

SCIENCE

Student Book

▶ **3rd Grade** | Unit 5

SCIENCE 305

PROPERTIES OF MATTER

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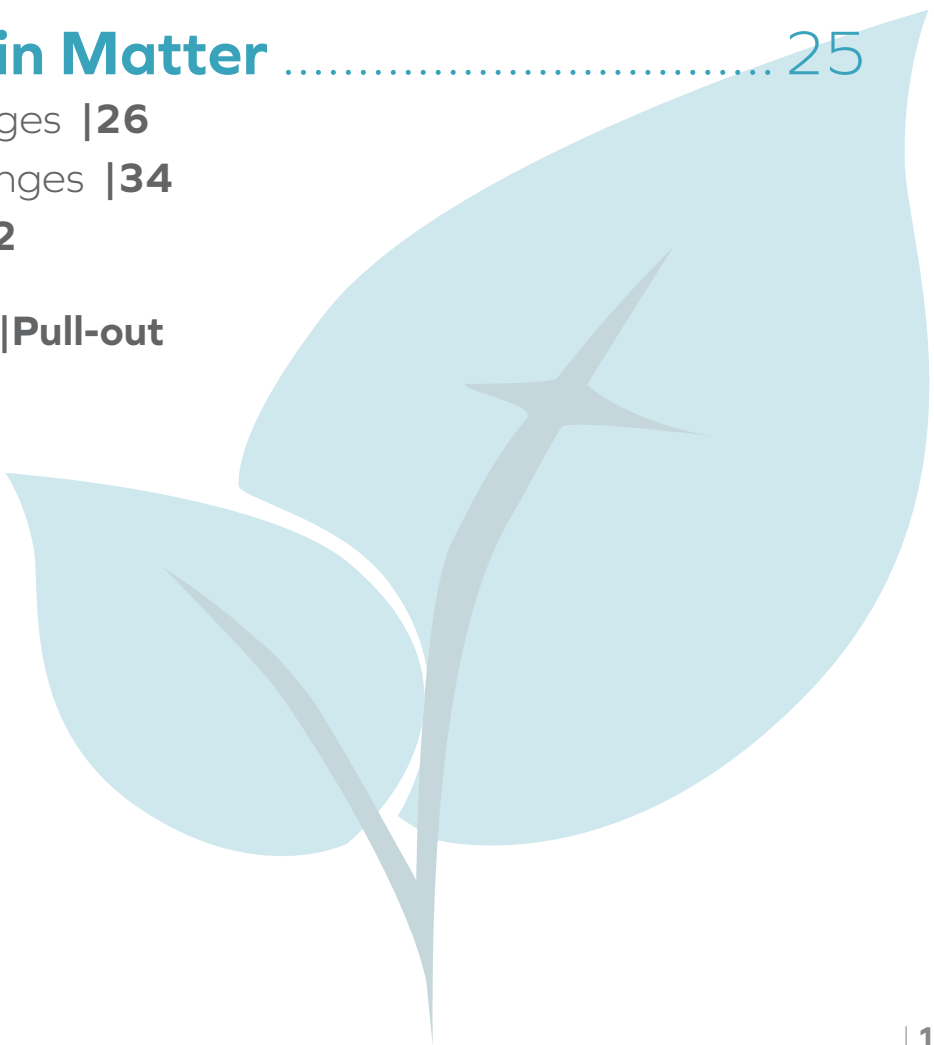
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PROPERTIES OF MATTER

Did you ever start crying and your mother said, “What’s the matter?” Then you told her what was the matter. In this LIFEPAC®, you will learn about another meaning of matter. You will learn about different properties of matter. When you finish this LIFEPAC, you will know more about the things God made.

Objectives

Read these objectives. The objectives tell you what you will be able to do when you have finished this LIFEPAC.

1. You will be able to tell what matter is.
2. You will be able to name three properties of a piece of matter.
3. You will be able to describe the states of matter.
4. You will be able to tell how matter changes.

1. MATTER

Did you know that everything you touch is **matter**? What are you touching now? Are you touching paper or holding a book? Are you sitting in a chair? What is the chair made of?

