

What are everyday materials made from?

Worksheet

Science

Miss Couves



Match the words to their definitions

a. Transparent

A material that you cannot see through

b. Opaque

A substance that needs a lot of energy to melt

c. Brittle

A material that does not let heat pass through easily

d. Malleable

A material that can be bent into shape

e. High Melting point

A material that you can see through

f. Poor

conductor

A material that breaks easily



Properties of glass, ceramics and plastics

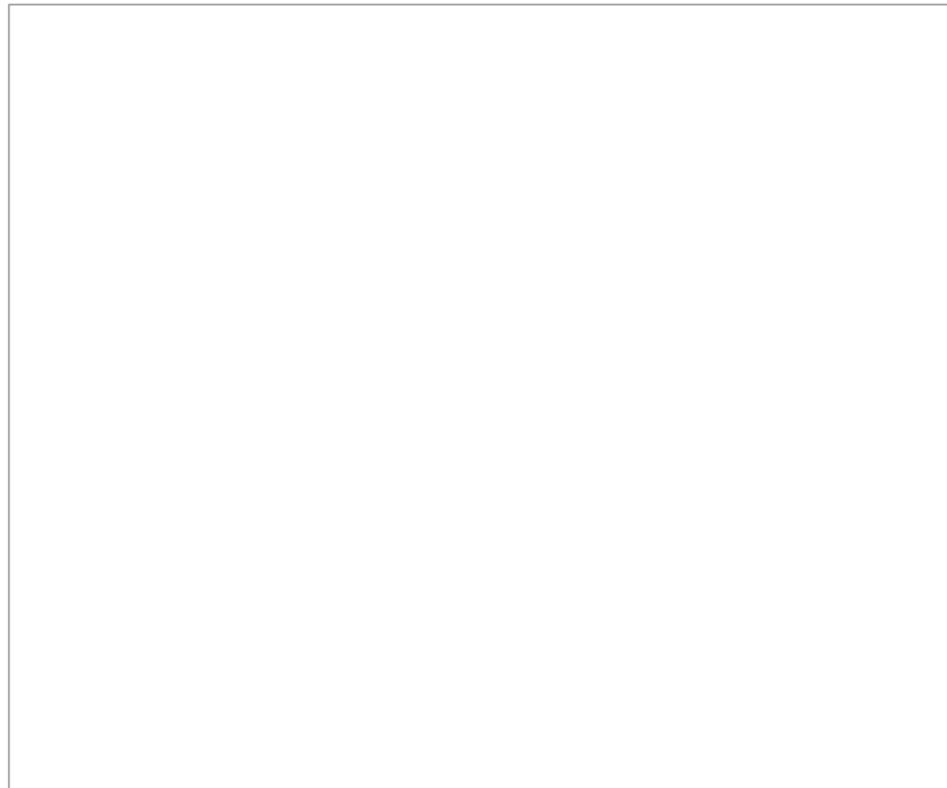
Draw this table into your notes.

Material	Glass	Ceramics	Plastic
Description			
Properties			
Uses			



Properties of materials

Glass



- Large structure made from silicon and oxygen particles
- Properties:
 - Transparent
 - Brittle
 - High melting point
 - Poor conductor
- Uses:
 - Windows
 - Bottles
 - Jars



Properties of materials

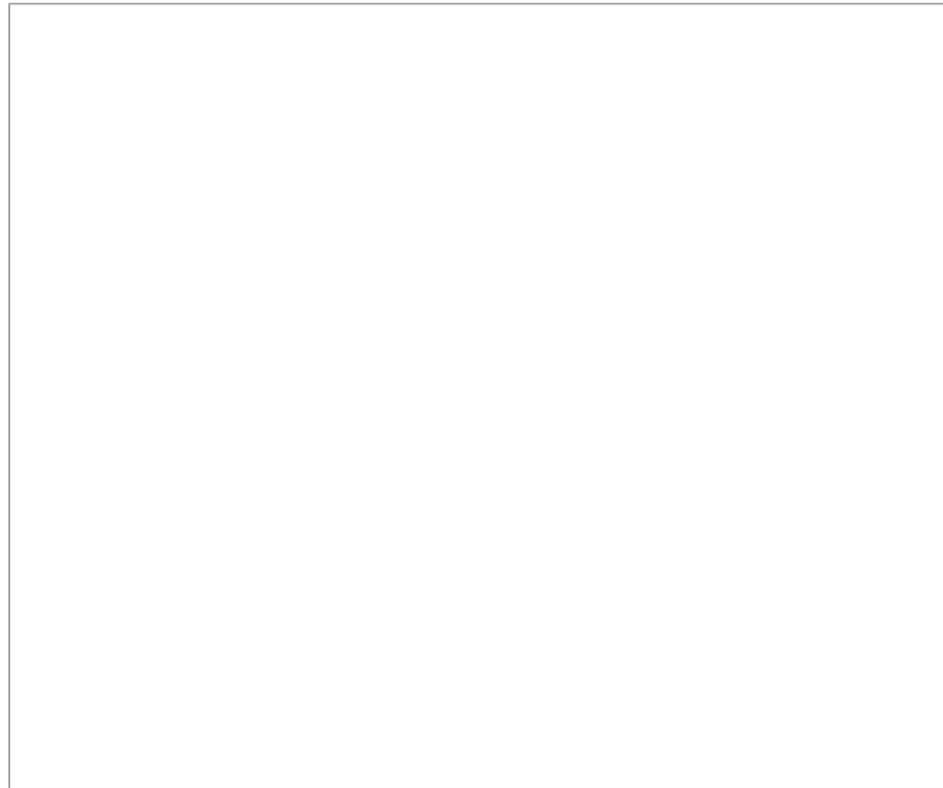
Ceramics

- Large structure made from metal oxide particles
- Properties:
 - Opaque
 - Brittle
 - High melting point
 - Poor conductor
- Uses:
 - Building materials
 - Pots



Properties of materials

Plastic



- Large structure made up of repeating units
- Properties:
 - Malleable
 - Low melting point
 - Poor conductors
- Uses:
 - Clothes
 - Plastic bags



Properties of materials

1. Give one property of glass.
2. Why do you think the properties of glass make it good for making windows?
3. Give one property of ceramics
4. Why do you think the properties of ceramics make it good for making oven dishes?
5. Give one property of plastics.
6. Why do you think the properties of plastics make it good for making plastic bottles?



The problem with synthetic materials

Landfill sites



Credit: Image from unsplash

- When materials are thrown away they end up in **landfill sites**.
- Synthetic materials **take a long time to break down**
 - Plastic bag: 10-20 years
 - Plastic bottle: 450 years!
- Problems with landfill:
 - Don't look very nice
 - Produce **harmful toxins**
 - Produce **harmful pollutants**



The problem with synthetic materials

Landfill sites



Credit: Image from unsplash

1. What happens to materials when they are thrown away?
2. What are the problems associated with landfill sites?
3. What could we do with these materials instead?

