



The GE Foundation High School STEM Integration Conference

Cocoa Beach, Florida

July 10 – 14, 2017

The 2017 GE Foundation High School STEM Integration Conference program's focus is to explore effective practices in STEM education to assist educators, schools and districts in creating a vision and plan for an integrated STEM education for all students.

The goals of the conference are to:

- Build the capacity of educators as district, state, national and international STEM leaders
- Provide application-based, hands-on experiences for STEM educators
- Assist educators in improving their practice through tools, resources, and innovative approaches
- Empower STEM educators to integrate STEM across the curriculum
- Prepare educators as STEM experts, poised to share their learning's broadly

Agenda

Sunday July 9, Cocoa Beach Doubletree

4:00 pm-6:00 pm **Check In:** *Doubletree Lobby*

6:30 pm-8:00 pm **Welcome Dinner**

Welcome from the GE Foundation and NSTA

Team Introductions

Monday July 10, Doubletree

7:00 am-7:50 am **Breakfast**

8:00 am-8:10 am **Overview of Conference and Day 1:** *Establishing a Vision and Collaborative Culture for Implementing Integrated STEM*



8:15 am-10:15 am	The High School STEM Classroom: A Dive Into an Integrated STEM Experience
10:15 am-10:25 am	Break
10:25 am-11:15 am	The Essential Elements of Inclusive STEM High Schools: How STEM Schools Define themselves, the Strategies they use, and the Student Experience
11:15 am-12:00 pm	Team Reflection and Discussion: High School STEM Models and Strategies for Inclusion
12:00 pm-12:50 pm	Lunch
1:00 pm-2:00 pm	Designing and Leading Change
2:00 pm-2:10 pm	Break
2:10 pm-3:10pm /3:15 pm-4:15pm	Concurrent Breakouts <ul style="list-style-type: none">▪ <i>Building a Collaborative School/District Culture: Administrators</i>▪ <i>Working Toward a Vision of High School STEM Classroom: Teachers and PD Leaders</i>
4:20pm-4:45 pm	Team Reflection on Roles, Application, and Planning: Supporting the Profile of the Graduate of your School/District

[Optional (Self-Pay) Evening Activities]

- ❖ *Bioluminescent Kayaking Tour: Calypso Tours: 8:30 pm Departure*
- ❖ *Manatee and Dolphin Encounter Kayak Tour: Calypso Tours: 6:45 pm Departure*
- ❖ *Bioluminescence River Boat Tour: 6:30 pm Departure*

Tuesday July 11 Doubletree/Kennedy Space Center

7:00 am-7:50 am	Breakfast
8:00 am-8:10 am	Overview of Day 2: Exploring Elements of Effective STEM Integration
8:10 am-9:00am	Implementing STEM Integration: Indicators of Successful STEM Education and the Role of Computational Thinking
9:10 am-10:00 am	Team Share, Reflection and Discussion: Engaging all Students in STEM
10:00 am-11:15am /11:20 am-12:30pm	Concurrent Breakouts: Exploring What Works



- *Instructional Leadership for STEM: Role of the Teacher Leader*
- *What Girls and Minorities Need to Experience in High School STEM*
- *College and Career Readiness*

12:30 pm-1:15 pm **Lunch**

1:15 pm **Buses Depart for Kennedy Space Center**

- *Kennedy Space Center- Welcome, Group Picture, Self-Tour of the Center*

Wednesday July 12, Kennedy Space Center

6:30 am-7:15 am **Breakfast**

7:20 am **Buses Depart for Kennedy Space Center**

7:50 am-8:00 am **Overview of Day 3: NASA Engineering Design Challenges**

8:00 am-4:30 pm **LSP Launch Simulation Field Trip**

Physics of Rocketry

- *Measuring Stability of a Rocket*
- *Learning about 3D Modeling*
- *Investigating Digital Video Analysis*
- *Calculating Launch Windows and Orbital Mechanics*

11:30 am-1:00 pm **Lunch**

4:30 pm **Buses Depart for Doubletree**

[Optional (Self-Pay) Evening Activities]

- ❖ *Bioluminescent Kayaking Tour: Calypso Tours: **8:30 pm** Departure*
- ❖ *Manatee and Dolphin Encounter Kayak Tour: Calypso Tours: **6:45 pm** Departure*
- ❖ *Bioluminescence River Boat Tour: **6:30 pm** Departure*

Thursday July 13, Kennedy Space Center

6:30 am-7:20 am **Breakfast**

7:20 am **Buses Depart for Kennedy Space Center**

7:50 am-8:00 am **Overview of Day 4: NASA Engineering Design Challenges, continued**

8:00 am-11:30 am **Rocketry Engineering Design Challenge**



Wrap-up and Discussion with Aerospace Engineer Subject Matter Expert (SME)

11:30 am-1:00 pm

Lunch

1:00 pm-4:30 pm

Exploring Sound and Light

- *Applied Physics Lab SME Talk*
- *Sound Modulated LASER*
- *Creating a Wave Form Monitor*
- *Acoustic Engineer SME Talk*
- *Building an Audio Speaker*

4:30 pm

Buses Depart for Doubletree

6:00 pm-6:30 pm

Reception

6:30 pm-8:30 pm

Closing Dinner

Friday July 14 Doubletree

7:00 am-7:50 am

Breakfast

8:00 am-8:15 am

Overview of Day 5: *Planning for Success with STEM Integration*

8:15 am-9:15am /
9:20 am-10:20 am

Concurrent Breakout Sessions

- *Effective STEM Practices*
- *Professional Learning in Support of STEM Integration*
- *STEM Frameworks to Inform your Plans*

10:30 am-11:30 am

Working Toward High School STEM: Experiences from the Field

Team Reflections, Discussions, and Planning

11:30 am-12:30 pm

Next Steps: NSTA Learning Center: Your Partner in Planning and Continuous Blended Learning for High School STEM integration

12:30 pm

Boxed Lunch

1:00 pm

Buses Depart for Orlando Airport