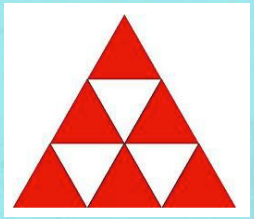
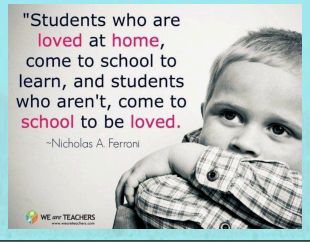
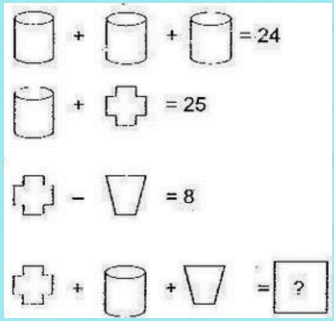
Brain Research & Classroom Implications

Count the Triangles in the Picture







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About Me

14 years in Business and Industry

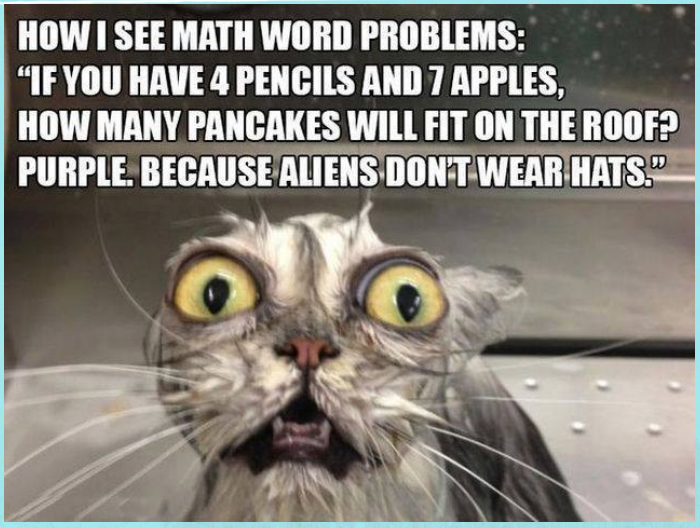
21 years in Education

I love having my picture taking with random good looking people in the street

My Goals Today

- To make you think critically about some issues in education particularly as they relate to brain research
- To share resources and information as they pertain what we know about the brain and the learning process
- To keep you awake at one of the worst times of the day to be listening to a presentation
- To share some sample lessons which engage students and hit on higher level learning and assessment

Before we get started, you should know this about me.



Let's just drop some bombs straight out of the gate.....

Why Kids Hate School?: Nikhil Goyal at TEDxYouth@BFS

School Is Boring As H-E -Double Hockey Sticks

School Is Structured Like Prison

To Which Educators Say, "Other than that Mrs. Lincoln, how was the play?

Is He Right?

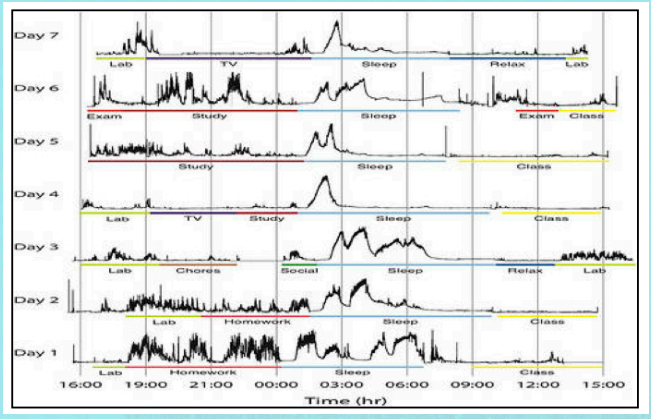
Perception and Reality - Is he right or is it just his perception?

- Rule #10 - Vision - Vision trumps all other senses.

So Is He Right? A Week In the Life

Electroencephalogram (EEG)

An electroencephalogram (EEG) is a test that measures and records the electrical activity of your brain.



