Meadow Park: Sequence of Learning Overview 2025-2026

Subject- Science

Autumn A	Autumn B	Spring A	Spring B	Summer A	Summer B
Key Stage 1					
Animals Including Humans	**Living things and their habitats**	**Everyday Materials**	**Seasonal changes (Spring & Summer)**	**Biodiversity and minibeasts**	**Scientist and inventors**
Identify and classify groups of animals including humans	Identify a range of different habitats	Gather and record data	Recognise that questions can be answered in different ways	Identify and classify a range of minibeasts	Perform simple tests and record findings
Ask simple questions	Recognise that questions can be answered in different ways	Perform simple tests	Observe changes over time	Observe and record findings on a range of biodiversities	Observe closely, using simple equipment
Year 3					
Animals Including Humans	**Plants**	**Rocks**	**Forces and Magnets**	**Light**	**Scientist and inventors**
Record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables	Observe changes over time	Use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge	Use a range of equipment, including thermometers and data loggers observe changes over time	Use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge	Collect data from their own observations and measurements
Draw simple conclusions from their results	Present data in a variety of ways to help in answering questions	Make systematic and careful observations	First talk about, and then go on to write about, what they have found out	Start to raise their own relevant questions about the world around them in response to a range of scientific experiences	Make links between their own science results and other scientific evidence
Year 4					
Animals Including Humans	**Living Things and Their Habitats**	**States of Matter**	**Sound**	**Electricity**	**Scientists and Inventors**
Use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge	Use straightforward scientific evidence to answer questions or support their findings	Recognise when a fair test is necessary	Report and present their results and conclusions to others in written and oral forms with increasing confidence	Identify similarities, differences, patterns and changes relating to simple scientific ideas and processes	Where appropriate, take accurate measurements using standard units using a range of equipment
Suggest improvements to investigations	Talk about criteria for grouping, sorting and classifying	Use a range of equipment, including thermometers and data loggers	Collect data from their own observations and measurements	Ask their own questions about what they observe	Present data in a variety of ways to help in answering questions
Year 5					
Animals Including Humans	**Living Things and Their Habitats**	**Properties and Changes of Materials**	**Forces**	**Earth and Space**	**Scientist and Inventors**

Decide how to record data from a choice of familiar approaches	Explore and talk about their ideas, raising different kinds of scientific questions	Select and plan the most appropriate type of scientific enquiry to use to answer scientific questions	Use their scientific knowledge and understanding to explain their findings	Read, spell and pronounce scientific vocabulary correctly	Recognise where secondary sources will be most useful to research ideas and begin to separate opinion from fact
Identify patterns that might be found in the natural environment	Independently report and present their conclusions to others in oral and written forms	Make careful and focused observations	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas	Identify evidence that refutes or supports their ideas	Explore and talk about their ideas, raising different kinds of scientific questions
Year 6					
Animals Including Humans	**Living Things and Their Habitats**	**Evolution and Inheritance**	**Electricity**	**Light**	**Scientists and Inventors**
Explore and talk about their ideas, raising different kinds of scientific questions	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas	Independently group, classify and describe living things and materials	Make their own decisions about what observations to make, what measurements to use	Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas	Look for different causal relationships in their data
Read, spell and pronounce scientific vocabulary correctly	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs	Draw conclusions based in their data and observations	Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar graphs and line graphs	Read, spell and pronounce scientific vocabulary correctly	Talk about how scientific ideas have developed over time
Key Stage 3					
Chemical Reactions: Acid and Alkalis	**The Earth and the Atmosphere:** The Rock Cycle	**The Structure and Function of Living Things:** Nutrition and Digestion	**Space Physics:** Earth and Our Solar System	**Electricity and Electromagnetism:** Static Electricity and Magnetism	**Interaction and Interdependence:** Relationships in Ecosystems
Year 7					
Research acids, alkalis and neutral substances.	Explain how the Earth's atmosphere has changed over time.	Describe what a balanced diet is and research the functions of each food group within the human body as well examples of food they are found in.	Research key features about each planet and relate features such as temperature and length of a year to their distance from the sun.	Carry out a practical to investigate series and parallel circuits.	Research how organisms are adapted to survive in different environments
Carry out a practical investigation to test the strength of various acids and alkalis using a range of indicators.	Carry out a practical to investigate the properties of different types of rocks.	Compare diseases caused by eating an unbalanced diet including obesity, starvation and deficiency diseases.	Explain the causes of our seasons and compare seasons in the Northern Hemisphere with the Southern Hemisphere.	Carry out a practical to investigate magnets and magnetic fields and represent magnetic fields by drawing simple labelled diagrams.	Carry out a practical to investigate the distribution of organisms within a habitat.
Year 8					
Research and compare a range of acids, alkalis and neutral	Explain how the Earth's atmosphere has changed over time by analysing data.	Describe what a balanced diet is and research the functions of each food group within the human body as well	Research key features about each planet and other celestial bodies and use	Carry out a practical to investigate series and parallel circuits and	Research how organisms are adapted to survive in different

