KS3 STEM Curriculum Links

Topic: Built to last

Activity: Turbulent times

STEM

Maths

Skills

1. Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information

Numeracy Framework

Strand: Developing numerical reasoning

Elements: Identify processes and connections

Learning outcomes

Children will

- transfer mathematical skills across the curriculum in a variety of contexts and everyday situations
- prioritise and organise the relevant steps needed to complete the task or reach a solution
- use technical terms, language and expression consistent with the subject

Other curriculum links

History

Skills

Historical knowledge and understanding

Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry

Pupils should be given opportunities to:

1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range

Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out

- investigations into historical issues on a range of scales, from the local to the international

English

Oracy

Range

Pupils should be given opportunities to develop their oral skills through:

2. experiencing and responding to a variety of stimuli and ideas: audio, visual and written
3. communicating for a range of purposes
5. using a variety of methods to present ideas

Topic

Built to last

Activity

Defence inspector

STEM

Maths

Skills

1.Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information
- develop their skills of estimating and measuring; recognise limitations on the accuracy of data and measurement; select an appropriate degree of accuracy

Range

Measures and money

Pupils should be given opportunities to:

1. Understand and use measures
- choose and use standard units of length, mass, volume and capacity, temperature, area and time
- interpret numbers on scales and read scales to an increasing degree of accuracy
- find perimeters of simple shapes

Numeracy Framework

Strands: Developing numerical reasoning and using measuring skills

Elements: Identify processes and connections, length, time, area, angle and position

Learning outcomes

Children will

- transfer mathematical skills across the curriculum in a variety of contexts and everyday situations
- prioritise and organise the relevant steps needed to complete the task or reach a solution
- calculate areas of compound shapes
- measure and record time
- make links between speed, distance and time
- use compass bearings and grid references to specify locations

Other curriculum links

ICT

Skills

Find and analyse information

Pupils should be given opportunities to:

2. find relevant information efficiently from a variety of sources for a defined purpose
4. produce and use databases to analyse data and follow particular lines of enquiry

Range

Pupils should be given opportunities to:

- use ICT to analyse and interpret data and produce new information on which to draw conclusions
- use ICT to explore and to solve problems in the context of work across a variety of subjects

Topic	Activity
Built to last	Explosive stuff

STEM

Design and Technology
Skills
Designing
Pupils should be given opportunities to:

1. use given design briefs and, where appropriate, develop their own to clarify their ideas for products
2. identify and use appropriate sources of information to help generate and develop their ideas for products
3. be creative and innovative in their thinking when generating ideas for their products
5. develop a specification for their product
6. explore, develop and communicate design ideas in a range of ways, including annotation, drawings and CAD, e.g. clip art libraries, internet resources, scanners,digital cameras
7. model and refine their design ideas in 3-D form where appropriate
8. evaluate, refine and modify their design ideas as they develop in relation to aesthetics, sensory requirements, healthy lifestyle, function, safety, reliability, properties of materials, ingredients, components, sustainability and cost
9. evaluate their final design ideas against their initial specification/recipe

Making
Pupils should be given opportunities to:

1. develop the skills to select and work with a range of materials and ingredients to make products in a variety of contexts
2. use hand and machine tools/utensils, and a range of equipment and processes, to mix, shape, form and join materials and ingredients
3. be creative in finding alternative ways of making if the first attempt is not achievable
4. develop techniques to ensure consistency and accuracy including the use of CAM,
5. test and evaluate their product against their original specification/recipe

System and control

16. learn about the properties and characteristics of electrical/electronic and mechanical components and apply this knowledge and understanding when designing and making products
17. interconnect mechanisms to achieve different kinds of movement in products

Range
Pupils should be given opportunities to develop their design and technology capability through:

- activities in which they develop and practise particular skills and techniques that can be applied in their designing and making

They should be given opportunities to:

- be creative
- be innovative and enterprising
- work independently and in groups

