

Science Activity I

WALT: understand properties of materials.

Properties of Materials

Any substance that is used to make something is a material. Natural materials such as stone, wood and cotton are used or worked with in the way they are found in nature. Synthetic or human-made materials are made from natural materials, but are altered with the help of heat or chemicals.

Some examples include plastics and polyester.

Materials have different properties. These properties can include: magnetic, reflective, absorbent, permeable, translucent, flexible, hardness, flammable, insulating and transparent.

Magnetic:

Magnetic materials are attracted to magnets. They are always made of metal, but not all metals are magnetic. Iron is magnetic, so any metal with iron in it will be attracted to a magnet. Steel contains iron, so a steel paperclip will be attracted to a magnet too. Most other metals, for example aluminium, copper and gold, are NOT magnetic.

Reflective:

Reflection is when light from an object is reflected by a surface, it changes direction. It bounces off the surface at the same angle as it hits it. Smooth, shiny surfaces such as mirrors and polished metals reflect light well. Dull and dark surfaces such as dark fabrics do not reflect light well. Reflective material is a material, such as a fabric, that contains tiny glass beads which reflect light back to the source, such as a headlight.

Absorbent:

An absorbent material has small holes in it. When a liquid comes into contact with an absorbent material, the tiny holes draw in the liquid and it spreads through the material. We use absorbent materials to soak up spills and to dry things.

Permeable:

This allows water or liquids to flow through. Permeable surfaces include planting beds and gravel. Impermeable surfaces include concrete and asphalt.

Translucent:

If an object is translucent, it means that some light passes through it but the light is scattered so you can't see clearly through it.

Flexible:

These are materials which are easy to bend without breaking. Flexible materials include: paper, rubber and leather.

Hardness:

This is the quality or condition of being hard to break. Hard materials include: brick, wood and glass. However, materials such as cotton, wool and rubber aren't hard materials because they can be broken.

Flammable:

The word flammable applies to any substance, material or object that burns easily. Some flammable materials include: plastic, cotton and petrol.

Insulating:

This is a material property which means that it does not let heat or electricity travel through them. Wood and plastic are both thermal and electrical insulators.

Transparent:

This material property lets light through so the object can be looked through, for example glass or some plastics.

Your Task:

Write a definition and interesting fact for the following key words using the information sheet or your own research.

Magnetic	
Reflective	
Absorbent	
Permeable	
Translucent	
Flexible	
Hardness	
Flammable	
Insulating	
Transparent	