Myranda Robinson

Ms. Tescha Walz

Block II Practicum

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**SOLAR** Lesson Plan

*Lesson #8- Wednesday, December 7*

**Grade Level:** 4th Grade

**Subject Area:** Science and Writing: *Fossils*

**Materials Needed:** Blue Science Book: pages 23-26, loose sleeve paper, pencil, over head projector, white bread, gummy worms and life savors, saran wrap, and heavy books.

**Standards:**

* 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers explanation for changes in a landscape over time.
* W.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

**Objective:**

* Students will demonstrate knowledge of fossils with in rock layers through actively listening to text, participating in a demonstration, and through a writing of their demonstration.
* Students will show their knowledge of scientific vocabulary and the development of fossils in rock lays by recording the demonstration they participate in.

**Learning Activities:**

* Gather students around the smart board area to start the lesson- Be sure everyone is seated in a way that is comfortable and appropriate to their learning style.
* While the students are becoming situated have one student pass out the blue science books to every student.
* Instruct the students to turn to page 23 and actively follow along (Ask questions, have students repeat back vocab as you write it on the board, turn and talks, etc.).
* Remind students that they need to be listening to the text in order to understand the demonstration and complete the writing assignment.
* Gather back the attention of the class as needed throughout lesson (Ex. “Give me 5”, “If you can hear my voice touch your nose”, etc.)
* Have the students stack their books on the grey stage and return to their seats, getting out a piece of paper and pencil only (Everything else should be cleared from their desks).
* Explain that that they going to be a “landform” and then “geologists” today and they need to recode first their demonstration and then their findings.
* Have the students follow along with you on the over head as you write your name, date, title “Fossil Discovery”, landform and geologist entry.
* Once the outline is complete, assign four students to be your helpers with materials (Three pieces of white bread, handful of gummy worms and life savors, and saran wrap-To each table pod).
* Instruct students not to eat or touch the materials until instructed.
* Remind students that they are first going to be landforms, creating their fossils.
* The students are to work together with in their table pods to place one layer of soil (Bread) and then creatures (Gummies), and another layer of soil, creatures, and then soil.
* Instruct the students to then wrap it in saran wrap and place a few heavy books on top of it (Demonstrate up front under the overhead for the students).

<http://teachbesideme.com/sedimentary-rocks-fossil-experiment/>

* As the students wait for “hundreds of years” have them write what they just did from a landforms perspective. (Ex. I started out with one layer of dirt where different creatures use to roam, but then the wind began to blow and the creatures were covered up by piles and piles of dirt…” Have students use as many science vocab as possible through their writing (Have them reference to the board).
* Once they are through, have them “change hats”, now they are to be geologist taking apart the layers and describing their findings and what they believe happened (Their next piece of writing).
* When students are finishing up, recap one last time on key vocab, fossils, and how they are formed.
* Have one student be your helper and walk around with the trash can for easy clean up.
* Have students turn in their writing for a form of assessment.

**Assessment:**

* Informally assess progress throughout lesson through observation and participation accuracy (Attention, effort, ability, etc).
* Formative:
  + Assess progress through correct identification of fossils with in rock layers through actively listening to text, participating in a demonstration, and through a writing of their demonstration.
  + Assess progress through student’s accuracy of knowledge of scientific vocabulary and the development of fossils in rock lays by recording the demonstration they participate in (Making sure all key components are there).
* Summative:
  + Assess student’s knowledge of fossils and how they are created at the end of the unit by having students match vocabulary and have a writing element on how fossils are created.

**Reflection:**

* As far as student engagement, best lesson I taught! Definitely keep!
* I added in a visual representation of demonstrating the layers and creatures (Layer, creatures swimming and dying, new layer, creatures swimming and dying, new layer) with text books and chip markers (What was right there)-It helped them see what the model would look like as they were not just making gummy sandwiches.
* I adapted writing piece- I did not use the different “characters”. I had them write what they did and then the results after but they had to use specific words (Fossils, sedimentary, organisms, evidence, geologists, paleontologists, and layers) They needed to use at least three in their writing (Met their need).
* Incorporated “Dino-mummy” as were were reading about Dakota the Dino-mummy, as the students picked up on the fact that the gummies were not leaving bone impressions.
* Students really connected with this lesson- A lot of are behaviors were not apparent.