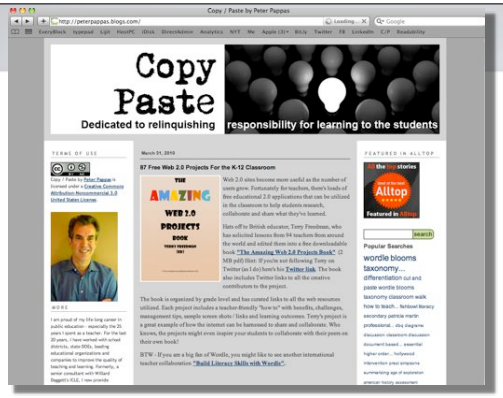
engaging teens in a 21st century classroom

Presented by
Peter Pappas



Contact

- **web: peterpappas.blogs.com**
- **cell: 585.355.5859**
- **email: peter@edteck.com**
- **Twitter/edteck**

we'll use an audience response system

Courtesy of:

Mike Venrose
TurningTechnologies
1-866-746-3015
mvenrose@turningtechnologies.com

Foundations of engagement

Kinds of thinking

Relevance

What is critical thinking?

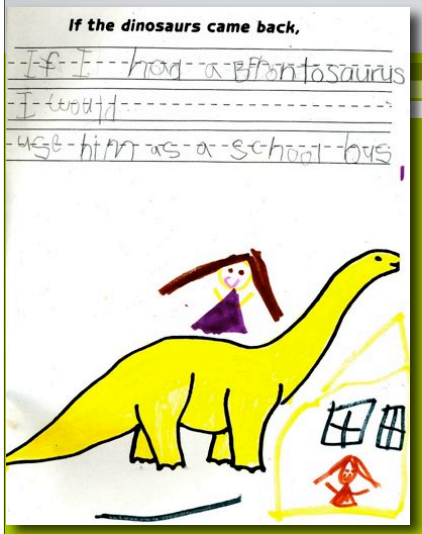
Critical thinking = Higher level Bloom's Taxonomy

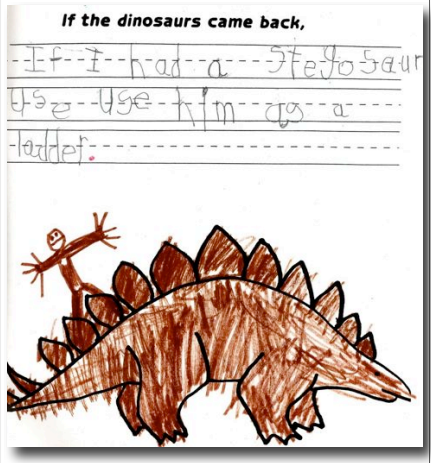
- **Creating** -generating new ideas
- **Evaluating** - justifying a decision or choice
- **Analyzing** - breaking into component parts
- **Applying** - using information in a new setting
- **Understanding** - explaining idea or concept
- **Remembering** - recalling information

Creating

A new combination of old elements

Kindergarten *Creators*





What is relevance?

Learning is relevant **when the student:**

- understands how this information or skill has some **application in their life.**
- has an opportunity to **follow their own process rather than just learn "the facts."**
- is not just learning content and skills, but is **reflecting on their work and their progress as learners.**

Justin, a second grader, talks about math

From: *Math Is Language Too: Talking and Writing in the Mathematics Classroom* Phyllis Whitin

Question: A cruise ship carries 200 passengers and crew. Each life boat carries 30 people. **How many lifeboats will the ship need?**

Almost one-third of the 8th graders who took the NAEP math test answered

"6 remainder 20"

Move students toward greater relevance

Using skills and knowledge in routine school setting.
Work as directed by the teacher.

