UF CPET ACTION PLAN TEMPLATE

Date submitted:

Teacher(s): Mathew G. Figueiredo

School(s): GC Swain

Grade(s): 7/8

Subject(s): SCIENCE

Title of Project: GEOLOGIC TIME: A BRIEF HISTORY OF SPACE, EARTH & YOU!

Goal of Project: Help students understand the geologic time scale & how fossils & rocks provide evidence of Earth's history.

What will be done with my students:

- Personal timeline
- Comparison to geologic time
- Research individual events in geologic time
- Reconstruct a geologic time scale w/ class

Benefit to my students:

- Understand geologic time
- Role of rocks & fossils in providing evidence of Earth's past

UF connection:

- Thomas Farm fossil samples
- Geologic Time activity example
# SINGLE LESSON PLAN

**Teacher:**

**Content Area/Grade:** Comp. Science

**Date:**

## Unit Name:

**History of the Earth**

### Unit Goal

**What unit goal does this daily lesson address?**

**SWBAT:** Explain how fossils supply evidence of geologic change & provide examples of physical evidence that supports scientific theories that Earth has evolved over time.

**Standard(s)/Benchmark(s):**

SC.7.E.6.4 - Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over time due to natural processes.

**Domain 2, E44**

### Students will understand that...

**What should the students understand by the end of today's lesson?**

Understand that by studying rocks & fossils, inferences can be made about Earth's history.

**Essential Questions**

**What essential question(s) does this lesson address?**

How do rocks and fossils help us make inferences about Earth's history?

**Connecting Concepts**

**How will you review yesterday's content and connect today's lesson to it?**

- Rock cycle
- Radioactive dating

**Review:**

- Superposition

**Organizing Students for Learning**

**How will students be organized today for the lesson’s activities?**

Pairs

**Connecting Concepts**

**How will you review yesterday’s content and connect today’s lesson to it?**

- Rock cycle
- Radioactive dating

### Lesson Sequence

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<th>Activating Prior Knowledge</th>
<th>Explicit Instruction</th>
<th>Group Processing of New Information</th>
<th>Elaborative Questioning</th>
<th>Demonstrating Understanding</th>
<th>Reflection</th>
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<tbody>
<tr>
<td><strong>DQ2, E8</strong></td>
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<td><strong>DQ2, E10</strong></td>
<td><strong>DQ2, E11</strong></td>
<td><strong>DQ2, E13</strong></td>
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<tr>
<td><strong>ABC Brainstorming</strong></td>
<td><strong>Complete Worksheet outlining events in your life to create a personal timeline.</strong></td>
<td><strong>Compare personal timeline to geologic timeline.</strong></td>
<td><strong>What artifacts did you use in your personal time line vs. a geologic timeline?</strong></td>
<td><strong>Students will be given various events in geologic time &amp; must recreate a geologic time scale to reflect those events accurately.</strong></td>
<td><strong>Write a summary in Cornell notes/class discussion.</strong></td>
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<tr>
<td><strong>KWL</strong></td>
<td><strong>Motivational Hook</strong></td>
<td><strong>Jigsaw</strong></td>
<td><strong>Inferential Questions</strong></td>
<td><strong>Graphic Organizers</strong></td>
<td><strong>Reflective Journal/s</strong></td>
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<td><strong>Anticipation Guide</strong></td>
<td><strong>Lecture</strong></td>
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<td><strong>Demonstration</strong></td>
<td><strong>Concept Attainment</strong></td>
<td><strong>Philosophical Chairs</strong></td>
<td><strong>Flow Charts</strong></td>
<td><strong>Exit Ticket (Student Learning)</strong></td>
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<td><strong>Think-Pair-Share</strong></td>
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<td><strong>Lab / Inquiry Activity</strong></td>
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**Based on the results from your Daily Progress Monitoring Assessment, what concepts need to be revisited in the next lesson?**

**Homework:**

**DQ3, E16**

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Secondary Science Curriculum
### SINGLE LESSON PLAN

**Teacher:**

**Content Area/Grade:** Comp. Science

**Date:**

**Unit Name:** History of the Earth

#### Unit Goal

**What unit goal does this daily lesson address?**

SWBAT: understand that by studying rocks & fossils, inferences can be made about Earth's history.

#### Standard(s)/Benchmark(s)

**What standard(s)/benchmark(s) does this daily lesson address?**

3.C.7.E.3 - identify current methods for measuring the age of Earth and its parts, including the law of superposition & radioactive dating.

Domain 2, E44

#### Students will understand that...

**What should the students understand by the end of today's lesson?**

- Describe how geologic calendars are used to compute relative ages of rocks
- Recognize that index fossils can be used to calculate absolute age of rocks.

**Essential Questions**

**What essential question(s) does this lesson address?**

- How do rocks & fossils help us make inferences about Earth's history?

#### Connecting Concepts

**How will you review yesterday's content and connect today's lesson to it?**

- Review rock cycle
- Rock layers & superposition

**Organizing Students for Learning**

**How will students be organized today for the lesson's activities?**

Pairs / Small group

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### LEARNING EXPERIENCES, INSTRUCTION, AND RESOURCES

**What activities or experiences (from your Unit Plan) will students engage in today? (DQ2, E9)**

#### Lesson Sequence

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**Compare & contrast personal time to geologic time.**

#### Resources & Materials

- Computer
- LCD Projector
- Paper
- Pencils
- Whiteboards
- Markers
- Butcher Paper
- Response Cards
- Post-it Notes
- Video Clip(s):

- Lab / Inquiry Activity:
  - Jigsaw
  - Reciprocal Teaching
  - Concept Attainment
  - Think-Pair-Share
  - Inferential Questions
  - Analytic Questions
  - Philosophical Chairs

- Lab Materials:
  - Graphing Organizers
  - Picture Notes
  - Flow Charts
  - Concept Maps
  - Mnemonics
  - Graffiti

- Reflective Journals
- Think Logs
- Exit Ticket (Student Learning)

#### Daily Progress Monitoring Assessment

**Define geologic column in relation to fossils, rocks, & continents.**

**Quiz:**

- Journal
- Exit Ticket (for Content)
- Response Cards

**Based on the results from your Daily Progress Monitoring Assessment, what concepts need to be revisited in the next lesson?**

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**Secondary Science Curriculum**