

East Midlands Academy Trust





Why Teach Science?

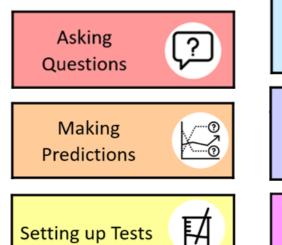
We believe that Science will allow pupils to make informed decisions and choices throughout their lives. By fostering and maintaining a curiosity throughout their education, our pupils will be able to:

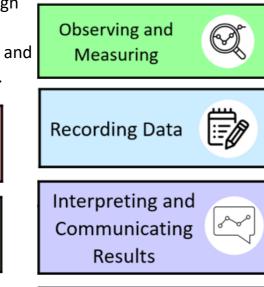
- Understand how the world around them works
- Adapt to a life in a modern world
- Experience and share the cultural capital that Science provides
- Show resilience when solving problems
- Decipher fact from fiction by learning how to look for reliable sources of information.

Working Scientifically

Our curriculum details the scientific enquiry skills involved in the processes of science, including an understanding that questions are

fundamental alongside the design of experiments; reasoning and arguing with scientific evidence and analysing and interpreting data.





Evaluating

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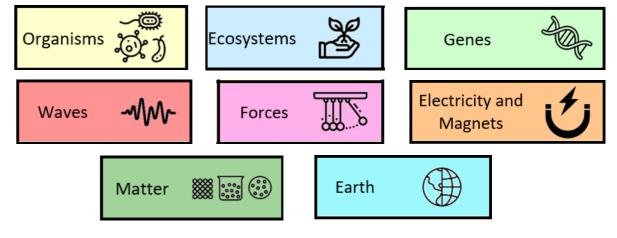
Key Vocabulary

'Rocket Words' are identified for each unit. These are displayed in a table so pupils and teachers can make connections and revisit vocabulary from previous years/units.

| E. | Science Rocket Words | | | | |
|--------|--|--------------------------------------|---|-----------|--|
| | Year 1 | Year 2 | Year 3 | | |
| | Animals Including Humans (About Me) | Living Things and Their Habitats | Rocks | | |
| | senses- sight, taste, touch, smell, hearing | habitat | metamorphic rock | | |
| 7 | organs | desert | igneous rock | | |
| Ē | exercise | living | sedimentary rock | | |
| Autumn | healthy | producer | extinct | | |
| 1 | design | root vegetable | weathering | | |
| | baby | Food chain | acid rain | | |
| | grow | excrete | fossil | | |
| | bones | microhabitat | mineral | | |
| | Everyday Materials (Exploring) | Animals Including Humans (Growth) | Animals Including Humans (What Makes us) | Hurr | |
| | flight | birth | skeleton | | |
| 2 | structure | growth | tendon | | |
| Ē | transparent | reproduction | ligament | | |
| Autumn | opaque | death | cartilage | | |
| < | translucent | life cycle | involuntary muscles | | |
| | flexible | generation | voluntary muscles | | |
| | rigid | child | contract and relax | | |
| | oil | adult | vertebrae | | |
| | Everyday Materials (Uses) | Plants | Forces and Magnets | l (Nat | |
| | | | | | |
| | magnet | germinate | lodestone | | |
| 1 | metal | nutrient | horseshoe magnet | | |

The 8 Big Ideas of the Science Curriculum

Curriculum maps detail the sequencing of substantive knowledge from the disciplines of biology, chemistry and physics to enable pupils to build schemata of important concepts over time through eight 'big ideas'



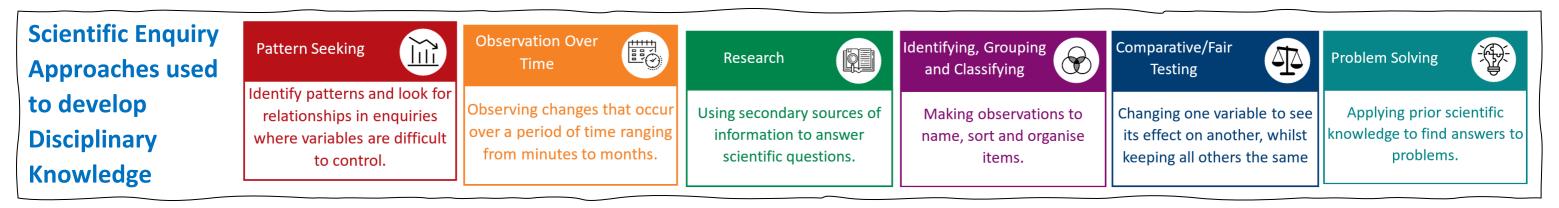
| Matter | | 0 0 0 0 0 0 0 0 0 0 0 0 | 6. |
|--------|--|-------------------------------|----|
|--------|--|-------------------------------|----|

Each unit focuses on one or two of these big ideas. Knowledge relating to each of the big ideas is mapped progressively so that connections can be made to previous learning.

| Reception | Year 1 | |
|---|---|--|
| Explore the natural world, making observations and drawing pictures of animals and plants. Know some | Identify and name a variety of plants and explore their bas structure | |
| | Identify, <u>name</u> and explore the growth and care of animals. | |
| | Explore the natural world, making observations and drawing pictures of | |

Assessment

Pupils' learning of the curriculum is assessed on an ongoing basis to monitor progress and identify the next steps in learning. In lessons, teachers check pupils can understand and remember the key knowledge and working scientifically skills built into the curriculum. Multiple choice guizzes are built into each unit to assess recall and understanding, these act as a diagnostic tool to inform teaching and provide pupils with feedback on their learning.









Substantive Curriculum Content Overview

| | Forces Electricit | t <mark>y and Magnets</mark> Wa | ves Earth | Matter | Organisms Ecosyst | ems Genes | | | |
|----------|--|--|--------------------------------|---|-------------------------------------|-------------------------------------|--|--|--|
| | | | | | | | | | |
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | | | |
| Autumn 1 | Animals, Including Humans (About Me) | Habitats | Rocks | States of Matter | Properties of Materials | Light | | | |
| | Organisms | Organisms Ecosystems | Earth | Matter | Matter | Waves | | | |
| Autumn 2 | Exploring Everyday Materials 1 | Animals, Including Humans 1 (Growth) | Animals, Including Humans | Animals, Including Humans | Changes of Materials | Looking after the Environment | | | |
| | Matter | Genes | Organisms | Organisms Ecosystems | Matter | Ecosystems | | | |
| Spring 1 | Exploring Everyday Materials 2 | Plants | Forces and Magnets | Living Things and Their Habitats (Conservation) | Animals, Including Humans | Electricity | | | |
| | Matter | Ecosystems | Electricity and Magnets Forces | Ecosystems | Genes Organisms | Electricity and Magnets | | | |
| Spring 2 | Plants | Uses of Everyday Materials | Plants | Living Things and Their Habitats | Living Things and their habitats | Animals, Including Humans | | | |
| | Ecosystems | Matter | Ecosystems | Genes | Ecosystems | Organisms | | | |
| Summer 1 | Animals, Including Humans (All About Animals) | Animals, Including Humans 2 (Life Cycles) | Light | Sound | Earth and Space | Evolution and Inheritance | | | |
| | Organisms Ecosystems | Organisms | Waves | Waves | Earth | Genes | | | |
| Summer 2 | Seasonal Changes | Living Things and Their Habitats (Habitats around the World) | Scientific Enquiry | Electricity | Forces | Living Things and Their habitats | | | |
| | Earth | Ecosystems | Waves Matter | Electricity and Magnets | Forces | Genes | | | |