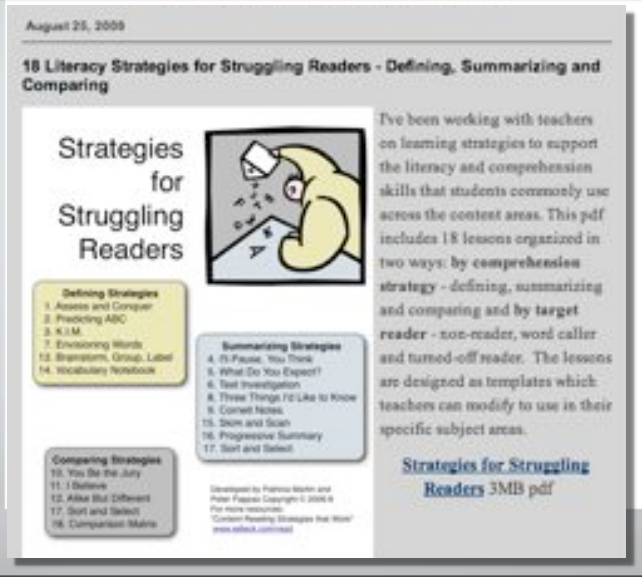
Using skills and knowledge for myself in the real world.
Figuring out my own approaches.

Evaluating my progress

Stategies to support student engagement

- Summarizing
- Comparing
- Reflecting

18 Strategies to download: http://bit.ly/U6olo


August 25, 2009

18 Literacy Strategies for Struggling Readers - Defining, Summarizing and Comparing

Strategies for Struggling Readers

I've been working with teachers on learning strategies to support the literacy and comprehension skills that students commonly use across the content areas. This pdf includes 18 lessons organized in two ways: by **comprehension strategy** - defining, summarizing and comparing and by **target reader** - non-reader, word caller and turned-off reader. The lessons are designed as templates which teachers can modify to use in their specific subject areas.

Strategies for Struggling Readers 3MB pdf

Summarizing

Support literacy
Raise level rigor
Greater relevance

Evaluating what's important.

Sharing what you've learned.

Summarizing builds content knowledge

Marzano's research shows student use of summarizing skills results in a 34-percentile gain in student performance.

Group 1: Teacher lectures on the essential characteristics of mammals

34% gain in content mastery

Group 2: Teacher lectures, then students do a summarizing exercise on the essential characteristics of mammals

Marzano*: Classroom Instruction that Works*

Six essential summarizing skills

- **Identify details** – can you identify key symbols, words, visual elements?
- **Recognizing context** – where is this taking place, time period, who's involved?
- **Identify relationships** – who are these people, what is their relationship to one another?

Continued - Summarizing skills

- **Identify opinions** – is there a point of view expressed in the source information?
- **Make predictions** – based on the information, what will happen next?
- **Infer meaning** – is there meaning that can be extracted from what's between the lines?

Move from identifying details to inference

Form an overall impression of the image and then examine individual items.

Next, divide the image into sections and study each to see what new details become visible.

List people, objects, and activities in the image

Elements for teaching summarizing

- Allow students to make their own judgments about what's important (instead of just repeating the details the teacher highlights)
- Students need to be able to share what they've learned with an audience other than the teacher.

Elements for teaching summarizing

- Allow students to make their own judgments about what's important (instead of just repeating the details the teacher highlights)
- Students need to be able to share what they've learned with an audience other than the teacher.

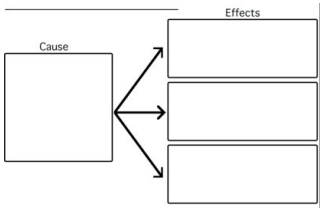
Explaining what you've learned is telling a story using a narrative patterns.