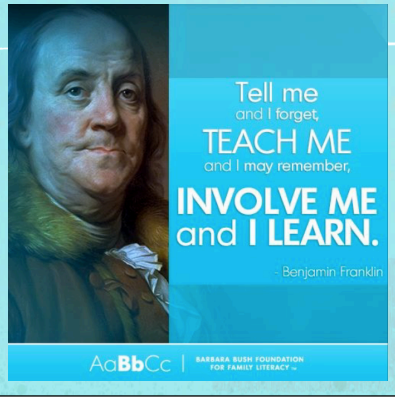
Finish this sentence -

If you wanted to create an education environment that was directly opposed to what the brain was good at doing, you probably would design something like a .....brain rules

- John Medina

In truth, young Nikhil's thoughts are not unique…

Indiana University Survey of High School Student Engagement – Two out of three respondents (66%) in 2009 are bored at least every day in class in high school; nearly half of the students (49%) are bored every day and approximately one out of every six students (17%) are bored in every class.



Responses to the second question provide insight into the sources of students' frequent boredom; students could mark as many reasons for their boredom as were applicable. Of those students who claimed they were ever bored (98%), the material being taught was an issue: more than four out of five noted a reason for their boredom as "Material wasn't interesting" (81%) and about two out of five students claimed that the lack of relevance of the material (42%) caused their boredom.

Mapping our Brains

- Why do we constantly ignore brain research in education policy?
- If we truly want our students to speak another language like a native and increase the likelihood it will be a lifelong "tool" in our brain's arsenal, what does brain research tell us we should do?
- Perhaps more importantly, why do we ignore what brain research and common sense tell us? The Hairball effect....
- Spooky Consequences of our common practice is illustrated on the next slide...

The Importance of Learning Foreign Language at an Early Age

- As you can see the consequences of not doing so can be severe

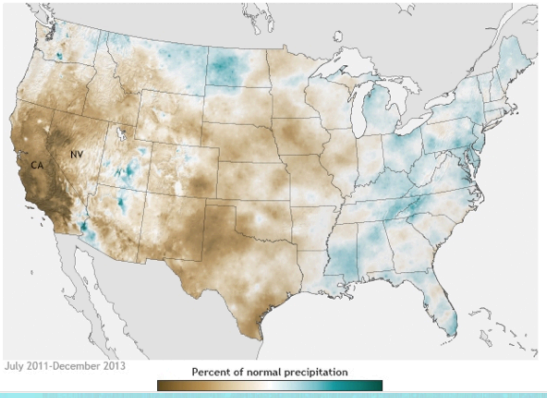
Partner Up and Look At The Questions on This Handout

Thoughts?

January precipitation deficits keep California drought outlook

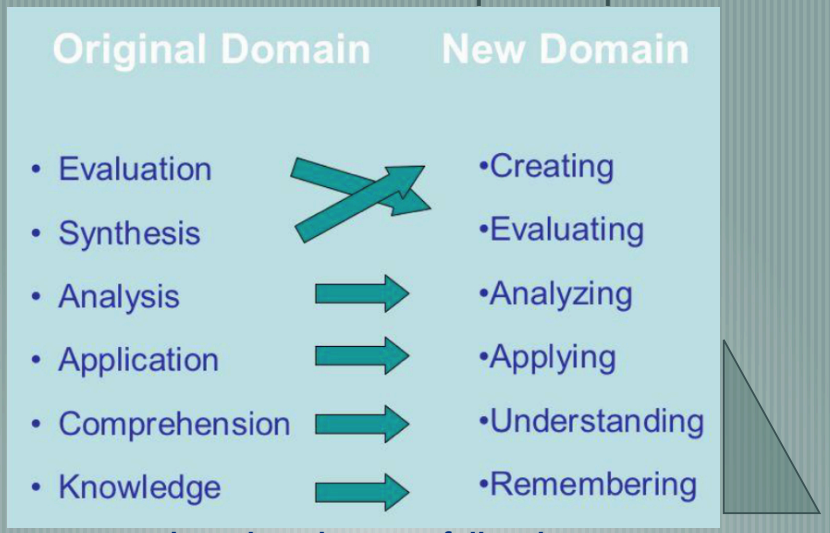
February 7, 2014

In our first post on the drought emergency in California and Nevada, we talked about conditions on a statewide level over the past two and half years. But a statewide average over a relatively long period can hide important variation from place to place, especially in a mountainous state like California, where the high elevations can get several times more average annual precipitation than adjacent valleys do.



