

Year Four Knowledge and Skills Framework 2020-2021

St. Columba's Catholic Primary School
Every Person is Precious to God



History Knowledge and Skills Objectives 2020-2021

Links to the National Curriculum:

- They should understand how our knowledge of the past is constructed from a range of sources.
- They should note connections, contrasts and trends over time.
- They should regularly address questions about change, similarity and difference.

Pupils should be taught about

- Changes in Britain from the Stone Age to the Iron Age
- Britain's settlement by Anglo-Saxons and Scots
- The Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor
- A local history study
- A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066

Chronological Understanding

Can they plot recent history on a timeline using centuries?

Can they place periods of history on a timeline showing periods of time?

Can they use their mathematical skills to round up time differences into centuries and decades?

Challenge

Can they use their mathematical skills to help them work out the time differences between certain major events in history?

Can they begin to build up a picture of what main events happened in Britain/ the world during different centuries?

Knowledge and Interpretation

Can they explain how events from the past have helped shape our lives?

Do they appreciate that wars have happened from a very long time ago and are often associated with invasion, conquering or religious differences?

Do they know that people who lived in the past cooked and travelled differently and used different weapons from ours?

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Do they recognise that the lives of wealthy people were very different from those of poor people?
Do they appreciate how items found belonging to the past are helping us to build up an accurate picture of how people lived in the past?
Challenge
Can they recognise that people's way of life in the past was dictated by the work they did?
Do they appreciate that the food people ate was different because of the availability of different sources of food?
Do they appreciate that weapons will have changed by the developments and inventions that would have occurred within a given time period?
Do they appreciate that wealthy people would have had a very different way of living which would have impacted upon their health and education?
Historical Enquiry
Can they research two versions of an event and say how they differ?
Can they research what it was like for a child in a given period from the past and use photographs and illustrations to present their findings?
Can they give more than one reason to support an historical argument?
Can they communicate knowledge and understanding orally and in writing and offer points of view based upon what they have found out?
Challenge
Can they independently, or as part of a group, present an aspect they have researched about a given period of history using multi-media skills when doing so?

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Geography Knowledge and Skills Objectives 2020-2021

Links to the National Curriculum

- Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time
- Describe and understand key aspects of physical geography, including: rivers and mountains
- Describe and understand key aspects of human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water
- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world

Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.

Geographical Enquiry

Can they collect information about a place and use it in a report?

Can they map land use?

Can they find possible answers to their own geographical questions?

Can they make detailed sketches and plans; improving their accuracy later?

Can they plan a journey to a place in another part of the world, taking account of distance and time?

Challenge

Can they work out an accurate itinerary detailing a journey to another part of the world?

Physical Geography

Can they explain why many cities of the world are situated by rivers?

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Can they explain how a location fits into its wider geographical location; with reference to physical features?
Can they explain how the water cycle works?
Can they explain why water is such a valuable commodity?
Can they describe how earthquakes are created?
Can they describe how volcanoes are created?
Challenge
Can they explain what a place (open to environmental and physical change) might be like in the future taking account of physical features?
Human Geography
Can they explain why people are attracted to live by rivers?
Can they explain how a location fits into its wider geographical location; with reference to human and economical features?
Can they explain what a place might be like in the future, taking account of issues impacting on human features?
Challenge
Can they report on ways in which humans have both improved and damaged the environment?
Geographical Knowledge
Can they name and locate many of the world's major rivers on maps?
Can they name and locate many of the world's most famous mountain regions on maps?
Can they locate and name some of the world's most famous volcanoes?
Can they locate the USA and Canada on a world map and atlas?
Can they locate and name the main countries in South America on a world map and atlas?
Challenge
Can they begin to recognise the climate of a given country according to its location on the map?

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Science Knowledge and Skills Objectives 2020-2021

Working Scientifically

Can they set up a simple fair test to make comparisons?

Can they plan a fair test and isolate variables, explaining why it was fair and which variables have been isolated?

Can they suggest improvements and predictions?

Can they decide which information needs to be collected and decide which is the best way for collecting it?

Can they use their findings to draw a simple conclusion?

Can they take measurements using different equipment and units of measure and record what they have found in a range of ways?

Can they make accurate measurements using standard units?

Can they explain their findings in different ways (display, presentation, writing)?

Can they find any patterns in their evidence or measurements?

Can they make a prediction based on something they have found out?

