

Bonus Session focused on education
How people are working with communities

First speakers

- Experience with informal and formal education with kids, adults, and volunteers
- Sarah Sparks – U ME CE – STEM area specialization K-12 population
 - o Hands on learned
 - o Also adults and volunteers
- Laurie Bragg – ME EPSCOR
 - o SEANET
 - 4th year – 20 million dollar grant
 - o Aquaculture to mitigate CC
 - o Improve techniques to ensure sustainability
 - o NSF requires us to make sure the work is accessible to general public and k-12 STEM pipeline
 - o Collaborate with CoopExt to make toolkits
- Toolkits
 - o Make science accessible for adults and kids
 - o Intro to Ocean Sciences for K-2 – intro to aquaculture and marine science
 - Blocks with sea creatures
 - Sea animal yoga → move like a crab
 - Getting younger ages engaged
 - o Sea Vegetables – Science of Seaweeds 3-5 grads
 - 10 activities designed around seaweed and food products
 - Why is kelp important to the coast
 - Curriculum and lesson plans in the toolkit
 - Check out our table
 - o Want to make two more kits
 - Middle and high school
 - Still being designed and piloted to meet learning objectives
 - Middle school – innovation aquaculture engineering
 - High school – Diving into data – data literacy
 - o Buoy and sensor data
 - o NERACOOS
 - o 4H + Cooperative Extension
 - o Hosting focus groups to get the curriculum right and has been tested a lot
 - Sea Vegetables were tested by 11,000 students
 - Summer of Science – testing again this summer
 - 4H partners with YMCA etc. with young people to have college students deliver the lessons to see if they are able to explain the content in a way that makes sense and is correct science

- Maine Discovery Museum with aquaculture exhibit to use these toolkits and concepts to make sure they do not just sit on a shelf
 - Activities are available to support the visits to the museum
 - Virtual reality to give aquaculture experience
- We use students at the university for all aspects of this work – they are the biggest asset
 - STEM teaching
- The toolkits are available for anyone to borrow – posted online for access – SEANET
 - If you wanted to borrow the kit, email us and we can send it to you.

Question – the sea vegetable on is downstairs?

Answer – No

Question – what is a good resource to find out all the edible vegetables?

Answer – ME Seaweed Council website or download our curriculum

Jen Kennedy – Blue Ocean Society

- Making Waves Across the Region – outreach and networking
 - Board member of gulf of Maine marine education association GOMMEA
 - Tell you about what we do
 - Have you heard of us? Yes
 - GOMMEA - Regional network of educators and scientists
 - Strategic planning process over the last few years – redid mission
 - Connect people of the gulf of Maine through education and experiences
 - Ocean literate citizenry who appreciates and cares for a healthy GOM
 - Wide geographic spread
 - Established 1979 – one of 17 chapters of National Marine Education Association
 - Focus areas
 - Informal education audience
 - Regional reach to bring together educators/orgs to share ideas, learn, collaborate etc.
 - Hold events that are fun and interesting
 - Comedy
 - Movie nights
 - Upcoming events
 - More than once a year

- Regional smaller events
 - More targeted
 - More networking
 - Website being developed →
 - August tide-pooling
 - NH whale watch
 - Beach cleanups
- Why attend
 - Stay in the loop!
 - Friendship and social capital
 - Way to build momentum and make ideas grow
- Join us!! gommea.org
- Special sign up rate!
- NMEA 2019 we are hosting the event at UNH
 - We need folks to help plan
 - Turning the tide – learning from yesterday, adapting for tomorrow

Question: have you connected with the ME Environmental Association?

Answer: not sure, I will add that to our list

Ruth Indrick

- program that I created that manomet is leading
 - manomet worked with clam harvester in town of Georgetown
 - set up a clam farm
 - looking for way to support fisheries along the coast of maine
 - clam aquaculture seemed awesome
 - 75 nets
 - five other farms at sites across the states
 - wanted to connect with communities
 - asked if we could prepare education programs that connect people with clams that could be taught in schools
 - Georgetown school kids
 - Out on the clam flats
 - Doing experiments on the kids nets
 - Kids love it
 - Also had a chance to use clams as a tool for teaching about other things – other concepts
 - Curriculum will be shared
 - Five lessons that clams can help teach
 - Food Chains – plankton, predators and prey, life cycles
 - Water Quality – pollution, clam health, bioaccumulation
 - Invasive Species – Green Crabs – causing issues for clams and other species – how it is impacting communities

- Economics – state fisheries, local history, regulations, food systems
- One of the first lessons is to do a dissection
- Let's do it!!