- Student may need **explicit training** about **narrative patterns**.
- Recognizing **how information is organized** helps to **analyze original** work and **summarize it** for their **audience.**

Narrative Pattern	Description	Cue Words
Description	Describes a topic by listing characteristics, features, and examples	for example, characteristics are
Comparison	Explains how two or more things are alike and/or how they are different.	different; in contrast; alike; same as; on the other hand
Cause / effect	Lists one or more causes and the resulting effect or effects.	reasons why; if...then; as a result; therefore; because
Problem / Solution	States a problem and lists one or more solutions for the problem.	problem is; dilemma is; puzzle is solved; question... answer
Sequence	Lists items or events in numerical or chronological order.	first, second, third; next; then; finally

Non-linguistic Representations

Description: listing characteristics, features, and examples



Cause / Effect: one or more causes and the resulting effect or effects

Comparing Classifying

Support literacy
Raise level rigor
Greater relevance

Evaluating similarities and differences.

Sharing what you learned.

Comparing builds content knowledge

Marzano's research shows student use of comparing skills results in a 45-percentile gain in student performance.

Group 1: Teacher lectures on the essential characteristics of mammals

45% gain in content mastery

Group 2: Teacher lectures, then students compare the essential characteristics of mammals to birds

Marzano*: Classroom Instruction that Works*

Do you give students chances to develop their comparative models?

- They could select items to compare from a teacher-produced list.
- They could independently decide what to compare.
- Can include some combination of selecting both the items and / or characteristics.

How is the comparison useful? What do you learn from it?

Elements for teaching comparing and classifying

- We must ask students to develop the comparison, not just learn and repeat the model that we present to them.
- Student must share what they learned from the comparison.

Students can do comparisons in every class.

What's more important in sports … strength or agility?

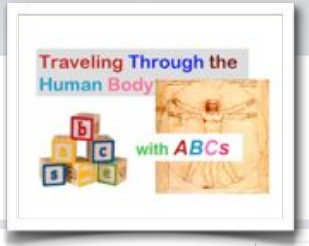
"When it comes to learning and recall, patterns can be more important than facts."

~Tim Hurson

Essential Question:
Who is doing the work?

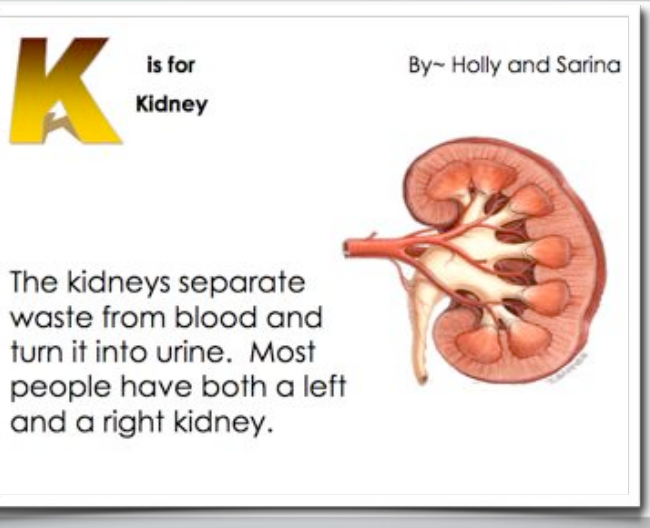
Learn to research, think, problem-solve and write like a

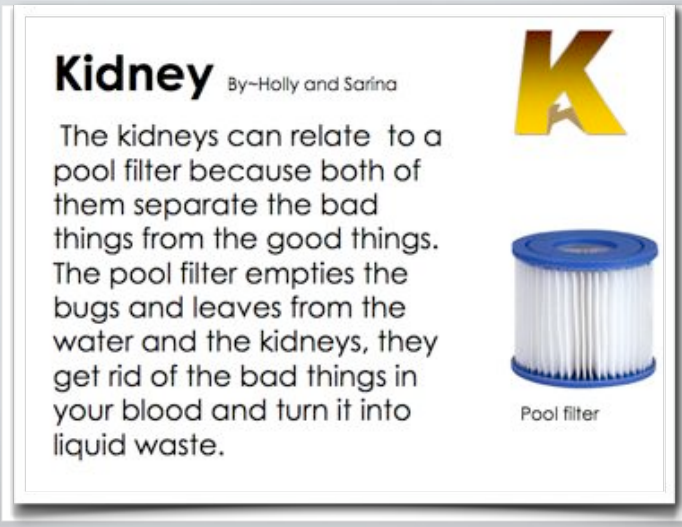
- scientist, engineer, coach, artist, historian, writer, mathematician, musician ….



