

Georgia Southern University

## Georgia Southern Commons

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Interdisciplinary STEM Teaching & Learning  
Conference (2012-2019)

2015 Interdisciplinary STEM Conference (March  
5, 2015)

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Mar 6th, 1:50 PM - 2:35 PM

### Moving Full STEAM Ahead

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# FULL STEAM AHEAD

STEM Teaching & Learning Conference

Georgia Southern University

March 6, 2015

Dr. Debra Collins  
Hampton Elementary Charter School  
Henry County  
Principal



Ensuring  
Success  
for Each  
Student

**HAMPTON  
ELEMENTARY  
CHARTER  
SCHOOL  
MISSION**

To enrich the lives and learning environments of students by creating educational opportunities that expose students to a deeper understanding of a rigorous curriculum and that provide opportunities to explore the world in which they live.

**416 Students**

35% African  
American  
15% Hispanic  
6% Other  
45% White

11.3% SWD

6% TAG

46% EIP

82% SES

Established in 1954  
Converted to  
Charter School 2014  
Title I School

Distinguished Title I  
School for 10  
consecutive years!

Reward School  
2015: Highest  
Progress School

Grants & Donations Received: \$275,0000 Charter  
Competitive; Title I; City of Hampton; Fernback Science  
Center; Georgia Aquarium; Reward School; PIE; Atlanta  
History Museum

# SLOW & STEADY

SY 12: One day a week:  
Some students offered an  
extra Fine Arts class



SY 13: One day a week:  
All students took a  
STEAM Class



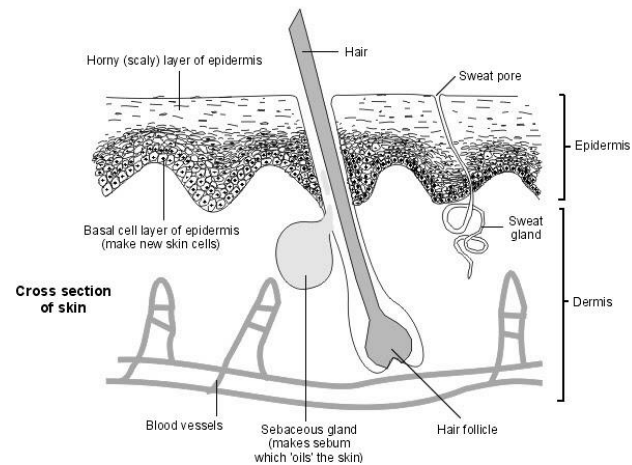
SY 14: Two days a week:  
All students took a STEAM  
Class

SY 15: Five days a week:  
All students take 2  
STEAM Stations a day

# Science



## Cosmetology





## Horticulture



## Science

- ❖ **Kids in the Kitchen:** Kindergarten – Learn math & science as students cook tasty treats.
- ❖ **Growing Minds in Science:** Kindergarten – Professor STEAM takes students on a journey with hands-on science experiments.
- ❖ **Fitness Fun:** First – Learn why eating healthy & exercising are important to a healthy life.
- ❖ **Treasures from Trash:** Second – Learn about the environment & recycling through hands-on projects.
- ❖ **Girls in Pearls:** Third – Learn how young ladies can become anything they want, especially in science & math!



## Science

- ❖ **Cosmetology:** Fourth & Fifth – Learn the basics of body structure & nail, hair, & skin care.
- ❖ **Mad Scientist:** Fourth & Fifth – Learn to explore the world of science.
- ❖ **Horticulture:** Fourth & Fifth – Learn about plants & the environment through hands-on projects in the greenhouse.
- ❖ **Health & Fitness:** Fourth & Fifth – Learn about fitness & good nutrition.

# Technology



Photography & Blogging

STEAM STATIONS

## Technology

- ❖ **Reading Warriors:** First – Stride Academy is an award-winning, cross-platform, adaptive learning solution that quickly accelerates learning with engaging curriculum engineered to address critical learning standards.
- ❖ **Bookin' & Cookin':** Third – Researching different cultures from around the world & trying a variety of foods!
- ❖ **Broadcasting:** Fourth & Fifth – The HNN crew creates & edits their script, then records & puts together the daily broadcast.

## Technology

- ❖ **TAG Exploration:** Fourth & Fifth – TAG students explore blogging, critical thinking, & a variety of apps.
- ❖ **Computer:** Kindergarten through Third – Students learn typing skills, play academic games, & create projects.

# Engineering



STEAM STATIONS

## Engineering

- ❖ **Engineering is Elementary:** Fourth & Fifth – Learn about the Engineering Design Process, green engineering, then plan & build a racer for the “Recycled Racer Rally.”

