

Fair Field Junior School - Science Overview 2021-2022

Curriculum Intent

At Fair Field Junior School we aim to provide an enquiry skills led science curriculum which promotes curiosity and inquisitive brains. The exciting and progressive curriculum ensures the following skills are built on and embedded as the children move through the school: comparative / fair testing; research; observation over time; pattern seeking; identifying, grouping and classifying; problem solving. Throughout the school, we provide children with opportunities to develop substantive (subject knowledge and conceptual understanding) and disciplinary (working scientifically) knowledge through thought provoking teaching and learning.

Implementation

Science topics at Fair Field are taught within each year group in accordance with the National Curriculum. Every year group will build upon the learning from prior year groups therefore developing depth of understanding and progression of skills. We celebrate British Science Week every year and activities are planned around the given theme that allow children to be both imaginative and logical, explore, enquire and observe. We use educational visits and visitors to enrich and enhance the pupil's learning experiences within the Science curriculum. Children are given the opportunity to present their knowledge at the end of each topic, which allows the teacher to assess their progress and provide opportunities for growth.

Impact

The impact of science will be seen across the school by an increase in enquiry about the world around us, both in and outside the classroom. Children will be able to:

- Work collaboratively and independently to investigate and experiment
- Question ideas and use their knowledge to provide reasoning
- Explain the process they have taken and be able to reason scientifically
- Draw conclusions about their findings
- Make predictions and justify their thinking
- Understand the uses of science, today and in the future

Whole-school and parental engagement will be improved through lunchtime clubs that focus wholly on working collaboratively to investigate and experiment and yearly British Science Week Celebrations which allow us to invite parents who work in STEM related jobs to share their experiences and knowledge of the subject. Children are naturally curious. We want to ensure that science at Fair Field nurtures this curiosity and allows them to ask questions and develop the skills they need to answer those questions.

	Lower Phase					
	Autumn	Spring	Summer	Key Skills	Vocabulary	Notes
Year 3	·Animals Including Humans Light	Plants Science Week	Rocks Forces and Magnets	<ul style="list-style-type: none"> • Setting up simple practical enquiries • Making systematic and careful observations • Using straightforward scientific evidence to answer questions • Recording findings using simple scientific language, drawings, labelled diagrams • Gathering, recording, classifying and presenting data in a variety of ways • Reporting on findings from enquiries, including oral and written explanations 	Fair test Variable Method Equipment Results Conclusion Prediction Observe Experiment Measure Question	Use of real-life plants

	Lower Phase					
	Autumn	Spring	Summer	Key Skills	Vocabulary	Notes
Year 4	States of Matter Living Things and Their Habitats	Animals Including Humans Science Week	Sound Electricity	<ul style="list-style-type: none"> • Setting up simple practical enquiries, comparative and fair tests • Making systematic and careful observations and taking accurate measurements using standard units • Using straightforward scientific evidence to answer questions • Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • Gathering, recording, classifying and presenting data in a variety of ways • Reporting on findings from enquiries, including oral and written explanations 	Fair test Variable Method Equipment Results Conclusion Prediction Observe Experiment Measure Question Evidence	Use of full-scale skeleton model

	Upper Phase					
	Autumn	Spring	Summer	Key Skills	Vocabulary	Notes
Year 5	Earth and Space Materials and their Properties	Living Things and their Habitats Science Week	Forces Animals Including Humans	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, tables, scatter graphs, bar and line graphs • Using test results to make predictions • Reporting and presenting findings from enquiries, including conclusions in oral and written forms 	Fair test Method Equipment Results Conclusion Prediction Observe Experiment Measure Question Evidence Independent variable Dependent variable Evaluation Biology Chemistry Physics Reliable	Wonderdome workshop

	Upper Phase					
	Autumn	Spring	Summer	Key Skills	Vocabulary	Notes
Year 6	Light Electricity	Animals Including Humans Science Week	Evolution and Inheritance Living things and their Habitats	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Using test results to make predictions • Identifying scientific evidence that has been used to support or refute ideas or arguments • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms 	Fair test Method Equipment Results Conclusion Prediction Observe Experiment Measure Question Evidence Independent variable Dependent variable Evaluation Biology Chemistry Physics Reliable Controlled Variable	Teacher led sheep heart dissection