Sample Project:
6th graders
write ABC book

- Students study the organs of the body
- Develop a comparisons
- Create an ABC book





We organized
and decided who was going to
do what and how.

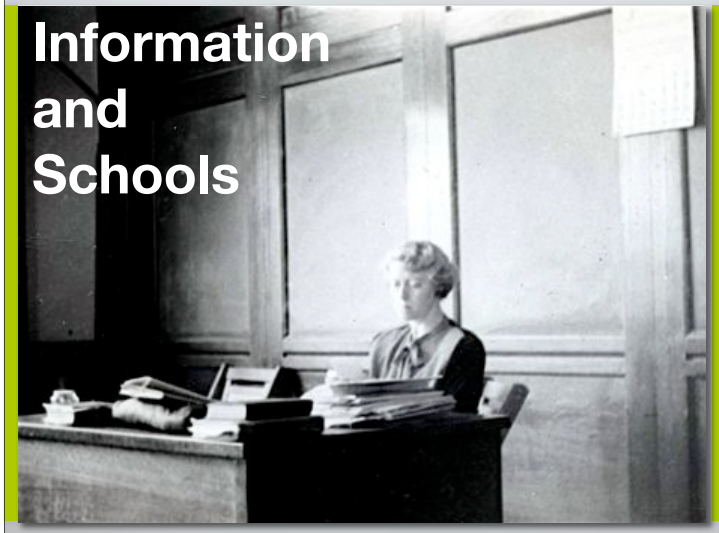
Then we read everything over **to see if everything made sense to our audience**

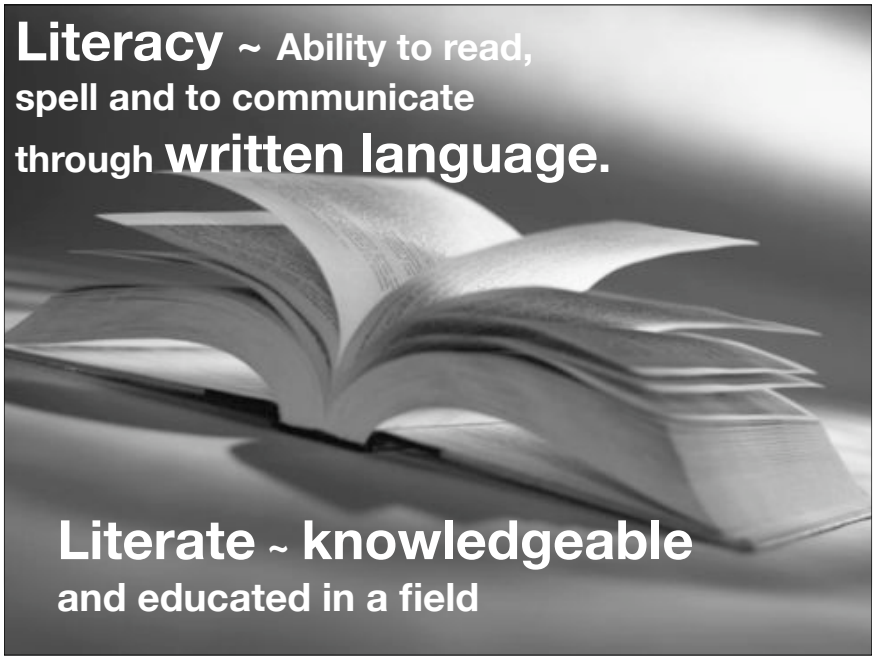
What process did you use to complete the project?

