Teaching College and Career Ready Students
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International Center for Leadership in Education

Agenda
- Welcome
- Teaching College and Career Ready Students
- Closing
- College & Career Ready
- The Rigor and Relevance Framework
- The Daggett System For Effective Instruction

Holland Michigan

My Credentials
- Professor
- Hope College
- Doctoral Candidate
- Director of Content Development
- International Center for Leadership in Education

Linda’s Family

All We Have In Common
- With the people sitting near you form a group of 3-5
- Create a list of at least three things you have in common.
- Be ready to share some items from your list with the group.
Why do we need to get to know the teacher? (Linda)

- Emotion is the gatekeeper to learning
- Relationship is a key element in every classroom
- Builds trust
- Find common threads of interest
- Fun

Goals for the Session

My Goals:
- Apply the Rigor/Relevance Framework to various engaging instructional settings, learning experiences, instructional strategies and assessments.
- Create action plans for...

Who Are the Students We Teach?

Digital Natives
Live in Global World
Parents & Students have new choices
- On-line learning

Common Core State Standards

- Fewer
- Higher
- Deeper
- The students will be expected to THINK and apply their knowledge
- Computerized
- Next Generation of Testing, 2014
### Why Change?

- Career and College Ready
- 21st Century Skills
- Technology
- Foundational Knowledge
- Pursuit of Excellence
- Maximize Potential

### Who Are the Students We Teach?

- Digital natives
- Live in global world
- Parents & students have new choices
  - Online learning

### Teachers are working hard, however....

### Schools are Improving
Schools are Improving

Changing World

School Improvement

Daggett System
for Effective Instruction

Teaching

How Students Learn

Today’s Students “Do” To Learn

Instead of Learning to Do
Brain Geography...

The Brain

SO WHY DOES INFORMATION FROM THE NEUROSCIENCES MATTER?
IT HAS BEEN A CURIOSITY FOR MUCH OF HUMAN HISTORY!

Learning is the brain’s primary function.

Yesterday’s thinking.....
Phrenology – 1840s and 50s

Phrenology is an early practice at the end of the 19th century that claimed to be able to identify mental capacity and character by feeling the bumps of the skull.

Today’s Science...

SPECT Scans
PET Scans

MRI and fMRI

It is possible to see the mind at work!

Brain Basics

Lobes of the Brain

Communication of Neurons
Mirror Neurons in the Brain

A new class of brain cells -- mirror neurons -- is active both when people perform an action and when they watch it being performed.

Amygdala

The psychological sentinel of the brain because it plays a major role in the control of emotion.

It is connected to many parts of the brain and plays a critical part in learning, cognition and emotional memories.

Amygdala-Almond

Hippocampus

It helps us remember events in recent past, as well as responsible for sending new information and experiences to be stored in the cortex in long-term memory.

Critical to learning and memory formation.
Hippocampus—FEED THE HIPPO!

Corpus Callosum

Corpus Callosum
Dirt Road to Super Highway

Reticular Activating System

Reticular Activating System
The Filter...The Senses

Strategies for the Structures

What lessons have you taught that activated these structures in your students’ brains?

• Amygdala—Emotion
• Hippocampus—Memory
• RAS—Attention

200 million nerve fibers connecting the right and left hemispheres and providing instantaneous communication.
Not fully mature until adolescence—ages 16 to about 25.

The RAS receives information from all over the body and acts as a central initial regulator for attention, arousal, sleep-wakefulness and consciousness.

It filters out distractions or trivial sensory information.

• Amygdala—Emotion
• Hippocampus—Memory
• RAS—Attention
How students learn

Rigor/Relevance Framework

Teaching

What is Rigor and Relevance?

With your elbow partner discuss the following:
- Your definition of rigor
- Your definition of relevance
- The skills you think 21st Century Learners need to be successful in life

Rigor is...

- Scaffolding thinking
- Planning for thinking
- Assessing thinking about content
- Recognizing the level of thinking students demonstrate
- Managing the teaching/learning level for the desired thinking level

Rigor is NOT...

- More or harder worksheets
- AP or honors courses
- The higher level book in reading
- More work
- More homework

RIGOR

means framing lessons at the high end of the Knowledge Taxonomy

EVALUATION

SYNTHESIS

ANALYSIS

APPLICATION

COMPREHENSION

KNOWLEDGE
Rigorous Lessons ask Students to:

- EXAMINE
- CLASSIFY
- GENERATE
- CREATE
- SCRUTINIZE

PRODUCE

DEDUCE

ASSESS

PRIORITIZE

DETERMINE

A Relevant Lesson asks Students to...

