

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. Plastic is 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

Fill in the blank with the correct word from the word box.

WORD BOX

properties metal magnetic transparent flexible

1. The characteristics of a material that you can observe are called its _____.
 2. _____ is usually hard, shiny, and conducts heat and electricity.
 3. Glass is _____, which means you can see through it.
 4. Rubber is _____, which makes it useful for tires.
 5. Iron is _____, which means a magnet will attract it.
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Activity 2

Because / But / So Complete each sentence three different ways.

Different materials have different properties because

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Different materials have different properties but

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Different materials have different properties so

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Activity 3

Circle True or False for each statement.

1. **True / False** Wood, metal, plastic, and glass are all categories of materials.
 2. **True / False** All metals are magnetic.
 3. **True / False** A property is a characteristic of a material you can observe or measure.
 4. **True / False** The best material for a job is chosen based on its properties.
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Activity 4

Each sentence below is a run-on. Rewrite it correctly. 1. Wood is strong and flexible it can be cut and shaped into many things.

Correction:

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2. Metal is hard and conducts electricity glass is see-through and rigid rubber is flexible.

Correction:

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