

# Lesson Plan:

## The Law of Superposition

### Learning Objectives: Law of Superposition

1. Students can define the Law of Superposition.
  - The law says that within a sequence of layers of sedimentary rock, the oldest layer is at the bottom and each layer above gets progressively younger
2. Students understand the basic principle of the Law of Superposition.
  - The deeper we dig, the further back in time we are able to see as each layer exposes us to a different era!

### Age Level

Ages: 5-12

### Time Required

About 15 minutes to set up and about 45 minutes to do the introduction and activity.

## Background Info

- ★ The Law of Superposition says that as we dig further into sedimentary rock we are digging into older and older rock. Meaning we can find older and older things left behind by ancient people!
- ★ There are two conditions necessary for the Law of Superposition to work.
  - Only possible in sedimentary rock. This is because sedimentary rocks form over time in layers, unlike igneous and metamorphic rocks.
  - Only possible if the layers are undisturbed! If there has been poor archaeological work, or construction/mining that has been dug into a site, it destroys the information we could have gained using this law.
- ★ The Law of Superposition is a major principle of stratigraphy (part of geology, looks at successive layers of rock and how they determine age).
- ★ Prehistory in this lesson means the time before contact between Native people and Europeans.
  - Early Prehistory (9500 BC-8800 BC)
    - 11,500-10,800 years ago
  - Middle Prehistory (1700-800 BC)
    - 3,700-2,800 years ago
  - Late Prehistory (AD 700-1200)
    - 1,300-800 years ago
- ★ The lack of artifacts found in and around our LSU mounds is a good indication that people had not lived at the site before the mounds were built!

# Materials

- Mason jars
- Coloring page (templet at bottom of lesson plan)
- Coloring utensils
- Scissors
- Tape or glue
- Sand
- Dirt
- Small rocks
- Scoops
- Tablecloths



## Set Up

Works best with 5-6 students per table.

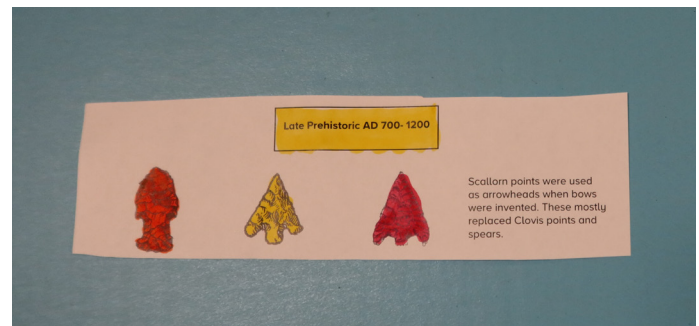
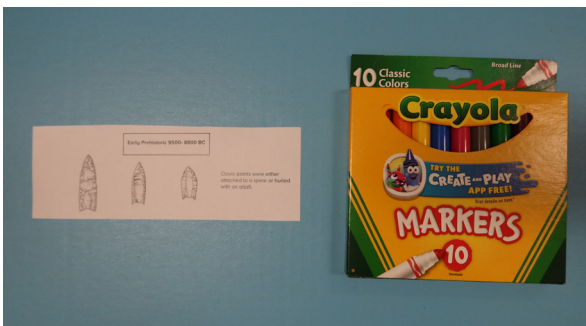
Make sure to place down a tarp or table cloth on each craft table. Spills will happen!

Every table should have containers of dirt, sand, gravel, and small rocks with a scoop. Each table should also have at least one coloring sheet per student, tape, and coloring utensils. All items should be placed in the middle of the table within reach of all participants.

## Steps

**Introduction:** We will be demonstrating the Law of Superposition by making our “mound in a jar”. This activity represents sedimentary rocks that formed on or near the Earth’s surface and formed in a sequence of rocks, layer by layer, preserving some objects left behind by ancient native people in the layers and allowing us to see and explore the rocks’ history (and the humans that lived on them).

1. Ask everyone to grab a coloring page then pass out the Mason jars (doing this at this point helps encourage the kids not to start until instructed).
2. Ask the group to look at the coloring page and explain that each row represents a different time in history. The objects underneath each “timestamp” are objects that native people would have been using then.



