

Focus on Instruction



<http://www.cobbk12.org/~kennesawmountain/>

Introduction

Dr. Mimi Dyer

Coordinator

Academy of Math, Science & Technology

<http://kmhsmagnet.com>

Cobb County Schools

- Just north of Atlanta, GA
- 2nd largest school district in state
- 30th largest in nation
- 102,000 students (+2,500/yr)
- 15 high schools
- 22 middle schools
- 68 elementary schools



KMHS Profile

- Opened in 2000 with 1250 students
- Projected 2005-6 population – 3,000
- 319,000 sq. ft. instructional space on 79 acres
- 118 core and 165 elective courses on 4x4 block schedule
- 23 AP courses – 240 students/361 tests

Special Programs

- Academy of Math, Science & Technology – 260 students
- NJROTC – 145 cadets
- National Academy of Finance
- National Academy of Event Planning
- National Academy of Information Technology
- Teacher Cadet Program
- R.I.S.E. and M.I.S.E.



Extracurricular Activities

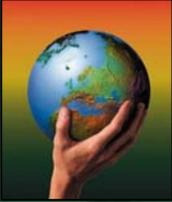
- 90% of students involved
- 22 athletic teams
- Drama – 225 students
- Marching Band – 340 students
- 51 clubs
 - Robotics
 - Recreation
 - Philosophy
 - International
 - Jazz Band
 - Model UN

"The rate of change is not going to slow down anytime soon. If anything, competition in most industries will probably speed up even more in the next few decades."

~ John Kotter
Leading Change, 1996

Globalization

- ❖ No longer worker to workplace but workplace to worker
- ❖ Cheap, ubiquitous labor
- ❖ Outsourcing
 - India accounts for 44%
- ❖ China graduates 5 times more engineers than US
- ❖ US has 3 gaps: ambition, numbers, education
- ❖ Entrepreneurial spirits will survive



The World is Flat
 Thomas Friedman

21st Century Skills



- ❖ Communication and Information skills
- ❖ Thinking and Problem Solving skills
- ❖ Interpersonal and Self-Directional skills
- ❖ Collaboration skills

Tomorrow's Classroom



- ❖ Student focused
- ❖ Interaction with experts
- ❖ Engaging project based activities
- ❖ Performance based assessment
- ❖ Integrated curriculum
- ❖ Virtual Labs
- ❖ Multiple resources
- ❖ Writing workshops
- ❖ Problem solving
- ❖ Primary resources

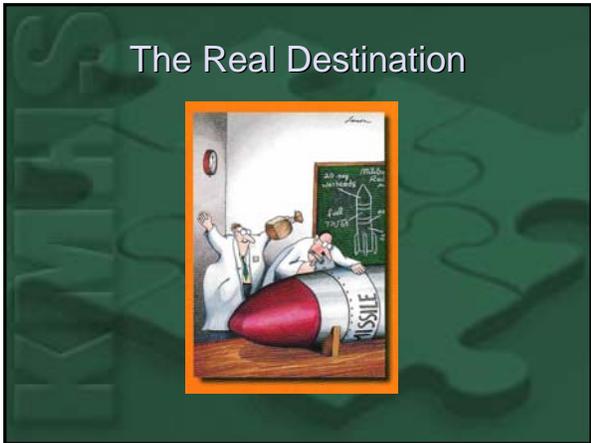
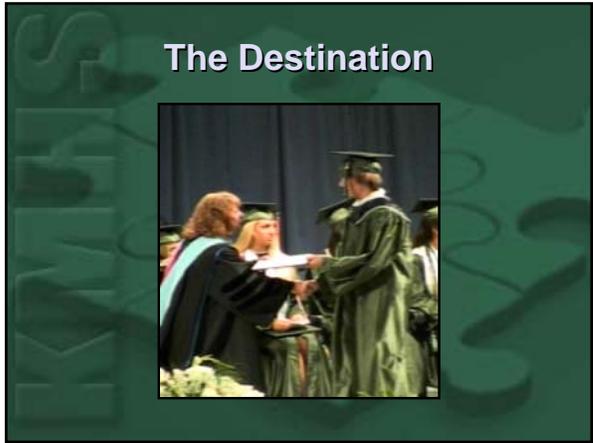
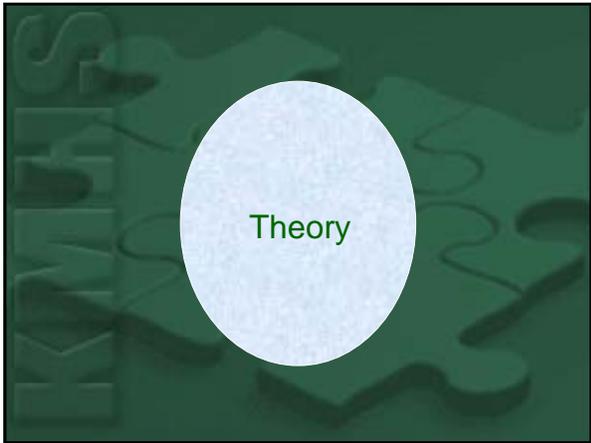
Changing the Paradigm of Teaching and Learning

