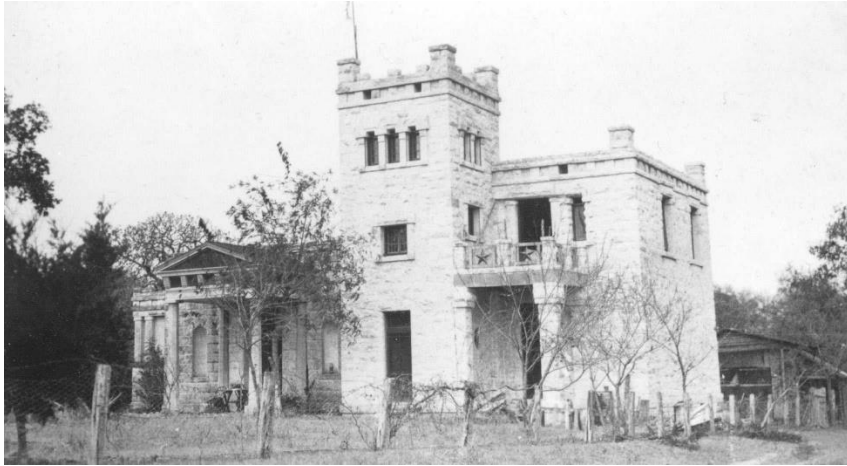


Elisabet Ney Museum Curriculum

Topic: The Importance of Clay



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Introduction

The **Importance of Clay** curriculum introduces students to the work of Elisabet Ney by exploring the scientific and social significance of clay, an important medium to the art of sculpting. Students will learn about the different artistic uses of clay, the process of creating sculptures, the scientific properties of clay and its representation in history and literature. Designed for 3rd and 4th grade classes, this curriculum guide includes activities that fulfill the following TEKS measures:

- English Language Arts and Reading: 3A; 3B
- Social Studies: 1B; 1D; 14A
- Science: 1B; 1D; 7A
- Mathematics: 8A; 8C
- Art: 3A; 3B; 4A; 4B

The **Representations of Clay** activity will introduce students to classic oral traditions, emphasizing the presence of clay in an Apache creation story and Greek mythology, while promoting reading comprehension and analysis. In the **Caddo Pottery Exploration**, students will learn more about indigenous groups from Texas and how they used clay to create pottery. Next, students will conduct an experiment to test different types of soil through the **Properties of Soil** activity. Students will then practice measuring and shaping their own creations in the **Shape Sculpting Activity**. Finally, students will put their skills to the test through the **Clay Modeling Project**, where they will create their own work of art to take home.

For Student Museum Tours:

The Elisabet Ney Museum is open to the public Wednesday-Sunday, noon to 5:00 pm. Class visits may be scheduled earlier in the day as well. For more information on our field trip program, or to set up a class trip, please call 512-974-1628.

Curriculum Outline

Theme: The Importance of Clay

Grade Level: 4th grade

Guiding Questions

- Why might clay be important in creation stories and myths?
- What can clay be used for?
- What are the properties of clay? Why is it important in soil?
- How was clay used in Elisabet Ney's sculpting process?

English Language Arts and Reading Connections

Students will read the story of [Prometheus](#) from Ancient Greek mythology as well as an [Apache creation myth](#), and answer reading comprehension questions about each.

TEKS: 3A; 3B

Social Studies/History Connections

Learn about various cultures among the [indigenous people of Texas](#) and their pottery, culture and language.

TEKS: 1B; 1D; 14A

Science Connections

Identify different types of soil and plant seeds in each. Next, use an accompanying worksheet to analyze data.

TEKS: 1B; 1D; 7A

Math Connections

Students will create geometric shapes from clay or playdough that adhere to specific requirements regarding length, width, etc.

TEKS: 8A; 8C

Art Connections

Explore the work of Elisabet Ney and of contemporary ceramic artists including [Catherine Lee](#), [Carl Block](#), and [Soon Hyung Kwon](#), and create their own by starting with a basic pinch-pot base and adding details.

