

YEAR 4 UNIT 5 MATERIALS (1/3)

TRANSPARENT, TRANSLUCENT, AND OPAQUE MATERIALS

TRANSLUCENT MATERIALS

Examples

- 1. Lampshade (thin cloth) - To disperse light
- 2. Frosted glass - To prevent the inside of house seen clearly from outside
- 3. Tracing paper - To make copies of drawings
- 4. Certain plastic

OPAQUE MATERIALS

Examples

- 1. roof tiles - To prevent sunlight entering house
- 2. hat - To provide shade
- 3. clothes - To protect body
- 4. containers - To keep contents unseen

Forms a shadow when light shines on it

TRANSPARENT MATERIALS

Examples

- 1. Clear Glass - Uses: windscreen, light bulb (to illuminate surroundings)
- 2. Clear Plastics - Uses: Containers (to see contents)

Materials that allow most light to pass through

Objects behind can be seen clearly



Materials that allow most light to pass through

CONDUCTORS AND INSULATORS

INSULATORS

Heat insulators

Materials that do not allow heat to pass through

Electric insulators

- 1. Clay
- 2. Fabric
- 3. Glass
- 4. Wood
- 5. Rubber
- 6. Plastic

Materials that do not allow electricity to pass through

CONDUCTORS

Heat conductors

Good conductors of electricity are ALSO good conductors of heat

Electric conductors

- 1. Metals - Examples: steel, iron, copper, aluminium, zinc
- 2. Wires

Materials that allow electricity and heat to pass through

PROPERTIES OF MATERIALS

Allows light to pass through

Examples

- 1. Glass door
- 2. Plastic sheet

Object placed behind can be seen

Can be stretch

Examples

- 1. Rubber band
- 2. Spring riders

Returns to original shape when released (Elastic)

Can be pulled and stretched

Do not Absorb water

Examples

- 1. Plastic - Examples: tent, raincoat, umbrella
- 2. Cloth - Examples: towel, nappy

prevent from getting wet (Waterproof)

Absorb water

Examples

- 1. Wood
- 2. Paper
- 3. Tissue

becomes wet when in contact with water

Float on water

Examples

- 1. Wood - Examples: furniture
- 2. Plastics - Examples: bottles, containers

do not sink in water

Conduct heat

Examples

- 1. Metals - Examples: aluminium, steel, wok, cooking utensils, pot
- 2. Non-metals - Examples: carbon

allows heat to pass through

Conduct electricity

Examples

- 1. Metals - Examples: copper wire, iron nails, steel knife
- 2. Non-metals - Examples: carbon

allows electricity to pass through

MATERIALS AROUND US

Wood

- 1. From trees
- 2. Objects: furniture, boat, paper

Metal

- 1. From rocks
- 2. Objects: key, knife, coin

Glass

- 1. From sand
- 2. Objects: mirror, glass, bottle

Plastic

- 1. From crude oil (petroleum)
- 2. Objects: container, ruler, toys

Rubber

- 1. From rubber tree sap (latex)
- 2. Objects: tyre, ball, gloves

Leather

- 1. From animal skin
- 2. Objects: shoe, belt, wallet

Cloth/Fabric

- 1. From cotton, wool
- 2. Objects: towel, curtain, clothe

Clay

- 1. From earth
- 2. Objects: vase, brick, tiles