Other curriculum links

History
Skills
Historical knowledge and understanding
Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry
Pupils should be given opportunities to:

1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range
Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out

- investigations into historical issues on a range of scales, from the local to the international

Topic: Built to last

Activity: Mission impossible

STEM

Maths

Skills

1. Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information

2. Communicate mathematically

Pupils should be given opportunities to:

- generalise and explain patterns and relationships in words and symbols; express simple functions in words and symbolically

Range

Measures and money

Pupils should be given opportunities to:

1. Understand and use measures

- make sensible estimates of length, mass, capacity and time in everyday situations, extending to less familiar contexts; calculate time and temperature differences
- use and interpret scale on graphs, maps and drawings
- read and interpret scales on measuring instruments and understand the degree of accuracy that is possible, or appropriate, for a given purpose
- find perimeters, areas and volumes of common shapes

Shape, position and movement

Pupils should be given opportunities to:

2. Understand and use the properties of position and movement

- use Cartesian coordinates to specify location

Numeracy Framework

Strands: Developing numerical reasoning and using measuring skills

Elements: Identify processes and connections. Length, time, area, angle and position

Learning outcomes

Children will

- transfer mathematical skills across the curriculum in a variety of contexts and everyday situations
- prioritise and organise the relevant steps needed to complete the task or reach a solution
- use compass bearings and grid references to specify locations
- apply understanding of bearings and scale to interpret maps and plans.

Other curriculum links

Geography

Skills

Locating places, environments and patterns

Pupils should be given opportunities to:

2. use maps, plans and imagery of different types and scales and ICT to interpret and present locational information, e.g. draw sketch maps

History

Skills

Historical knowledge and understanding

Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry

Pupils should be given opportunities to:

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Range

Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out

- investigations into historical issues on a range of scales, from the local to the international

Topic: Tools of the trade

Activity: Grand design

STEM

Design and Technology
Skills
Designing
Pupils should be given opportunities to:
1. use given design briefs and, where appropriate, develop their own to clarify their ideas for products
2. identify and use appropriate sources of information to help generate and develop their ideas for products
3. be creative and innovative in their thinking when generating ideas for their products
6. explore, develop and communicate design ideas in a range of ways, including annotation, drawings and CAD, e.g. clip art libraries, internet resources, scanners, digital cameras
7. model and refine their design ideas in 3-D form where appropriate
8. evaluate, refine and modify their design ideas as they develop in relation to aesthetics, sensory requirements, healthy lifestyle, function, safety, reliability, properties of materials, ingredients, components, sustainability and cost
9. evaluate their final design ideas against their initial specification/recipe

Rigid and flexible materials
12. combine and process materials in order to create enhanced properties and desired aesthetic characteristics
14. be aware of current developments in materials technology, e.g. 'smart' materials
15. consider issues of sustainability when choosing and using materials

Range
Pupils should be given opportunities to develop their design and technology capability through:
- activities in which they develop and practise particular skills and techniques that can be applied in Their designing and making

They should be given opportunities to:
- be creative • be innovative and enterprising • work independently and in groups

Maths
Range
Measures and money
Pupils should be given opportunities to:
1. Understand and use measures
- use and interpret scale on graphs, maps and drawings
- find perimeters, areas and volume of common shapes

Numeracy Framework
Strands: Using measuring skills
Elements: Identify processes and connections. Length, time, area
Learning outcomes
Children will
- apply understanding of bearings and scale to interpret maps and plans, and to create plans and drawings to scale
- measure and draw angles

Other curriculum links

History
Skills
Historical knowledge and understanding
Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry
Pupils should be given opportunities to:
1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range
Pupils should be given opportunities to:
- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out
- investigations into historical issues on a range of scales, from the local to the international

Topic

Tools of the trade

Activity

Materials I spy

STEM

Science

Skills

Enquiry

Pupils should be given opportunities to carry out different types of enquiry

Developing

Pupils follow the planned approach/method, revise it where necessary, and where appropriate:

2. make sufficient relevant observations and accurate measurements, using ICT as appropriate, to a degree of precision appropriate to the enquiry

3. identify, describe and explain trends, patterns and relationships

Range

The sustainable Earth

Pupils should be given opportunities to study:

5. the properties of sustainable materials and how these are related to their uses in everyday life, e.g. in the construction and manufacturing industries, and the importance of sustainability.

