Curriculum plan: Science

"Nothing in life is to be feared. It is only to be understood."
Marie Curie

Our intent

Science explains everything about the world around us.

Studying science at Woodhouse Academy allows students to critically think about the world and phenomena. Students will learn to question everything they have been told and design experiments to test theories. We aim to provide students with the key skills that they will require in life; problem solving, working through a method and presenting findings to their peers.

Enrichment in Science

The Woodhouse Academy science experience is complimented by cross-curricular links with English, geography, food technology, PE, DT, maths, PSHE, music, computer science and ICT.

Our enrichment programme is designed to bring science alive and we spend 2 weeks in March working on Science Week projects. During these 2 weeks the children have access to lots of different alternative activities during lunch times, including dissections and crime scene investigation. In lessons, during science fortnight, the students will design and carry out their own projects ready to show off at the science fair on the final Friday.

Y5 Curriculum Plan: Science

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Forces • Gravity • Air resistance • Water resistance • Friction • Levers • Pulleys • Gears • Physicists	**Animals Including Humans** • Puberty • Menstruation • Old age • Gestation in humans • Life cycles • MRS GREN • Gestation in animals	**Evolution and Inheritance** • Fossils • Palaeontologists • Variation • Crossbreeding • Adaptations • Keys and classification • Evolution • Inheritance	**Living Things and their Habitats** • Life cycles • Local environment • Reproduction in plants • Animal changes • Naturalists • Living things	**Earth and Space** • Planets • Geocentric and heliocentric • The Moon • Spherical bodies • Day and night • Space scientists	**Working scientifically** • Asking questions • Scientific equipment • presenting data • Fair test variables • Prediction • Conclusion writing • Presenting skills

Y6 Curriculum Plan: Science

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Light • How light travels • Shadows • Reflection • Mirrors • Light phenomena • Light scientists	**Animals Including Humans** • Anatomy • Digestion • Diet and exercise • Drugs and lifestyle • Nutrients and water	**Electricity** • Circuits • Voltage • Series • Parallel • Circuit applications	**Living Things and their Habitats** • Classification • Classification keys • Biologists • Unfamiliar animals	**Properties and Changes of Materials** • Properties of materials • Dissolving • Separating mixtures • Physical and chemical changes	**Practical Project** • Asking questions • Scientific equipment • presenting data • Fair test • variables • Prediction • Conclusion writing • Presenting skills

Y7 Curriculum Plan: Science

Autumn 1	Autumn 2	Spring 1
Working scientifically • Planning • Recording data • Analysing data **Particles** • The particle model • States of matter • Diffusion	**Forces** • Drag forces • Balanced and unbalanced • Gravity **Cells** • Plant and animal cells • Specialised cells • Unicellular organisms	**Elements, Atoms and Compounds** • Elements • Atoms • Compounds • Chemical formula **Chemical Reactions** • Chemical reactions • Word equations • Thermal decomposition • Exothermic and endothermic

Y7 Curriculum Plan: Science

Spring 2	Summer 1	Summer 2
Sound • Waves • Sound transfer • Loudness and pitch • Detecting sound • Echoes and ultrasound **Structure and Function of Body Systems** • Respiration • Breathing • Skeleton • Joints • Muscles	**Light** • Reflection • Refraction • The eye • Colour **Reproduction** • Puberty • Reproductive systems • Menstrual cycle • Flowers and pollination	**Acids and Alkalis** • Acids and alkalis • Neutralisation • Indicators • pH **Space** • The solar system • The Earth and Moon

Y8 Curriculum Plan: Science

Autumn 1	Autumn 2	Spring 1
The Periodic Table • Metals and non-metals • Group 1 • Group 7 • Group 0 **Electricity and Magnetism** • Circuits and current • Potential difference • Series and parallel • Resistance • Magnets • Electromagnets	**Health and Lifestyle** • Nutrients • Food tests • Unhealthy diet • Digestive system • Drugs, alcohol and smoking **Separation Techniques** • Mixtures • Solutions • Solubility • Filtration • Evaporation and distillation • chromatography	**Energy** • Food and fuels • Energy transfer • Radiation • Energy resources • Machines **Ecosystem Processes** • Photosynthesis • Plant minerals • Chemosynthesis • Respiration

Y8 Curriculum Plan: Science

Spring 2	Summer 1	Summer 2
Metals and Acids • Acids and metals • Metals and oxygen • Metals and water • Displacement reactions • Ceramics, polymers and composites **Motion and Pressure** • Speed • Motion graphs • Pressure in gases • Pressure in liquids • Pressure on solids	**Adaptation and Inheritance** • Competition and adaptation • Variation • Inheritance • Natural selection • Extinction • DNA **The Earth** • The atmosphere • The rock cycle • The carbon cycle • Climate change • Recycling	**Practical Project** • Team work • Method planning • Experimental skills • Graph work • Conclusion writing • Presenting skills