


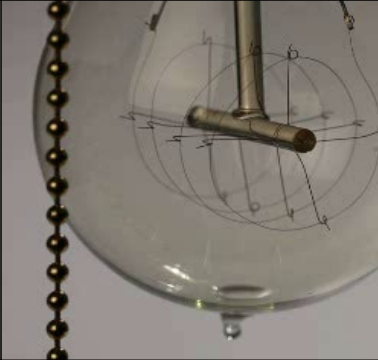
# STEM




**Scott Goodwin**  
Winfield Middle School  
Principal



**Jennifer Birmingham**  
STEM Coordinator 9-12  
WCHS Robotics/Chemistry/Physics



**Alexa Box**  
Winfield Middle School  
5<sup>th</sup> Grade Math/Science





# Winfield City Schools



- Chris Cook – Superintendent
- James Garner – Board Chairman
- Brenda Taylor – Vice-Chairman
- Tommy Bowen – Board Member
- Chris Carothers – Board Member
- Dana Peoples – Board Member.

# What is STEM?

- “STEM is an educational program developed to prepare primary and secondary students for college and graduate study in the fields of science, technology, engineering, and mathematics (STEM). **In addition to subject-specific learning, STEM aims to foster inquiring minds, logical reasoning, and collaboration skills.**”

# How Did We Get Here?

- School Visits
- 1:1
- 5<sup>th</sup> & 6<sup>th</sup> Pilot
- PowerSchool Learning (LMS)
- Self-reflection
- Obstacles

# Obstacles

- ❖ Investment
- ❖ Fear of Change
- ❖ Controlled Chaos
- ❖ Curriculum Connectivity
- ❖ Time Constraints
- ❖ Buy in of all departments

# Learning Management System

InformationNOW | PowerSchool Learning | How to Take a Screenshot | Danielle

Secure | [https://winfield.learning.powerschool.com/dstocks/8mathstocks17-18/cms\\_page/view/31634371](https://winfield.learning.powerschool.com/dstocks/8mathstocks17-18/cms_page/view/31634371)

Apps | Winfield City Schools | Haiku | InformationNOW | Mathspace :: Online | Other bookmarks

## Monday, Sep. 25 - Lesson 3-1C Solving Addition and Subtraction Equations

Show: All Sections

+ Add Content Block | Unpublish | Manage Page

### 1.) WeatherSTEM Monday: Fall Foliage

Visit the link below to complete today's assignment.  
WeatherSTEM: Fall Foliage  
Journal Entry: Explain how weather can affect fall foliage. Be sure to follow the rubric for journals. You need at least FOUR sentences.  
View student discussions

### 2.) Algebra Tiles Lab

Algebra Tiles.flipchart

### 3.) Video by Mrs. Stocks

Vocabulary Terms:  
Inverse operations: Pairs of operations that undo each other. For example, addition and subtraction and multiplication and division would be considered this.

Solve Addition & Subtraction

Objective: 8.EE.7 - Solve equations using the Subtraction and Addition Properties of Equality.

