



*Explore.
Question. Experiment.
Integrate.*

Making Playdough



OVERVIEW

During this cooking activity, children will use a variety of measurement tools to make playdough. Through this hands-on science experience, children will begin to understand the importance of using accurate measurement in daily activities. Additionally, the following learning goals can be achieved as the children participate in this ScienceStart! activity:

Science

- Using standard and non-standard measuring tools to answer questions
- Becoming familiar with the 4-step science cycle as a daily approach to investigate the everyday environment

Literacy

- Having conversations and responding to questions
- Using descriptive language to talk about experiences
- Beginning to use recipes as a specific genre of reading and writing

Mathematics

- Beginning to understand the concept of measurement using standard and non-standard measuring tools

Center-Based Play Materials & Activities to Support Today's Science Learning



Dramatic Play

- Dishes, pots & pans, pretend food, measuring cups and spoons
- Cookbooks with pictures
- Aprons and chef hats



Art Center

- Apple prints
- Making chef hats
- Painting still life portraits of produce
- Decorating aprons



Block Area

- Wooden unit blocks and measuring tapes
- Yardsticks and rulers



Manipulatives

- Fruit and vegetable stamps and stamp pads
- Using tongs to fill a container
- Playdough and cookie cutters
- Beads to string



Large Motor Play

- *Jack Be Nimble, Jack Be Quick, Jack Jump Over the Pumpkin!*
- Measuring how far a ball rolls



Science Table

- Pumpkins, squash, gourds, apples
- Measuring cups and spoons
- Cookbooks
- Containers of various sizes



Making Playdough

Concepts:

Scientists need to measure the volume of materials when they are mixing them. People who cook need to measure ingredients.

Learning Goals:

Children measure the volume of ingredients as they follow a recipe to make play dough.

Vocabulary:

ingredient

measure

measuring cups

measuring spoons

recipe

volume

Materials:

measuring cups

salt

flour

measuring spoons

cream of tartar

cooking oil

mixing bowl

hot plate

pan

water

Read and Talk About:

Mmm, Cookies! by Robert Munsch



Things to Talk About:

What do we need to use when we want to cook something? How do we know what to do and what materials to use?

What ingredients do we use to make playdough? What other things can we make using those ingredients?

What do you like to do with playdough?

What might happen if we did not use measuring cups when we make playdough?

Making Playdough - Language and Literacy

Speaking & Listening	Talk about cooking and the use of recipes. Ask <i>Who cooks at home?</i> and <i>What do they like to make?</i> Explain what a recipe is. Tell children that you are going to use a recipe to make play dough. Make a list of the ingredients needed to make play dough.
Reading Comprehension	Show children the front cover of the book and read the title. Ask them to look closely at the cover illustration – what do they notice about the people’s faces? Explain that there is something about the cookies in this story that makes people say “yuck.” Have the children listen closely to find out what that is. When you finish reading, talk about the ending of the story.
Alphabet Awareness	Introduce P/p for <i>playdough</i> and demonstrate how to make it using playdough snakes. Have the children make various alphabet letters, like the first letter in their name, with the playdough.
Phonological Awareness	Print out the words for the nursery rhyme <i>Pat-A-Cake, Pat-A-Cake, Baker’s Man</i> on large chart paper and say it with the children. Ask them to identify the words that rhyme. Have them act out the rhyme as they say it.
Print Awareness	Show children a recipe and talk about how it differs from a story or book. Explain how cooks use recipes—by collecting the ingredients listed at the top first and then following the steps in the directions written below.



Mathematics:

Children measure ingredients to make play dough and count as each ingredient is added to the bowl.

Talk about how the different measures relate to each other (3 teaspoons fill a tablespoon; 2 half-cups fill a whole cup).

Making Playdough

Science Inquiry Cycle:

Reflect and Ask

Ask if anyone has cooked things at home, and if they have seen their families use recipes. Talk about what kinds of things they have cooked. Look at the recipe card for playdough and ask if anyone has ever made playdough before.

Plan and Predict

Read the recipe card. Make a list of ingredients and tools needed to make the playdough. Invite children to help you find these items in the classroom. Check them off the list as they are found. Talk about the recipe card in terms of measuring. How do we know how much of each ingredient to put in? How will we measure it? What kinds of measuring tools will we need to use? What might happen if we don't measure the ingredients?

Act and Observe

Follow the recipe directions to make the playdough. As you measure ingredients, talk about relative amounts (We need 2 whole cups of flour—a lot of flour—and 2 tablespoons of oil, only a little oil. It takes a lot of tablespoons to fill a cup). Count as you add ingredients. Talk about what to do with the playdough when you are done playing with it. *What happens to play dough if it is left out of its container?*

Report and Reflect

Review the process by sequencing the steps. Ask the children what they think would have happened if they had not measured the ingredients or followed the recipe. Copy the recipe for them to take home.

Playdough Recipe

Ingredients:



2 cups flour



1 cup salt



2 Tablespoons cream of tartar



2 cups water colored with food coloring (any color you like)



1 Tablespoons cooking oil

Directions:

1. Mix all the dry ingredients together in a large bowl.
2. Heat the colored water for 2 minutes in a microwave or boil on the stove.
3. Add boiling water and oil all at once to the dry ingredients and stir until it is all mixed together.
4. Let playdough cool until it can be handled.
5. Knead the dough until it is the consistency of playdough.
6. Store in an airtight container. Playdough should last about one month.