What happens in schools when life's an open book test?

21st century skills

Collaboration
Critical thinking
Communication
Creativity
Connectivity

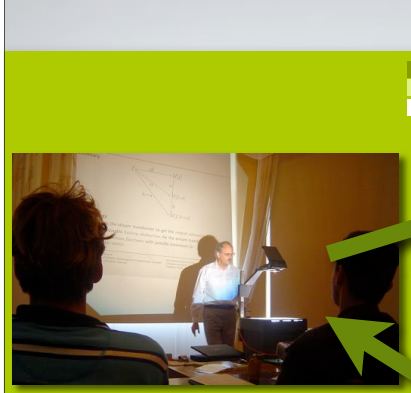


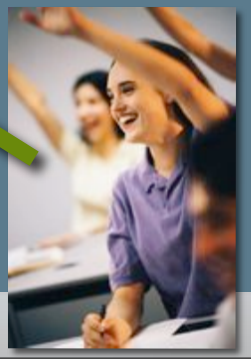


Schools developed as information centers.
Teachers functioned as "information gatekeepers."

Teachers "*knew*" the information.

Students "*got*" it from teachers and "*learned*" it.





Information flow in a "traditional" classroom

teaching as telling

Our natural, unexamined model for teaching is Telling.

... to carefully and clearly tell students something they did not previously know.

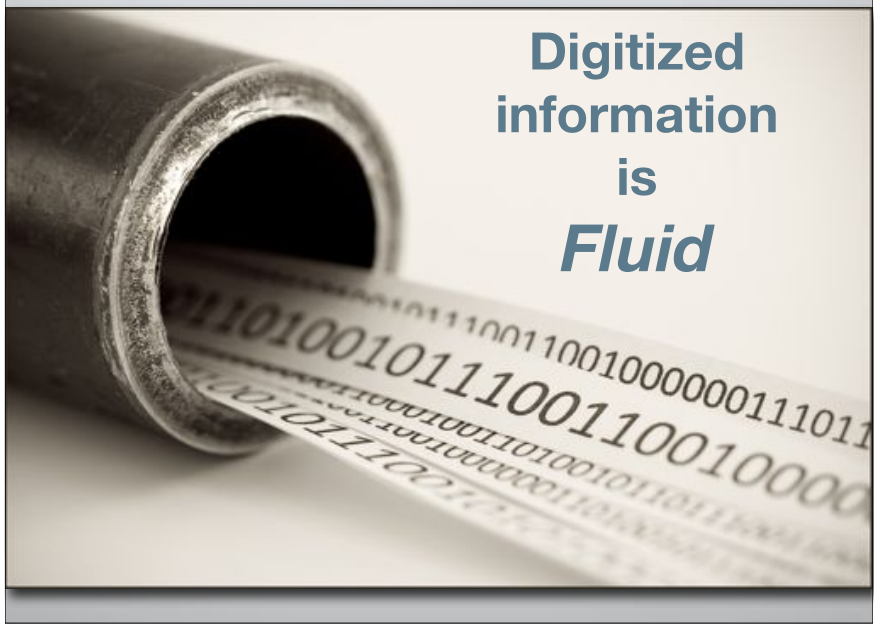
Knowledge is transmitted, we imagine, through this act of telling.

~ Donald Finkel

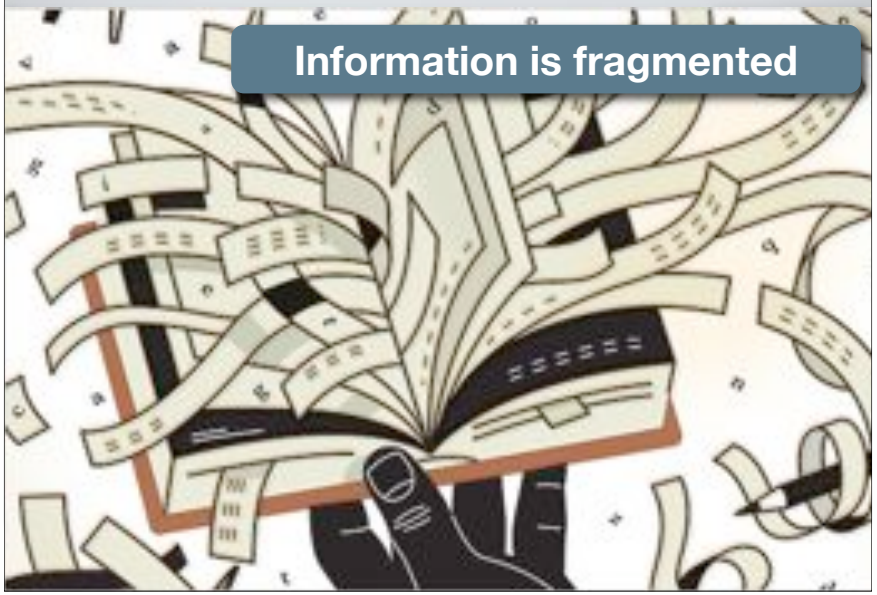
The results ...

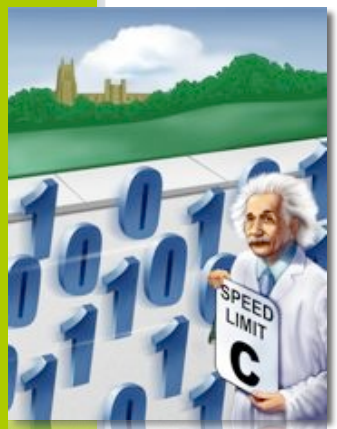
"No generation in history has ever been so thoroughly prepared for the industrial age."

~ David Warlick



Information is fragmented





New technologies have put **students in charge of** the **information** they access, store, analyze and share.

new "digital age"

- Fosters a **bottom-up** information flow.
- **We** can be **creators** as well as consumers **of content**

Digital tools foster personal creativity

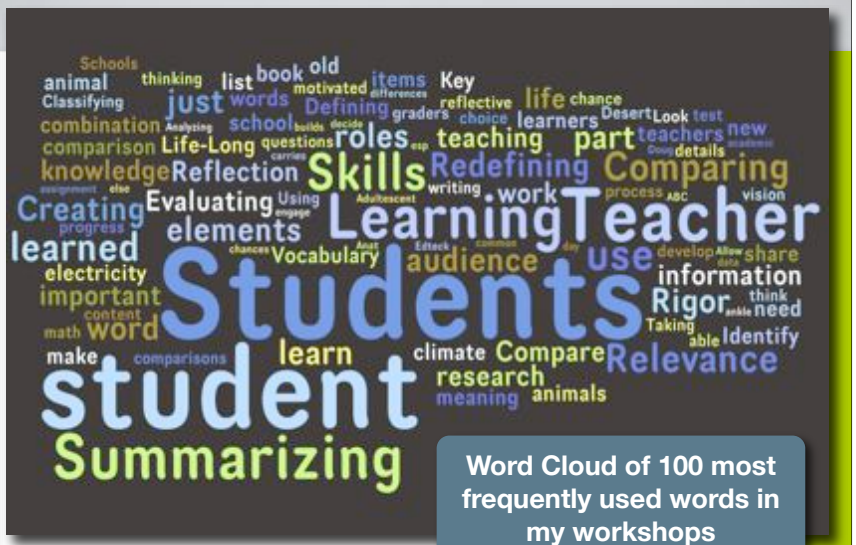
Digital age engages students with choices

#1 factor for improving student motivation is choice.

Not whether the student does the assignment, but how they engage in the work.