TEKS: 3A; 3B; 4A; 4C

Field Trip Ideas

Visit the [Elisabet Ney Museum](#), [Umlauf Sculpture Garden](#) or a [local plant nursery](#)

Career Connections

[Ceramicist](#), [geologist](#)

Vocabulary

Pinch pot

Mythological

Indigenous

Caddo

Apache

Silt

Peat

Loam

Evaluation and Assessment

Students will have read the myth of Prometheus and the Apache creation story and answered several reading comprehension questions.

Students will have learned more about the culture and language of indigenous groups from Texas, including the Caddo. Students will be able to identify examples of Caddo pottery.

The class will have conducted an experiment to test plant growth in different types of soil. Students should be able to complete the accompanying worksheet and describe the properties of the different soil samples.

Students will have learned about the process of making sculptures and used clay or playdough to construct geometric shapes of specific dimensions.

Students will use air dry clay to create their own piece of artwork after learning about Elisabet Ney and contemporary ceramicists.

Sample Lesson Plan

Student Outcomes

Students will recognize the properties of clay and its use in multiple fields.

Objectives

Students will read the myth of Prometheus and the Apache creation story and answer several reading comprehension questions.

Students will have learned more about the culture and language of indigenous groups from Texas, including the Caddo. Students will be able to identify examples of Caddo pottery.

The class will learn about the properties of soil and clay and conduct an experiment to decide which type of soil facilitates plant growth best.

Students will have learned about the process of making sculptures and used clay or playdough to construct geometric shapes of specific dimensions.

Students will interpret the style of contemporary ceramicists and incorporate it into their work, learning to integrate artistic styles and clay concepts.

Introduction Activity/Guiding Questions

- Why might clay be important in creation stories and myths?
- What can clay be used for?
- What are the properties of clay?
- Why was clay important to Elisabet Ney's sculpting process?

Vocabulary

Pinch pot

Mythological

Indigenous

Caddo

Apache

Silt

Peat

Loam

Procedures

Representations of Clay Reading Comprehension Activity: Introduce this activity by showing an image of Elisabet Ney's *Prometheus Bound* to the class. Discuss the piece and then have students read the myth of Prometheus. Next, students will read an Apache creation story. The class may discuss the two readings, comparing their themes and the use of clay in each. Finally, have students complete a brief reading comprehension worksheet. For an additional activity, students may create their own mythological story (or creation story) involving clay as a creative writing exercise.

Caddo Pottery Exploration: Begin the lesson by discussing the Caddo people, a population indigenous to Texas. This group is well known for their pottery tradition, dating back to A.D. 800. Present examples of Caddo pottery to the class and discuss the origin and development of this tradition. More information on Caddo pottery is available from [this website](#). To learn more about Caddo culture, choose a Caddo legend to read as a class (available [here](#)) or learn a few phrases from the Caddo language(available [here](#)).

Properties of Soil Experiment: Begin the activity by discussing the properties of clay (ex. small particle size, high water retention, slow permeability, etc.). Discuss why clay might be important to soil and how it could help plants to grow. Next, allow students to observe the properties of 3-4 different types of soil with varying amounts of clay. This activity is hands-on and students should touch the different types of soil and make observations about texture, particle size and color. The class will then conduct an experiment by planting a few seeds in each jar of soil. Continue watering the plants over the following weeks and observe how each plant grows. Have students fill out an experiment worksheet to relay their findings.

Shape Sculpting Activity: Introduce this activity by showing students a short video presentation describing the process of sculpture making. Discuss how plaster models are then cut into marble through careful measurement. Following this, students will do their own “sculpting” of geometric shapes. Show images of geometric shapes with specific dimensions and have students replicate these shapes using clay or playdough and a ruler.

Clay Modeling Project: Begin this activity with a brief background on Elisabet Ney, the prominent German-American sculptor. Give a brief background of her accomplishments and show students images of her work. Next, introduce students to contemporary ceramicists. Discuss the importance of clay in sculpting and ceramic work. Next, students will complete their own art project using air-dry clay. Have students create pinch pot and allow them to dry overnight before decorating with paint.

Evaluation and Assessment

Students will have read the myth of Prometheus and the Apache creation story and answered several reading comprehension questions.

Students will have learned more about the culture and language of indigenous groups from Texas, including the Caddo. Students will be able to identify examples of Caddo pottery.

The class will have conducted an experiment to test plant growth in different types of soil. Students should be able to complete the accompanying worksheet and describe the properties of the different soil samples.

