Youth Engagement: Introducing Career Pathways

All Hands on Deck Conference
June 9 – 11, 2019
Presenters:

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SMART Youth Outreach Activities

Tobey Anne Allen
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SMART Summer Maritime Camp 2019

Max 10 campers
Campers rising 6 - 9th graders
One week
Budget $ 4,000
Nauticus
Tugboat tour
Shipyard tours
American Rover tall ship learning sail
Wooden boat building day
Cardboard Regatta Race
• **Budget (examples)**
  • Boat building supplies
  • Camp t-shirts for students and staff
  • Lunch
  • Trophies and awards
  • Tour expenses
Incorporated basic math and science activities between tours to expand on maritime knowledge.
Cardboard Boat Regatta

Summer Maritime Camps
Cardboard Boat Regatta

Summer Maritime Camps
Women Take The Wheel Event 2019:
• Outside parking lot on campus
• Inside the building that houses maritime training
• Invited first responders, military, industry partners, media
• 32 Girl Scouts attended

Issues during planning:
• Rescheduling due to hurricane/flooding
• Change the name of the event
• Lack of Girl Scout interest originally
• Event closed to the public
Women Take The Wheel

Present at the event:
- US Coast Guard
- US Army
- Newport News Shipbuilding
- Virginia Ship Repair Association
- Colonna’s Shipyard
- WHRO Television
- R. O. Givens Trucking
Inside during the event:

Vendor tables, basic knot tying, and the maritime simulator were inside for the girls to explore.
Women Take The Wheel

Outside during the event:
• All attendees received a Tidewater Community College Summer Camp bag with information about the SMART Summer Maritime Camp and other SMART items.

• Girl Scouts of the Colonial Coast created a patch for all of the girls that completed their Women In Transportation requirements.
The Virginia Beach Public Schools STEM Trifecta allows students, teachers, mentors, industry and community partners to join together to create and promote STEM and Entrepreneurship awareness through project-based learning activities.

In August of 2018 started to prepare CTE instructors for “maritime” theme
- Tour of the Port
- Finding resources for the committee
- Ordering SMART materials for the event
Virginia Beach Public Schools Partnership

- 1500 Students participated
- Cyber Security
  - RFP for the Port of Virginia for security
- Makers Challenge
  - Various project ideas for maritime logistics and supply chain
- Robotics
  - Logistics
  - Moving containers
  - Intermodal lessons

STEM Trifecta 2019
Virginia Beach Public Schools Partnership

STEM Trifecta 2019
Tobey Anne Allen
Outreach and Education Manager
SMART Center

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SUMMER ADVENTURE CAMPS
FLORIDA KEYS COMMUNITY COLLEGE
FKCC SUMMER CAMPS HISTORY

- Up to 2015 Daycamp at Aquatics Center
  - Mostly daycare
- 2015 Overnight Week-long Camps
  - Residence Hall – Lagoon Landing
  - ECO Adventures Camp
    - Educational
- 2016 Week-long Daycamps
  - Three Themes
- 2017 Added Themes Based on AS/AAS Degrees
- 2018 Added Boating Safety Camp
70 first breaths underwater
Ages 7-15
274 campers
9 boaters safety certs.
12 Jr. Lifeguard certs.
23 staff members
7 scuba certs.
21 camp sessions
10 weeks
12 CPR and First Aid certs.
Jr. Lifeguard
Jr. Scuba and Adv. Scuba Adventures

Florida Keys Community College
Island Living, Island Learning
Future Heroes
BOATING SAFETY CAMP

- 1st Year 2018
- 9 Campers
- 12 – 17 year olds
- Week-long
- Budget $2,000
BOATING SAFETY CAMP

- Florida Boaters Safety Certificate
- Rules of the Road
- Field Trips
- 2 & 4 Cycle Engine Troubleshooting
- Kayaking
- Practical Application on FKCC 2

<table>
<thead>
<tr>
<th>TIME</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
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</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Introduction</td>
<td>Orientation to boating</td>
<td>Florida Boaters Safety Certification Course: navigation rules</td>
<td>Florida Boaters Safety Certification Course: chart plotting, GPS, anchoring, conditions, emergencies, communication</td>
<td>Florida Boaters Safety Certification Course: water sport safety, trailering, PWC ops, knots, lines</td>
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<tr>
<td>10:00</td>
<td>Florida Boaters Safety Certification Course: nautical terms, safety equipment, fueling, costing off, and underway</td>
<td>Florida Boaters Safety Certification Course: navigation rules</td>
<td>Field trip: USS Cutty Sark</td>
<td>Your own personal vessel kayak tour: float plan, navigational aids, rules of the road, and conditions (tide, current, wind, radar)</td>
<td>Best Trip on FKCC’s 45’ Catamaran: float plan, navigational aids, rules of the road, and conditions (tide, current, wind, radar)</td>
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<td>11:30</td>
<td>Lunch and Recess</td>
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<tr>
<td>2:00</td>
<td>Introduction to small outboard engines</td>
<td>Field trip: Key West Shipwreck Museum</td>
<td>Florida Trip: Key West Shipwreck Museum</td>
<td>Florida Trip: Key West Shipwreck Museum</td>
<td>Florida Trip: Key West Shipwreck Museum</td>
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Florida Keys Community College
Island Living, Island Learning
Welcome!
Tall Ships® Maine is a 501(c)(3) nonprofit and the first official chapter of Tall Ships® America.