Can they evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables?

Can they use straightforward scientific evidence to answer questions or to support their findings?

Can they identify differences, similarities or changes related to simple scientific ideas or processes?

Challenge

Can they plan and carry out an investigation by controlling variables fairly and accurately?

Can they use test results to make further predictions and set up further comparative tests?

Can they record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models?

Can they report findings from investigations through written explanations and conclusions?

Can they use a graph or diagram to answer scientific questions?

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Animals inc. Humans
Can they identify and name the basic parts of the digestive system in humans?
Can they describe the simple functions of the basic parts of the digestive system in humans?
Can they identify the simple function of different types of teeth in humans?
Can they compare the teeth of herbivores and carnivores?
Can they explain what a simple food chain shows?
Can they construct and interpret a variety of food chains, identifying producers, predators and prey?
Challenge
Can they classify living things and non-living things by a number of characteristics that they have thought of?
Can they explain how people, weather and the environment can affect living things?
Can they explain how certain living things depend on one another to survive?
Living Things and their Habitats
Can they recognise that living things can be grouped in a variety of ways?
Can they explore and use a classification key to group, identify and name a variety of living things? (plants, vertebrates, invertebrates)
Can they compare the classification of common plants and animals to living things found in other places? (under the sea, prehistoric)
Do they recognise that environments can change and this can sometimes pose a danger to living things?
Challenge
Can they give reasons for how they have classified animals and plants, using their characteristics and how they are suited to their environment?
Can they explore the work of pioneers in classification? (e.g. Carl Linnaeus)
Can they name and group a variety of living things based on feeding patterns? (producer, consumer, predator, prey, herbivore, carnivore, omnivore)
States of Matter
Can they compare and group materials together, according to whether they are solids, liquids or gases?
Can they explain what happens to materials when they are heated or cooled?
Can they measure or research the temperature at which different materials change state in degrees Celsius?
Can they use measurements to explain changes to the state of water?
Can they identify the part that evaporation and condensation has in the water cycle?
Can they associate the rate of evaporation with temperature?
Challenge
Can they group and classify a variety of materials according to the impact of temperature on them?

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Can they explain what happens over time to materials such as puddles on the playground or washing hanging on a line?
Can they relate temperature to change of state of materials?
Sound
Can they describe a range of sounds and explain how they are made?
Can they associate some sounds with something vibrating?
Can they compare sources of sound and explain how the sounds differ?
Can they explain how to change a sound (louder/softer)?
Can they recognise how vibrations from sound travel through a medium to a ear?
Can they find patterns between the pitch of a sound and features of the object that produce it?
Can they find patterns between the volume of the sound and the strength of the vibrations that produced it?
Can they recognise that sounds get fainter as the distance from the sound source increases?
Can they explain how you could change the pitch of a sound?
Can they investigate how different materials can affect the pitch and volume of sounds?
Challenge
Can they explain why sound gets fainter or louder according to the distance?
Can they explain how pitch and volume can be changed in a variety of ways?
Can they work out which materials give the best insulation for sound?
Electricity
Can they identify common appliances that run on electricity?
Can they construct a simple series electric circuit?
Can they identify and name the basic part in a series circuit, including cells, wires, bulbs, switches and buzzers?
Can they identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery?
Can they recognise that a switch opens and closes a circuit?
Can they associate a switch opening with whether or not a lamp lights in a simple series circuit?
Can they recognise some common conductors and insulators?
Can they associate metals with being good conductors?
Challenge
Can they explain how a bulb might get lighter?
Can they recognise if all metals are conductors of electricity?

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Can they work out which metals can be used to connect across a gap in a circuit?
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Can they explain why cautions are necessary for working safely with electricity?
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Art Knowledge and Skills Objectives 2020-2021

Links to the National Curriculum

Pupils should be taught to develop their techniques, including their control and their use of materials, with experimentation and an increasing awareness of different kinds of art, craft and design.

Pupils should be taught:

- to create sketch books to record their observations and use them to review and revisit ideas
- to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials (e.g. pencil, charcoal, paint, clay)
- about the greatest artists, architects and designers in history

Drawing

Can they begin to show facial expressions and body language in their sketches?

Can they identify and draw simple objects, and use marks and lines to produce texture?

Can they organise line, tone, shape and colour to represent figures and forms in movement?

Can they show reflections?

