

Welsh National Curriculum Key Stage links to Meteorology

<u>Subject</u>	KS1	KS2	KS3	KS4	KS5
Geography		See document	See document		
Mathematics		See document	See document	See document	
Science		See document	See document	See document	

**Where can meteorology (weather/climate and environment studies)
fit with the
Welsh National Curriculum?**

Geography Key Stage 2 programme of study (Geography KS2)

Geography KS2- Identify and describe the spatial patterns (distributions) of places and environments and how they are connected, *e.g. a line of towns in a valley, the pattern of areas affected by a tsunami*

Geography KS2- Identify and describe natural and human features, *e.g. weather conditions, types of buildings*

Geography KS2- Describe the causes and consequences of how places and environments change, *e.g. by season; from past to present; the need for sustainability.*

Geography KS2- Carry out investigations of 'geography in the news', topical events and issues in the local area and the wider world

Geography KS2- Carry out fieldwork to observe and investigate real places and processes

Geography KS2- Observe and ask questions about a place, environment or a geographical issue, *e.g. Why does it flood? How and why is our village changing?*

Geography KS2- Measure, collect and record data through carrying out practical investigations and fieldwork, and using secondary sources, *e.g. use instruments to measure rainfall, use GIS, design questionnaires*

Geography KS2- Organise and analyse evidence, develop ideas to find answers and draw conclusions, *e.g. use a data spreadsheet, compare weather data.*

Geography KS2- Express their own opinions and be aware that people have different points of view about places, environments and geographical issues, *e.g. about wind farms, fair trade*

Geography KS2- Where is this place/environment? What is it like and why? What is happening and why?

Geography KS2- How is this place the same as or different from other places/environments and why? Is it always the same? Why is it changing?

Geography KS2- How have people affected this place/ environment? How can I and other people look after this environment?

Geography Key Stage 3 programme of study

Geography KS3- Explain how and why places and environments change and identify trends and future implications, *e.g. population increase, climate change, globalisation.*

Geography KS3- The hazardous world: global distribution, causes, and impacts of extreme tectonic and other hazardous events

Geography KS3- Threatened environments: characteristics of, and possibilities for, their sustainable development

Geography KS3- Tomorrow's citizens: issues in Wales and the wider world of living sustainably and the responsibilities of being a global citizen

Geography KS3- How and why is this place/environment changing? What might happen next, in the short/long term and why?

Geography KS3- How do environments and people interact?

Geography KS3- How can changes be sustainable and why is it important for this place/environment?

Geography KS3- What are the geographical issues for people living in this location? How and why do people's views on issues differ and what do I think?

Mathematics Key Stage 2 programme of study

Mathematics KS2- Select and use the appropriate mathematics, materials, units of measure and resources to solve problems in a variety of contexts

Mathematics KS2- Identify, obtain and process information needed to carry out the work

Mathematics KS2- Use flexible and effective methods of computation and recording

Mathematics KS2- Use negative numbers in the context of temperature, and decimals in the context of money and measures

Mathematics KS2- Know the rough metric equivalents of imperial units still in daily use

Mathematics KS2- Use everyday language for early ideas of probability

Mathematics KS2- Know that the likelihood of an event lies between impossible and certain.

Mathematics Key Stage 3 programme of study

Mathematics KS3- Select, organise and use the mathematics, resources, measuring instruments, units of measure, sequences of operation and methods of computation needed to solve problems

Mathematics KS3- Evaluate different forms of recording and presenting information, taking account of the context and audience

Mathematics KS3- Evaluate results by relating them to the initial question or problem; develop an understanding of the reliability of results; recognise that inferences drawn from data analysis may suggest the need for further investigation.

Mathematics KS3- Explore number and geometric patterns and sequences, *e.g. patterns in the natural world, Fibonacci sequences, and the Golden ratio*

Mathematics KS3- Use and interpret scale on graphs, maps and drawings

Mathematics KS3- Read and interpret scales on measuring instruments and understand the degree of accuracy that is possible, or appropriate, for a given purpose

Mathematics KS3- 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*

Mathematics KS3- Interpret information given in a wide range of graphs, diagrams and statistics, specially real-life data

Mathematics KS3- Understand and use the vocabulary of probability and the probability scale from 0 to 1 through experience, experiment and theory

Mathematics KS3- Recognise situations where probabilities can be based on equally likely outcomes and others where estimates must be based on experimental evidence; use relative frequency over a number of trials as an estimate of probability

Mathematics Key Stage 4 programme of study

Mathematics KS4- Develop their understanding of the relationships between units, converting from one metric unit to another

Mathematics KS4- Know imperial measures in common use and their approximate metric equivalents

Mathematics KS4- Read and interpret scales on measuring instruments and understand the degree of accuracy that is possible, or appropriate, for a given purpose

Mathematics KS4- Understand and use the vocabulary of probability and the probability scale from 0 to 1 through experience, experiment and theory

Mathematics KS4- Recognise situations where probabilities can be based on equally likely outcomes and others where estimates must be based on experimental evidence; calculate and make these estimates as appropriate, using relative frequency over a number of trials as an estimate of probability

Mathematics KS4- Recognise the conditions for the addition of probabilities for mutually exclusive events, and the multiplication of probabilities for two independent events, and make the appropriate calculations when these conditions apply

Science Key Stage 2 programme of study

Science KS2- Pupils should be given opportunities to carry out different types of enquiry, *e.g. pattern-seeking, exploring, classifying and identifying, making things, fair testing, using and applying models*

Science KS2- Through fieldwork, the plants and animals found in two contrasting local environments, *e.g. identification, nutrition, life cycles, place in environment*

Science KS2- The environmental factors that affect what grows and lives in those two environments, *e.g. sunlight, water availability, temperature*

Science KS2- How humans affect the local environment, *e.g. litter, water pollution, noise pollution.*

Science KS2- The daily and annual movements of the Earth and their effect on day and year length

Science KS2- The relative positions and key features of the Sun and planets in the solar system

Science KS2- A consideration of what waste is and what happens to local waste that can be recycled and that which cannot be recycled.

Science KS2- How light travels and how this can be used.

Science Key Stage 3 programme of study

Science KS3- How human activity affects the global environment, *e.g. acid rain, greenhouse effect*, and the measures taken to minimise any negative effects and monitor them, *e.g. by Earth observation satellites*

Science KS3- Applications of science, medicine and technology that are used to improve health and the quality of life, including those in countries with different levels of economic development.

Science KS3- 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.

Science KS3- How renewable and non-renewable energy resources are used to generate electricity and the implications of decisions made about their use

Science KS3- Technologies under development, which may lead to more efficient use of energy resources or using them in new ways, *e.g. hydrogen-powered cars, using cooking oil/gasohol, as replacements for diesel/petrol.*

Science Key Stage 4 programme of study

Science KS4- Ethical, social, economic and environmental issues and their interaction with science.

Science KS4- Recognise that scientific knowledge changes over time, and that there are some questions that science cannot currently answer or address.

Science KS4- The effects of human activity on the environment can be assessed using living and non-living indicators.

Science KS4- The surface and the atmosphere of the Earth have changed since the Earth's origin and are changing at present.

Science KS4- Energy transfers can be measured and their efficiency calculated, which is important in considering the economic costs and environmental effects of energy use.