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

Moving Full STEAM Ahead

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Ensuring Success for Each Student

FULL STEAM AHEAD

STEM Teaching & Learning Conference
Georgia Southern University
March 6, 2015

Dr. Debra Collins
Hampton Elementary Charter School
Henry County Principal
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

Established in 1954
Converted to Charter School 2014
Title I School

11.3% SWD
6% TAG
46% EIP
82% SES

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

http://www.myfoxtampa.com/clip/10436355/hampton-elementary-school-opens-as-charter-school
Science

Cosmetology

Cross section of skin:
- Epidermis
- Dermis
- Hair
- Sweat pore
- Sebaceous gland (makes sebum which holds the skin)
- Basal cell layer of epidermis (make new skin cells)
- Horny (scaly) layer of epidermis

Blood vessels

STEAM STATIONS
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
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
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
Percussion
Chorus & Ensemble
Piano
Advanced Art
Arts

- **Salsa on Stage**: Kindergarten – Experience & perform classic tales in Spanish.
- **Super Stretcher**: 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, flowing 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
- 21st Century Competencies
- In-Depth Inquiry
- Critique & Revision
- Public Audience

www.bie.org
### Lesson Plan Template

<table>
<thead>
<tr>
<th>STEAM Station</th>
<th>Name of Station</th>
<th>Facilitator</th>
<th>Beginning Date</th>
<th>Target Audience</th>
<th>No. of Students</th>
<th>Course Description</th>
<th>Standards Assessed</th>
<th>Desired Learning Outcome</th>
<th>Driving Question(s)</th>
<th>Project Assessment</th>
<th>Artifact/Evidence</th>
<th>Weekly Plan</th>
</tr>
</thead>
</table>

**Weekly Plan**

- **Week 1**
- **Week 2**
- **Week 3**
- **Week 4**
- **Week 5**
- **Week 6**
- **Week 7**
- **Week 8**

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

William Shedd
FULL STEAM AHEAD

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