Everything around you is made of something. The clothes you wear are matter. The food you eat is matter. The air is matter. Even you are matter! You know that the things around you do not look the same. Different kinds of matter look very different. Even if things look different, all things are made of what is called matter.

Vocabulary

Study these new words. Learning the meanings of these words is a good study habit and will improve your understanding of this LIFEPAC.

chemist (kĕm' ĭst). A person who works in chemistry.

chemistry (kĕm' ĭ strĕ). The study of matter.

chocolate (chôk' lĭt). A substance made from cacao beans.

gravity (grāv' ə tĕ). The force that pulls toward the center of the earth.

mass (mäs). How much matter is in something.

matter (măt' ər). What things are made of.

plaster (pläs' tər). White mixture put on walls and ceilings.

property (pröp' ər tĕ). A word used to tell about something.

volume (völ' yōōm). The space used.

Note: All vocabulary words in this LIFEPAC appear in **boldface** print the first time they are used. If you are unsure of the meaning when you are reading, study the definitions given.

Pronunciation Key: hat, āge, cāre, fār; let, ēqual, tērm; it, īce; hot, ōpen, ôrder; oil; out; cup, pūt, rüle; child; long; thin; /FH/ for th; /zh/ for measure; /u/ or /ə/ represents /a/ in about, /e/ in taken, /i/ in pencil, /o/ in lemon, and /u/ in circus.

Special Words

Robert Boyle

Gaelic

Irish

Ask your teacher to say these words with you.



Teacher check:

Initials _____ Date _____



Draw a picture.

1.1

Draw and color two things you see that you think are matter.

Robert Boyle

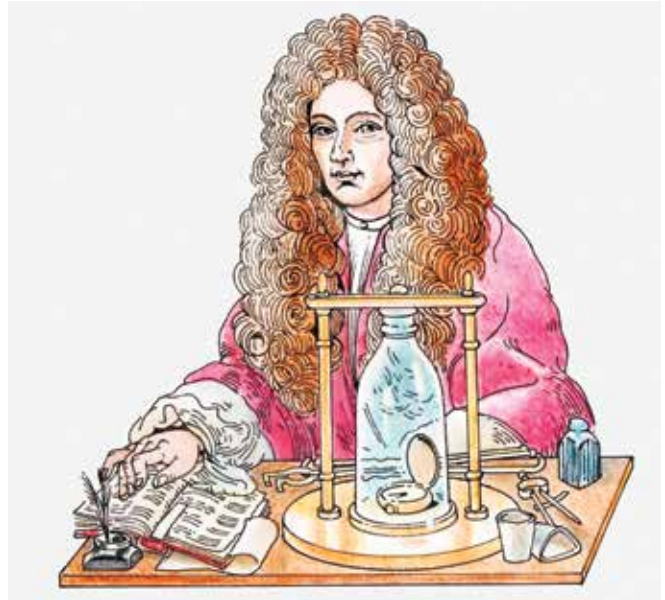
The study of matter is called **chemistry**. Robert Boyle lived about 300 years ago. He is famous for his work in chemistry. He found out a lot about matter.

Robert Boyle was a **chemist**. A chemist is a scientist who tries to find out about matter. A chemist works at finding out what is in each piece of matter.

A chemist also puts different kinds of matter together. When you put **chocolate** in milk to make chocolate milk, you are putting matter together just like a chemist does!

Robert Boyle believed in God. He had the Bible printed in Irish and Gaelic. He paid for the printing. He was also head of a group that told people about Jesus.

You can be thankful for this great man and for his work in chemistry. More important, think how many people were helped by the work he did in getting Bibles printed in Irish and Gaelic. Boyle knew how important the Word was in a person's life.



| Robert Boyle

**Write the answers to the questions.**

- 1.2** What is matter? _____
- 1.3** What is the name of the study of matter? _____
- 1.4** Who worked out ideas about matter? _____
- 1.5** Did this man believe in God? _____
- 1.6** What did Robert Boyle do for the people who spoke Irish and Gaelic?