# Arts



Creative Stitchery





Performing Sign Language





Dance



STEAM STATIONS

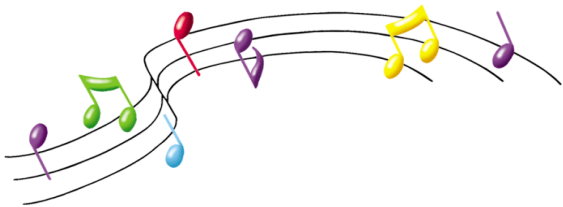


## Percussion





## Chorus & Ensemble



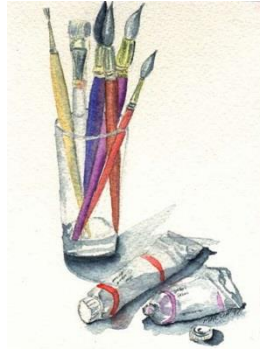


Piano



STEAM STATIONS





## Advanced Art



## Arts

- ❖ **Salsa on Stage:** Kindergarten – Experience & perform classic tales in Spanish.
- ❖ **Super Stretchers:** First – Learn relaxing techniques to clam the body & maintain focus, as well as strengthening & balancing poses (yoga).
- ❖ **Communication Nation:** Second – Learn about ways to communicate without speech & gain a better understanding of the hearing impaired through song, poetry, & dance.
- ❖ **Rock On!:** Third – Learn the basics of playing the guitar, including rhythm, beat, chords, strumming, patterns & much more.
- ❖ **Cosmetology:** Fourth & Fifth – Learn the basics of body structure & nail, hair, & skin care.

## Arts

- ❖ **Piano:** Fourth & Fifth – Improve your music-reading skills & learn to play REAL pieces of music on the piano.
- ❖ **Drumming 101:** Fourth & Fifth – Learn how to read music notes, keep tempo, & play the drums.
- ❖ **Dance:** Fourth & Fifth – Develop coordination as well as an understanding of dance concepts & terminology. Learn to use dance as a means of creative self-expression.
- ❖ **Visual Arts:** Fourth & Fifth – Learn about ceramics.
- ❖ **Creative Stitchery:** Fourth & Fifth – Explore basic stitches of crochet. Learn the basics of plastic canvas & yarn.

## Arts

- ❖ **What's Your Sign?:** Fourth & Fifth – Learn basic American Sign Language to interpret a song & poem for a public audience.
- ❖ **HECS Chorus:** Fourth & Fifth – Chorus members will learn to sing to the best of their abilities.
- ❖ **General Music:** Kindergarten through Third – All students learn music vocabulary & standards.
- ❖ **Art:** Kindergarten through Third – All students learn art standards.



# Math



## Cooking with Math





## Math

- ❖ **Kids in the Kitchen:** Kindergarten – Learn math & science as students cook tasty treats.
- ❖ **Moving with Math:** Kindergarten – Get active & learn math concepts at the same time.
- ❖ **Math Maniacs:** First – Having fun learning all about math with number talks & Numeracy Projects.
- ❖ **Number Ninjas:** First – Increase your number sense & become mathematicians through games & small groups.

# Math

- ❖ **Sassy Salsa:** Second – Learn measurement, sequencing, following recipes, as well as other skills related to cooking with math in the context of Spanish culture.
- ❖ **Tessellate & Create!:** Third – Discover mathematical patterns through tessellating and quilting!
- ❖ **Cooking with Math:** Fourth & Fifth – Learn measurement, sequencing, following recipes as well as other skills related to food preparation.



- ❖ Chess Club
- ❖ Jr. BETA Club
- ❖ Odyssey of the Mind
- ❖ Student Council
- ❖ Mathletes
- ❖ Tennis Club
- ❖ WHES Crew
- ❖ Hornet Helpers
- ❖ Shelf Elves



- ❖ Atlanta History Museum
- ❖ Fernbank Science Center
- ❖ Georgia Aquarium
- ❖ Local Food Bank
- ❖ Legoland
- ❖ Center of Puppetry Arts
- ❖ Ocmulgee Indian Mound
- ❖ Cubihatchi Nature Center
- ❖ Walking Tour of Hampton
- ❖ Behind the Scenes Tours of Local Restaurants
- ❖ Plays at Henry County Performing Arts Center
- ❖ Singing Events at Hampton High & Christmas Parade
- ❖ Yule Forest



# PROJECT-BASED LEARNING

- Significant Content
- Need to Know
- Driving Question
- Student Voice & Choice
- 21<sup>st</sup> Century Competencies
- In-Depth Inquiry
- Critique & Revision
- Public Audience

[www.bie.org](http://www.bie.org)



# LESSON PLAN TEMPLATE

STEAM Station	Name of Station	Graphic
Facilitator		Beginning Date:
Target Audience		No. of Students:
Course Description		
Standards Assessed		
Desired Learning Outcome		
Driving Question(s)		
Project Assessment		
Artifact/Evidence		
<b>Weekly Plan</b>		
Week 1		
Week 2		
Week 3		
Week 4		
Week 5		
Week 6		
Week 7		
Week 8		

“Plan & then plan some more.”

“Over-planning is a good thing!”

“Being prepared is essential.”

“Be ready for your students,  
and they will be ready for you.”

*The Classroom Management Book,*  
Wong & Wong, 2014



# RESOURCES

Engineering is Elementary

Paws in Jobland

Personalized Learning, Henry County Schools

*Project-Based Learning*, Buck Institute

*The Classroom Management Book*,  
Wong & Wong, 2014

Typing Pals



**LEAVE YOU WITH THIS THOUGHT . . .**

“Ships are safe in the  
harbor,  
but that’s not what  
ships are for!”

*William Shedd*

# FULL STEAM AHEAD

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