

Categories of Materials

READ ALOUD PASSAGE

Everything around us is made of some kind of material. Scientists and engineers pay close attention to what things are made of because different materials behave in different ways. The main categories of materials that human-made things are built from are wood, metal, plastic, glass, rubber, and clay or ceramics.

Different materials have different properties. A property is a characteristic of a material that you can observe or measure. Metals are usually hard, shiny, and good at conducting heat and electricity. Wood is strong but can be cut and shaped, and it does not conduct electricity well. Many plastics are flexible and waterproof. Glass is transparent, which means you can see through it.

Some metals are magnetic. Iron and steel are magnetic, which means a magnet will attract them. Most other metals, like aluminum, copper, and gold, are not magnetic. A magnet will not attract them.

The properties of a material determine what it is best used for. Metal is used for cooking pots because it conducts heat. Rubber is used for tires because it is flexible and grippy. Glass is used for windows because you can see through it. Matching the right material to the right job is an important part of science and engineering.

Activity 1: Grow a Sentence

This sentence is very short. Answer each question to add more information. Then put your answers together into one longer sentence.

START WITH THIS SENTENCE

Metal conducts.

When?

Where?

How?

Why?

Write your expanded sentence:

Activity 2: Because, But, So

Finish the sentence three ways. After because, tell why. After but, tell something different or surprising. After so, tell what happened next.

Glass is used for windows **because**

Glass is used for windows, **but**

Glass is used for windows, **so**

Science Mad Lib

Fold the page on the dashed line so the story is hidden. Write a word for each blank. Then unfold the page, copy your words into the story, and read it aloud.

1 _____
A name

2 _____
A noun

3 _____
A noun

4 _____
A noun

FOLD HERE

THE STORY

_____ needed to make a raincoat for their pet _____. Wood? Too
1 2
stiff. Metal? Too heavy. Glass? You could see through it, but it would shatter.

_____ picked plastic, because it bends and keeps water out. Then they
1
tested a magnet on everything in the room. It grabbed a steel _____ but
3
ignored a copper penny and the _____. "Not every metal is magnetic," said
4
_____. The _____ wore its new raincoat proudly.
1 2