HUMANITIES AND THE SUNSHINE STATE | TEACHING FLORIDA'S CLIMATES
In partnership with the Florida Humanities Council

**JUNE 19-23, 2017 GAINESVILLE, FLORIDA**

**ACTION PLAN TEMPLATE**

Teacher(s): Nadia King

Grade(s): 4/5

Subject(s): Science/Social Studies

Title of Lesson: Human Impact on the Environment

Learning Objectives: Students will create a position on conservation/preservation in relation to environment changes (sea level, temperatures, animal adaptations, plant growth)

Standards Addressed:

SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycle variations, animal behaviors, and physical characteristics.

SC.5.E.7.2 Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth's water reservoirs via evaporation and precipitation processes.

SC.5.P.9.1 Investigate and describe that many physical and chemical changes are affected by temperature.

SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.

SS.4.A.7.1 Describe the causes and effects of the 1920's Florida land boom and bust.

SS.4.C.2.1 Discuss public issues in Florida that impact the daily lives of its citizens.

LAFS.5.W.1.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

Lesson Outline:

- Day 1:
  - Class Project based Learning (10 days max)
    - Students create lesson plans to teach presentations about different environments in Florida
      - Everglades
      - Weeki Wachee Springs

- Fernandina Beach
- Withlacoochee Gulf
- Suwanne River
- Lake Occechobee
- Kissimmee Prairie
- Ocala National Forest
- Lake Wales Ridge
- Cedar Key
- Tampa Bay
- Florida Keys

- Day 8/9: Students will finalize their environment studies.

- Day 10: Presentations/reflections of environment studies

- Day 11: Activating Activity: Marbles in water
  - Add marbles of water to indicate dredging of the Everglades, addition of houses (marbles), water displacement, adding water back
  - Tie into Math: http://utahscience.oremjr.alpine.k12.ut.us/sciber03/middle/7_sciber/matter/html/volume.htm
  - Tie it back to the Disstion Purchase, Broward's plan to dredge the Everglades
  - $2.00 sentence summing up their take on the demonstration and topics (words are worth $0.10.

- Day 12:
  - Water Cycle discussion
    - Map out the "normal" hydrological cycle
    - Add any underling additions due to Florida's environments taught through presentations
  - Reading: The Lorax
    - https://www.youtube.com/watch?v=aa82mcXO9AQ
    - Casual Loop Diagram showing connections of what is occurring in the book through the story
    - Write a Flash Fiction/new ending to the Lorax. 25 words or less

- Day 13:
  - Mapping Carbon
    - Create a KWL on topics/stations to be covered prior to starting the rotations
    - Teacher will model 2 rotations
    - Students will pair up, and rotate for 20 minutes
    - http://sfrc.ufl.edu/extension/ee/climate/section3/activity7/
    - Student pairs will create Causal Loop map showing their mapping results

- Day 14:
  - Pollution discussion
    - Who polluted the Weeki Wachee River: Interactive story where students experience the pollution of a local river over time.
    - http://www.northeastern.edu/helmuthlab/lessons/pdfs/grade7z.pdf

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        - Students create and discuss the hydro”ill”logical cycle, adding fertilizer, etc based off of observations from interactive activity
- Day 15:
    - Using the articles below, students will write an opinion essay with the following prompt
        - What do you think is the environmentist need focus on reversing?
        - https://newsela.com/articles/kids-suing-state/id/25284/
        - https://newsela.com/articles/govt-EPA-climate-southeast/id/28814/
        - https://newsela.com/articles/greatlakes-chemicals/id/1278/
- Day 16:
    - Students will create a Casual Loop Diagram to create personal problem/solution outcomes of “fixing the problem” backing up their stance.

Systems thinking connection (learning habits and/or tools used):
- Model (I do): Teacher creates a Casual Loop Diagram to show “The Lorax” connection with students.
- Students with partners (we do): Casual Loop Diagram showing their team results for Mapping Carbon
- Students individually (you do): Create a Casual Loop Diagram to create personal problem/solution outcomes of “fixing the problem” backing up their stance.

Learning Strategies:
- Cooperative Groupings
- ESE/ESOL accommodations
    - Oral Presentation
    - Pre filled Graphics
    - Graphic organizers
    - Visual Representations

Science Concept(s):
- Climate Change
- Pollution
- Animal/plant adaptations
- Hydrological cycle
- Carbon Mapping
- Water displacement

Humanities Concept(s):
- Human repercussions
- Ethics
- Politics
- Florida history (land boom, etc)

Student Assessment Strategies:
- Formatives
    - $2.00 words
    - Causal Loop Diagrams
    - Fast Fiction
- Final Assessment
    - Essay

Benefit to my students:

- Inspiration for teaching “change”
- Awareness of environments around us
- Creating system thinkers and critical problem solvers

Resources and Materials (supplies needed for activities): All embedded

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