Students will have learned about the process of making sculptures and used clay or playdough to construct geometric shapes of specific dimensions.

Students will use air dry clay to create their own piece of artwork after learning about Elisabet Ney.

Clay in Mythology and Creation Stories

English Language Arts and Reading Activity Guide

TEKS: 3A; 3B

In this activity, students will learn more about the role that clay plays in classical myths and creation stories. Introduce the activity by showing the students an image of Elisabet Ney's sculpture, *Prometheus Bound*. As a class, discuss who the man in the sculpture might be and what story or event the artist wanted to portray. Some guiding questions might include:

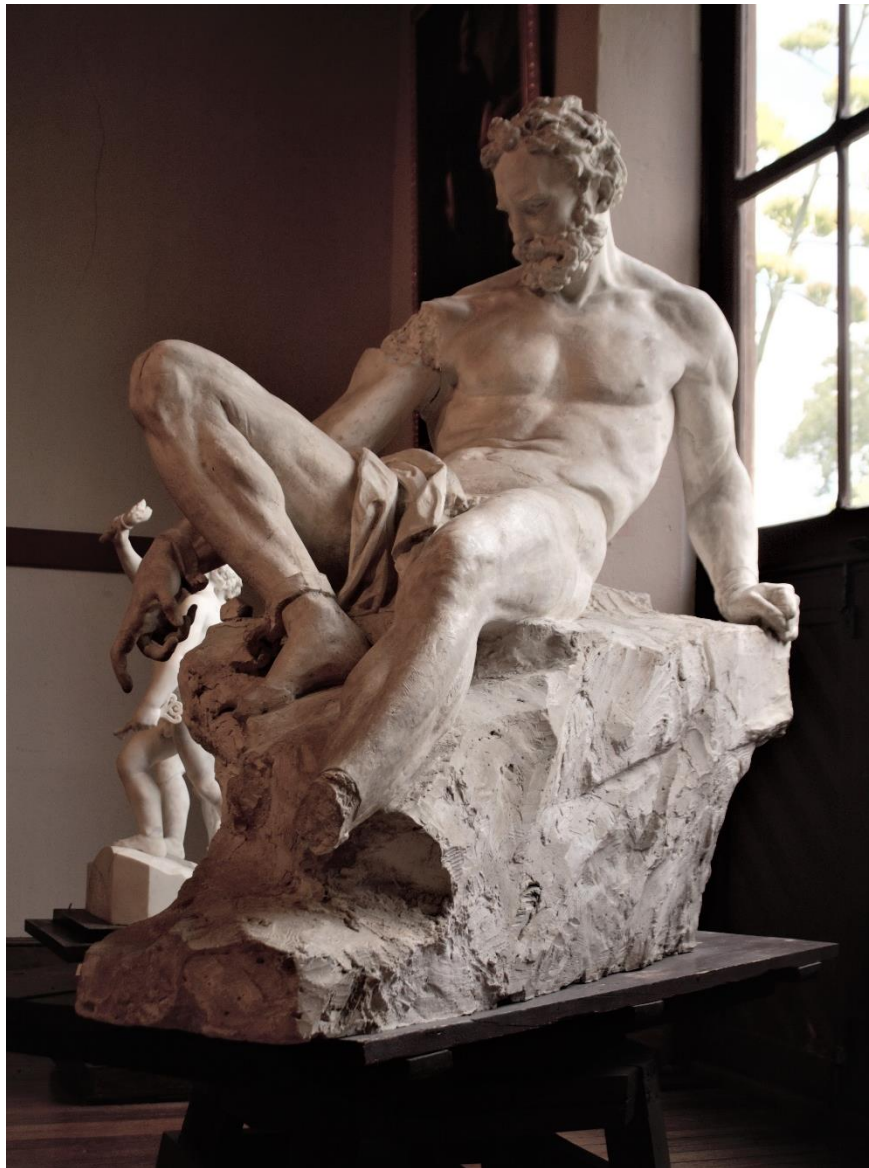
- What do you notice about the man in the sculpture?
- Who do you think he might be?
- Why do you think he is chained to the rock?

