

Japanese Netsuke Sculptures

Essential Question	How can we use science to make our own sculptures?
Grade	2nd
Time	30 minutes to make salt dough 60 minutes to create sculpture
Art Concepts	Sculpture, 3-Dimensional, kimono, <i>obi</i> , netsuke, zodiac, armature, height, width, depth, carved, knead, dough
Materials	2 cups flour, ½ cup salt, ¾ cup warm water, bowl, spoon, small cookie sheet (to fit in toaster oven) lined with aluminum foil, extra aluminum foil for sculpting, plastic wrap, plastic plate or tray or cutting board, water-based markers or tempera paint, clear nail polish

Artworks in Focus [*Sleeping Cat, mid to late-19th century by Masatsugu Kaigyokusai*](#)

[*Dog, mid-19th century by Artist Unknown*](#)

Talking about Art Look at these two **sculptures**. What do you see? Do you see the dog, sitting so erect and alert, and the curled-up sleeping cat?

These beautiful sculptures are called **netsuke** (net-skee). A sculpture is **three-dimensional (3-D)**, which means it has **height, width, and depth**. A piece of paper is two-dimensional. You are 3-D!

These sculptures are solid. Most netsuke are **carved** from wood or bone. Do you know what carving is? It's when you cut away from a solid block of some material like stone, wood, bone or clay.

Netsuke are from Japan. It is a miniature sculpture that was invented in the seventeenth century to serve a practical function. Traditional Japanese robes, called **kimono**, had no pockets. Men who wore them needed a place to put their pipe, money, and tobacco. Their solution was to put these belongings in containers called *sagemono*, which hung by cords from their robe's belt (**obi**). The fastener that secured the cord at the top of the belt or sash was a carved button-like sculpture called a netsuke.

Have you ever seen a button that was as beautiful and as sensitively carved, as if from real observation, as these animals?

Making Art

Today we are going to make a salt-dough sculpture of an animal. It will be 3-D. We are going to start with a few everyday ingredients and, through the science of chemistry, it will transform into **dough** and then, into a sculpture!

1. Wash your hands.
2. Lay out a large plate, cutting board, or tray.
3. Mix the flour and salt in a bowl.
4. Slowly add the warm water, stirring until it becomes stiff. Use your hands to **knead** the mixture. Kneading means that you form a ball of dough from the ingredients, and then squeeze and press it and roll it into a ball again. You want all of the dry ingredients and the water to become completely blended.
5. Knead thoroughly for five minutes, adding more flour or water if needed. This is when the ingredients transform into dough! *Ta da!*
6. Place the dough in a plastic bag or wrap in plastic wrap, taking out only small amounts as needed as you make your sculpture. When you touch the dough, take note of what it feels like. Is it cold or warm? Is it smooth or bumpy? Does it have a smell?
7. Decide what animal you want to create. A dog? A cat? A bird? You decide!
8. First, make the shape of the animal's body out of aluminum foil. This will be the understructure or **armature**, which is the structure underneath a sculpture, like an animal's bones. It should be no smaller than an egg and no bigger than a mango.
9. Lay your plastic tray or plate out.
10. Put your aluminum foil body or armature on top of the plate or tray.
11. Flatten out some dough with the palm of your hand. Mold it over the foil.
12. If you want to add a head or other smaller parts—like paws or a tail—wet the surfaces of the dough pieces and blend them together. This is when your sculpture hardens or becomes firm to the touch.
13. You will need an adult help turn on the oven or toaster oven to 300 degrees.
14. Place your sculpture on the small cookie sheet lined with aluminum foil. It will take about 45 minutes to 1 hour to bake. Check it after 30 minutes. If an area browns too quickly, cover it with foil and continue baking.
15. Make sure you have adult supervision to check the sculpture and to take it out of the oven!
16. Let it cool for an hour or even overnight.
17. Once your sculpture has cooled, you can color it with water-based markers or paint it with acrylic or tempera paint. Finally, you can even seal it with clear nail polish, if an adult supervises.

Reflection

How was your sculpture different from when it was unbaked to being baked? Can you describe how its texture, color, and weight changed?

Study your sculpture and write a one- or two-paragraph story about an adventure that it gets into with you! You can draw a picture of you and your animal sculpture together.

Curriculum Connections California Arts Standards for Public Schools—Visual Arts

2.Va:Cr1.2: Make art or design with various art materials and tools to explore personal interests, questions, and curiosity. 2.VA:Cr2.1: Experiment with various materials and tools to explore personal interests in a work of art or design. 2.VA:Cn10: Create works of art about events in home, school, or community life.

Next Generation Science Standards

2-PS1-1: Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

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