Maths

Range

Handling data

Pupils should be given opportunities to:

1. Collect, represent, analyse and interpret data

- use a variety of means to collect data in order to follow lines of enquiry or to test hypotheses, e.g. the internet, questionnaires, data collection sheets, experiment

Other curriculum links

English

Oracy

Range

Pupils should be given opportunities to develop their oral skills through:

2. experiencing and responding to a variety of stimuli and ideas: audio, visual and written
3. communicating for a range of purposes
5. using a variety of methods to present ideas

Topic

Tools of the trade

Activity

Missing

STEM

Science

Skills

Communication

Pupils should be given opportunities to:

2. communicate logically by speech, writing, drawings, diagrams, charts, tables, bar charts, line graphs, videos and ICT packages using a wide range of scientific vocabulary, terms, symbols and conventions

Enquiry

Pupils should be given opportunities to carry out different types of enquiry

Developing

Pupils follow the planned approach/method, revise it where necessary, and where appropriate:

2. make sufficient relevant observations and accurate measurements, using ICT as appropriate, to a degree of precision appropriate to the enquiry
3. identify, describe and explain trends, patterns and relationships

Range

The sustainable Earth

Pupils should be given opportunities to study:

5. the properties of sustainable materials and how these are related to their uses in everyday life, e.g. in the construction and manufacturing industries, and the importance of sustainability.

Other curriculum links

History

Skills

Historical knowledge and understanding

Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry

Pupils should be given opportunities to:

1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range

Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out

- investigations into historical issues on a range of scales, from the local to the international

Topic: Tools of the trade

Activity: Use the force / Investigate arches

STEM

Science

Skills

Communication

Pupils should be given opportunities to:

2. communicate logically by speech, writing, drawings, diagrams, charts, tables, bar charts, line graphs, videos and ICT packages using a wide range of Scientific vocabulary, terms, symbols and conventions

Enquiry

Pupils should be given opportunities to carry out different types of enquiry

Developing

Pupils follow the planned approach/method, revise it where necessary, and where appropriate:

1. use a range of apparatus and equipment safely and with skill, taking action to control the risks to themselves and others
2. make sufficient relevant observations and accurate measurements, using ICT as appropriate, to a degree of precision appropriate to the enquiry
3. identify, describe and explain trends, patterns and relationships

Range

How things work

Pupils should be given opportunities to study:

4. the forces in devices and their relationship to work done and power

Design and Technology

Skills

Designing

Pupils should be given opportunities to:

1. use given design briefs and, where appropriate, develop their own to clarify their ideas for products
5. identify and apply knowledge and understanding about technological, sustainability and health and safety issues to develop ideas for products that are achievable and practical

System and control

16. learn about the properties and characteristics of electrical/electronic and mechanical components and apply this knowledge and understanding when designing and making products

Range

Pupils should be given opportunities to develop their design and technology capability through:

- activities in which they develop and practise particular skills and techniques that can be applied in their designing and making

They should be given opportunities to:

- be creative
- be innovative and enterprising
- work independently and in groups

Other curriculum links

English

Oracy

Range

Pupils should be given opportunities to develop their oral skills through:

2. experiencing and responding to a variety of stimuli and ideas: audio, visual and written
3. communicating for a range of purposes
5. using a variety of methods to present ideas

Topic: Tools of the trade

Activity: Build budget

STEM

Maths

Skills

1. Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information
- use a range of mental, written and calculator computational strategies

2. Communicate mathematically

Pupils should be given opportunities to:

- use a wide range of mathematical language, notation, symbols and conventions to explain and communicate their work to others

