

Syllabus content for the unit **CONSTRUCTION MATERIALS (CM)**

This unit deals with how the structure, properties and uses of materials are related. This leads to the study of reaction speeds and particle theory

MATERIALS PROPERTIES

be able to relate properties to structure for substances with linear, layered and cross-linked giant structures

- *be able to interpret diagrams showing different types of molecular structures*

know that polymers are large molecules made by joining many small molecules [MUO]

- understand the relationship between a polymer and the monomer it is made from [MUO]
- understand what is meant by an addition reaction [MUO]

understand the relationship between properties and structure for a thermosoftening polymer [MUO]

be able to compare the properties of cross-linked and non-cross-linked polymers [MUO]

RUSTING

know that corrosion of metals is an oxidation reaction that is non-useful [MM]

know the conditions needed for iron to rust and the methods used to prevent it [MM]

RATE OF REACTIONS

know the general reaction of carbonates with acids [MM]

be able to relate the position of a metal in the activity series to its chemical activity [BB, MM]

be able to use given information about chemical reactions to recognise patterns of behaviour

know how the rate of chemical reactions depends on temperature, particle size and concentration of reactants

understand that reactions occur as a result of collisions between reacting particles

understand the effect of temperature, concentration and particle size in terms of simple collision theory

