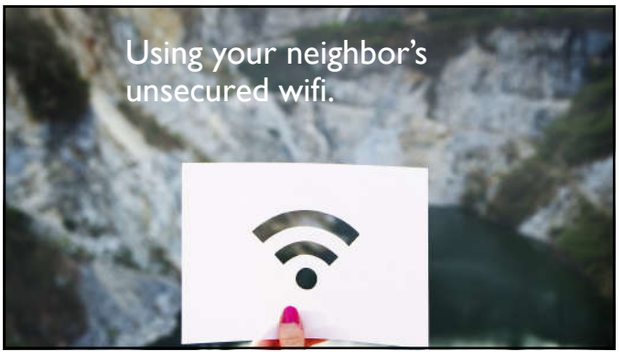


254

255

256

257

258

Ethics

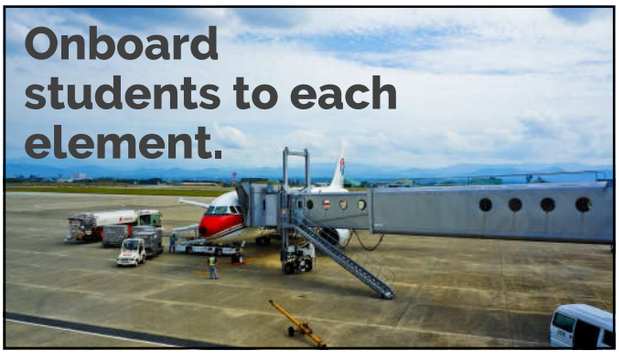
259

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

260

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

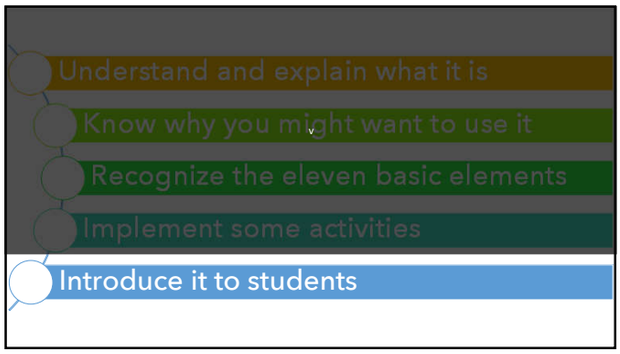
261



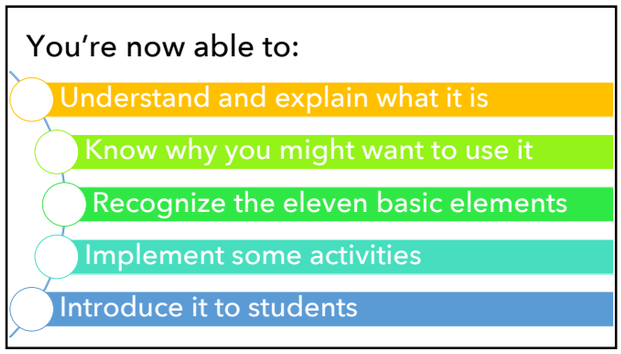
262

263

264


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

265


You're now 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

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