Meadow Park School - Curriculum Map 2025-2026

Key Stage	Year Group	Subject	Teacher	Programme of Study
KS4	Year 10	Science	Trevor Ngawoofah	AQA GCSE Biology

Autumn a	Autumn b	Spring a	Spring b	Summer a	Summer b
Topic(s)	Topic(s)	Topic(s)	Topic(s)	Topic(s)	Topic(s)
Cell Biology	**Bioenergetics**	**Organisation**	**Infection and Response**	**Required Practicals/Revision:**	**Required Practicals/Revision:**
Core Knowledge:	Core Knowledge:	Core Knowledge:	Core Knowledge:	Required Practicals	Required Practicals
• Eukaryotes & prokaryotes • Animal & plant cells • Cell Specialisation • Microscopy & calculating magnification • Cell division: Meiosis & mitosis • Stem cells • Transport in cells: Diffusion, osmosis & active transport	• Photosynthesis: equation, reactants, products & limiting factors associated with the chemical reaction • Investigating the effect of light intensity on the rate of photosynthesis (RP) • Uses of glucose from photosynthesis • Respiration: aerobic vs anaerobic • Factors which affect our metabolism	• Principles of organisation: cells, tissues, organs & organ systems • The human digestive system: organs involved & the actions of digestive enzymes (RP) • The heart and blood vessels: functions & adaptations including the composition of the blood • Coronary heart disease • Health issues in humans & the effect that lifestyle can have on non-communicable diseases (CHD, cancer) • Plant tissues & organs	• Pathogens: structures, cellular processes and entry to the body • Viral, bacterial, protist & fungal infections • Human barriers to infection: skin, stomach acid etc • The human immune system: role of lymphocytes and phagocytes in the immune response (antitoxins, antibodies & engulfing of pathogens) • The processes of immunisation with vaccines • Antibiotic treatment vs painkillers • Discovery & development of drugs • Plant pathogens & infection: TMV • Antibiotic testing and calculation of clear zone using mathematical pi	• Microscopes • Culturing Microbes • Effects of Osmosis on Plant Tissues • Food Tests • Effect of pH on amylase • Photosynthesis • Revision of Paper 1 topics	• Reaction Times • Plant Responses • Sampling Organisms • Decay • Revision of Paper 1 topics
Personal Development	Personal Development	Personal Development	Personal Development	Personal Development	Personal Development

Career focus: Biology, Medical Technologist, Industrial Technologist **PD Focus: Health and Well-being** Emphasis placed on social skills with the practical investigation task. Are students able to work in a group, listen to ideas and divide a task up fairly before relaying their findings back to their group?	**Career focus:** Botanist, Agronomist, Food analysis and nutrition **PD Focus: Health and Well-being** Emphasis placed on social skills with the practical investigation task. Are students able to work in a group, listen to ideas and divide a task up fairly before relaying their findings back to	**Career focus:** Healthcare sciences and NHS careers, Nutritionist, Health visitor, Gastroenterologist **PD Focus: Relationships** Listening, speaking, problem solving, creativity, staying positive, aiming high, leadership, teamwork	**Career focus:** Virologist, zoology, pharmaceutical careers, healthcare Science **PD Focus: Relationships** Listening, speaking, problem solving, creativity, staying positive, aiming high, leadership, teamwork	**Career focus:** Healthcare Science **PD Focus: Living in the wider world** Emphasis placed on social skills with the practical investigation task. Are students able to work in a group, listen to ideas and divide a task up fairly before relaying their findings back to their class	**Career Focus** Medical Technologist **PD Focus: Living in the wider world** Emphasis placed on social skills with the practical investigation task. Are students able to work in a group, listen to ideas and divide a task up fairly before relaying their findings back to the group
Reading & Writing	Reading &Writing	Reading &Writing	Reading &Writing	Reading &Writing	Reading &Writing
- Recording research on acids and alkalis clearly spelling key words correctly. - Recording observations from practical tasks clearly. - Writing in full sentences with correct punctuation to answer open ended questions.	- Writing in full sentences with correct punctuation to form conclusions and answers to open ended questions. - Including correctly spelt key words in descriptions. - Applying knowledge of phonics to spell out new words when reading information / methods for practical tasks.	- Reading factual information on diseases and balanced diets, highlighting key facts and using their skills of inference. - Recording observations clearly spelling key words correctly. - Writing conclusions using full sentences and using connectives to include explanations.	- Using deduction to highlight key facts within a text answer short questions. - Using inference to form ideas and opinions about research or a concept/ theory. - Writing in full sentences with correct punctuation to answer open ended questions.	- Recording observations clearly spelling key words correctly. - Writing conclusions using full sentences and using connectives to include explanations. - Applying knowledge of phonics to spell out new words when reading information / methods for practical tasks.	- Reading factual information on adaptations, highlighting key facts and using their skills of inference. - Recording observations clearly spelling key words correctly. - Writing in full sentences with correct punctuation to answer open ended questions.
Speaking & Listening	Speaking & Listening	Speaking & Listening	Speaking & Listening	Speaking & Listening	Speaking & Listening
- Listening carefully to methods ahead of practical skills. - Verbally sharing ideas about practical results/ listening respectfully to the ideas of others. -.	- Listening carefully to methods ahead of practical skills. - Verbally sharing ideas about practical results/ listening respectfully to the ideas of others. -	- Speaking respectfully to their peers when working as a team during the practical investigations. - Including key words when verbally explaining results and ideas.	- Listening attentively during verbal explanations recalling the information that has been relayed in video clips.	- Listening carefully to methods ahead of practical skills. - Verbally sharing ideas about practical results/ listening respectfully to the ideas of others.	- Listening attentively during verbal explanations recalling the information that has been relayed in video clips. - Verbally sharing ideas about practical results/ listening respectfully to the ideas of others.
Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning	Numeracy & Mathematical Reasoning
Calculating cell sizes - Reading scales accurately during practical tasks.	- Reading scales accurately during practical tasks. - Interpreting data to form a conclusion and support key facts.	- Reading scales accurately during practical tasks. - Using basic operations to analyse data in order to form a conclusion. - Using deduction to prove or disprove a statement.	- Using basic operations to analyse data in order to form a conclusion. - Using deduction to prove or disprove a statement	- Using basic operations to analyse data in order to form a conclusion. - Using deduction to prove or disprove a statement	- Using basic operations to analyse data in order to form a conclusion. - Using deduction to prove or disprove a statement.
Creative Media	Creative Media	Creative Media	Creative Media	Creative Media	Creative Media

- Using ICT to complete online quizzes to assess knowledge and understanding of animal and plant cells - Using Power Point to record research	- Using ICT to watch stimulations of the effect of exercise on the body. - Using SENECA to complete optional online homework/ extension tasks in class.	- Using ICT to visualise how food moves through the digestive system. - Using ICT to visualise how enzymes break down large food molecules. - Using SENECA to complete optional online homework/ extension tasks in class.	- Using ICT to visualise the immune system in action. - Use ICT to research key facts and concepts.	- Using ICT to visualise magnetic fields around magnets. - Using ICT to research key facts about the uses of magnets and electromagnets. - Using Power point to present research.	- Using ICT to visualise how predators and prey interact. - Using SENECA to complete optional online homework/ extension tasks in class.