



Playdough Power

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Squishing, rolling, sculpting, molding . . . young children love to play with playdough. Add some props from around the home and playdough play becomes a powerful way to support your child's learning. This simple preschool staple lets children use their imaginations and strengthen the small muscles in their fingers—the same muscles they will one day use to hold a pencil and write. Using playdough with you, a friend, or siblings supports your child's social skills such as sharing, taking turns, and enjoying being with other people. Playdough also encourages children's language and literacy, science, and math skills—all at the same time!

Homemade or out of a can, playdough can provide hours of fun and learning at home. Besides the playdough, all you need are a clear surface, a few household items, and lots of time for fun.

Around-the-House Playdough Props

- Birthday candles
- Blocks
- Bottle caps
- Cookie cutters
- Combs
- Garlic press (be prepared to give it up forever)
- Large buttons and other objects that can be pressed into the playdough to make a design
- Feathers
- Leaves, twigs, pebbles
- Plastic knives, forks, and spoons
- Rolling pin or bottle
- Small toy people and animals
- Straws
- String or shoelaces
- Tea strainer
- Toothpicks (only for older children)

What children learn

Playdough play at home or school supports development and learning in many areas. When children use playdough, they explore ideas and try different approaches until they find one that works. They compare and contrast objects ("Mine's a fat pancake and yours is skinny"), actions ("No, don't cut it! Scrape it, like this"), and experiences ("We're not making a snake—we're making a road"). In their experimenting, children come up with their own ideas, satisfy their curiosity, and analyze and solve problems. These are all skills that help children learn and succeed in school.

Social and emotional development

Creating with playdough lets children feel competent ("I'm good at rolling the dough") and proud of their accomplishments ("Hey, I made a dog"). Pounding, flattening, and squeezing are healthy and safe outlets for extra energy. They can also help children cope with strong feelings. When children seem stressed or angry, get out the playdough and props!

During playdough time at school, children talk about what they're making and how. Re-create this atmosphere at home by inviting siblings or playmates and including yourself in the play. Make comments about their work ("You cut it again"). Ask questions so children can describe and think about what they are doing ("What does this do?"). Connect their play to the real world ("Can you make a red tomato? A green one might not be ripe"). Teach cooperation ("I can help you make your car"), and observe and compare actions ("I'm rolling my dough too"). Interactions like these contribute to development and learning, helping to prepare children for success in school and in life.

Creativity and imagination

With playdough, young children express their ideas through art and make-believe play. At the same time, they learn *symbolic thinking* by pretending that the playdough is something else ("That thing with the antlers is a moose").

As 3-year-old Anna plays, she makes and names her many creations:

Anna squeezes a piece of playdough and rolls it back and forth between her hands. "I made a worm!" she exclaims. Then she makes another long object and places it on top of the first one. "I made another worm—a bigger one!" Then Anna squishes some playdough together; There's a turkey sandwich for you." Next, she rolls a ball of dough around, pounds it down on the table, and sticks several plastic knives vertically into the pile. "Look, a birthday cake with candles!" Anna declares. She pokes the pile with a spoon, raises the spoon to her mouth, and pretends to eat. "Yummy!" she says.

As Anna makes her cake and eats it too, she engages in simple pretend play. Your child might pretend to make tortillas, dumplings, or pizza, or create alligators, airplanes, or houses.

Older preschoolers—say, 4- or 5-year-olds—often make detailed playdough creations. With one or more friends, they may imagine themselves to be construction workers building a highway, prehistoric hunters pursuing a woolly mammoth, or pastry chefs baking and selling cookies, cupcakes, and donuts at a bakery. You can join in their pretend play too!

Language and literacy

Through playdough play at home, children practice listening to and talking with friends, siblings, and adults (you!). Materials like playdough help children build their vocabulary as they explain what they are doing. For example, when a child exclaims, "Chop!" as she brings down the plastic knife, she uses just the right word to describe her action.

