# Let's Make Play Clay!



## **Team Pumpkin Pie**

#### **Supplies**

- All-purpose flour (1 cup)
- Salt (½ cup)
- Cream of tartar (2 tablespoons)
- Vegetable oil (1 tablespoon)
- Water (1 cup)
- Pumpkin spice seasoning (1 tablespoon)
- DIY pumpkin spice seasoning (optional)
- 1 tablespoon ground cinnamon

- 1 teaspoon ground ginger
- 1 teaspoon ground nutmeg replace pumpkin pie spice seasoning.
- Mixing bowl
- · Mixing spoon
- Spatula
- A tablespoon
- Measuring cups (½ cup, 1 cup)

## **Procedure**

- 1. In a bowl, combine all-purpose flour, salt, cream of tartar, and the star of the show pumpkin spice seasoning! Give it a good mix so that all the ingredients blend together.
- 2. Now carefully and quickly pour in boiling water and vegetable oil to the bowl and mix well with a spatula.
- 3. Once everything is mixed, let the dough cool down until it's comfortable to touch. Now knead it with your hands like a pro baker!
- 4. Explore the texture of the dough and mold it into any desired shape. When you're done playing, pop your dough into an airtight plastic bag or container and store it in the fridge.





The mission of the Cade Museum for Creativity & Invention is to transform communities by inspiring and equipping future inventors, entrepreneurs, & visionaries.

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## **Team Chocolate Pie**

## **Supplies**

- All-purpose flour (2 cups)
- Salt (½ cup)
- Cocoa powder (½ cup)
- Cream of tartar (1 tablespoon)
- Water (1 ½ cups)
- Vegetable oil (3 tablespoons)
- Vanilla (1/2 teaspoon)

- Mixing bowl
- · Mixing spoon
- Spatula
- Measuring spoons (tablespoon, ½ teaspoon)
- Measuring cups (½ cup, 1 cup)

#### **Procedure**

- 1. In a bowl, combine all-purpose flour, salt, cream of tartar, and the star of the show cocoa powder!
- 2. Now carefully and quickly pour in boiling water and vegetable oil to the bowl and mix well with a spatula.
- 3. Once everything is mixed, let the dough cool down until it's comfortable to touch. Now knead it with your hands like a pro baker!
- 4. Explore the texture of the dough and mold it into any desired shape. When you're done playing, pop your dough into an airtight plastic bag or container and store it in the fridge.





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## **What Happened**

When flour, salt, and cream of tartar mix with boiling water, a chemical reaction occurs: the cream of tartar stabilizes the mixture, acting as a mild acid, which helps prevent it from becoming sticky.

The boiling water dissolves the salt and activates the cocoa powder, enhancing the dough's color and texture. This heat also plays a crucial role in hydrating the flour, causing the starches to gelatinize, which thickens the mixture and gives it a cohesive structure. As the mixture cools and is kneaded, the dough becomes elastic and smooth and transforms into a pliable material that can be shaped and molded.

## **Read On!**

Inventors like Elijah Dickinson, Gail Borden, and Kenneth James Poole helped transform Thanksgiving desserts into the most anticipated part of the feast with their clever innovations. Dickinson's invention of canned pumpkin made it easy to create delicious pumpkin pies, while Borden's condensed milk still adds a creamy sweetness to many holiday recipes.

Poole's pie crust and edge maker simplified the process of crafting perfectly shaped pies. Together, these inventors have ensured that Thanksgiving desserts are both flavorful and visually appealing, making the holiday even sweeter!







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