



Humanities and the Sunshine State

What Sustains Us?

Florida Ecosystems in an Era of Rapid Change

University of Florida 20-24 June, 2016

ACTION PLAN TEMPLATE

Teacher(s): *Karen Mitcalf*

Grade(s): *6-7*

Subject(s): *Life Science*

Title of Lesson: *An Ecosystem Mystery*

Learning Objectives:

- Ecosystem relationships
- Creating models
- Evaluating impacts of change

Standards Addressed:

NGSS MS-LS2-1 Analyze and interpret ~~change~~ data to provide evidence for the effects of resource availability on organisms and populations in an ecosystem

MS-LS2-4 Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Lesson Outline:

- ① Familiarize students with systems diagrams (following a lesson on food webs). Emphasize that we will now be including variables ~~that~~ that are not limited to feeding relationships.
- ② Students ^{groups} make systems diagram of saltmarsh ecosystem. Provide a video or powerpoint to introduce the organisms and other variables of interest.
- ③ Discuss results (gallery walk?)
- ④ Give students readings to share in small groups about the effects of ~~the~~ earthen barriers on water flow, effect of salinity on growth of plants (cabbage palm), ~~effect~~ impacts of sea level rise, oyster mariculture + harvest.
- ⑤ ~~Students are asked to add these variables to their diagrams~~ ^{- over -} Give students a reading that tells the story of ~~people~~ ^{changes} that have occurred in a saltmarsh (Shell Mound)

Systems thinking connection (learning habits and/or tools used):

- Students make a diagram
- Consider effects of changes

Learning Strategies:

- Group diagramming
- Readings that include data visualizations
- Gallery walk
- CER to justify claims

Science Concept(s):

Ecosystems
Change

Humanities Concept(s):

Human cultures alter ecosystems today and long ago.
Early Floridians

Student Assessment Strategies:

- ~~Students~~ generate diagrams and ~~modify~~ modify them.
- Students writing about their claims

Benefit to my students:

- Learn about systems ~~that are~~ ^{they are} not limited to ~~the~~ "wildlife".
- Awareness that ~~even with~~ ^{even with} limited technology, humans ~~have~~ cause change

Resources and Materials (supplies needed for activities):

chart paper, markers, copies of readings.

- PPT about saltmarsh ecosystem
- readings with data about impacts
- "story" of shell mound

- ⑥ Student groups came up with a claim, evidence and reasoning about what could have caused the changes in this marsh.
- ⑦ Reveal that this saltmarsh was altered by Native Americans at shell mound. Discuss how this relates to current climate change.

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