Following this, have students either read or listen to the myth of Prometheus. Discuss the sculpture further and decide which part of the myth Ney's sculpture portrays and how she feels (sympathetic, ambivalent, etc.) toward Prometheus. Ask students about the use of clay in the myth and why clay would be a good material to create humans from. Next, students will either read or listen to an Apache creation story. Encourage discussion about both stories and why clay might be important in these stories. Following this, students may complete a reading comprehension worksheet to test their understandings of the two readings.

For an additional creative writing exercise, students may create their own myths or creation stories involving clay. They may create their own cast of characters or use those from Greek/Norse mythology or other oral traditions. Encourage students to add as much detail as possible and use their imaginations!

***Prometheus Bound*, Elisabet Ney, 1865**

In this sculpture, Elisabet Ney recreated the classical myth of Prometheus, the Greek Titan who stole fire from the gods. Ney sculpted *Prometheus Bound* in plaster 1865. During the 1890s, this sculpture was damaged while being transported from her studio in Europe to the United States. Elisabet Ney made some attempts to repair the sculpture later in life, and *Prometheus Bound* was one of the last sculptures that she worked on before her death in 1907.



Myth of Prometheus

According to Greek myths, the Titan Prometheus was given the job of creating humankind. He formed the people out of clay and the goddess Athena breathed life into them. Prometheus then gave his brother, Epimetheus, the job of distributing different gifts and strengths to the creatures of the Earth. Epimetheus gave the various creatures gifts such as speed, the ability to fly, strength and fur. But when he finally got to the humans, there were no more gifts left to give. Prometheus loved the humans that he had created and wanted to help them survive against their harsh environments, so he decided to steal Zeus's lightning bolt and give fire to the people. However, Zeus looked down and saw the humans huddled around fires. Zeus was furious with Prometheus, the clever trickster, and decided to punish him. Zeus had Prometheus chained to a mountain for all of eternity and sent an eagle to fly down and peck at him every day. There on the mountain, Prometheus was trapped until one day when Hercules would rescue him.

Other accounts of this myth can be found at the following websites:

- Greek Mythology for Kids: <https://greece.mrdonn.org/greekgods/prometheus.html>
- How Prometheus Gave Fire to Humans: <https://www.dltk-kids.com/world/greece/m-story-prometheus-fire.htm>
- The Titan Prometheus: <https://www.theoi.com/Titan/TitanPrometheus.html>

Apache Creation Story

Visit www.crystalinks.com/nativeamcreation.html to read/print this Apache creation story.

- More information about Apache Native Americans is available from www.crystalinks.com/apache.html.

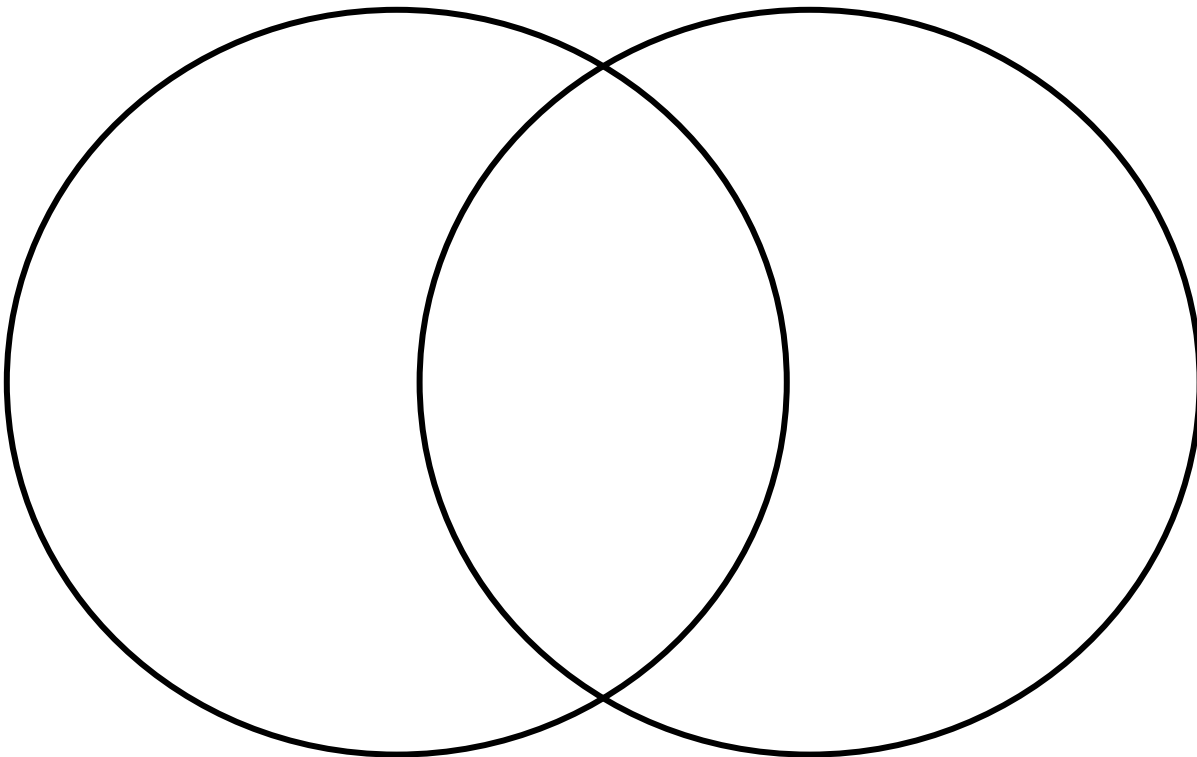
Name:

Reading Comprehension Worksheet

Compare and contrast the two stories of creation you just read. How are they similar?
How are they different?

Myth of Prometheus

Apache Creation Story



Why do you think both Prometheus, Tepeu and Gucumatz all used clay to create human beings?

Why did Prometheus decide to give the people fire? Do you think he made the right decision?

Why did Tepeu and Gucumatz decide to make beings out of clay? Were they successful?

Why or why not?

Caddo Pottery Exploration

Social Studies Activity Guide

TEKS: 1B; 1D; 14A

In this activity, students will learn more about the Caddo Native Americans and other indigenous populations in Texas. The Caddo people were known for being incredibly skilled potters, and their pottery tradition dates back to A.D. 800. Today, remaining members of the Caddo Nation reside in Oklahoma after being forced to give up their homes in Texas, Louisiana and Arkansas. Visit the following websites to learn more about the Caddo group, including their culture, language and history.

- www.texasbeyondhistory.net/tejas/clay/tradition.html
- www.texasbeyondhistory.net/tejas/fundamentals/who.html
- www.nps.gov/elte/learn/historyculture/caddo-nation-introduction.htm

Briefly present information about Caddo culture to the class and/or have students conduct independent research on the websites above. Show the class examples of Caddo pottery (available on the next page) and discuss the process of creating pieces like these. Guiding questions might include:

- What is Caddo pottery made out of?
- Why do you think clay might be a good medium for pottery?
- What was Caddo pottery used for day-to-day?
- How is pottery like this similar to the sculptures Elisabet Ney made? How are they different?

Following this, continue to explore Caddo culture and history as a class. Examine a historical timeline of the Caddo people, read a traditional Caddo legend or learn some words and phrases in the Caddo language.

- Timeline: www.texasbeyondhistory.net/tejas/fundamentals/timeline.html
- Caddo Legends: www.native-languages.org/caddo-legends.htm
- Caddo Phrases: www.native-languages.org/caddo-words.htm

Caddo Pottery Examples



Properties of Soil

Science Activity Guide

TEKS: 1B; 1D; 7A

In this activity, students will learn more about clay and the role that it plays in soil. Begin the activity by discussing the properties of clay using the attached informational handout or other online resources. Some properties may include small particle size, high water retention and slow permeability. Discuss why clay might be important to soil and how it could help plants to grow. Allow students to explore the properties of soil firsthand by collecting samples of 3-4 different types of soil in mason jars or other containers. Some examples might be silt, loam or sand. Have students feel the soil and make observations about texture, particle size, color, etc.

Following this, conduct a class experiment to test which type of soil is most conducive to plant growth. Get a small pouch of seeds and plant a few seeds (all the same kind) in each of the jars. Make sure to label the jars with the soil type. Herbs such as basil or parsley should sprout within a week or two. Water the seeds consistently, ensuring that the soil is slightly damp to the touch, and observe their growth over the following week. Be on the lookout for any sprouts! Have students keep track of plant growth in science notebooks and relay their findings on the experiment worksheet. Once all of the jars have sprouted, discuss which types of soil seemed to produce the fastest growing, healthiest, or tallest plant.

