Wednesday, July 15

11:30am

SciGirls "High Tech Tide" 4th – 8th grade

Florida SciGirls - Laila, Claire and Byrne make a splash, uniting with marine biologists to digitally track spotted eagle rays in the Gulf of Mexico. They share their data in a livestream presentation and explore the incredible Mote Marine Laboratory!

After watching this episode, choose from the following questions and/or tasks to extend your learning

Question Box 1

- What does each girl enjoy about the ocean?
- What is acoustic technology?
- What is an acoustic tag? Why are there different sizes?
- What ocean animal are the SciGirls studying? How will tags help the girls collect data?
- How does an acoustic tag work? Describe the range testing?
- The receivers for the acoustic tags are located in the north and south areas of New Pass, what data does the marine biologist and the SciGirls expect to collect?
- How far away from each other are the receivers placed and what is the reason for this?
- Compare and contrast the data collected between the two receivers.
- Based on the data received, what questions do the girls generate?
- What is the hypothesis the girls want to test?
- How is the process of Cody used to test the hypothesis?
- What are some of the challenges the girls face when coding?
- How do the girls prepare for the livestream, "Raising Awareness" presentation at the Keating Educational Marine Center?
- What do the girls hope others will get from the livestream?

Question Box 2

- How did you feel about this episode?
- What did you learn?
- What would you like to know more about?
- Using evidence from the text, explain why is "High Tech Tide" a good title for this episode?
- How do you think the girls' ability to play a musical instrument benefits them in scientific research and coding?

Box 3 (Tasks)

- Draw and describe the Spotted Eagle Ray.
- Describe and discuss the environment of the Spotted Eagle Ray.

Continued on the next page…

- Make a Scientific Poster to answer the question:
  - How are acoustic guitars and acoustic tags similar?
  - Think….sound!
  - For examples, visit:
  - How to make creative poster for competition
  - How to make poster presentation by sanket and rohan.
  - Try to accomplish this task without buying any materials. Use what you have in the house. Any size a 8.5 X 11 sheet of paper will do!

Box 4 (Enrichment)

- Research, draw and describe the closest living relative of the spotted Eagle Ray. *(ELD) Report orally or write your findings regarding Spotted Eagle Ray using academic vocabulary from the program.*
- Research and discuss, other than humans, the major predator of the Spotted Eagle Ray.
- Learn more about Spotted Eagle Rays. Watch the video: Discovering the Mystery of the Eagle Ray
- As you watch, take notes on tagging the rays to track their movements:
  - How does the team record and analyze the sounds the rays make when they eat.
  - How do these new research methods shed light on the rays' eating habits?
  - How does this research give researchers a deeper understanding of the eagle ray?
  - How does understanding the eagle ray help biologists understand the ocean as a whole?
- Make a connection to conservation. Write a magazine article to convince others why it is important to take care of the Earth's oceans.

Box 5 (Extend/Real-Life)

- Describe different jobs that are performed in the Mote Marine Laboratory.
- What sort of education and training do the Marine Biologists have in order to work at the Mote Marine Laboratory?
- Join the Hour of Code Campaign -
- Coding is an important job because computers can only understand machine code. It is a coder's job to enable humans and machines to "talk" to each other.
- Learn to code at home@ Learn