The mission of Tall Ships® Maine is to encourage character building of youth through sail training, support education under sail and promote sail training to the public in Maine and beyond.
Growth Track – Maine Teen Sailing Weeks

2015 – 17 teen sailing weeks
2016 -- 34 teen sailing weeks
2017 – 46 teen sailing weeks
2018 – 104 teen sailing weeks
2019 – 250 teen sailing weeks
2020 – 500 teen weeks (proj.)
Academically Accredited H.S. Curriculum

Watch Keeping:
1. Demonstrate knowledge of watch procedures and an ability to follow them.
2. Demonstrate the ability to execute a "boat check" during a watch.
3. Demonstrate the ability to steer a vessel by Compass.
4. Explain and demonstrate the procedures for relieving the watch.
5. Demonstrate the ability to execute helm orders.
6. Demonstrate the ability to stand a lookout and to correctly report hazards and approaching vessels.

Safety Procedures:
1. Identify and explain your position during any drill.
2. Locate and explain fire control and life saving plan.
3. Identify the alarms and what they mean.
4. Locate and explain:
   - Abandon ship supply location.
   - Life rafts, rings, lines and buoys.
   - Fire stations.
   - Manoverboard station.
   - Life jackets and immersion suits.
   - Cold water survival equipment and techniques.

Sail Handling:
1. Demonstrate how to properly make off, coil and hang a line.
2. Demonstrate how to properly slack, haul and sweat a line.
3. Demonstrate proper technique for setting, furling, reefing and striking sail.
4. Visually identify and explain running rigging.
5. Visually identify and explain all standing rigging.
6. Explain and execute commands for setting and dousing sails.

Marlinspike:
1. Demonstrate how to tie each of the following knots and their uses:
   - Figure eight
   - Square (reef) knot
   - Bowline
   - Clove hitch
   - Rolling hitch
   - Sheet bend
   - Round turn and two half hitches

Advanced Sailing:
1. Define and describe the following terms:
   - Port tack/Starboard tack
   - Heading up
   - Falling off
   - Explain how the ship sails into the wind (airfoil effect).
   - Explain how wind will push vessel from aft.
   - Describe the different points of sail:
     - Close hauled
     - Beam reach
     - Broad reach
     - Running
     - In Irons
   - Explain gybing and tacking, how each is accomplished and why one might choose one or the other.

Basic Navigation:
1. Explain latitude and longitude.
2. Plot a fix from a given latitude and longitude.
3. Plot a fix from compass bearings.
4. Explain deviation and variation and correct for both.
5. Plot pilotage in both magnetic and true from a given fix.
7. Maintain an accurate Log of all navigation and shipboard activities.

Engineeering:
1. Monitor operations of engine, generator, fire pump and windlass.
2. Monitor Electrical and communications systems
3. Use and monitor ship plumbing systems

Shipkeeping:
1. Assist in keeping ship clean and tidy at all times.
2. Assist with food preparation, serving and cleanup
Knowledge and learning

During a voyage participants learn about a range of things including sailing skills, domestic chores (which may be a first for some participants), food hygiene and the environment. In addition, tasks involved in sail training can require participants to employ critical thinking to solve problems.

Putting learning into practice can be more engaging than learning in environments like school where problems can seem abstract—on a voyage, participants can immediately see the impact of the decisions they make. In good examples of sail training, staff employ techniques such as effective questioning to maximize this impact. As a result, participants may have a stronger sense of purpose for learning and greater motivation to learn new skills.

In combination with the personal development outlined about, these experiences are likely to improve young peoples’ aspirations and contribute to them be more engaged in learning.
Career Track Options

Marine Services
  Partnership with tech schools (PATHS)

Maritime Industries – Maine Maritime Academy, Mass Maritime etc.

Advanced Sailing Programs – SEA Inc. Woods Hole, MA

Apprenticeship Programs on Tall Ships
Maritime Venture Summer Camp 2018
At San Jacinto College

The San Jacinto College Maritime Ventures Camp is a fun, exciting way for 14 to 17 year olds to learn all about the maritime industry. Campers will have the opportunity to explore exciting careers available in the area’s thriving maritime industry. The camp includes an entertaining and educational maritime adventures and will be held at the brand new Maritime Campus. Students will take field trips on vessels and get to explore the Houston Ship Channel.

Age: 14-17
Cost: $25
Location: San Jacinto Maritime Center, 3700 Old Highway 146, La Porte, TX 77571
Time: 9 am - 4 pm Monday-Thursday (lunch provided daily)
9-11:30 am – Friday
Week #1: July 9-13
Week #2: July 23-27

For more information or to register please go to this link:
https://secure.touchnet.com/C22634_ustores/web/store_main.jsp?STOREID=31&STCID=4
You can also contact San Jacinto Maritime at 281-459-5483
or email the camp director:
Robert.lloyd@sjccd.edu

Maritime Venture Summer Camp

- 30 campers
- Campers 14 – 17 years old
- 2 one week camps
- Budget $10,000
- Additional funding provided by Port of Houston Foundation Grants
Maritime Venture Summer Camp

• Concerns
  • Registration numbers
  • Registered campers that were a no show
  • Charging a basic $25 registration fee has helped ensure that there are less no shows

• Budget
  • T Shirts for campers
  • Meals
  • Craft supplies
  • Tours
  • Staff
Maritime and Logistics Youth Expo

- Partnership with Houston Pilots, US Coast Guard Auxiliary, Port Houston, San Jacinto College
- Six Years
- Middle School through High School
- Grown from 150 students to over 450
- 42 industry exhibits
Past Activities include:
Port of Houston tour on M/V SAM HOUSTON
Texas Seaport Museum and tour the sailing Vessel ELISSA
Texas Parks and Wildlife - Boater Certification
Tour SEABASE Galveston, visit on M/V BAYSMART EXPRESS
Tour OCEAN STAR oil rig museum
Cardboard Boat creation and races
Water Survival Techniques in our pool
Tour Battleship Texas