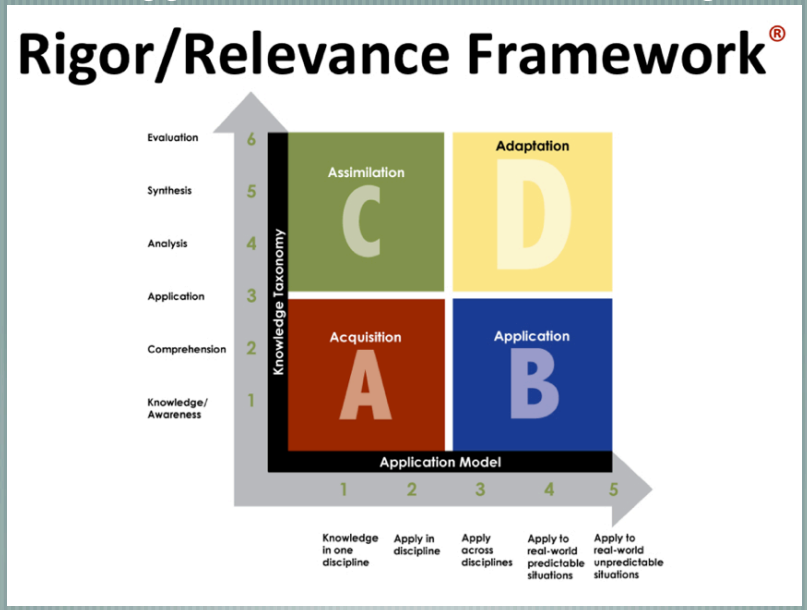
Quality, Brain Friendly, Instructional Delivery

Some Terms We Will Use and Concepts to keep in Mind

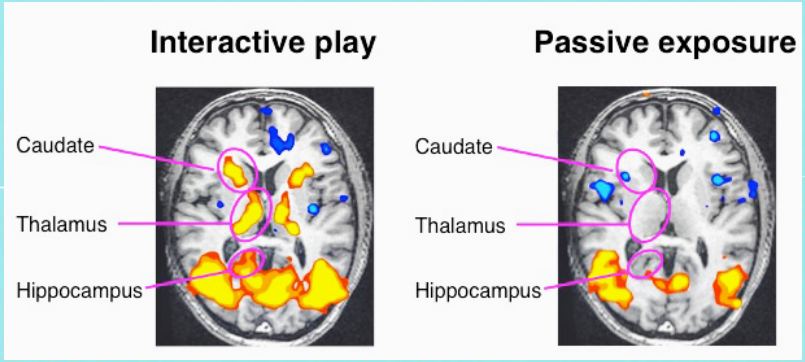


Where does the A.C.T. fall on here?

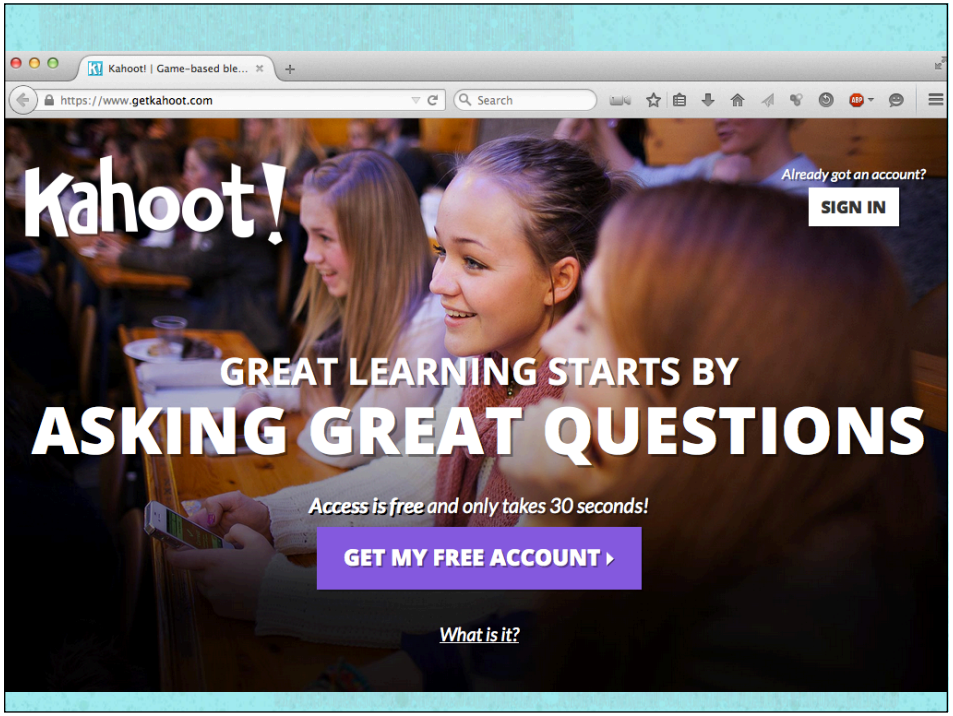
Daggett's Quadrant D is "Creating"



Gaming - How can we incorporate elements in our classrooms?



