

Science at Beormund

'Science and everyday life cannot and should not be separated'

Rosalind Franklin

Intent, Implementation and Impact:

Science is a vital core subject taught every week and it supports children to make sense of the world around them whilst developing their sense of curiosity. At Beormund, we aim to develop children's working scientific skills. These include:

Asking questions

Asking questions that can be answered using a scientific enquiry.



Making predictions

Using prior knowledge to suggest what will happen in an enquiry.



Setting up tests

Deciding on the method and equipment to use to carry out an enquiry.



Observing and measuring

Using senses and measuring equipment to make observations about the enquiry.



Recording data

Using tables, drawings and other means to note observations and measurements.



Interpreting and communicating results

Using information from the data to say what you found out.



Evaluating

Reflecting on the success of the enquiry approach and identifying further questions for enquiry.



More specifically, children should naturally progress through the following 'working scientific skills' based on their age and attainment level.

Reception/Year 1 and 2 (KS1):

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

Year 3 and 4 (Lower KS2):

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

Year 5 and 6 (Upper KS2):

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- 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 to set up further comparative and fair tests
- 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 such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments

STEAM (historically referred to as STEM)

It is important that children understand how Science has changed our lives and its role in our future development.

STEAM stands for: **S**cience, **T**echnology, **E**ngineering, **A**rt and **M**aths.

STEAM learning enables students to be practical and learn through a hands-on approach, whilst still developing key scientific knowledge.

Once every half term, class teachers are assigned a STEAM day during Enrichment Wednesdays. Lessons and resources for this fun, exploratory, kinaesthetic day can be found at: [Primary | STEM](#).

The Creative Curriculum

Each term a class will engage in a topic-based approach to learning. Throughout the course of the year (across the three terms) topics will have a history, geography or science driver. This ensures that scientific learning takes place in addition to the explicit science lessons taught every week. The aim is for class teachers to devise a culturally relevant curriculum that caters to the needs of our children's background, prior learning and interests.

Science Curriculum at Beormund

Science teaching at Beormund follows the National Curriculum. With that in mind, pupils are often in mixed year groups and therefore curriculum teaching is based on a teacher's assessment of the pupils in their class. The document below is a guide of coverage across the year.

Year	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 1	Seasonal change	Everyday materials	Seasonal change	Animals including humans	Plants	During this half term revisit areas where the children did not achieve A.R.E. to show progress from earlier in the year.
Year 2	Seasonal change	Uses of everyday materials	Animals including humans	All living things and their habitats	Plants	
Year 3	Light	Forces and magnets	Rocks	Animals including humans	Plants	
Year 4	States of Matter	Electricity	Sound	Animals including humans	All living things	
Year 5	Properties and changes of materials	Forces	Earth and Space	All living things	Animals including humans- Puberty	
Year 6	Light	Electricity	Evolution and inheritance	All living things	Animals including humans Puberty	

Lesson planning & the subsequent progression of scientific knowledge and skills are taken from the EduKent scheme of work: [Kent Primary Science Scheme of Work \(theeducationpeople.org\)](http://theeducationpeople.org)

Children's work is recorded in their books and evidence relies heavily on photographs of pupils developing relevant skills. Teachers assess pupils against 'I can statements' derived from the National Curriculum.

Useful websites for Science teaching:

STEM: <https://www.stem.org.uk/>

BBC Bitesize Science:

<https://www.bbc.co.uk/bitesize/subjects/z6svr82> (Key Stage 1)

<https://www.bbc.co.uk/bitesize/subjects/z2pfb9q> (Key Stage 2)

eChalk: <https://www.echalk.co.uk/Primary/science.html>

WOW Science: <https://wowscience.co.uk/>

Primary Science National Curriculum:

<https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study>

Supporting your child in Science:

To ensure the development of scientific skills, please explore and discuss the world around us with your children. This could be through stories, discussions, research and observations on topics of interest. Allow them to connect their thoughts and ask further questions about discussion points.

Celebrate Science Week at home in March (annually).

Allow creativity, safe experiments and exploration at home on weekends.

To find out more about our Science curriculum, please email your questions to:
office@beormund.southwark.sch.uk