Range

Measures and money

Pupils should be given opportunities to:

2. Understand and use money

- understand and use the conventional way of recording money
- calculate with money and solve problems related to budgeting, saving and spending, and currency exchange rates

Numeracy Framework

Strands: Using number skills

Elements: Manage money

Learning outcomes

Children will

- make informed decisions relating to discounts and special offers
- carry out calculations relating to VAT, saving and borrowing
- appreciate the basic principles of budgeting, saving (including understanding compound interest) and borrowing

Other curriculum links

English

Oracy

Range

Pupils should be given opportunities to develop their oral skills through:

2. experiencing and responding to a variety of stimuli and ideas: audio, visual and written
3. communicating for a range of purposes
5. using a variety of methods to present ideas

ICT

Skills

Find and analyse information

Pupils should be given opportunities to:

2. find relevant information efficiently from a variety of sources for a defined purpose

Range

Pupils should be given opportunities to:

- use ICT tools and suitable information sources safely and legally, in accordance with LEA/school guidelines

Topic: Just the job

Activity: All in a day's work

STEM

Maths

Skills

1. Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information

Range

Measure and money

Pupils should be given opportunities to:

1. Understand and use measure

- use and interpret scale on graphs, maps and drawings
- read and interpret scales on measuring instruments and understand the degree of accuracy that is possible, or appropriate, for a given purpose

Shape, position and movement

Pupils should be given opportunities to:

2. Understand and use the properties of position and movement

- use Cartesian coordinates to specify location

Numeracy Framework

Strands: Developing numerical reasoning and using measuring skills

Elements: Identify processes and area, angle and position

Learning outcomes

Children will:

- transfer mathematical skills across the curriculum in a variety of contexts and everyday situations
- prioritise and organise the relevant steps needed to complete the task or reach a solution
- apply understanding of bearings and scale to interpret maps and plans, and to create plans and drawings to scale
- measure and draw angles

Other curriculum links

Geography

Skills

Locating places, environments and patterns

Pupils should be given opportunities to:

2. use maps, plans and imagery of different types and scales and ICT to interpret and present locational information, e.g. draw sketch maps

History

Skills

Historical knowledge and understanding

Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry

Pupils should be given opportunities to:

1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range

Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out

- investigations into historical issues on a range of scales, from the local to the international

English

Oracy

Range

Pupils should be given opportunities to develop their oral skills through:

2. experiencing and responding to a variety of stimuli and ideas: audio, visual and written
3. communicating for a range of purposes
5. using a variety of methods to present ideas

Topic: Just the job

Activity: Castle careers

STEM

Maths

Range

Handling data

Pupils should be given opportunities to:

1. Collect, represent, analyse and interpret data
   - use a variety of means to collect data in order to follow lines of enquiry or to test hypotheses, e.g. the internet, questionnaires, data collection sheets, experiment

Numeracy Framework

Strands: Using data skills

Elements: Collect and record data. Present and analyse data

Learning outcomes

Children will:

- construct a wide range of graphs and diagrams to represent the data

Other curriculum links

ICT

Skills

Find and analyse information

Pupils should be given opportunities to:

2. find relevant information efficiently from a variety of sources for a defined purpose
4. produce and use databases to analyse data and follow particular lines of enquiry

Range

Pupils should be given opportunities to:

- use ICT to analyse and interpret data and produce new information on which to draw conclusions
- use ICT to explore and to solve problems in the context of work across a variety of subjects

History

Skills

Historical knowledge and understanding

Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry

Pupils should be given opportunities to:

1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range

Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out

- investigations into historical issues on a range of scales, from the local to the international

Topic: Just the job

Activity: Party planner

STEM

Maths

Skills

1. Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information
- use a range of mental, written and calculator computational strategies

2. Communicate mathematically

Pupils should be given opportunities to:

- use a wide range of mathematical language, notation, symbols and conventions to explain and communicate their work to others

Range

Measures and money

Pupils should be given opportunities to:

1. Understand and use money
- understand and use the conventional way of recording money
- calculate with money and solve problems related to budgeting, saving and spending, and currency exchange rates

Numeracy Framework

Strands: Using number skills

Elements: Manage money

Learning outcomes

Children will

- make informed decisions relating to discounts and special offers
- carry out calculations relating to VAT, saving and borrowing
- appreciate the basic principles of budgeting, saving (including understanding compound interest) and borrowing

Other curriculum links

ICT

Skills

Find and analyse information

Pupils should be given opportunities to:

2. find relevant information efficiently from a variety of sources for a defined purpose

Range

Pupils should be given opportunities to:

- use ICT tools and suitable information sources safely and legally, in accordance with LEA/school guidelines

English

Oracy

Range

Pupils should be given opportunities to develop their oral skills through:

2. experiencing and responding to a variety of stimuli and ideas: audio, visual and written
3. communicating for a range of purposes
5. using a variety of methods to present ideas

Topic: Just the job

Activity: Heraldry

STEM

Maths

Skills

1. Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information

2. Communicate mathematically

Pupils should be given opportunities to:

- use a wide range of mathematical language, notation, symbols and conventions to explain and communicate their work to others

Shape, position and movement

Pupils should be given opportunities to:

1. Understand and use the properties of position and movement
- use line and rotational symmetries to solve problems on two and three dimensions

Other curriculum links

Art and design

Skills

Understanding

Pupils should be given opportunities to:

2. explore the diverse working practices of artists, craftworkers and designers from different:
- periods

considering their purpose and intentions

Investigating

Pupils should be given opportunities to:

1. develop specific skills for recording from:
- observation
- memory
- imagination

develop specific skills for investigating:

- the natural environment
- the made environment
- the world of imagination

using a variety of media

Range

Understanding

Pupils should be stimulated and inspired, where appropriate, by:

- styles
- ideas
- local and Welsh art, craft and design
- images and artefacts from a variety of historical and contemporary cultures and contexts

Investigating

Pupils should investigate:

- natural objects and environments
- made objects and environments
- imagined objects and environments.

They should, where appropriate, apply to their own work relevant findings collected from a variety of contexts including:

- local and Welsh examples
- different cultures and periods.

Making

Pupils should design and make both imaginatively and expressively

- objects • artefacts • images

They should work in different contexts such as:

- outdoors

Topic	Activity	STEM	Other curriculum links
Home sweet home	Go go gadget go		

Design and Technology
Skills
Designing
Pupils should be given opportunities to:

1. use given design briefs and, where appropriate, develop their own to clarify their ideas for products
2. identify and use appropriate sources of information to help generate and develop their ideas for products
3. be creative and innovative in their thinking when generating ideas for their products
6. explore, develop and communicate design ideas in a range of ways, including annotation, drawings and CAD, e.g. clip art libraries, internet resources, scanners, digital cameras
7. model and refine their design ideas in 3-D form where appropriate
8. evaluate, refine and modify their design ideas as they develop in relation to aesthetics, sensory requirements, healthy lifestyle, function, safety, reliability, properties of materials, ingredients, components, sustainability and cost
9. evaluate their final design ideas against their initial specification/recipe

Range
Pupils should be given opportunities to develop their design and technology capability through:

- activities in which they develop and practise particular skills and techniques that can be applied in their designing and making

They should be given opportunities to:

- be creative
- be innovative and enterprising
- work independently and in groups

English
Writing
Skills
Pupils should be given opportunities to communicate in writing and to:

1. use the characteristics features of literary and non-literary texts in their own writing, adapting their style to suit the audience and purpose
4. choose and use a wide range of vocabulary with increasing precision

Range
Pupils should be given opportunities to develop their writing skills through:

1. writing for a range of purposes
4. writing in response to a wide range of visual, audio and written stimuli

History
Skills
Historical knowledge and understanding
Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry
Pupils should be given opportunities to:

1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range
Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