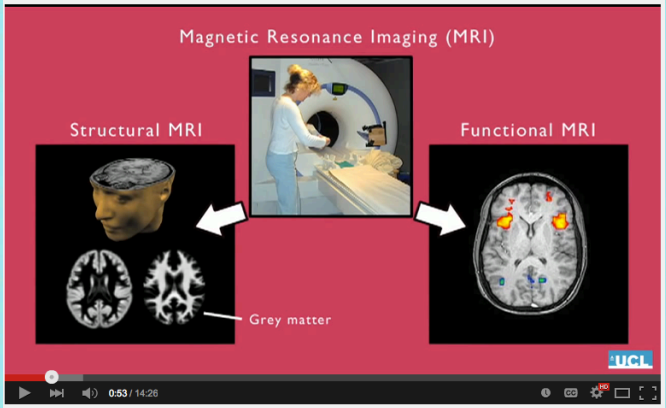
Please Open the Browser In Your Cell Phone Now


Kahoot! | Game-based ble...
https://www.getkahoot.com
Search
Kahoot!
Already got an account?
SIGN IN
GREAT LEARNING STARTS BY
ASKING GREAT QUESTIONS
Access is free and only takes 30 seconds!
GET MY FREE ACCOUNT
What is it?

Let's Look at the Science

- Functional Magnetic Resonance Imaging (fMRI)
- Functional Magnetic Resonance Spectroscopy (fMRS)
- Electroencephalogram (EEG)

A look at the Science
fMRI and Brain Activity



Sarah-Jayne Blakemore: The mysterious workings of the adolescent brain

https://www.youtube.com/watch?v=6zVS8HIPUng

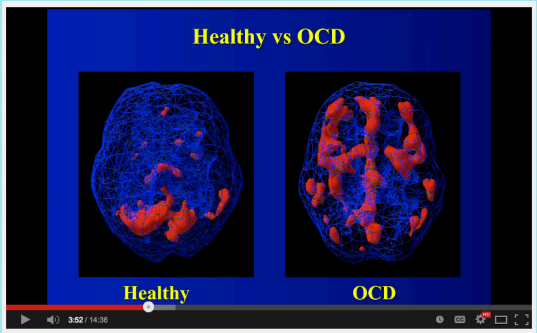
Show your kids this slide….

The most important lesson from 83,000 brain scans | Daniel Amen | TEDxOrangeCoast

Advances In Radiology

- We are learning more about brain function and the human mind in general every day. The incredible advances in diagnostic imaging and brain research are truly in their infancy.
- These advances are assisting Doctors with diagnosis and treatment - they can literally "see" the success
- Another example on the next slide of an OCD individual

OCD - The front part of the brain typically works too hard…



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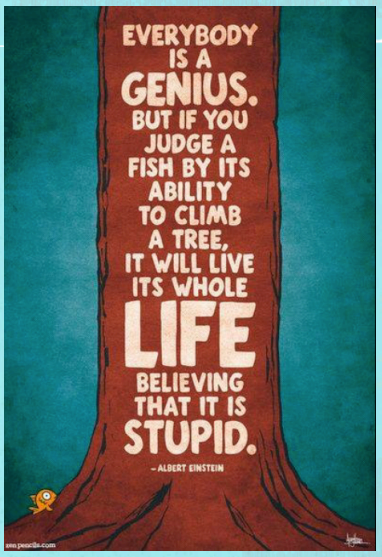
Let's acknowledge the obvious. We are all unique.



So why are we measuring and defining "success" in our schools based on a standardized test?

This chart represents the teaching experience of most people making decisions about education.

Sir Ken Robinson on part of what's wrong with the educational system

Sir Ken Robinson - "Do Schools Kill Creativity?" - TED talk

Another Example of what this means for our classroom....

Partner Up for Question 1

The above Cartogram is a graphic representation of the world by population. Your group has been asked to advise the board of directors with Apple Computer on developing strategies for global expansion. The company has established strong market presence in the United States and recently posted a record quarter for the market in China. Given this information, answer the following questions and be prepared to explain your answers:

1. The board is seeking your input on which 3 countries they should seek to target for expansion. As a group, list 4-6 factors you will consider in determining what factors are important in selecting your countries.