Materials Needed:

- Soil samples
- Jars
- Seeds (any kind)
- Water

Why is Clay Important?

Soil plays an important role in supporting life on earth. It allows plants to grow, helps filter our water and provides a home for many living organisms. It can take hundreds of years for small amounts of soil to form, depending on the climate, topography and the minerals and rocks that are present. When talking about soil, some words you might use include:

- Texture
- Structure
- Density
- Temperature
- Porosity
- Color

All of these words describe different properties of soil. There are many different types of soil with different properties. Some examples include **sand**, **silt** and **clay**. Most types of soil are a mixture of these.

What is clay? Why is it important?

Clay is a kind of material that is formed through the processes of **weathering** and **erosion**. Clay has the smallest particle size of any soil type. Because of this, clay is smooth and dense. This also means that clay retains water well. Clay is an important part of soil because it contains nutrients that are essential to plant growth.

Another way to use clay is through sculpting. One property of clay is **plasticity**. This means that you can stretch out the clay without it breaking or tearing. Clay with high plasticity is used to make sculptures and pottery. You can test the plasticity of your clay by rolling it out, bending it, and shaping it. Does it fall apart or crumble?

Name:

Soil Experiment Worksheet

Draw a picture of your plants and label each kind of soil:

Which kind of soil had a plant that grew the tallest?

Did this kind of soil have a high amount of clay in it? How do you know?

Why do you think this kind of soil was the best for helping plants grow?

If you were to do this experiment again, what would you alter?

Shape Sculpting Activity

Math Activity Guide

TEKS: 8A; 8C

Through this activity, students will learn more about the process of sculpting and the importance of mathematics and measurements to this process. Begin by familiarizing students with the process of sculpting. Discuss how sculptures, like those Elisabet Ney made, are first made out of clay. Next, the artist will cover the sculpture with plaster to create a mold. More plaster is placed inside of the mold, and then the mold is broken open to reveal a plaster version of the sculpture. Next, the plaster might be used as a model for a marble version. Artists and stonecutters use precise measurements and devices called pointing machines to create a replica of the plaster sculpture. The following videos are helpful resources and will allow students to see these processes firsthand:

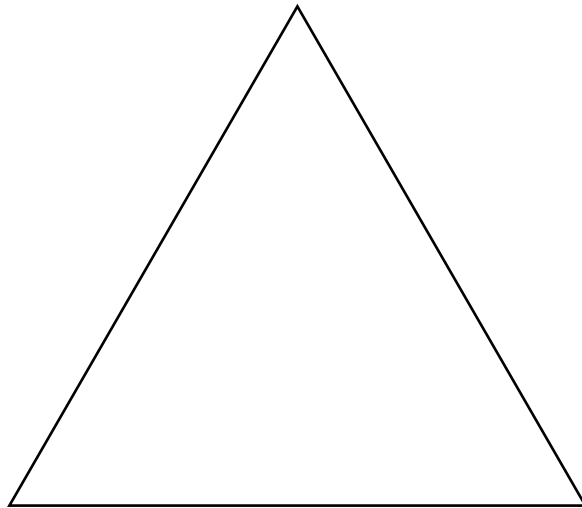
- Creating a Plaster Mold: <http://www.youtube.com/watch?v=Swl5-CSGO2I>
- From Plaster to Marble: <http://www.youtube.com/watch?v=1i30rPRmEeA>

Emphasize the importance of precise measurements to the process. Then distribute playdough or modeling clay to students and allow them to create their own replicas of geometric shapes. Using the following shapes as samples, project images of geometric shapes with specified dimensions. Have students recreate these shapes with their clay/playdough by measuring length, width, etc. Repeat for several shapes.