substances and identify substances as acidic, alkaline and neutral.		examples of food they are found in.	subject knowledge to relate features such as temperature and length of a year to their distance from the sun.	compare how current and voltage changes in series and parallel circuits.	environments including extreme environments.
Carry out a practical to test the strength of various acids and alkalis using a range of indicators and analyse the effectiveness of different indicators.	Carry out a practical to investigate the properties of different types of rocks.	Compare diseases caused by eating an unbalanced diet including obesity, starvation and deficiency diseases and make links with where globally certain diseases are more prevalent.	Research methods used to observe our solar system and other galaxies in the Universe.	Carry out a practical to investigate magnetic fields and represent magnetic fields by drawing accurate labelled diagrams identifying where the field strength is the strongest.	Carry out a practical to investigate the distribution of organisms within a habitat and calculate the percentage cover.
<u>Year 9</u>					
Compare a range of acids, alkalis and neutral substances and identify substances as acidic, alkaline and neutral.	Predict how the composition of gases in the atmosphere will change in the future and link to key events and human activities.	Use detailed knowledge of food tests to carry out a problem-solving practical investigation and write a report to explain findings.	Research other celestial bodies such as dwarf planets and apply knowledge to explain why Pluto is no longer classed as a dwarf planet.	Carry out a practical to investigate examples of static electricity explaining their applications and predict which objects will repel or attract each other due to electrostatic forces.	Carry out a practical to investigate choice chambers evaluating on the reliability and validity of the data recorded. Link results to explaining why organisms live in specific habitats.
Carry out practical investigations to investigate reactions between acids and metals/ acids and metal carbonates/ acids and metal oxides/ combustion reactions, displacement reactions and thermal decomposition reactions.	Model the formation of different types of rocks adding detailed descriptions of each stage.	Compare diseases caused by eating an unbalanced diet including obesity, starvations and deficiency diseases and link these diseases to lifestyle choices/ prevalence in less economically developed countries compared to more economically developed countries.	Research methods used to observe our solar system and other galaxies in the Universe and compare the advantages and disadvantages of each.	Carry out a practical to investigate magnets and magnetic fields and represent magnetic fields by drawing accurate labelled diagrams identifying where the field strength is the strongest and use compasses to label the direction of the magnetic field.	Interpret food chains and food webs to describe the impacts of change in the population of one organism on the populations of other organisms.
<u>Year 10 (AQA GCSE Biology)</u>					
Cell Biology	**Bioenergetics**	**Organisation**	**Infection and Response**	**Required Practical**	**Required Practical**
Animal and plant cells Eukaryotes and prokaryotes Cell specialisation and differentiation Microscopy Cell culture Cell division Transport in cells	Photosynthesis reaction Rate of photosynthesis Glucose use from photosynthesis Aerobic and anaerobic respiration Response to exercise Metabolism	Organisation principles The human digestive system The heart and blood vessels Non-communicable disease (heart disease) Health issues Lifestyle effects of some non-communicable diseases Cancer Plant tissues Organ system of plants	Communicable (infectious) diseases Viral diseases Bacterial diseases Fungal diseases Protist diseases Human defence systems Vaccination Antibiotics and painkillers Discovery and development of drugs Monoclonal antibodies Plant disease	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

Year 11(AQA GCSE Biology)

Homeostasis	Inheritance	Variation and Evolution	Ecology	Revision and Preparation for Summer exams	Revision and Preparation for Summer exams
Structure and function of the human nervous system The brain The eye Body temperature control Hormonal coordination in humans Maintaining water and nitrogen balance in the body Hormones in human reproduction Contraception Infertility Plant hormones	Genetic make-up of living organisms – DNA, Chromosomes, genes & alleles Cell Division – meiosis & mitosis Homozygous & heterozygous genotype outcomes from genetic crosses Inherited disorders & chance of inheritance Key concepts and methods of genetic engineering & cloning	Darwin's Theory of Evolution define key terms: homozygous, heterozygous, recessive & dominant Interactions between organisms in an ecosystem Identify adaptations of plants and animals	Communities within ecosystems Changes in ecosystems Ecosystem adaptations Organisation within ecosystems How materials are cycled Decomposition Impact of environmental change Biodiversity Waste management Land use Deforestation Global warming Maintaining biodiversity Pyramids of biomass Food security Farming techniques Sustainable fisheries Biotechnology	Revision of Paper 1 and Paper 2 topics Practice PPQs	Revision of Paper 1 and Paper 2 topics Practice PPQs

	Biology
	Chemistry
	Physics
	Scientists and inventors