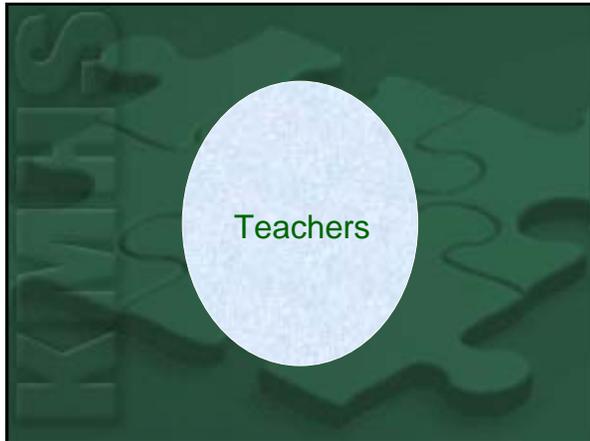
- ❖ Active **engagement** in learning
- ❖ Primary and dynamic **resources**
- ❖ **Application** of knowledge
- ❖ **Performance** based assessment




Leading Change Eight-Stage Process

- ❖ Establish a sense of urgency
- ❖ Create guiding coalition
- ❖ Develop vision and strategy
- ❖ Communicate the change vision
- ❖ Empower broad-based action
- ❖ Generate short term wins
- ❖ Consolidate gains and produce more change
- ❖ Anchor new approaches in the culture





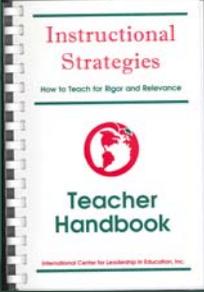
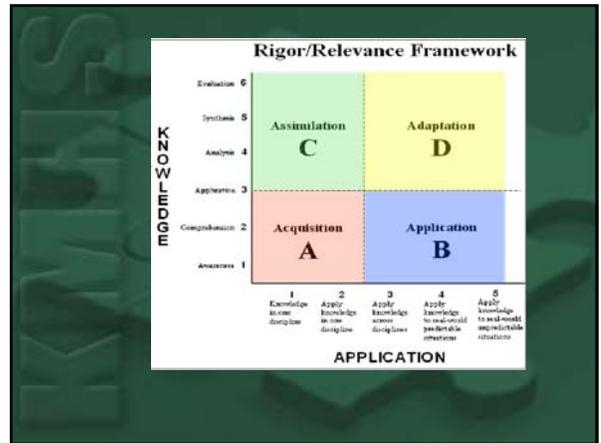
From Vision to Reality

- Research
- Practice
- Renewal

Research

Book Study

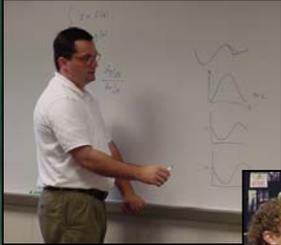
ICLE Consultants

Practice

- Professional Development Groups
- Gold Seal Lessons
- Snack 'n Shares
- Small Learning Communities

Classroom Visits




Collaboration



Renewal

Recognition & Reward

- Golden Apple
- Teacher of the Month
- D Quadrant Teacher of the Month



Classrooms

Lessons and Resources



Blogging Biology

In response to a NY Times article about eco-burial sites:

Personally, I think that the green burial sites are an amazing idea. We as people already use enough of the earth during our lives. The least we could do is give back some of what we took once we pass away. Some people might disagree and say that they won't be able to mourn their loved ones. I think that by burying their family and friends in biodegradable ways and planting some kind of greenery, they can show how much they care for and miss their loved one. As the memorial tree or shrub grows, each person will see that they too can grow and blossom without forgetting their lost friend or relative.

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Blogging AP Literature

Tennessee Williams has said of his characters, "There are no 'good' or 'bad' people. . . all are activated more by misunderstanding than by malice." Discuss the instances of misunderstanding in the play ("A Streetcar Named Desire"). How would the play be different if each character could be neatly categorized as "right" or "wrong"? Who do you think would be right, and who would be wrong? Why? Why do you think Williams insisted that they are more complex? (PLEASE write your response before you read and respond to the responses of others. Your thinking should be original!)

