

Cooking With Fractions



Grade 5
Core Concept/Science/Art/Math

Objective: Students will be assigned in groups to calculate a recipe for the number in their group and combine ingredients to make play dough. They will cook it and make geometric art shapes with the dough.

<p>Grade 5 Core Curriculum Science: STANDARD I: Students will understand that chemical and physical changes occur in matter. Objective 3: Investigate evidence for changes in matter that occur during a chemical reaction.</p>	<p>Grade 5 Core Curriculum Math: 5NF Number and Operations—Fractions Use equivalent fractions as a strategy to add and subtract fractions.</p>	<p>Grade 5 Core Curriculum Art: Standard 1 (Making): The student will explore and refine the application of media, techniques, and artistic processes. Objective 3 Handle art materials in a safe and responsible manner.</p>
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Time: 120 minutes

Equipment and Materials needed:

- Recipe for play dough
- Extra recipes for conversion
- Ingredients for play dough: flour, cream of tartar, cinnamon, ginger, nutmeg, cloves, vegetable oil, water
- Paper, pencil
- Measuring spoons, cups
- Cooking pot
- Hot plate
- Large wooden spoons for stirring
- Zip Loc bags for finished dough

Introduction:

1. Divide students into groups of four. Give each group a recipe for play dough that makes enough for one person. Since they are in a group of four, they will need to multiply each ingredient's amount by four.
2. Once a group has all the new ingredient totals calculated, they need to measure out each ingredient into the provided cooking pot. Cook the

- ingredients over low heat on a hot plate. Students in the group then divide the dough into four equal parts.
3. Once all groups have made their play dough, allow them to sculpt with their play dough. This would be great to do after a discussion of organic and geometric shapes in artwork.
 4. When finished with the activity, students seal their portion of the play dough in a plastic bag to take home.
 5. **While groups of students are waiting for their turn to make their play dough, give them several additional recipes to adjust (multiply or divide fractions) the amounts.
 6. **This would be a great tie-in with science, matter, and physical changes/chemical reactions.

Recipes for Gak, Ooblick, edible dough, or scented play dough would be good ideas.

Gingerbread Play Dough

$\frac{1}{2}$ cup all-purpose flour
 $\frac{1}{4}$ cup salt 1 tsp. cream of tartar
 $\frac{1}{2}$ Tbsp. ground cinnamon
1 tsp. ground ginger
 $\frac{1}{2}$ tsp. ground nutmeg
 $\frac{1}{2}$ tsp. ground cloves
1 Tbsp. vegetable oil
 $\frac{1}{2}$ cup water

*Mix all dry ingredients together first. Add oil and water.

*Stir while cooking over low/medium heat until thickened.

*Place in a gallon bag and knead until smooth.