EARTH: Education and Research

By Elizabeth Baer and Melissa Richburg (12-7-15)

Summary:

Students will have prior knowledge of animal classification and the basic taxonomy system. After researching various types of sawfish, their adaptations, and their environments, they will "discover" a new species of sawfish. They will name it based on its characteristics, and explain how its adaptations help it to survive in its habitat/ecosystem.

Key Concepts:

- Classification and Taxonomy
- Adaptations
- Habitats
- Career Connection: Marine Biology

- *LS1A Life and Structure of Living Things*
- *LS4C Adaptations*

Objectives:

- Observe characteristics of sawfish to determine its classification

- Research different types of sawfish using reliable sources
- Identify adaptations of sawfish and how they help them to survive
- Demonstrate knowledge of animal classification and adaptations by creating a new species for the ecosystem
- Engineer a prototype of the new species using various art supplies
- Communicate knowledge by implementing Chatterpix to teach their peers about their sawfish species

Materials:

- Sawfish Power point from EARTH
- Discovery Education
- Styrofoam balls and other craft materials
- Chatterpix App (free download)
- Rubric for Chatterpix presentation

Procedure:

1. Zoom In: Show image of sawfish tooth zooming out until entire fish is shown– Students will analyze image and predict what the image could be. http://gjsmsvirtualzoo.pbworks.com/f/1417742595/external2.jpg

2. Students in small groups research 5 facts about their assigned species of sawfish. They will record facts on large paper and present to peers.

3. Discuss whole group similarities and differences in adaptations between the five types of sawfish.

4. Students will become “Marine Biologists” and discover a new species of sawfish. Their job is to classify it based on existing sawfish taxonomy down to the genus level and name their new species based on a new characteristic and its habitat.

5. Students will engineer a prototype for their new species demonstrating their distinguishing physical features using various art supplies and materials.

Assessment:

1. Students will use the Chatterpix to take a picture of their prototype and then create a monologue using pertinent vocabulary to describe their new species.

2. Students will present their Chatterpix creations to their peers

3. Students will use the rubric to assess their peers and then give and receive constructive feedback based on the rubric.

Additional Resources:

- *Classify It* App (free download) to practice classifying various organisms
- Twitter: #Flatsharksneedlove

Lesson Extension:

Compose a creative writing piece that explains the origin of their new species

(See www.Scholastic.com/teachers/lesson-plan/teaching-pourquoi-tales based on the book Why Mosquitos Buzz in People's Ears) by Verna Aardema