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Blogging Sites



<http://www.nicenet.org>

Free: does not support graphics and uploads



<http://www.typepad.com>

Fee paid: supports graphics and uploads

Romeo and Juliet Adaptation Ninth Lit/Comp

“In performance, students must understand the material at the highest level in order to write an original adaptation of a particular scene, and they must have the ability to work cooperatively in order to make the performance successful.”

~ *Writing America*, 2004

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Masque Scene
Senior Prom

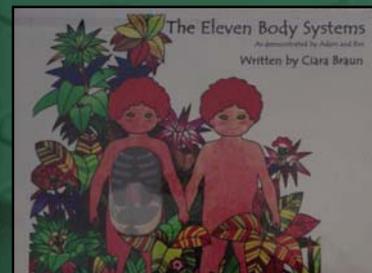


Montague/Capulet Fight Scene
Chicago, 1940's

Student Reflection

“I think these skits gave us a chance to expand our knowledge of *Romeo and Juliet* in different ways. It made sure we really understood the basis of the play and it brought us closer together as a classroom community.”

Children's Book Project Anatomy & Physiology



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Student Reflection

“At first I thought the Anatomy Systems Book was going to be just another easy project to begin the semester. Then I realized the difficulty that actually lay in producing a book like this. In order to give a summary of each of the 11 systems, I had to understand a bit about each one. This project served as a sort of introduction and course summary.”

Student Reflection

“I once had a teacher who said, ‘If you truly understand a concept, you can find at least 5 different ways to retell the information.’ The children’s book helped me think past the memorization of dry textbook material.”

Real Life Physics

- ☞ Why does pizza dough flatten when it is tossed?
- ☞ Why do golf balls have dimples?
- ☞ What causes high and low tides to occur at the beach?
- ☞ How do barrels on interstates lessen the severity of a crash?
- ☞ The physics of a piano

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Environmental Science



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Websites with Great Interactive Ideas

Cancer: Angiogenesis

A tumor consists of cells that are dividing at an abnormally high rate, crowding surrounding healthy cells and competing for nutrients. Tumor growth typically proceeds in 3 dimensions, pushing out from the surrounding normal tissue and growing to become visible to the naked eye. A tumor must recruit blood vessels from the surrounding tissue to grow much bigger than 1 mm across (see the VEGF animation).

This animation includes audio narration, please make sure your computer's volume is up so that you can hear it.

Windows version (3.6 MB)
Windows Media Player version (7.2 MB)

For a printer-friendly version of the text that accompanies this animation, click here.

HHMI
Howard Hughes Medical Institute

www.biointeractive.com

Interactive Mathematics

www.cut-the-knot.org/index.shtml

Welcome to read·write·think

International Reading Association NCTE marcopolo

A Strong New Stage: Home Role: RI, in Excerpt Authors' Lines	In this lesson, eleventh-grade students read biographies and explore websites of selected American authors. They collaborate in teams to design creative projects and role-play as the authors in a panel presentation. They then synthesize their knowledge into essays about their authors to post online.	9-12	9/10/04
A Harlem Renaissance Retrospective: Connecting Art, Music, Dance, and Poetry	The Harlem Renaissance was a vibrant time that was characterized by innovations in art, literature, music, poetry, and dance. In this lesson, students work in collaborative groups to conduct Internet research and create a museum exhibit that highlights the work of selected artists, musicians, and poets of the Harlem Renaissance.	9-12	5/26/05
A High-Interest Novel Help: Struggling Readers Confront Bullying in Schools	Reading <i>The Study</i> —a novel that should be especially appealing to struggling or reluctant readers—students will better understand the bully, the bullied, and the bystander. Students will use reading strategies such as literary analysis, T-charts, Readers Theatre, and reflective journals to help improve fluency and comprehension.	9-12	12/1/04
A Significant Influence: Describing an Important Teacher in Your Life	All of us have had a teacher who has made a profound difference in our lives. Like <i>Minnie in Tuesday</i> with Minnie or John Keating in <i>Dead Poets Society</i> . In this project, students write a tribute to such a teacher then publish their work in a class collection. Because college application essays often ask students to write about a significant influence, the lesson's extensions include resources for writing more traditional, formal papers.	9-12	5/5/05
An Introduction to Beowulf: Language and Poetics	While <i>Beowulf</i> is generally considered the earliest major work of English poetry, it is almost always taught in translation and its verse form and poetic techniques are often unfamiliar. This lesson provides an introduction to the language and poetics of the poem.	9-12	3/8/05
Analyzing Symbolism, Plot, and Theme in a Novel	Encourage students to transfer the analytical skills that they use when reading...	9-12	4/20/05

www.readwritethink.org

ThinkQuest

www.thinkquest.org

Start a search; you'll be amazed where it leads you!

