

	Music	Science	Design Technology	Computing	Geography
Programme of Study	<p>Improvise and compose music for a range of purposes using the interrelated dimensions of music.</p> <p>Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians.</p> <p>Use and understand staff and other musical notations.</p> <p>Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression.</p> <p>Improvise and compose music for a range of purposes using the interrelated dimensions of music.</p> <p>Improvise and compose music for a range of purposes using the interrelated dimensions of music.</p>	<p>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</p> <p>Y6 Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them.</p> <p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations.</p> <p>Identify scientific evidence that has been used to support or refute ideas or arguments.</p> <p>Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.</p> <p>Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.</p> <p>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.</p>	<p>Understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors).</p> <p>Y6 Apply their understanding of computing to program, monitor and control their products.</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<p>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</p> <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</p>	<p>Improvise and compose music for a range of purposes using the interrelated dimensions of music.</p> <p>Appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians.</p> <p>Use and understand staff and other musical notations.</p> <p>Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression.</p> <p>Improvise and compose music for a range of purposes using the interrelated dimensions of music.</p> <p>Improvise and compose music for a range of purposes using the interrelated dimensions of music.</p>

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Year 6 Learning Intention (skills)	<p>Compose and perform a group score using a wide variety of timbres, textures, rhythms and motifs.</p> <p>Identify and explain patterns and motifs in live and recorded music that provoke feelings in the listener.</p> <p>Use features of musical notation when composing.</p> <p>Play and create pieces of music with a clear understanding of pulse and rhythm.</p> <p>Compose and perform a group score using a wide variety of timbres, textures, rhythms and motifs.</p>	<p>Investigate and identify good thermal insulators, describing their common features.</p> <p>Report on and validate their findings, answer questions and justify their methods, opinions and conclusions, and use their results to suggest improvements to their methodology, separate facts from opinions, pose further questions and make predictions for what they might observe.</p> <p>Independently decide which observations to make, when and for how long and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.</p> <p>Plan and carry out a range of enquiries, including writing methods, identifying and controlling variables, deciding on equipment and data to collect and making predictions based on prior knowledge and understanding.</p>	<p>Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their products.</p> <p>Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways.</p>	<p>Identify how a new piece of software or an app can increase creativity.</p> <p>Demonstrate how programs run in an exact order by following a sequence of instructions, and test and debug programs.</p>	<p>Use lines of longitude and latitude or grid references to find the position of different geographical areas and features.</p>

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Year 6 Knowledge	<p>A score contains all the information musicians need to rehearse and perform a piece of music, including separate lines for each instrument or voice part, notation showing pitch and duration of sounds and markings to show dynamics, such as <i>mp</i> and <i>mf</i>.</p> <p>A motif in music is a short musical idea that is repeated and developed throughout a piece.</p> <p>Features of musical notation include staves, time signatures, bar lines, notes, rests and dynamic markings.</p> <p>Pulse can be created using bar lines to write bars of music with the same number of beats per bar, and using articulation to create strong beats. Rhythm can be created using notes of varying length, such as quavers, crotchets, minims and semibreves.</p> <p>A score contains all the information musicians need to rehearse and perform a piece of music, including separate lines for each instrument or voice part, notation showing pitch and duration of sounds and markings to show dynamics, such as <i>mp</i> and <i>mf</i>.</p>	<p>Heat energy is transferred in three different ways: conduction, convection and radiation. A material that allows heat energy to travel through it is a thermal conductor. Poor thermal conductors are known as thermal insulators. Insulation is important for the survival of many animals. Blubber is a layer of fat that acts as an insulator under the skin of some animals, such as walruses and whales. It is an adaptation that is essential for their survival. Animals with fur, such as polar bears and Arctic foxes, trap a layer of air close to their skin to insulate them from the cold.</p> <p>The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered, using correct, precise terminology and collected evidence.</p> <p>An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time, identify processes and make comparisons.</p> <p>A method is a set of clear instructions for how to carry out a scientific investigation, including what equipment to use and observations to make. A variable is something that can be changed during a fair test. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding.</p>	<p>Computer programs can control electrical circuits that include a variety of components, such as switches, lamps, buzzers and motors.</p> <p>Design criteria should cover the intended use of the product, age range targeted and final appearance. Ideas can be communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<p>Some software or apps are designed to help increase creativity by saving time or making tasks easier, such as being able to combine text, images, audio or video content into one place.</p> <p>Decomposition is breaking down a problem down into smaller parts to make it easier to process and following a sequence of instructions. Decomposition is useful for checking programs and debugging because it saves time.</p>	<p>Invisible lines of latitude run horizontally around the Earth and show the northerly or southerly position of a geographical area. Invisible lines of longitude run vertically from the North to the South Pole and show the westerly or easterly position of a geographical area.</p>