# Year 5 Pegasus Class — Tomorrow's World — Cycle A 2020-2021 Term 6

St Peter's PRIMARY SCHOOL

| | Computing | Design and technology | Science | History |
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| **Programme of Study** | 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.<br><br>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.<br><br>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.<br><br>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.<br><br>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.<br><br>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.<br><br>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.<br><br>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.<br><br>**Relationships Education:**<br><br>Know how information and data is shared and used online.<br><br>Know how to be a discerning consumer of information online including understanding that information, including that from search engines, is ranked, selected and targeted. | Understand how key events and individuals in design and technology have helped shape the world.<br><br>Investigate and analyse a range of existing products.<br><br>Apply their understanding of computing to program, monitor and control their products.<br><br>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.<br><br>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.<br><br>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. | Describe the movement of the Moon relative to the Earth.<br><br>Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.<br><br>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.<br><br>Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. | Understand historical concepts such as continuity and change, cause and consequence, similarity, difference and significance, and use them to make connections, draw contrasts, analyse trends, frame historically valid questions and create their own structured accounts, including written narratives and analyses. |

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| **Year 5 Learning Intention (skills)** | Compare the ways in which work can be shared on a school network with the ways work is shared at home or in the wider world.<br><br>Discern where web content might originate from and recognise that this gives clues to its authenticity, reliability and security.<br><br>Design, write and debug simple sequences of instructions (algorithms), including IF, THEN and OTHERWISE commands, to decide if something is true or false.<br><br>Create, select and combine a range of texts, images, sound clips and videos for given purposes.<br><br>Use a range of sensors to control a physical system.<br><br>Create an online collaborative project for a specific purpose, sharing documents and appropriately setting permissions for other group members. | Describe the social influence of a significant designer or inventor.<br><br>Explain how the design of a product has been influenced by the culture or society in which it was designed or made.<br><br>Link a physical device to a computer or tablet so that it can be controlled (such as changing motor speed or turning an LED on and off) by a program.<br><br>Test and evaluate products against a detailed design specification and make adaptations as they develop the product.<br><br>Use pattern pieces and computer-aided design packages to design a product. | Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding. | Sequence and make connections between periods of world history on a timeline. |

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| **Year 5 Knowledge** | Computer networks are made up of computers that are connected by cables, fibres or wireless links. Each network can only be accessed by computers within their network, such as in school or at home. The internet network can be accessed by anyone.<br><br>Some websites have more reliable content than others and content should be verified with another independent source.<br><br>Sequences of instructions (algorithms) that contain IF, THEN and OTHERWISE statements are called selections. The computer will complete operations based on whether the conditions of these selections are met or not.<br><br>Creating, selecting and combining a range of texts, images, sound clips and videos for given purposes could include creating a web page, slide show presentation, short film or an animation<br><br>Sensors can be combined to control a physical system, such as using motion, light and sound sensors to control a road network of traffic lights and level crossings.<br><br>Online collaborative projects can be shared with different permission settings, such as who can view, edit or comment on the documents. Privacy settings can be restricted to those who are invited, those who have access to the link or can be made open to the public. | Many new designs and inventions influenced society. For example, labour-saving devices in the home reduced the amount of housework, which was traditionally done by women. This enabled them to have jobs.<br><br>Culture is the language, inventions, ideas and art of a group of people. A society is all the people in a community or group. Culture affects the design of some products. For example, knives and forks are used in the western world, whereas chopsticks are used mainly in China and Japan. The design of products needs to take into account the culture of the target audience. For example, colours might mean very different things in different cultures.<br><br>Equipment and devices can be controlled by pressing buttons on a control panel, such as on a washing machine or microwave.<br><br>Testing a product against the design criteria will highlight anything that needs improvement or redesign. Changes are often made to a design during manufacture.<br><br>A pattern piece is a drawing or shape used to guide how to make something. There are many different computer-aided design packages for designing products. | A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. | |