Steps for the Archaeological Simulation

Supplies needed
2 10lb bags of rock
2 10 lb bags of Premium play sand
1 glass terrarium
1 plastic cup (to collect sand to layer in terrarium
1 bowl, hat, or plastic container
Numbered pieces of paper based on the number of students you have (I had 6 students so I wrote numbers one through six- each number on a different piece of paper)
Rubber gloves (approximately 5 pairs per student)
Ancient coins (approximately 1 Optime coin per student and approximately 4 coins from lot of 100 per student -1 for each additional layer of project)
Steps:

*** Gather supplies and leave next to terrarium (except coins should be kept in safe place such as teacher’s locked desk or file cabinet). One coin per student should be taken out per layer of rock or sand deposited.

1. Each student chooses a number out of a bowl which will determine the order each person gets to take a cup full of rocks or sand depending upon the layer.
2. Students stand in a line in numerical order according to the number they drew from the bowl, hat, or container
3. The teacher models appropriate way to take a cup full of rocks and pour into terrarium without damaging glass. The teacher takes a cup of rocks and pours out gently into terrarium.
4. The first student in line then pours 1 cup of rocks, then student number two, etc. until the entire bottom layer of the terrarium is covered and students all had the same number of turns.
5. Each student then takes a coin (I kept the coins in the envelopes they came in and had students draw a coin out if them so they were surprised at the coin they received).
6. Each student in the same order in which they layered the rocks places a coin in the place of their choosing on top of the first layer of rocks.

7. Once all students have placed his or her coin in the first rock layer, step 4 is repeated and an additional layer of rocks is placed using the cup.
8. Once a second layer of rocks is placed, students will then again place 1 coin each on top of the layer of deposited rocks (this time with the coins from the lot of 100 coins: not in the same condition as the Optime coins).

9. Students will draw numbers once again to decide the new order in which they will place the coins and sand.
10. Once the order is decided, students will then gather 1 cupful sand each and pour into terrarium. During this step it is helpful for each student to partner up with the person next to him or her. One student can hold open the bag of sand while the other pours. It is an excellent way to work on turn-taking goals for students with exceptionalities and conversation/communication skills.
11. After one layer of sand is completed, one layer of coins could be placed once again as in step five.
12. Another layer of sand is then poured on top of the layer of coins.
13. A layer of grass or soil could then be placed on top of the sand as the top layer.

Once the layering is completed, the teacher can use twine (could be bought or some delis grocery stores will give to teachers for free) to section off the top layer of the terrarium. The teacher can do his or herself or students can assist. The archaeological site can be divided in half horizontally then into four sections by pacing three pieces of twine spread out evenly then taped at each end with sturdy tape.

The site is then ready to be excavated!