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): Greenwald and Sohn

Grade(s): 5th and 6th

Subject(s): Science, Reading, Writing and Math

Title of Lesson: Saved by the Footprint

Essential Questions:
How can I understand my impact on the environment?
How has my carbon footprint changed over time?
How could I measure my carbon footprint?

Learning Objectives: Students will…
1.   Increase their awareness of the impact of their choices on the Earth. This awareness is to result in a goal to reduce their personal impact (footprint). Students will create a survey to interview sets of data using decades. Oral Presentation, writing, reading

2.   Students will use pie graphs to learn how to manipulate the data on the survey. Math, Results

3.   Learn the mean, median, mode, and standard deviation of a set of data. Data collection and knowing how to input data to determine proper results

Standards Addressed:

ELA: LAFS.5.RI.1.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Science:
SC.6.N.1.1- Nature of Science

Math: (Statistics and Probability)
MAFS.6.SP.1.1, MAFS.6.SP.1.2, MAFS.6.SP.1.3, MAFS.6.SP.3.1, MAFS.6.SP.3.8,
MAFS.6.SP.6a, MAFS.6.SP.7c, MAFS.6.SP.7d

Lesson Outline:

Discuss climatology.
Understand what climate is and how our impact as humans has affected the levels of carbon that are present today…
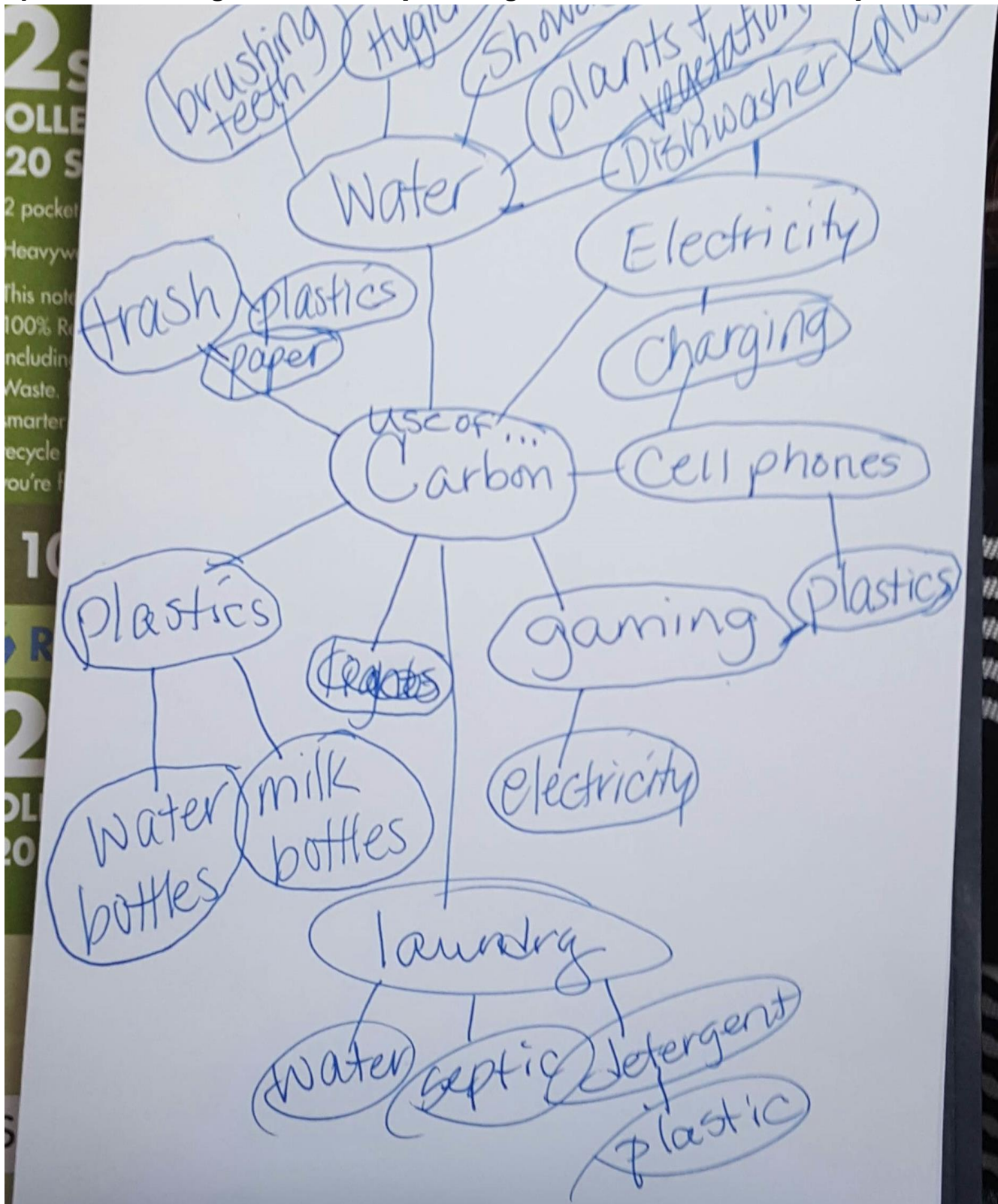
Create interview questions

Complete interview with a partner, record data- present to class (can use a pie chart)

Administer interview to several people of the decades {parent or grandparent} (20, 30, 40…etc.)

After interview students will have a group discussion to make connections about the knowledge of the interviewee and what their experience has meant to them and make connections on the differences of how much carbon they use compared to the carbon the person they interviewed used.

After collecting data students will then make graphs to analyze the data and then discover how to find measures of central tendency (mean, median, mode, range and absolute standard deviation)

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

A hand-drawn concept map centered on "Use of... Carbon" with connected nodes:

- brushing teeth
- Hygiene
- Shower
- plants + vegetation
- Dishwasher
- Water
- Electricity
- trash
- plastics
- paper
- Charging
- Use of... Carbon
- Cell phones
- Plastics
- Plastics
- gaming
- tractors
- electricity
- milk bottles
- Water bottles
- laundry
- Water
- septic
- detergent
- plastic

Learning Strategies:
Create a system diagram to use cause and effect relationships to show how humans depend on carbon.

Have students then create the survey and questions to ask during the interview.

Students will then create a pie graph to analyze information obtained from the interview.

Students will use measures of central tendency to determine what interview question had the most usage of carbon.

Accommodations if necessary: *Work with peer, sit closer to teacher's desk, use technology, use recording device, guided template for graphing purposes, increase size of text if necessary, give oral and written directions*

Science Concept(s): (build prior knowledge of…)
Discuss climatology.
Understand what climate is and how our impact as humans has affected the levels of carbon that are present today…

Humanities Concept(s): Oral interview verbally relating, recording, transcripts…in depth interview

Student Assessment Strategies:

After interview students will encounter the prior knowledge of the interviewee and what their experience has meant to them and make connections.

After collecting data students will then make graphs to analyze the data and then discover how to find measures of central tendency (mean, median, mode, range and absolute standard deviation)

Benefit to my students:
- Awareness of earth's conditions
- Awareness of their role in the current conditions within their own lives
- Awareness of their role in the future of our earth

Resources and Materials (supplies needed for activities):
- Access to the Internet
- Create survey
- Graph paper or poster paper
- Pencils
- Colored Pencils/Markers
- Worksheet