Chemistry Learning Journey

Oasis Academy Don Valley

YEAR 11

Chemical Analysis
- What equipment can you test with?
- How can you test for ions?
- Why test for gases?
- RP: Chromatography
- What is a chromatogram?

Our Resources
- How have humans impacted the planet?
- How can we extract resources?
- How has the atmosphere changed?
- How can we use Earth's resources?
- RP: Safe water

Organic Chemistry
- How does alcohol react?
- What is cracking?
- Why burn hydrocarbons?
- Why would you use a catalysts?
- What is crude oil made from?
- How are other organic compounds arranged?
- What are alkanes?
- What is polymerization?

Energetics and Electrolysis
- What is collision theory?
- RP: Thermal reactions
- What is electrolysis?
- RP: Electrolysis
- How does neutralization link to pH?
- RP: Rates of reaction
- What is bond energy?
- How does electrolysis work?

Chemical changes and calculations
- RP: Making salts
- Why is displacement useful for extracting metals?
- How are salts made?
- What is concentration?
- Why are balanced equations useful?
- What is a titration?
- What are nanoparticles?

YEAR 10

Structure and Bonding
- Are substances pure?
- What are the patterns between elements?
- How do atoms become ions?
- What is bonding?
- How is a covalent bond formed?
- What are transition metals?
- How is an ionic bond formed?
- How do metals bond?
- How do we calculate moles?
- What is the yield of a reaction?

The Periodic Table
- Why do Group 7 react they way they do?
- How reactive are Group 1?
- Why are columns and periods important?
- Why are electrons important?
- Why are ions useful?
- What is an ion?
- Who discovered the atom?
- What is the best separation technique?
- How are atoms, elements, compounds and mixtures different?
- Why is the Periodic Table arranged as it is?
- Which Scientists worked on the Periodic Table?

Atomic Structure
- How do electrons and the Periodic Table link?
- What Is the structure of an ion?
- What is an isotope?
- How does distillation separate substances?

YEAR 9

Reactions
- How do carbonates and hydroxides react?
- What are noble gases?
- What is the reactivity series?
- What is a rate of reaction?
- How can we use a catalyst?

Earth and the atmosphere
- What is the atmosphere?
- What is the Earth made from?
- What is a fossil?
- How is carbon recycled?
- Why is recycling important?
- What is the greenhouse effect?
- Why is our climate changing?

Acids and alkalis
- How do acids react?
- How are salts formed?
- How do we name salts?
- Where are Group 1, 7 and 0?
- How can we use displacement?
- Why is displacement useful for extracting metals?
- What factors affect the rate of reaction?
- How does the rock cycle work?
- How can you extract fossil fuels?
- What is combustion?
- What are non-metal properties?
- Why are alloys and composites useful?
- Why are some elements more reactive?
- What other separation techniques are there?
- How can we separate rock salt?
- How do we separate substances?

Legacy Scheme of Work. New one coming 2023

Materials
- What is neutralization?
- What is an alkali?
- What are the properties of metals?
- What are solutes, solvents and solutions?

Separation
- What is solubility?

YEAR 8

Solubility
- Physical and chemical changes
- What do chemical formula show?
- Why do some substances dissolve?
- How do we use graphs of solubility?
- How do we increase solubility?

Reactions and equations
- How can equations show us reactions?
- How is mass conserved in a reaction?
- What do we observe in chemical reactions?
- How do we represent chemical change?
- What do symbol equations represent

Elements and Compounds
- How do chemists represent substances
- Compounds and mixtures
- Why do metals have high melting points?
- What are elements?
- Separating salt from the sea
- What is boiling?
- What is melting?
- What happens when something dissolves?
- Why graphs are important
- Why is measuring important?

Brand new Scheme of Work for 2022

Substances
- Are gages made of particles?
- Is ink pure?
- What are pure substances?

Skills School
- How should we use equipment?
- How do we stay safe in the lab?

YEAR 7

"Be less curious about people and more curious about ideas" – Marie Curie