Carry out

- investigations into historical issues on a range of scales, from the local to the international

Topic	Activity
Home sweet home	Castle for sale

STEM

Maths

Skills

1. Solve mathematical problems

Pupils should be given opportunities to:

- identify what further information or data may be required in order to pursue a particular line of enquiry; formulate questions and identify sources of information
- develop their skills of estimating and measuring; recognise limitations on the accuracy of data and measurement; select an appropriate degree of accuracy

Range

Measures and money

Pupils should be given opportunities to:

1. Understand and use measures
- make sensible estimates of length, mass, capacity and time in everyday situations, extending to less familiar contexts; calculate time and temperature differences
- read and interpret scales on measuring instruments and understand the degree of accuracy that is possible, or appropriate, for a given purpose
- find perimeters, areas and volumes of common shapes

Shape, position and movement

Pupils should be given opportunities to:

2. Understand and use the properties of position and movement
- use Cartesian coordinates to specify location

Numeracy Framework

Strands: Developing numerical reasoning and using measuring skills

Elements: Identify processes and connections, length, time, area, angle and position

Learning outcomes

Children will

- transfer mathematical skills across the curriculum in a variety of contexts and everyday situations
- prioritise and organise the relevant steps needed to complete the task or reach a solution
- calculate areas of compound shapes
- measure and record time
- measure perimeters
- use compass bearings and grid references to specify locations

Other curriculum links

Geography

Skills

Locating places, environments and patterns

Pupils should be given opportunities to:

1. locate places and environments using globes, atlases, maps and plans
2. use maps, plans and imagery of different types and scales and ICT to interpret and present locational information, e.g. draw sketch maps

Topic: Home sweet home

Activity: Water watch

STEM

Science
Skills
Communication

Pupils should be given opportunities to:

2. communicate logically by speech, writing, drawings, diagrams, charts etc, using a wide range of scientific vocabulary, terms, symbols and conventions

Range
Interdependence of organisms
Pupils should be given opportunities to study:

6. how humans activity affects the global environment

Other curriculum links

Geography
Skills
Investigating
Pupils should be given opportunities to:

1. identify and establish sequences of questions for investigation
2. observe, measure, extract and record data through carrying out practical investigations and fieldwork and using a variety of secondary sources

Range
Pupils should be given opportunities to:
study

- the rich and poor world: economic development in different countries
- tomorrow's citizens: issues in Wales and the wider world of living sustainably and the responsibilities of being a Global citizen

carry out

- fieldwork to observe and investigate real places and processes

History
Skills
Historical knowledge and understanding
Pupils should be given opportunities to:

1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

Historical enquiry
Pupils should be given opportunities to:

1. ask and answer significant questions
3. independently use a range of historical sources in their historical context including buildings and sites.

Range
Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological order
- how the coming of the Normans affected Wales and Britain between 1000 and 1500

carry out

- investigations into historical issues on a range of scales, from the local to the international

Skills across the curriculum

Developing thinking
Learners develop their thinking across the curriculum through the processes of planning, developing and reflecting.

Developing communication
Learners develop their communication skills across the curriculum through the skills of oracy, reading, writing and wider communication.

Developing ICT
Learners develop their ICT skills across the curriculum by finding, developing, creating and presenting information and ideas and by using a wide range of equipment and software.

Developing number
Learners develop their number skills across the curriculum by using mathematical information, calculating, and interpreting and presenting findings.

Cwricwlwm Cymreig (7-14)
Learners aged 7-14 should be given opportunities to develop and apply knowledge and understanding of the cultural, economic, environmental, historical and linguistic characteristics of Wales.

Personal and social education
Learners should be given opportunities to promote their health and emotional well-being and moral and spiritual development; to become active citizens and promote sustainable development and global citizenship; and to prepare for lifelong learning.

Careers and the world of work
Learners aged 11-19 should be given opportunities to develop their awareness of careers and the world of work and how their studies contribute to their readiness for a working life.