

Materials and the Earth

Lesson 12: Types of Material

Science

Chemistry - Key Stage 3

Miss Willett



What have you learnt already?

1. **What is the greenhouse effect?**
2. **What is climate change?**
3. **Name two greenhouse gases.**



Ceramics

Correct my mistakes!

Ceramics are made from sandy soil

Ceramic materials are brittle (they can withstand force)

Being unreactive is a useful physical property of ceramics



Ceramics

Fill in the missing words:

1. Another word for ceramic materials is.....
2. Ceramics are made from soil, and are fired in a.....
3. The materials are (they can withstand force), but also (they will smash)
4. Ceramics are good and insulators



Polymers

True or false?

An individual part of a polymer is called a monomer

Natural polymers include silk and wool

The raw material for plastics is found in crude oil



Polymers

Answer the following questions:

- 1) What is a monomer?
- 2) How do you make a polymer?
- 3) What is this process called?
- 4) Where are the raw materials for many polymers (eg plastics) found?
- 5) State the two types of polymers. Provide an example for each.



Polymers

Answer space:

1)

2)

3)

4)

5)



Composite materials

Quick fire questions!

Composite materials are..

The raw material for plastics is found in crude oil

How would you decide what starting materials to use?



Composite materials

Complete the sentences:

- Composite materials are made from..
- They have properties....
- For example, raincoats contain both....
- This is so they can be as well as



Bringing it together..

Answer the following question:

Select a material for the following jobs:

- A. Tennis racket
- B. Brick wall
- C. Small toy

(Key workds: ceramic, polymer, carbon-fibre composite)

Justify your choices.



Bringing it together..

Answer space:

A)

B)

C)