~Doug Reeves

Technology helps us see information and ideas in new ways



Word Cloud of 100 most frequently used words in my workshops

Wordle

There's a new "literacy"

- find information
- decode it
- critically evaluate it
- organize it into digital libraries
- be able to share it with others
- maintain a selective focus

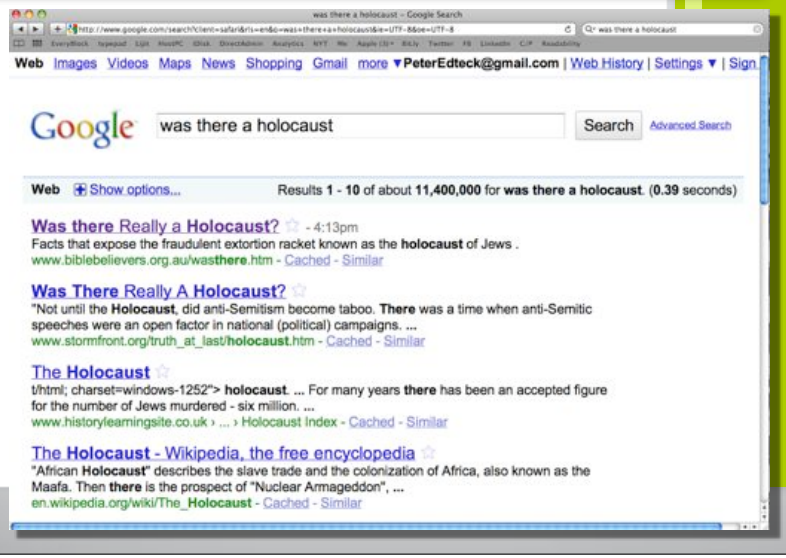
Adapted from David Warlick

But students are adrift in a sea of text without context

And the information gatekeepers are gone

Search is highly personal and empowering. It's the antithesis of being told or taught.
~ Eric Schmidt, Google CEO

I googled "was there a holocaust"



Literacy is selective focus

To be succesful in digital age they'll need to be reflective and self-directed

TEACHING:

creating learning experiences that provoke student reflection

Traditional Writing is *Assigned*	Writing Assigned with *Choice*
Students are asked to write only on the **teacher's topics**.	**Students** can **develop topics** that matter to them.
Student **writes for the teacher**.	**Audience and purpose** for writing is identified.
Teacher grades their writing.	**Students** are asked to **reflect on their growth**.

Reflection should be higher-order thinking

It's about patterns, evaluations and creating goals

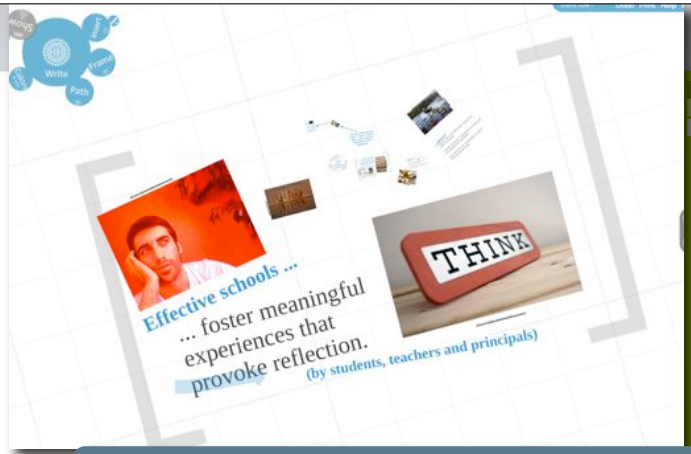
Higher and lower-order reflection

- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering

I can describe patterns, create my own connections, and assess my progress

I can tell you what I did, but don't expect me to think about it

Taxonomy of Reflection: Students, Teachers, and Principals: http://bit.ly/8cLsBX



See my prezi presentation on Reflection at:
http://bit.ly/cKbFFj