Children use language to invent stories about their playdough creations. You may notice your child using facts or ideas from books you've read together. Children also refer to things they did or saw in their everyday lives ("This is a burrito like we had at lunch").

When the two of you make a batch of playdough together, your child learns about print and why people write. Following the recipe helps him connect written and spoken words and learn that writing can be used for different purposes. In this case, the writing explains how to make playdough. Encourage him to roll snakes and use them to form letters. Discuss action words like *pound* and *slice* and descriptive words like *mushy* and *sticky*.

These types of experiences help children learn new words and communicate their thoughts and ideas effectively—skills they will need when they learn to read and write in the primary grades.

Science

Young children learn about science through hands-on experiences. They learn by observing, thinking, and talking about how materials feel and how they change. You can encourage scientific thinking. Provide sawdust or sand to add to the playdough and then talk about how this new kind of dough looks and feels. Introduce words like *texture*, *grainy*, *smooth*, and *lumpy*.

Your child might declare, "I'm making this flat!" as she pushes down on playdough with the palm of her hand. Or she may say, "I'm making it soft," as she adds water to dry playdough to make it more pliable. When you ask, "What do you think would happen if we added too much water?" you are helping her understand the scientific concept of *cause and effect*.

Math

Measure and count while you make a batch of playdough together. Your child can learn about measurement and numbers by filling the cup and comparing the size of teaspoons and tablespoons, and about counting as he adds the ingredients.

Children note changes in shape and size as they comment on, compare, and contrast the objects they make ("I made a triangle" and "Mine is a tiny ball and yours is big"). Others notice who has more or less playdough. Ask your child to count how many pieces she is making or to arrange her creations by size or color. Encourage mathematical thinking by asking, "What shape is that?" "Which snake is longer?" or "How many pieces do you have now?"

These play experiences encourage children to practice counting, learn about shapes (geometry) and how they relate to each other (spatial sense), and practice sorting and classifying. Such mathematical ways of thinking prepare children for learning more complex math concepts in the coming years.

Physical development

While poking, rolling, and squishing playdough, children develop the small muscles in their fingers and hands. They use hands, fingers, and tools to pound, push, poke, shape, flatten, roll, cut, and scrape. Through these manipulations, children develop eye-hand coordination, the ability to match hand movement with eye movement. They also gain strength and improve dexterity in their hands and fingers, critical areas of physical development for writing, drawing, and other purposes.

Playdough is a powerful learning tool for many reasons. And when you play with playdough at home with your children, you'll discover the most important reason of all: it's just plain fun!

Playdough recipes

On-Cloud-9-Dough

What you need:

- 1 cup water
- food coloring
- 6 cups flour
- 1 cup vegetable oil
- *measuring cups*
- *mixing bowl*
- *wooden spoon*

Directions:

1. Mix water and food coloring in bowl
2. Add flour and oil
3. Stir
4. Knead until smooth

Variation:

For the first step, children can drop the food coloring in the water and watch the color spread.

Note:

Dough can be reused; store in the refrigerator in an airtight container.

Bouncy Playdough

What you need:

- 2 cups baking soda
- 1½ cups water
- 1 cup cornstarch
- *measuring cups*
- *medium mixing bowl*
- *fork*
- *medium saucepan*
- *wooden spoon*

Directions:

1. Place ingredients in bowl
2. Mix with fork
3. Place mixture in saucepan
4. Bring to boil on medium heat
5. Cook, stirring constantly with spoon, until thick
6. Let cool

Note:

Only the supervising adult should test the dough's temperature. Dough can be reused; store on shelf in an airtight container.

Source:

Both recipes are from Laura J. Colker, *The Cooking Book: Fostering Young Children's Learning and Delight*. 2005. Washington, DC: NAEYC

Download PDF versions of both playdough recipes.

Source: Adapted from M.I. Swartz, 2005, "Playdough: What's Standard about It?," *Young Children* 60 (2): 100–09.

Audience: *Family*

Age: *Early Primary, Infant/Toddler, Kindergarten, Preschool*

Topics: *Other Topics, Play, Toys, Materials, Games*

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