

Connecting With Your Child

Cooking that matters

Cooking is a great way to help children learn the differences between states of matter.

Ask your child to help you make pizza, a food that is a great example of all three states of matter. You can find many different recipes online. Here is a summary of the main steps:

1. Put a tea kettle on high, and when the water boils, show the steam to your child. Explain that this is water vapor—the gaseous form of water. Be careful not to place your hands directly in the steam, though—it is extremely hot! Let this water cool to around 50°C (comfortably warm, but not hot to the touch) before adding yeast.
2. Let your child pour a packet of yeast into a bowl, and then ask if the powder is a solid, liquid, or gas. This is a tough question because powder pours into the container like a liquid. Explain it is actually many small grains of a solid.
3. Add one cup of the WARM water (liquid) to the yeast (solid) and mix.
4. In another bowl, have your child mix 2.5 cups of flour, one teaspoon of sugar, and one teaspoon of salt. As with the yeast, all of these ingredients are solids made up of many tiny particles.
5. Add the yeast mixture and two tablespoons of olive oil to the mixture of flour, sugar, and salt, and form the resulting dough into a ball. Emphasize to your child that although the dough is goeey and easy to mold, it is still a solid.
6. Let the balled dough rise for about 30 minutes.
7. After the dough rises, pat it into a pizza crust on a greased, large cookie sheet. Add spaghetti sauce (a liquid that sometimes contains solid chunks of vegetables), shredded cheese (a solid), and any toppings of your choice (solids).
8. Bake the pizza in an oven at 425°F for 20 minutes, and observe the solid nature of the crust.
9. Enjoy your pizza!

Here are some questions to discuss with your child:

- Is flour a solid or liquid? Why?
- Why does water turn into a gas in the tea kettle?
- What do you think happens to the moisture (water) in the dough?