Science
Year 7 Curriculum Map

Woolwich Polytechnic School for Boys

Unit One	Unit Two	Unit Three
Topic: Working Scientifically and Cell Biology **Key Learning:** • Variables in Investigations • Data and Graph Skills • Scientific Conclusions • Plant and Animal Cells • Specialised Cells • Microscopy • Transport in cells **Assessment:** Half- term assessment of unit 1	**Topic:** Particle Models, Atoms, Elements and compounds, Forces **Key Learning:** • States of Matter • Density • Elements and the Periodic Table • Atomic Structure • Compounds and Mixtures • Balanced and Unbalanced Forces • Mass and Weight **Assessment:** End of term exam of unit 2	**Topic:** Human Body- organ systems and Reproduction **Key Learning:** • Life Processes • Organisation • Circulatory, respiratory and Skeletal Systems • Adolescence and Puberty • Menstrual Cycle • Reproduction in Humans • Development of the Foetus • Reproduction in Plants **Assessment:** Formative assessment of Human Biology
Unit Four	**Unit Five**	**Unit Six**
Topic: Chemical Reactions and Acids and Alkalis **Key Learning:** • Chemical Reactions • Combustion • Thermal Decomposition • Exothermic and Endothermic Reactions • Testing for Gases • Acids and Alkalis • Neutralisation Reactions • Making Salts **Assessment:** Formative assessment of Chemistry	**Topic:** Energy and Motion **Key Learning:** • Transferring Energy • Power • Heat Transfer • Renewable and Non-R. Energy Resources • Calculating speed and Acceleration • Distance-Time Graphs • Velocity-Time Graphs • Forces and Braking • Reaction Times **Assessment:** Formative assessment of Physics	**Topic:** Space **Key Learning:** • The Solar System • Exploring the universe • Life Cycle of a Star **Assessment:** End of year Exam Examination

Science
Year 8 Curriculum Map

Woolwich Polytechnic
School for Boys

Unit One	Unit Two	Unit Three
Topic: Ecosystems and the Periodic Table **Key Learning:** • Food chains and Food Webs • Disruptions to Food chains • Extinction • The Periodic Table • Group 1- Alkali Metals • The Halogens • The Noble Gases **Assessment:** Half- term assessment of unit 1	**Topic:** The Earth, Adaptation, and Inheritance **Key Learning:** • Earth and its Atmosphere • Rock Cycle • Carbon Cycle • Climate change • Competition and Adaptation • Variation and inheritance • Natural Selection **Assessment:** Formative assessment of unit 2	**Topic:** Body Systems, Drugs and Alcohol **Key Learning:** • Aerobic and Anaerobic Respiration • Photosynthesis • Nutrition and Diet • Digestion and Enzymes • Drugs • Alcohol • Smoking **Assessment:** Biology assessment
Unit Four	**Unit Five**	**Unit Six**
Topic: Separation Techniques, Metals and Acids **Key Learning:** • Solubility • Filtration and Evaporation • Distillation • Chromatography • Metals in acids, oxygen and water reactions • Displacement Reactions • Extraction of metals **Assessment:** Chemistry assessment	**Topic:** Electricity and Magnetism **Key Learning:** • Circuit Diagrams • Series and Parallel circuits • Resistance • Static Electricity • Magnets • Electromagnets • Uses of Electromagnets **Assessment:** Physics assessment	**Topic:** Diseases **Key Learning:** • Pathogens • Body Defence Systems • Vaccinations • Antibiotics and Resistance **Assessment:** End of year examination

Science
Year 9 Curriculum Map

Woolwich Polytechnic School for Boys

Unit One

Topic: Cell Biology and Energy

Key Learning:
- Eukaryotes and Prokaryotes
- Microscopy
- Cell Division
- Movement of substances into cells
- Energy stores and Systems
- Energy Efficiency
- Calculating Work Done
- Calculating Gravitational Potential Energy
- Calculating Kinetic E. and Elastic Potential E.
- The National Grid

Assessment: Half-term assessment of unit 1

Unit Two

Topic: Atomic Structure and Particle Physics

Key Learning:
- Atoms, compounds and Isotopes
- Electronic Structure
- Developing the Atomic Model
- Periodic Table
- Groups 1, 7 & 8/0
- Density of Materials
- Kinetic Theory and Changes of State
- Specific Heat Capacity
- Internal Energy and Specific Latent Heat

Assessment: End of term assessment of unit 2

Unit Three

Topic: Bioenergetics and Energy Changes

Key Learning:
- Photosynthetic Reaction
- Uses of glucose
- Aerobic and Anaerobic Respiration
- Metabolism and response to exercise
- Exothermic and Endothermic Reactions
- Measuring Energy Changes
- Energy Level Diagrams
- Bond enthalpy

Assessment: End of term assessment of unit 3

Unit Four

Topic: Infection and Response

Key Learning:
- Communicable Diseases
- Viral and Bacterial Diseases
- Human Defence Systems
- Vaccination
- Antibiotics and painkillers
- Discovery and Development of Drugs

Assessment: Biology assessment

Unit Five

Topic: Structure and Bonding

Key Learning:
- Ionic Bonding
- Ionic Compounds
- Covalent Bonding
- Covalent Structures
- Polymers
- Metallic Bonding
- States of Matter

Assessment: Chemistry assessment

Unit Six

Topic: Nuclear Physics and Space Physics

Key Learning:
- Atomic Structure
- Development of the Atomic Model
- Radioactive Decay
- Activity and Half Life

Assessment: Physics assessment