DEVELOPING STEM IN THE PRIMARY CURRICULUM

STEM skills: primary

Skill	Description
Group work	• Take on different roles within a group • Actively listen to others • Respect the opinions of all members of the group • Make a decision as a group after exploring all possibilities
Questioning	• Take on different roles within a group • Actively listen to others • Respect the opinions of all members of the group • Make a decision as a group after exploring all possibilities
Problem solving	• Ask relevant questions • Look at research to find relevant information to help with the problem • Apply knowledge and skills to the problem
Practical work	• Follow simple instructions accurately • Select the most appropriate equipment for the situation • Use the equipment correctly • Work with accuracy • Investigation and enquiry skills
Investigation and enquiry skills	Plan how to investigate a problem • Identify the variables eg dependent, independent and control • Decide which variables to control and which to change to make sure the test is fair • Work out the best method to investigate the question • Think about any risks and dangers involved

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STEM skills: primary

Skill	Description
Investigation and enquiry skills	Obtaining results and recording data • Make careful and accurate observations and measurements • Record the observations and measurements appropriately eg a table, use of standard units • Carry out repeat observations
	Analysis of results • Identify simple patterns and outliers • Carry out calculations if appropriate eg averages • Present observations in an appropriate form eg pie chart, bar chart • Interpret information to identify more complex patterns • Draw conclusions from observations
	Evaluation of results • Make simple comments about the degree of trust in results, giving reasons • Evaluate the equipment and method used and suggest some improvements
Use of modern technology	Use modern technology to enhance: • Research and planning • Data collection and recording • Analysis and graphing techniques • Presentation of results and findings • Links to industry and/or careers

DEVELOPING STEM IN THE PRIMARY CURRICULUM

STEM skills: primary

Skill	Description
Maths	• Convert units where appropriate eg kg to g • Use simple mathematical equations and carry out appropriate calculations • Undertake basic data analysis
Application to new situations	• Recognise current knowledge and skills and when they are relevant • Confidently use current knowledge and skills and apply them to unfamiliar situations
Links to industry/careers	• Can give examples of where knowledge and skills learned in school are used in a real-life context
STEM literacy	• Describe different viewpoints a range of people may have about scientific or technological developments eg vaccines • Indicate how scientific or technological developments may affect different groups of people in different ways • Identify ethical or moral issues linked to scientific or technological developments eg climate change • Link applications of science or technology to the basic scientific ideas that underpin them • Distinguish between opinion and evidence in contexts related to STEM, and use evidence rather than opinion to support or challenge arguments

STEM
LEARNING

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SCIENCE OF THE
ENVIRONMENT

Department for
Business, Energy
& Industrial Strategy

British
Antarctic Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL