LESSON PLAN

Earth

Teacher Notes:

Next Generation Sunshine State Standards:

SC.5.E.7.7-- Design a family preparedness plan for natural disasters and identify the reasons for having such a plan.
SC.5.E.7.In.c-- Identify elements that make up weather, including temperature, precipitation, and wind speed and direction.
SC.5.E.7.In.e-- Recognize weather-related differences in environments, such as swamps and deserts.
SC.5.E.7.Su.e-- Match specific weather conditions with different locations.
SC.5.E.7.Pa.d-- Recognize examples of severe weather conditions
SC.5.E.7.In.g-- Identify emergency plans and procedures for severe weather
SC.5.E.7.Su.f-- Identify what to do in severe weather

SC.6.E.7.7-- Investigate how natural disasters have affected human life in Florida
SC.6.E.7.8-- Describe ways human beings protect themselves from hazardous weather and sun exposure
SC.6.E.7.In.c-- Identify the way elements of weather are measured, including temperature, humidity, wind speed and direction, and precipitation.
SC.6.E.7.In.g-- Identify possible effects of hurricanes and other natural disasters on humans in Florida.
SC.6.E.7.Su.g-- Recognize possible effects of severe storms, hurricanes, or other natural disasters in Florida.
SC.6.E.7.Pa.e-- Recognize where to go in severe weather situations or drills at school and at home.
SC.6.E.7.In.h-- Identify ways humans get ready for severe storms and protect themselves from sun exposure.
SC.6.E.7.Su.h-- Recognize ways people prepare for severe storms and protect themselves from sun exposure.
SC.6.E.7.Pa.e-- Recognize where to go in severe weather situations or drills at school and at home.

SC.7.E.6.5-- Explore the scientific theory of plate tectonics by describing how the movement of earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building.
SC.7.E.6.Su.d-- Recognize the effects of earthquakes and volcanoes.

SC.912.E.6.3-- Analyze the scientific theory of plate tectonics and identify related major processes and features as a result of moving plates.
SC.912.E.6.In.c-- Relate a cause and effect of movements in Earth's crust (plate tectonics), such as fault lines in the plates causing earthquakes.
SC.912.E.6.Su.c-- Recognize that Earth's crust is broken into parts (plates) that move and cause mountains and volcanoes.
SC.912.E.7.6-- Relate the formation of severe weather to the various physical factors.
SC.912.E.7.In.f-- Compare weather conditions in different types of severe storms, including hurricanes, tornadoes, and thunderstorms.

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SC.912.E.7.Su.f-- Recognize conditions in severe storms, such as hurricanes, tornadoes, and thunderstorms.
SC.912.E.7.Pa.e-- Recognize the weather conditions, including severe weather, in Florida.

Common Core Literacy Standards:

CCSS.ELA-Literacy.RST.6-8.1-- Cite specific textual evidence to support analysis of science and technical texts.
CCSS.ELA-Literacy.RST.6-8.2-- Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
CCSS.ELA-Literacy.RST.6-8.3-- Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
CCSS.ELA-Literacy.RST.6-8.4-- Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.
CCSS.ELA-Literacy.RST.6-8.7-- Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
CCSS.ELA-Literacy.RST.6-8.8-- Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
CCSS.ELA-Literacy.RST.6-8.9-- Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

CCSS.ELA-Literacy.RST.9-10.1-- Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
CCSS.ELA-Literacy.RST.9-10.3-- Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text.
CCSS.ELA-Literacy.RST.9-10.4-- Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 9–10 texts and topics*.
CCSS.ELA-Literacy.RST.9-10.8-- Assess the extent to which the reasoning and evidence in a text support the author's claim or a recommendation for solving a scientific or technical problem.

CCSS.ELA-Literacy.RST.11-12.3-- Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
CCSS.ELA-Literacy.RST.11-12.4-- Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11–12 texts and topics*.
CCSS.ELA-Literacy.RST.11-12.7-- Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

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CCSS.ELA-Literacy.RST.11-12.8-- Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.

CCSS.ELA-Literacy.RST.11-12.9-- Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

Common Core Mathematics Standards:

CCSS.Math.Content.HSS-IC.B.6-- Evaluate reports based on data.

Target Classes:

- Elementary School Earth Systems & Patterns, specially 5th grade
- Middle School Earth Systems & Patterns 6th grade & Earth Structures 7th grade
- High School Earth and Space Science

Summary of the Activity:

The following activity introduces students to the concept of natural disasters. Students will learn important facts about earthquakes, hurricanes, twisters and tsunami's to name a few. The worksheet has students to visit the ***Earthquake Café, The Hurricane Shack and Natural Disasters Trivia*** exhibits.

Timing:

Approximately 30-45 minutes of data collection at ***WonderWorks***.

Pre-Field Trip Activities:

Spend 1-2 days covering the Earth on which we plan to focus

- Pre-assessment (formal or informal) to gauge students' knowledge
- Give an overview of relevant vocabulary
- Discuss the Saffir-Simpson and Richter scales.
    - What are they used for?
- Discuss natural disasters.
    - Write some examples?
    - Write some examples of natural disasters in Florida?
    - Discuss if anyone has experienced any natural disasters?
- Identify on a map the location of specific natural disasters based on the discussion and writing you just had.

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Variations of the lesson include:

- For ESE/ESOL students:
  - Deliberate grouping of ESE/ESOL students with standard students/chaperones
  - Go over directions of each exhibit before field trip with ESE/ESOL students

WonderWorks Activity: Please print the Earth Lesson Scavenger Hunt file.

Post-Field Trip Activities:

Writing Component

- What would your family's preparedness plan be?
  - Why is it important?
- Where would you go during a natural disaster (be specific)?
- How has natural disasters affected human life in Florida?

Discussion

- What are the evacuation routes for your city (zone)?
- What is your school drill for a natural disaster (be specific)?