- 1.7** What is the scientist called who tries to find out about matter? _____

- 1.8** What two kinds of work does a chemist do?
- a. _____

- b. _____

BE A CHEMIST



You will need these things:

- a pan of water
- a cup of sand
- a stick

Follow these directions. Check the boxes as you do each step.

- 1. Pour the sand into the water.
- 2. Stir the sand.



Write the answers to the questions on the lines.

1.9 What did your water look like before you poured in the sand?

1.10 What did your water look like after you poured in the sand?

1.11 Did you put two different kinds of matter together?

1.12 What is the name of a scientist who puts two different kinds of matter together? _____

BE A CHEMIST AGAIN



You will need these things:

- your sandy water from the last experiment
- a bowl
- a strainer, either metal or cloth

Follow these directions. Check the boxes as you do each step.

- 1. Put the strainer over the clean bowl.
- 2. Pour the sandy water into the strainer.



Write the answers to the questions on the lines.

1.13 What kind of matter did you pour into the strainer?

1.14 What kind of matter went into the bowl?

1.15 What kind of matter stayed in the strainer?

1.16 Did you find out the different kinds of matter that were in the sandy water? _____

1.17 What kinds of matter were in the sandy water?

1.18 What is the name of the scientist who tries to find out what is in different kinds of matter? _____



Properties

Look at the things in the picture. Try to name as many of the things as you can. You can easily see that all the things are not the same. Some are big and some are little. Some are soft and some are hard. They have different shapes. Some are living. Some are not living. When you tell about something, you tell about its **properties**. You might tell how big something is. You could tell how much something weighs. You could tell about its taste and smell. You might tell about the shape of it, too. Anything you tell about something is a property of it. Different kinds of matter have different properties. You might say that a needle is thin and sharp. You might say that a door is hard and smooth.

Sometimes you can use many words to tell about something. You could use the words light, white, smooth, and round to tell about a ball. Some kinds of matter have many properties.



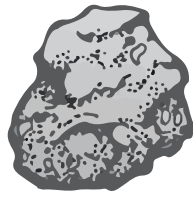
Think about properties. Write three words from the list under each picture.

soft
round
light

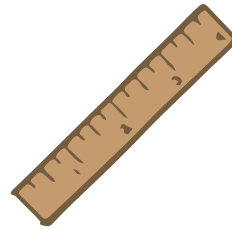
short
long
square

smooth
hard

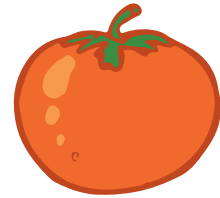
heavy
rough



Rock



Ruler



Tomato

1.19



Write *true* or *false* on the line.

1.20 _____ Things like shape, color, size, and taste are called properties.

1.21 _____ Everything you touch is matter.

1.22 _____ Robert Boyle was a scientist.

1.23 _____ All matter has only one property.

SELF TEST 1

Each answer = 1 point

Draw a line from the beginning of the sentence to the end.

- 1.01 Properties ● is a chemist.
1.02 Robert Boyle ● pulls to the sky.
1.03 A scientist who studies matter ● worked on matter.
1.04 The mass of something ● tell about something.
1.05 The force of gravity ● pulls to center of the earth.
is how much matter is in it.

Write *yes* or *no* in front of each sentence.

- 1.06 _____ Two things can take up the same space.
1.07 _____ The force of gravity makes apples fall from a tree to the ground.
1.08 _____ Chemistry is the study of matter.
1.09 _____ The shape and size of a ball are properties of the ball.
1.010 _____ If something takes up space, it has volume.

Answer these questions with *yes* or *no*.

- 1.011 Is a chair matter? _____
1.012 Is your pencil matter? _____
1.013 Does your bike take up space? _____
1.014 Does a candy bar have mass? _____
1.015 Could you ever fallen up off a swing? _____

1.016 Will gravity pull more on a crayon than on a bucket full of paint?

1.017 Are the properties of your pen soft and flat? _____

1.018 Was Robert Boyle a good Christian man? _____

1.019 Is heat matter? _____

1.020 Is a paper clip matter? _____

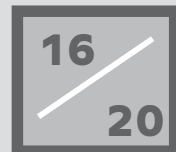


Teacher check:

Score _____

Initials _____

Date _____





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