



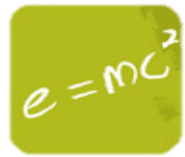
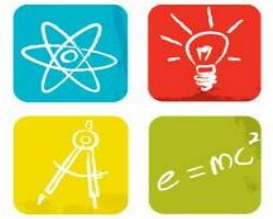
**R. E. MCNAIR DISCOVERY LEARNING ACADEMY**

**2014-2015**

**PARENT MEETING**



# What does STEM stand for?



**S**cience



**T**echnology



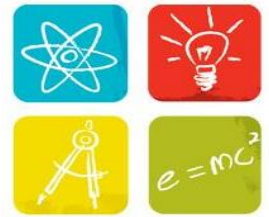
**E**ngineering



**M**ath



# What is STEM?

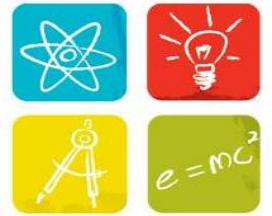


- A “**meta-discipline**” that infuses Science, Technology, Engineering, and Math
- STEM Education attempts to **transform the typical teacher-centered classroom** by encouraging curriculum that is driven by problem-solving, discovery,

exploratory learning, and **require students to actively engage** in a situation in order to find its solution



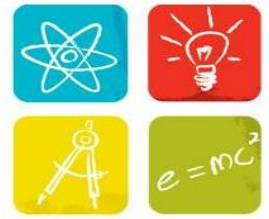
# What STEM is not...



- ❑ Four separate and unrelated disciplines (silos)
- ❑ Merely adding technology to the classroom
- ❑ A passing trend

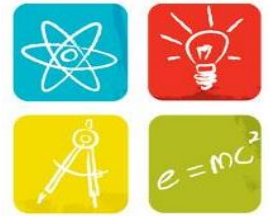


# Why STEM?



- Science, technology, engineering and math (STEM) are where the jobs are.
- STEM workers can expect higher salaries.
- The United States is failing to produce enough skilled STEM workers and thus is losing its competitive edge.
- American students aren't keeping up with students in other countries in math and science.
- The decline in STEM knowledge capital is reducing the basic scientific research that leads to growth and innovation
- Other nations are racing to establish dominance in STEM areas, costing Americans jobs and money.

# STEM in Georgia



## STEM SKILLS ARE IN DEMAND

In Georgia, STEM skills have stayed in demand even through the economic downturn.

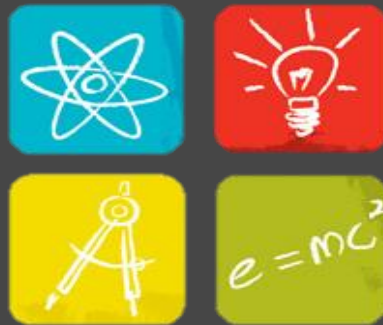
**STEM:**  
**2.0 jobs** for every  
**1 unemployed person**



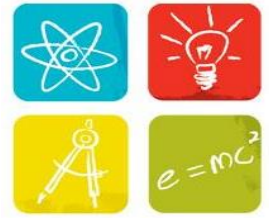
**Non-STEM:**  
**4.5 unemployed**  
**people** for every **1 job**



# WHAT DOES A STEM CLASSROOM LOOK LIKE ?



# STEM Classrooms

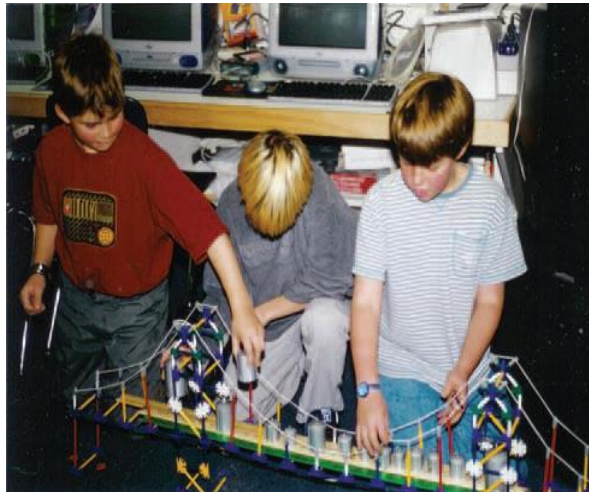


Engineering Balloon Cars

Building Robots



Constructing  
Bridges

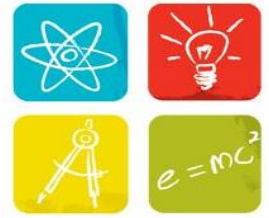


Constructing  
Playground  
Equipment





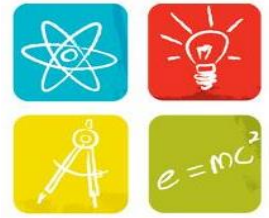
# Teaching Practices around STEM Integration



Zemelman, Daniels, & Hyde (2005) list ten best practices for teaching math and science:

1. Use manipulatives and hands on learning;
2. Cooperative learning;
3. Discussion and inquiry;
4. Questioning and conjectures;
5. Use justification of thinking;
6. Writing for reflection and problem solving;
7. Use a problem solving approach;
8. Integrate technology;
9. Teacher as a facilitator;
10. Use assessment as a part of instruction.

