#### **KS3 STEM Curriculum Links**





#### **STEM**

## Other curriculum links

Topic Activity

#### Maths

Skills











Pupils should be given opportunities to:

1. Solve mathematical problems

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

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

Built to last

**Furbulent times** 

# Other curriculum links

Topic Activity

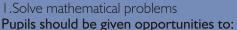
#### **Maths** Skills











- 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:

- I. 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

ICT







Skills

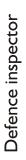
Find and analyse information Pupils should be given opportunities to:

- 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



Built to last



#### Other curriculum links

Topic Activity

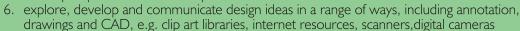
#### **Design and Technology**



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
- 3. be creative and innovative in their thinking when generating ideas for their products
- 5. develop a specification for their product



- 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



- 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

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

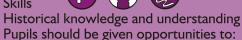
They should be given opportunities to:

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

History Skills







- 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:

- I. 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



**Built to last** 





#### Other curriculum links

Topic Activity

#### **Maths** Skills









I. 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:

- I. 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.

#### 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

Built to last



#### Other curriculum links

Topic Activity

#### **Design and Technology**







- 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

# **History** Skills





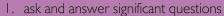


Historical knowledge and understanding Pupils should be given opportunities to:

- I. 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:



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

# **Grand design**



#### Other curriculum links

Activity Topic

**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

**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



spy

Materials I

#### Other curriculum links

Topic Activity

#### **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.

#### **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:

- I. 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

Missing



#### Other curriculum links

Topic Activity Use the force

#### **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:



#### **Design and Technology**



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

#### **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

Investigate arches

#### Other curriculum links

Topic Activity

#### **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

**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

#### Other curriculum links

Topic Activity

#### **Maths**











#### Skills I. 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:

- I. 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

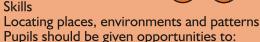
#### Children will:

- 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

Geography







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:

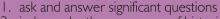


- 1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
- 2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

#### Historical enquiry

Pupils should be given opportunities to:





3. independently use a range of historical sources in their historical context including buildings and sites.

#### 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

- 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

Just the job







#### Other curriculum links

Topic Activity

#### **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

#### **ICT**







#### 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**









#### 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:

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

#### Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological
- 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

# Just the job





### Other curriculum links

Topic Activity Party planner Just the job

#### **Maths** Skills









#### I. 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:

- I. 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

#### ICT







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 Activity Just the job Heraldry

#### **Maths**

#### Skills

others

1. Solve mathematical problems

2. Communicate mathematically

Shape, position and movement

three dimensions

Pupils should be given opportunities to:

and identify sources of information

Pupils should be given opportunities to:

Pupils should be given opportunities to:



• identify what further information or data may be required in

• use a wide range of mathematical language, notation, symbols

and conventions to explain and communicate their work to

1. Understand and use the properties of position and movement

• use line and rotational symmetries to solve problems on two and

order to pursue a particular line of enquiry; formulate questions









#### Art and design



Skills

#### Understanding

#### Pupils should be given opportunities to:

Other curriculum links

- 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

#### Other curriculum links

Topic Activity

8

gadget g

8

9

Home sweet home

#### **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



- 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
- 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:

- I. 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:

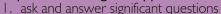


- 1. recognise the characteristic features of the periods, situations and societies studied and the diversity of experience within each one
- 2. describe, analyse and explain patterns and relationships, e.g. the causes and consequences of the historical events, situations and changes studied

#### Historical enquiry

#### Pupils should be given opportunities to:





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



#### Other curriculum links

Topic Activity Home sweet home Castle for sale

#### **Maths** Skills









#### I. 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:

- I. 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

#### 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 Activity Home sweet home Water watch

#### **Science**

Communication

**Skills** 





#### 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:

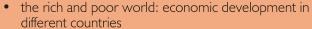
- 1. identify and establish sequences of questions for investigation
- 2. observe, measure, extract and record data through carrying out practical investigations and fieldwork and using a variety of secondary sources



#### Range

# Pupils should be given opportunities to:









• fieldwork to observe and investigate real places and processes

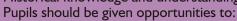




#### History

#### Skills

# Historical knowledge and understanding





- 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:





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

#### Pupils should be given opportunities to:

- explore and interpret the following historical contexts in chronological
- 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.