USE THEIR KNOWLEDGE
TO TACKLE
REAL-WORLD PROBLEMS
THAT HAVE MORE THAN ONE SOLUTION

Relevant

Real World Application in Unanticipated Situations

Knowledge Taxonomy

6. Evaluation
5. Synthesis
4. Analysis
3. Application
2. Comprehension
1. Recall Knowledge

Bloom’s Taxonomy
Application Model

5 Application to real-world unpredictable situations
4 Application to real-world predictable situations
3 Application across disciplines
2 Application within discipline
1 Knowledge of one discipline course

What is Relevant to TODAY’s Students?

K- Born in 2007
6- Born in 2000
12-Born in 1994 (in K 2000)

What have you experienced that they have NOT?

Rigor/Relevance Framework

Students reflect on the potential use of the new information as a solution
Students apply the information learned to answer the questions or to solve the problems

Students seek information to answer questions or solve problems
Students test the relevancy of the information as it relates to the question or problem

Acquisition of knowledge / skills
Rigor
Critical Thinking
Motivation
Creativity – Innovation
Problem Solving

Relevancy
Validation

Name
Label
Select
Identify
List
Recite
Locate
Record
Memorize

Apply
Sequence
Demonstrate
Interview
Construct
Solve
Calculate
Dramatize
Interpret
Illustrate

Analyze
Compare
Examine
Contrast
Differentiate
Explain
Dissect
Classify
Diagram
Discriminate

Evaluate
Formulate
Justify
Recommend
Infer
Prioritize
Revise
Predict
Argue
Conclude
Product by Quadrant

A
- definition
- worksheet
- list
- quiz
- test
- workbook
- true-false
- reproduction
- recitation

B
- scrapbook
- summary
- interpretation
- collection
- annotation
- explanation
- solution
- demonstration
- outline

C
- essay
- abstract
- blueprint
- inventory
- report
- plan
- chart
- investigation
- questionnaire
- classification

D
- evaluation
- newspaper
- estimation
- trial
- editorial
- play
- collage
- machine
- adaptation
- poem
- debate
- new game
- invention

Rigor/Relevance Framework

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Questions By Quadrant

C
- How are these similar/different?
- How is this like...
- What's another way we could say/explain/explore this?
- What do you think are some reasons/ideas that...?
- Why did... change occur?
- What's a better solution to...?
- How would you defend your position about that...

- A
- What is...?
- How many...?
- How does...
- What did you observe...?
- What else can you tell me about...?
- What does it mean...
- What can you recall...
- Where did you find that...
- Who is...

D
- How would you design...?
- How would you compose a song about...
- How would you rewrite the ending to the story?
- How would it be different today if that event occurred...
- Can you see a possible solution to...
- How could you teach that to others?
- If you had access to all the resources, how would you deal with...
- What new and unusual twist would you create...

B
- Would you do that?
- Where will you use that knowledge?
- How does that relate to your experiences?
- What observations relate to...
- Where would you locate that information?
- Calculate that for...
- How would you illustrate that?
- How would you interpret that?
- How would you collect that data?
- How do you know it works?

What is Career Ready?

Core academic skills and the ability to apply those skills to concrete situations in order to function in the workplace and in routine daily activities

Employability skills (such as critical thinking and responsibility) that are essential in any career area

Technical, job-specific skills related to a specific career pathway

What are the 21st Century Skills?

Ways of thinking
- Creativity, critical thinking, problem-solving, decision-making and learning

Ways of working
- Communication and collaboration

Tools for working
- Information and communications technology (ICT) and information literacy

Skills for living in the world
- Citizenship, life and career, and personal and social responsibility

Putting Concepts Into Practice
What are the 21st Century Skills?

Collaborative problem-solving Working together to solve a common challenge, which involves the contribution and exchange of ideas, knowledge or resources to achieve the goal.

ICT literacy — learning in digital networks Learning through digital means, such as social networking, ICT (Information and Communication Technologies), technological awareness and simulation. Each of these elements enables individuals to function in social networks and contribute to the development of social and intellectual capital.

Common Core State Standards

- English Language Arts
- Math
- Science
  - (Draft Next Generation Science Standards)
- Social Studies (sometime this fall)

Education is changing…. are YOU? How do we get our students ready?

The Power of One

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