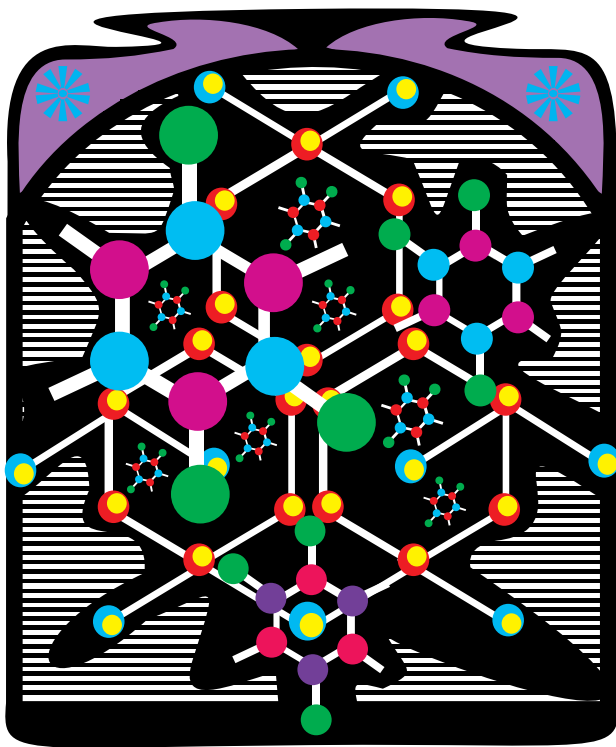


# Matter and Its Properties



MSELL is a collaborative grant with Sam Houston State University and Texas A&M University funded by the National Science Foundation.

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# Dear Family,

Your child is learning about matter and its properties. The class learned about physical properties of matter, including color, temperature, and physical state. Your child studied the three phases of matter: solid, liquid, and gas. The class also discussed the role of conductors and insulators.

Your child is learning many new vocabulary words that describe matter. Help your child make these words a part of his or her own vocabulary by finding ways to use them in everyday conversations.

## WORD

## DEFINITION

classify	to arrange or organize into groups
matter	anything that has mass and takes up space
physical properties	characteristics that can be observed or measured without changing the matter, such as color, temperature, and physical state
physical states	solid, liquid, gas
magnetism	the force that is produced by a magnet, ability to attract certain metals
conductor	material that allows energy to travel through it easily or quickly
insulator	material that prevents, or does NOT allow, energy from traveling through it easily or quickly

The following pages include activities that you and your child can do together. By participating in your child's education, you will help to bring the learning home.

# Vocabulary Practice

## Matter and Its Properties

Below is a word bank of words that relate to matter. Find and circle each word in the puzzle. Then write the remaining letters to spell a fact about a special matter. Write the letters in order from left to right and top to bottom.

*Word Bank: classify, matter, color, temperature, solid, liquid, gas, magnetism, conductor, insulator*

T	I	M	Y	O	U	A
E	N	A	C	S	R	E
M	S	G	L	O	L	C
P	U	N	A	L	I	O
E	L	E	S	I	Q	N
R	A	T	S	D	U	D
A	T	I	I	G	I	U
T	O	S	F	A	D	C
U	R	M	Y	S	M	T
R	A	T	T	E	R	O
E	C	O	L	O	R	R
!	M	A	T	T	E	R

*You are made up of all three states of matter: solid, liquid, and gas.*

Answer: You are matter!

Helper's Signature \_\_\_\_\_

Helpers, please rate the activities in this booklet:

1-poor    2-needs improvement    3-good    4-excellent  
(Please circle one number on each line.)

My child's performance on these activities was:    1    2    3    4

The quality of these activities was:    1    2    3    4

Once you have completed all the activities and experiments, complete this section, cut along the dotted line, and return it to your teacher.

Student's Name: \_\_\_\_\_

I worked with my \_\_\_\_\_ on these projects.  
(ex: mom, aunt, brother, guardian)

# Family Science Activity

## *Undecided Goo*

This goo can't make up its mind . . . is it a solid or a liquid?

### Materials:

- ◆ 1/2 cup water
- ◆ 1 cup of dry corn starch
- ◆ food coloring (optional)
- ◆ bowl
- ◆ newspaper



### Steps:

- a. Cover your table or counter with the newspaper.
- b. Put the cornstarch into the bowl. Add one or two drops of food coloring if you want. Add a little water at a time, using your fingers to stir the mixture until all the powder is wet and the mixture feels like a liquid. Stop stirring.
- c. Next, try tapping on the top of the Goo with your finger. It's just right when it feels like a solid and it doesn't splash. If your Goo is still too powdery, add a little more water. If it's still too wet, add more cornstarch.
- d. Let the fun begin!
  - Grab a handful of Goo and squeeze it. When you stop squeezing, it will run through your fingers like a liquid.
  - Put the Goo back into the bowl and lay your fingers on top. Push your fingers down into the Goo and then try to pull them out real fast. Does it still feel like a liquid?
  - Grab a handful of Goo and roll it into a ball. Now it feels like a solid. But when you stop rolling, it runs through your fingers again.

### Talk About It

How can my Goo do that? Isaac Newton identified all of the properties that are found in ideal liquids. Liquids that don't have all of these properties are called non-Newtonian fluids, and they all act different than liquids. Ketchup and quicksand are also non-Newtonian fluids.