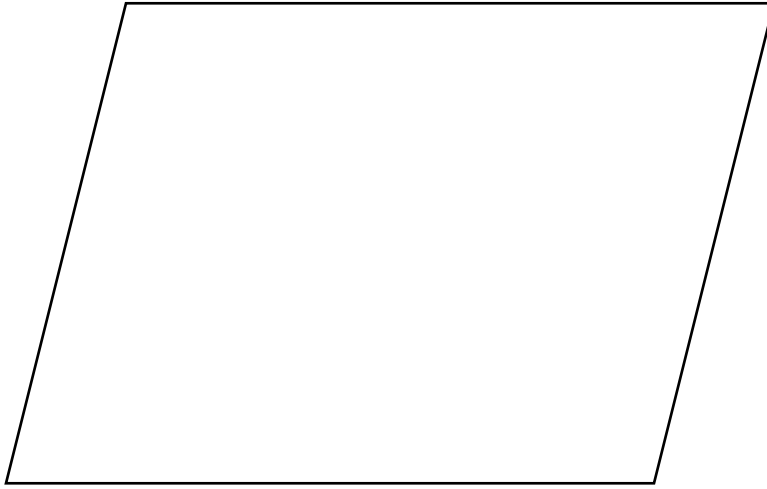
Sample Shapes



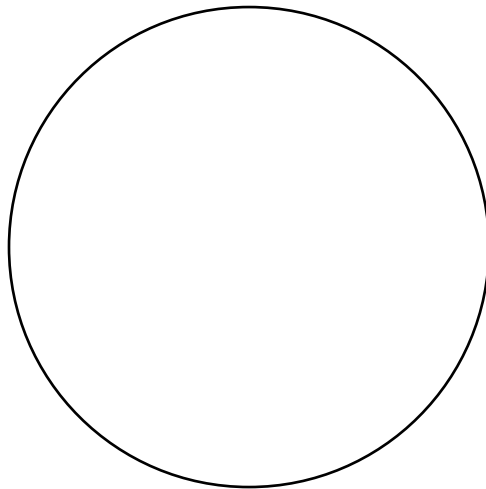
Rectangle: 2" X 4"



Equilateral Triangle: 3" Sides



Parallelogram: 2.5" and 4" sides



Circle: 2.5" diameter

Clay Modeling Activity

Art Activity Guide

TEKS: 3A; 3B; 4A; 4B

This project will allow students to try their hand at sculpting and test their artistic abilities! Introduce the activity with a background of Elisabet Ney, the prominent German-American sculptor. Discuss her use of clay as an artist and present images of some of her works. Next, compare Ney's works with those of contemporary ceramicists including Carl Block. Use the provided PowerPoint to provide background information on these artists.

Next, allow students to make their own creations with air-dry clay. Keep in mind, air-dry clay is not water resistant or safe to place food on. You can also substitute homemade salt dough for the clay. Students might start with a simple pinch pot. To make a pinch pot, students should begin by forming their clay into a ball. Next, have students place their thumbs in the center, gently widening out a hole. Continue pushing back the sides until the clay takes on the shape of a bowl. Students may also add more decorative details such as handles or decorative trim. They may also use stamps or small wooden skewers to carve out designs and engrave their pinch pots. Allow their creations to dry overnight. After they are dry, students can decorate their masterpieces with paint, stamps or markers.

For more detailed instructions on how to create a pinch pot, visit the following website: <https://www.firstpalette.com/craft/pinch-pots.html>.

Materials Needed:

- Air-dry clay
- Paint, stamps, etc.

Additional Resources

- For additional biographical information about Elisabet Ney, visit the following websites:
 - Elisabet Ney Museum: www.austintexas.gov/page/elisabet-ney-biography
 - Women in Texas History Biography: <https://www.womenintexashistory.org/biographies/elisabet-ney/>
- For more information about the properties of soil and clay, visit:
 - <https://kinderart.com/art-lessons/sculpture/about-clay/>
 - https://www.ducksters.com/science/earth_science/soil_science.php
 - <https://www.soils4kids.org/about>
 - <http://www.thekidsgarden.co.uk/teachingkidsaboutsoil.html>
- The Contemporary Ceramics PowerPoint Presentation is available on our website.
- For a step by step tutorial on making a pinch pot, visit:
 - <https://www.firstpalette.com/craft/pinch-pots.html>
- For a recipe for homemade salt dough, visit:
 - <https://www.bbcgoodfood.com/howto/guide/how-make-salt-dough-recipe>