# **CHEMISTRY**





### SKILLS

### Year 11

- Select the correct
  qualitative chemical test to
  identify unknown
  substances
   Evaluate the impact of
  human activities and
  industrial processes
   Use practical skills to
  measure the rate of
  chemical reactions
   Apply mathematical skills
  to chemical contexts

### Year 9

- Identifying patterns in data and extrapolating the data to make predictions - Balancing symbol
- . Selecting the most
- appropriate method to solve a problem Understand how scientific theories change over time

### Year 8

- Correct use of measuring
- equipment
   Identifying independent,
  dependent and control
- Analysis of the periodic
- Using symbol equations to represent chemical
- Analysing data to draw conclusions

### Year 7

- Safe use of common lab equipment
- Writing and following methods
- Identifying and controlling risks
- Using the pH scale and the Periodic table
- Using word equations to show reactions
- The use of scientific models to explain complex ideas

### The future

- Study Chemistry at 6th form or colleges
- The study of chemistry will help to develop research, problem solving and analytical skills. Enabling you to challenge ideas and apply logic and reasoning

### KNOWLEDGE

Experience a range of qualitative tests to detect specific chemicals Identify the variables that will affect the rate of chemical reactions and how changing these variables will affect the rate of reaction

### Chemical Analysis

Investigate carbon based compounds and how they can be modified to make many useful materials

Rates of Reaction Study the ways in which

chemists attempt to reduce the impact of humans on the Earth's resources

### Organic Chemistry

### Using Resources

Apply maths skills to chemical reactions to calculate appropriate data

Investigate the Earth's dynamic atmosphere and the reasons behind the changes, including the effects of pollution 4



### Study acid reactions, displacement reactions and electrolysis

Identify chemical reactions

as exothermic or

endothermic

Use the atomic structure to show how atoms interact and form bonds

Learn how bonding affects the properties of chemical structures

### **Chemical Bonding**

### Identify the patterns in the groups of the Periodic table and how the atomic structure affects these patterns

### Periodic Table

### **Chemical Structures**

Learn the structure of the atom and how this model has changed over time

Study the periodic table and look for trends in different groups. Make use of chemical formulae in writing equations



### Matter

Carry out investigations into exothermic and endothermic reactions and thermal decomposition

Study the structure of the Earth and how rocks change in the rock cycle

### Reactions

Compare the different

methods of separating

mixtures

### Earth

Carry out chemical reactions between acids and alkalis, use indicators and the pH scale and observe reactions of metals

Reactions



### Matter

## Study the structure of the Earth

Lighting a Bunsen burner Lab safety Hazard symbols

Safety



and how rocks change in the rock cycle

Earth