Other Cool Websites

- ☞ <http://www.niehs.nih.gov/kids/links.htm> a page full of great science websites, including cdc.gov, epa.gov, and chemcool.com
- ☞ <http://www.stemworks.org/realmshomepage.html> replaces www.eric.com for educational websites including math and science and technology
- ☞ <http://antoine.frostburg.edu/chem/senese/101/index.shtml> chemistry. Check out the exam guide.
- ☞ <http://www.anachem.umu.se/eks/pointers.htm> LOTS of chemistry teaching resources
- ☞ <http://www.colorado.edu/physics/2000/index.pl> cool visuals for physics and basic discussion
- ☞ <http://www.biointeractive.org> teacher friendly site with live web casts, lectures, virtual laboratories, interactive learning modules and much more.
- ☞ <http://www.veazeys.com/math/lessons.htm> algebra problems that kids can do online. Tells them when they're correct. Shows them step by step how to do the problem when they're wrong.

- ☞ <http://motivatingmath.com> everything for preparing for tests to online tutorials. Helps parents understand what their kids are doing!!
- ☞ <http://www.shodor.org/interactivate/activities/index.html> great interactive site based on middle school math. Great for reviewing concepts in algebra, geometry and basic math.
- ☞ <http://aplusmath.com/Flashcards/algebra.html> Great interactive site that makes a game out of basic algebra using flashcards.
- ☞ <http://wikipedia.com> reference site. Updated continuously.
- ☞ <http://campus.northpark.edu/history/WebChron> Time lines and overviews. History.
- ☞ <http://www.nefe.org/hfspportal/index.html> Financial planning
- ☞ <http://federalreserveeducation.org/Fed101/> Great interactive website on everything money
- ☞ <http://www.mymoney.gov> more financial planning information
- ☞ <http://www.younginvestor.com> Informative site for students learning about personal finance.
- ☞ <http://www.cellsalive.com> Wonderful biology site with lots of video clips and interaction.
- ☞ <http://www.biology.arizona.edu> Great biology sites with stuff for teachers, students, cool stuff.

- ☞ <http://www.cia.gov/cia/publications/factbook> Very informative site. Info for every country on the planet.
- ☞ <http://www.nationalgeographic.com/forcesofnature/> everything you always wanted to know about earthquakes, tornadoes, hurricanes and volcanoes.
- ☞ <http://www.thinkquest.com> Global competition among teams to create best website. Very "D" quadrant.
- ☞ <http://www.webquest.com> Problem based lessons submitted by teachers. Really Fun!!
- ☞ <http://www.kingdomality.com> Ever want to know what role you would have played if you lived in Medieval Times?
- ☞ <http://www.breakingnewsenglish.com/> Current events lesson for ESOL students. Easy and hard version which includes a listening option.
- ☞ <http://www.mcrel.org/compendium/activityDetail.asp?activityID=33> As a result of this activity, students will be able to make, confirm and revise predictions using the reading context. (Great way to get kids to show their thinking)

Competitions as Curriculum

http://kmhsmagnet.com/curriculum/comp_resources.php

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Kids Get It



Mane Link

- Leadership retreat
- Talk to new teachers about student expectations



Enrollment in Academies



Kennesaw Youth Council



Community



Community Response to Curriculum Matrix

Surprise! No specific skills articulated; rather,

- Problem-solving
- Employability
- Character

In other words, what should kids know, be able to do, and be like?

Mountaintop Cafe



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Physics on the Road



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Urban Planning



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RISE and MISE



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Mustang Stop



William.Richardson@cobbk12.org

Character Education Program

- 99 KMHS seniors teach freshman classes
- 110 community leaders teach lessons
- 66 KMHS seniors teach elementary and middle feeder school classes
- 10th and 11th grades studying *7 Habits of Highly Effective Teens*, Stephen Covey
- Bullard Elementary students followed their leaders



Questions for Discussion

- What does your graduate look like? What do you want your graduate to look like, know, and be able to do?
- How can teachers discuss successful practices?
- Whom could you count on for being early adopters for change?
- Who would be objectors? How would you handle them?

Email

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- **Mimi Dyer**, KMHS Magnet Coordinator:
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