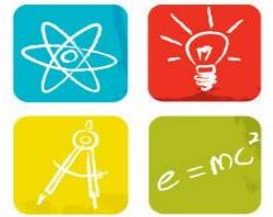
# Teaching Practices around STEM Integration



Berlin & White (1995) provide recommendations on how teachers should approach student knowledge:

- Build on students' prior knowledge;
- Organize knowledge around big ideas, concepts, or themes;
- Develop student knowledge to involve interrelationships of concepts and processes;
- Understand that knowledge is situation or context specific;
- Enable knowledge to be advanced through social discourse;
- Understand that knowledge is socially constructed over time.

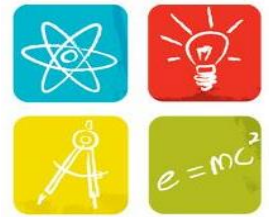
# DeKalb STEM Vision



To be a leader in rigorous K-12 Integrated STEM Education that prepares students to meet the challenges of a competitive global society through innovation, collaboration, and creative problem solving.



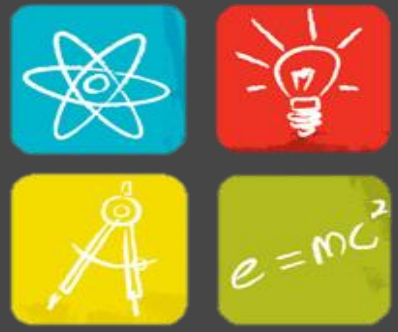
# McNair D.L.A. STEM Goals



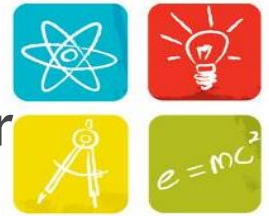
- **Create student-centered learning environments** that empower students to become innovators and technologically proficient problem solvers using an integrative STEM approach.
- **Engage partnerships with the community** that allow the school and businesses to connect with the goal of improving students' STEM-related career opportunities
- **Provide quality educational learning opportunities** via EIE kit experiences, field trips (out reach), and community partners and parental



**DR. BOLDEN**



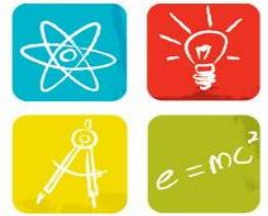
# McNair DLA STEM Plan for 2014-2015 school year



- Teacher S.T.E.M. trainings
- Teacher S.T.E.M. planning sessions
- S.T.E.M. Team Year 2
- S.T.E.M. Team Year 1
- Electives or Specials for both S.T.E.M. teams



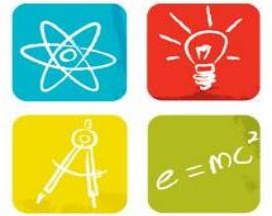
# Next Steps



- ❑ **Make sure you return your child's registration form.**
- ❑ Provide valid email address and phone number
  
- ❑ Follow the school on FaceBook, Twitter, or Remind101 to get pertinent information



# Summer Information

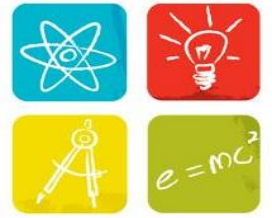


- Please pick up the websites hand-out
- Become familiar with your neighborhood library
- become familiar with differing modes of technology and software.





# Digital Summer Camp



## Makers Camp with Google+

<http://makezine.com/maker-camp/>



Science, Technology, Engineering, & Mathematics

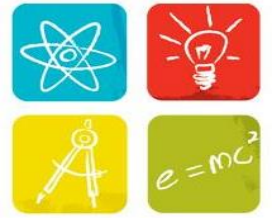
# Save the Date:

## July 10, 2014

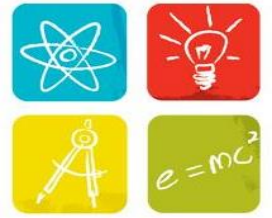
### Parent Meeting at 5:30



# Fostering Future Innovators



# Questions?





THANKS FOR COMING!

