

**Lesson Cycle (Gradual Release of Responsibility)**

**Lesson Title/Topic:**

An Archaeological Look into Earth’s Timeline by Simulating a Dig Site with Artifacts

**Standards:**

CCRS: Science Standards. IV. C. 1. Understand the historical development of major theories in science.

CCRS: Cross-Disciplinary Standards. I. D. 3. Strive for accuracy and precision.

CCRS: Cross-Disciplinary Standards. I. E. 2. Work collaboratively.

<p><b>Lesson Objectives:</b> Students will complete Archaeological Dig Artifact Log with 80% accuracy.</p>	<p><b>Assessment:</b> Completed Archaeological Dig Artifact Log sheet.</p>
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**Materials:**

Large containers for dig-sit, sand, dirt, rocks, fossils, arrow heads, coins, shells, pieces of trash, pieces of pottery, sticky notes, pens, paint brushes (different sizes), plastic spoons, card stock, poster board, trash bags, Archaeological Dig Artifact Log sheet

<p><b>The teacher will:</b></p>	<p><b>The student will:</b></p>
<p><b>Focus:</b>                      Hand out career sheet for students to fill out. Ask students what they think an archaeologist is? Ask students to raise their hands and complete the definition of an archaeologist.</p>	<p>Students will respond to the questions and write down the definition of an archaeologist on the career sheet.</p>
<p><b>Teacher Input (I Do):</b>                      Go over tri-fold display. Discuss education levels (bachelors, masters, doctoral), how many years of school, and what jobs they can get with each level. Discuss salary of archaeologist and explain that the lower level is bachelors and upper level is upper level education. An archaeologist is someone who studies human history and before through excavation and analysis of artifacts and physical remains. Ask students what excavation means? Ask students what they think an artifact is, show them pictures to explain. An artifact is an object made by humans often times found in the Earths layers. Show students the Earth timeline picture</p>	<p>Students will listen and ask questions about archaeologist career.</p> <p>Students will respond to what excavation means.</p> <p>Students will respond to the questions about artifacts and ask any questions they have about archaeology.</p>



<p><b>Independent Practice (You Do):</b>          Instruct students to discuss and reflect with their partner on what they found and what it could mean for that time period. Instruct students to write down on the sticky notes other ideas about what could have been found in each layer. They can also brainstorm about what may be found in the future by archaeologists.</p>	<p>Students will work with their partner to brainstorm about what other fossils and artifacts may have been found in each Earth layer. Students may also brainstorm about what might be found in the future by archaeologists.</p>
<p><b>Closure:</b>          Teacher will discuss and reflect on the words students put on each Earth layer. Discuss why or why not that would or would not be found in that layer. Move sticky notes around as needed.          Instruct students to take the arrowhead out of the dirt and each will state a use for that arrow head. <i>Students may take home the arrow head.</i></p>	<p>Students will reflect and discuss the choices they made for each layer. Students will respond to what they think the arrowheads could have been used for.</p>

<p><b>Bloom’s Level(s):</b>  <b>Create:</b> Students will investigate what is under the dirt as they excavate each layer.  <b>Evaluate:</b> Students will discuss and debate what they believe archaeologists will find in our future Earth layers.  <b>Apply:</b> Students will re evaluate what they first thought would be in each layer compared to what they actually found in each layer.  <b>Understand:</b> Students will describe what an archaeologist, excavate, and artifact means.</p>	<p><b>Technology Integration</b>          In the classroom students would play online “Dirt Detective” game as part of the extension.           (<a href="https://www.history.org/kids/games/dirtDetective.cfm">https://www.history.org/kids/games/dirtDetective.cfm</a>)</p>
<p><b>Extension:</b>          Students have the opportunity to get online and play “Dirt Detective”. Students can play individually or with a partner.</p>	<p><b>Reteach:</b>          Students will complete nine “Fossil Stations” by moving around the room in small groups and completing the worksheet. Teacher will walk around the room and assist students and answer questions as needed.</p>

<p><b>Accommodations / Modifications:</b></p> <ul style="list-style-type: none"><li>- For students with a physical disability, they will have a partner that will assist in the excavation of the artifacts and fossils.</li><li>- For students with anxiety, they will be allowed to sit in a quiet place to do their activity at their own pace.</li><li>- For students with dyslexia, they will not be graded on spelling or grammar on worksheet/career sheet.</li></ul>	<p><b>References:</b></p> <p>Brown, S. (n.d.). Shoebox Dig. Retrieved October 25, 2019, from <a href="https://www.archaeological.org/pdfs/education/digs/Digs_shoebox.pdf">https://www.archaeological.org/pdfs/education/digs/Digs_shoebox.pdf</a>.</p> <p>Science Pictures and Multiplication Freebies. (2014, January 7). Retrieved October 27, 2019, from <a href="https://www.ashleigh-educationjourney.com/science-pictures-and-multiplication/">https://www.ashleigh-educationjourney.com/science-pictures-and-multiplication/</a>.</p>
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