eBook Lesson - One Step Equations  
eBook

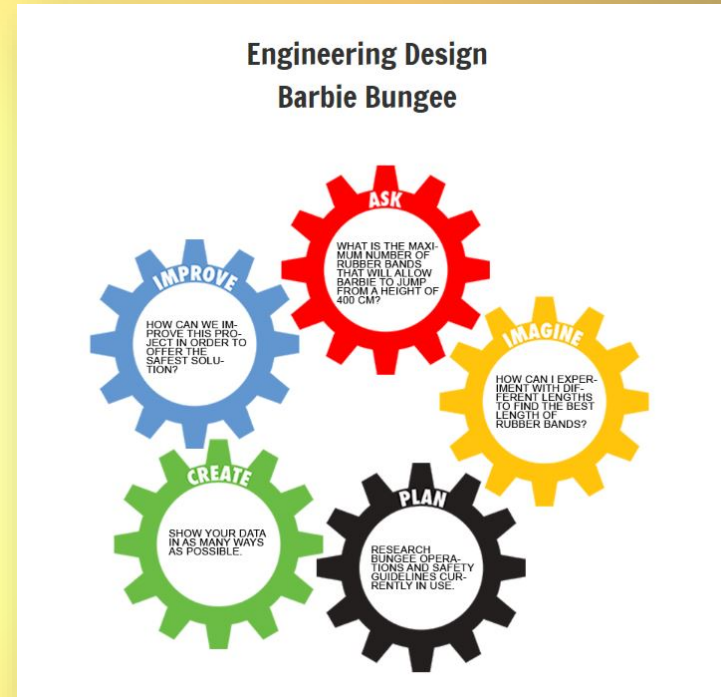
Go | People | Classes | Danielle Stocks

# Our Focus: Engineering Design Process



## Steps:

- Ask
- Imagine
- Plan
- Create
- Improve



# Opportunities for Our Students

Provide your students with.....

- Opportunities to create
- Opportunities to build
- Opportunities to show their creative side
- Opportunities to think outside the box
- Opportunities to work in groups
- Opportunities to problem-solve without your help



# Benefits

- ❖ Creativity utilization
- ❖ Comprehensive college prep
  - ❖ Increased confidence
- ❖ Better job chances/more income
  - ❖ More equality
- ❖ Scholarship opportunities
  - ❖ College choices

# My Role as a STEM Facilitator

<b>Traditional Teacher</b> <b>How I used to be....</b>	<b>Facilitator Teacher</b> <b>How I am now....</b>
Teacher does all the talking. All of the students are facing the teacher and listening to him/her to gain information.	Teacher guides a discussion with students. Leader sits among the groups and joins in on the discussion.
Provides or “spoon feeds” all of the information to the students. Stands in the front of the classroom and lectures the entire time.	Guides the students during their learning. The students have to work for the information. Typically they are presented a problem and have to come up with a solution.
Doesn't allow students to work in groups to problem-solve.	Provides the students with opportunities to solve problems in a group setting.

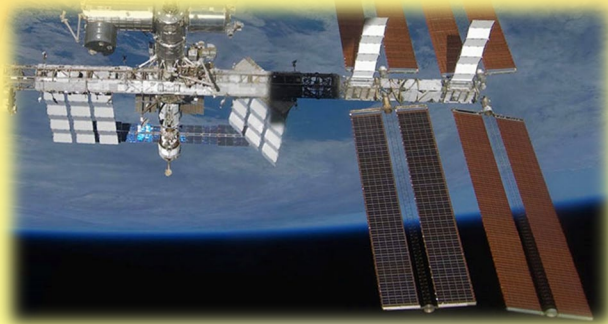
**Traditional classroom**



# What Does A STEM Classroom Look Like?



# What We Have Gained



WINFIELD CITY SCHOOLS  
STEM EXPO 2016

**Welcome**  
**What is STEM Anyway?**  
**Registration**  
**Menu**

**Dr. Keith Davis, Superintendent**  
**Candy Gorman, STEM Coordinator**  
**Scott Goodwin, WWS Principal**

**Student/Teacher Project Tour**

Library	Taylor Chandler	Shelli Peoples
1st Grade	Ally Tibbitt	Kate Cox
2nd Grade	Brandon Whaley	David Upton
3rd Grade	Alexis Johnson	Stacy White
4th Grade	Ella Charles	Candy Gorman
5th Grade	Eryn Swartz	Karla Marshall
6th Grade	Emma Rae Tule	Jessica Bishop
7th Grade	Zachary Ford	Terri Card
8th Grade	Tom Roberts	Kevin Koenig
Physics	Logan Franklin	Jennifer Simmons
Chemistry	Avery Haskley	
	Marie Walker	



WINFIELD CITY SCHOOLS INVITE YOU

## FALL FESTIVAL

Games • Rides • Entertainment  
 Haunted Pirate Trail • Food

## BONFIRE & PEP RALLY

OCTOBER 13 5:00 - 8:00 IVAN K HILL PARK  
 PEP RALLY AND BONFIRE BEGIN AT 8:00



# Things to Remember:

- This will not happen over night!!!
- You won't be building something every day. There are days where I teach information to students.
- However, overtime the way you think and act as a teacher will evolve.
- STEM projects don't have to be huge or involve a lot of materials.
- Start with a few small changes and go from there.

# STEM Website Links:

<http://wesstem.winfield.k12.al.us/>

<http://wmsstem.winfield.k12.al.us/>

<http://wchsstem.winfield.k12.al.us/>