**SC22 Revision Mat**

Reactions of alkanes and alkenes

Name the products of complete combustion of s hydrocarbon

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Describe how bromine water can be used to distinguish between alkanes and alkenes.

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Draw the structures of the reactants and products when bromine and ethane react.

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Alkanes and alkenes

Give the names, formulae and structures of the 4 smallest alkanes

State the functional group present in alkenes

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How is the position of the functional group shown in alkene names?

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**SC23 Revision Mat**

Alcohols

Give the names, formulae and structures of the 4 smallest alcohols

State the functional group present in alcohols

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List the chemical properties of alcohols

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Carboxylic acids

How are carboxylic acids produced?

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Give the names, formulae and structures of the 4 smallest alcohols

Describe how the functional group in all carboxylic acids influence their chemical properties.

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Ethanol production

How are alcoholic drinks produced?

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What chemical reaction occurs during fermentation? Give the equation.

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Describe how to make alcohol solutions more concentrated.

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**SC24 Revision Mat**

Condensation polymerisation

Define “condensation polymerisation”

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State the two functional groups that react together to form a polyester.

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Polymer properties and uses

Describe how chloroethene molecules join together to make poly(chloroethene)

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How are the properties of each polymer related for their uses?

Poly(ethane)……………………………………………………………………………………………………….……………………………………………………………………………………..………………………………………………………………………………………………………Poly(propene)………………………………………………………………………………………………………..………………………………………………………………………………………………………..………………………………………………………………………………… Poly(chloroethene)……………………………………………………………………… ……………………………………………………………………………………………………….……………………………………………………………………………………..………………… Poly(tetrafluoroethene)………………………………………………………………………………………………………..………………………………………………………………………………………………………..…………………………………………………………………………………(…………………………………………………..………………………….

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Addition polymerisation

Define a polymer.

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Name the monomers that join together in:

DNA……………………………………………………………………………

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Starch………………………………………………………………………………………………………………………………………………………………

Proteins…………………………………………………………………………………………………………………………………………………….………

Draw the polymerisation reaction equations to make poly(ethene) from ethene

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**SC25 Revision Mat**

Tests for positive ions

Why must the test for an ion only detect that ion?

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Describe how metal ions are identified using sodium hydroxide solution.

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How are ammonium ions and ammonia detected?

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Tests for positive ions

How are carbonate ions and carbon dioxide detected?

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Describe how sulfate ions are detected.

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Describe the test for halide ions.

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Flame tests and photometry

Devise a plan to identify metal ions using a flame test.

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Why might chemists analyse substances using machines instead of chemical tests?

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How is information from a flame photometer used?

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Tests for positive ions

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Describe how metal ions are identified using sodium hydroxide solution.

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How are ammonium ions and ammonia detected?

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Tests for positive ions

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Describe how sulfate ions are detected.

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Describe the test for halide ions.

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Flame tests and photometry

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How is information from a flame photometer used?

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**SC26 Revision Mat**

Composite materials

What is a composite material?

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Describe the difference between reinforcement and matrix.

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Describe the structure of a laminate.

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Nanoparticles

Why do nanoparticulate materials have different properties from bulk materials?

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State the uses of nanoparticles.

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Describe the possible risks from nanoparticles.

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Choosing materials

Define “ceramics”

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Give a property of:

Ceramics……………………………………………………………………………………………………………………………………………………..…

Metals……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

Polymers…………………………………………………………………………………………………………………………………………………………