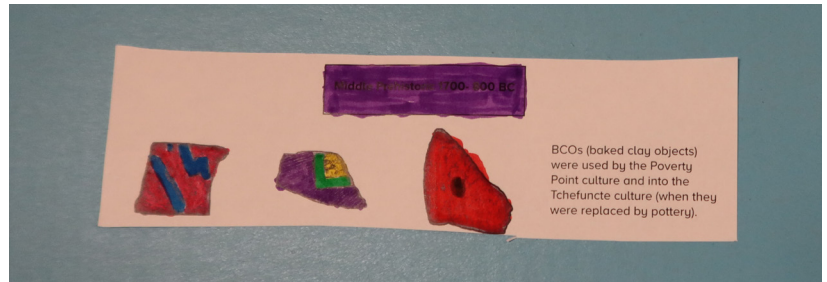
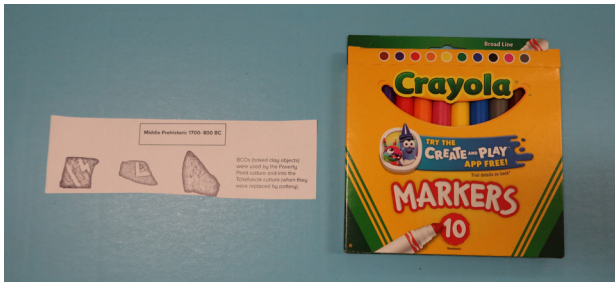
3. Ask everyone to point to the oldest objects on the page (the Clovis points under “Early Prehistory”) then ask them to **color in the Clovis points**.

While they are coloring, explain that Clovis’s points would have been tied to a spear and thrown. This is why they have a dent in the middle, this is where the wooden part of the spear went.



4. Have your group take a **scoop of sand and pour it into their Mason jar**. This represents the land during the “Early Prehistoric Period”. Then have them **cut out their “Early Prehistoric” timestamps and Clovis points and tape them on the outside of their Mason jar along the line of sand**.

Tip: You may want to have your group replace their lid after each pour to reduce spilling

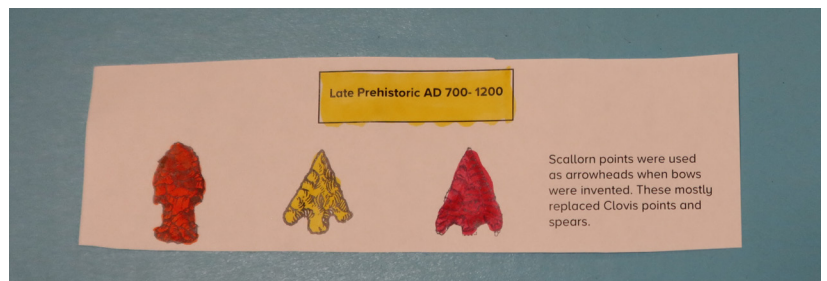


5. Ask the group to **color in the next oldest layer’s objects, BCOs**. Explain that BCO is an abbreviation used by archaeologists that stands for braked clay objects.

DYK? BCOs were used by the Poverty Point culture and into the Tchefuncte culture, when they were replaced by more advanced pottery around (1700-800 BC or 3,700-2,800 years ago).



6. Have everyone take a **scoop of dirt and pour it into their Mason jar**. This represents the land during the “Middle Prehistoric Period”. Then have the students **cut out their “Middle Prehistoric” timestamps and BCOs and tape them on the outside of their Mason jar along the line of dirt**.



7. Ask everyone to **color in the next oldest layer’s objects, Scallorn points**.

Explain that Scallorn points are what archaeologists call “arrowheads”! Bows and arrows started to be used by native Louisiana people around A.D. 700. Bows mostly replaced spears and Clovis points by this time!



8. Have your group take a **scoop of rocks and pour them into their Mason jar**. This represents the land during the “Late Prehistoric Period”.

9. Make sure everyone at this point screws on the top of their mason jar so nothing spills! Then have them **cut out their “Late Prehistoric” timestamps and Scallorn points and tape them on the outside of their Mason jar along the line of rocks**.



10. Finally, have your group cut out their **“Modern Times” timestamp and tape them to the tops of their Mason jars’ lids**. This represents the land from right now, the land that we are walking on when we go outside!

11. Ask the group what they believe archaeologists will find in 700 years when they are digging through our time? Encourage group discussion!

# Law of Superposition

## Craft

The **Law of Superposition** says that within the layers of sedimentary rock, the youngest layer is at the top. As you go further, each layer below is older.

### Instructions

Color the objects that represent the different time periods of Louisiana's Native People!

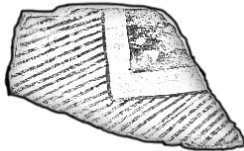
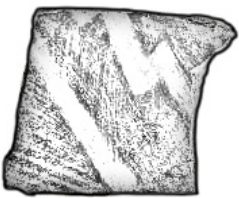
**Modern Times**

**Late Prehistoric AD 700- 1200**



Scallorn points were used as arrowheads when bows were invented. These mostly replaced Clovis points and spears.

**Middle Prehistoric 1700- 800 BC**



BCOs (baked clay objects) were used by the Poverty Point culture and into the Tchefuncte culture (when they were replaced by pottery).

**Early Prehistoric 9500- 8800 BC**



Clovis points were either attached to a spear or hurled with an atlatl.