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

JUNE 24-28, 2019 UNIVERSITY OF FLORIDA

"TAKING IT BACK TO THE CLASSROOM" ACTION PLANS

Teacher: Kimberly Casselman

Grade(s): 6-8

Subject(s): Comprehensive Science 2; Physics (Elective)

Idea 1: **Energy Conservation Club**

I plan to begin an Energy Conservation Club at the school to promote less energy consumption and recognizing alternative energy solutions that may be reachable by students, teachers, and community members.

I have seen the importance of giving students a responsibility and power to carry out a movement. Some students do show interest in conserving energy and some practice this at home. I would like to help students learn how to recognize the effects of human actions on our environment.

Learning Goals/Standards:

8.L.18.4- Cite evidence that living systems follow the Laws of Conservation of Mass and Energy. (DOK 4)

7.P.10.1-I llustrate that the sun's energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.

SC.6.E.7.4- Differentiate and show interactions among the geosphere, hydrosphere, cryosphere, atmosphere, and biosphere. (DOK 3)

SC.6.E.7.9- Describe how the composition and structure of the atmosphere protects life and insulates the planet. (DOK 2)

SC.8.N.4.1- Explain that science is one of the processes that can be used to inform decision making at the community, state, national and international levels. (DOK 2)

SC.8.N.4.2- Explain how political, social and economic concerns can affect science and vice versa. (D

Idea 2: Weather vs. Climate

Providing students with examples of weather and climate and having them categorize them.

Observe the pictures to make written explanations of the changes that took place in the pictures.

Create a list of some ways humans could adapt to the climate changes that are taking place currently.

Learning Goals/Standards:

6.E.6.1- Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition. (DOK 2)

8.P.9.1- Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes. (DOK 3)

8.P.9.2- Differentiate between physical and chemical changes. (DOK 2)

8.P.9.3- Investigate and describe how temperature influences chemical changes. (DOK 3/4)

Idea 3: Relationships in Nature - Mutualism, Commensalism, Parasitism

Define the differences between these three terms.

Provide pictures of the different relationships in nature. Students can try to separate these pictures into the appropriate categories.

Students can write down how the picture shows the relationship they chose. How do you justify your choice of relationships?

Students will be able to identify relationships between organisms as mutualism, commensalism, predation, competition or parasitism.

Students will be able to define and describe examples of symbiotic relationships: mutualism, commensalism, predation, competition or parasitism.

The teacher will begin the class by showing the YouTube video Symbiosis: Mutualism, Commensalism, and Parasitism. It is by Untamed Science and it presents commensalism, mutualism and parasitism via a tropical ocean ecosystem and provides information on symbiotic relationships.

The teacher will then lead a brief discussion about symbiosis and the types of symbiotic relationships that were featured in the video. Simply put, a symbiotic relationship is an interaction between two or more species in an ecosystem. These interactions can be *obligate* or *facultative*. Obligate symbiosis occurs when organisms need each other in order to survive. Facultative symbiosis occurs when organisms live together by "choice." The types of symbiotic relationships are: mutualism, commensalism, parasitism, predation and competition.

The teacher will then show the second YouTube video Hickey's Creek Florida Scrub Ecosystem by Leanne Ellis. It shows what a Florida scrub ecosystem looks like. Take time to

point out the lack of abundant trees, the saw palmetto plants, and generally dry sandy conditions. If the teacher is unfamiliar with this ecosystem and would like to learn more, the Florida Fish and Wildlife Conservation Commission, Florida Data, and FNAI have great information on their websites.

Learning Goals/Standards:

7.L.17.2 Compare the relationships among organisms such as mutualism, predation, parasitism, competition, & commensalism. (DOK 2)

8.L.18.4 Cite evidence that living systems follow the Laws of Conservation of Mass and Energy. (DOK 4)