Can they explain why they have chosen specific materials to draw with?

Painting

Can they create all the colours they need?

Can they create mood in their paintings?

Do they successfully use shading to create mood and feeling?

Printing

Can they print using at least four colours?

Can they create an accurate print design?

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Can they print onto different materials?
Sketch Books
Can they use their sketch books to express their feelings about various subjects and outline likes and dislikes?
Can they produce a montage all about themselves?
Do they use their sketch books to adapt and improve their original ideas?
Do they keep notes about the purpose of their work in their sketch books?
3D/Textiles
Do they experiment with and combine materials and processes to design and make 3D form?
Can they begin to sculpt clay and other mouldable materials?
Can they use early textile and sewing skills as part of a project?
Collage
Can they use ceramic mosaic?
Can they combine visual and tactile qualities?
Use of IT
Can they present a collection of their work on a slide show?
Can they create a piece of art work which includes the integration of digital images they have taken?
Can they combine graphics and text based on their research?
Knowledge
Can they experiment with different styles which artists have used?
Can they explain art from other periods of history?

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DT Knowledge and Skills Objectives 2020-2021

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts, for example, the home, school, leisure, culture, enterprise, industry and the wider environment. When designing and making, pupils should be taught to:

Design

Make

Evaluate

Technical knowledge

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Developing, planning and communicating ideas

Can they come up with at least one idea about how to create their product?

Do they take account of the ideas of others when designing?

Can they produce a plan and explain it to others?

Can they suggest some improvements and say what was good and not so good about their original design?

Working with tools, equipment, materials and components to make quality products

Can they tell if their finished product is going to be good quality?

Are they conscience of the need to produce something that will be liked by others?

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Can they show a good level of expertise when using a range of tools and equipment?
Do they work at their product even though their original idea might not have worked?
Evaluating processes and products
Have they thought of how they will check if their design is successful?
Can they begin to explain how they can improve their original design?
Can they evaluate their product, thinking of both appearance and the way it works?
Do they take time to consider how they could have made their idea better?
Cooking and nutrition
Do they know what to do to be hygienic and safe?
Have they thought what they can do to present their product in an interesting way?
Textiles
Do they think what the user would want when choosing textiles?
Have they thought about how to make their product strong?
Can they devise a template?
Can they explain how to join things in a different way?
Electrical and mechanical components
Can they add things to their circuits?
How have they altered their product after checking it?
Are they confident about trying out new and different ideas?
Stiff and flexible sheet materials
Can they measure carefully so as to make sure they have not made mistakes?
How have they attempted to make their product strong?
Mouldable materials
Can they use a range of advanced techniques to shape and mould?
Do they use finishing techniques, showing an awareness of audience?

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Computing Knowledge and Skills Objectives 2020-2021

Links to the National Curriculum

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content, that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Algorithms and Programs

Can they use repeat instructions to draw regular shapes on screen, using commands?

Can they experiment with variables to control models?

Can they make turns specifying the degrees?

Can they give an on-screen robot specific directional instructions that takes them from x to y?

Can they make accurate predictions about the outcome of a program they have written?

Data Retrieving and Organising

Can they capture images using webcams, screen capture, scanning, visualiser and internet?

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Can they choose images and download into a file?
Can they download images from the camera into files on the computer?
Can they copy graphics from a range of sources and paste into a desktop publishing program?
Communicating
Do they appreciate the benefits of ICT to send messages and to communicate?
Can they use the automatic spell checker to edit spellings?
Using the Internet
Can they use a search engine to find a specific website?
Can they use note-taking skills to decide which text to copy and paste into a document?
Can they use tabbed browsing to open two or more web pages at the same time?
Can they open a link to a new window?
Can they open a document (PDF) and view it?
Databases
Can they input data into a prepared database?
Can they sort and search a database to answer simple questions?
Do they recognise what a spread sheet is?
Can they use the terms 'cells', 'rows' and 'columns'?
Can they enter data, highlight it and make bar charts?
Presentation
Can they create a lengthy presentation that moves from slide to slide and is aimed at a specific audience?
Can they insert sound recordings into a multi media presentation?
Do they know how to manipulate text, underline text, centre text, change font and size and save text to a folder?
Challenge
Can they use photo editing software to crop photographs and add effects?
Can they copy and paste the graph/bar chart and use it in a WP document?
Can they use animation in their presentation?