

St Anne's C of E Primary School Curriculum Plan

Subject: Computing

Year: 5

Term: Autumn



Unit: Computing systems and networks – Sharing Information.



Vocabulary	Knowledge	Understanding	Skills
	Children will know (that).....	Children will understand (that).....	Children will be able to.....
<p>System a number of things (parts, components, people) that work together to complete or perform a task.</p> <p>Connections two or more things joined together.</p> <p>Digital using, storing or sharing information electronically.</p> <p>Input – signals or data received by a device</p> <p>Process – what a device does with the data or information it receives.</p> <p>Output: - signals or data send from a device</p> <p>Protocol – An agreed way to do something.</p>	<p>What a system is.</p> <p>Different parts in a system need to work together and are connected</p> <p>That some systems are managed by computers</p> <p>That computers communicate using agreed protocols.</p> <p>For information to be shared online, an IP address tells you who has sent something and where it is being sent.</p> <p>Most information has to be broken down into small parts so that it can be sent on the internet.</p> <p>Packets are the small parts of information that are sent on the internet.</p>	<p>that systems are built using a number of parts.</p> <p>that computer systems communicate with other devices.</p> <p>The input – process – output cycle.</p> <p>The input – process – output sequence can happen to different parts of the system at the same time.</p> <p>Data packets are given a numbers and that these numbers are used to put the information back together again in the right order.</p> <p>That there can be advantages and disadvantages to working with others online.</p>	<p>describe that a computer system features inputs, processes, and outputs.</p> <p>Explain the benefits of computer systems.</p> <p>Describe how different parts of a system work together.</p> <p>Describe how information is communicated through the internet.</p> <p>Explain why it is important that computers have protocols when communicating with each other.</p> <p>Compare working online and offline.</p>

<p>IP address – A unique number that is the address of each computer on the internet.</p> <p>Data packets – Information broken into small parts so that it is easier to send via a network.</p>	<p>Some of the ways in which you can work with others online.</p>	<p>That working together on the internet can be public or private.</p>	<p>Can describe when working collaboratively with others online might be useful.</p> <p>Can describe some disadvantages to working with others online.</p>
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St Anne's C of E Primary School Curriculum Plan

Subject: Computing

Year: 5

Term: Spring



Unit: Creating Media – Video creation and editing



Vocabulary	Knowledge	Understanding	Skills
	Children will know (that).....	Children will understand (that).....	Children will be able to.....
<p>Video – recording of an image or moving images.</p> <p>Media – different ways to pass on information, written media, media images, videos and recordings.</p> <p>Story board – pictures that outline the plan of the video, in sequence. It shows details of where video scenes will be recorded and what might be in each scene.</p> <p>Scene – Where parts of the video is recorded.</p> <p>Script – a pre prepared written document of what is going to be said during the video recording.</p> <p>Visual – things that you see</p> <p>Camera lens – takes light into the</p>	<p>A video can contain both visual and audio media.</p> <p>Some digital devices that can record video and sound</p> <p>That software on computers can be used to edit videos.</p> <p>That videos need to be engaging for the person watching them.</p> <p>That there are some effects that can be added to a video to make it more engaging or easier to watch and understand.</p> <p>The editing stage of a video is important to get rid of parts you do not want or do not make sense.</p>	<p>The purpose of a video</p> <p>That adding elements such as audio to a video can add benefits.</p> <p>That a video can be planned using a story board singular to an animation.</p> <p>The main features of a recording device and where to locate them.</p> <p>Some of the features of an effective video</p> <p>what different effects add to a video and how effective they are.</p> <p>Why it is important for everyone working on the video to be part of the credits at the end.</p>	<p>Explain that the purpose of a recorded video is to engage the audience, entertain, inform or share a message.</p> <p>Can select a suitable device to record a project with and explain why they have chosen it,</p> <p>Demonstrate how to use and handle digital recording equipment safely.</p> <p>Plan the production of a video by creating a story board featuring the different scenes and action in a logical order.</p> <p>Show consideration to any sounds and spoken elements of the video and to plan for these to be effective.</p>

<p>device to produce the images.</p> <p>Zoom – for an image to move in closer to a subject</p> <p>Editing software – programs and apps that allow you to add, take away and change video that you have created.</p>	<p>That sometimes you have to re shoot parts of a video to improve it.</p> <p>That there should be end credits outlining who did what in making the video.</p>	<p>That by working with others and sharing roles, everyone can bring new ideas to improve the video.</p>	<p>use some different techniques to make their video more effective and describe why and how they have used these techniques.</p> <p>Work effectively in a group to produce a video.</p> <p>Evaluate their own and other peoples videos, outlining key elements they liked, giving reasons and areas that could be improved.</p> <p>Consider plans to edit and improve their own pieces of work.</p>
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St Anne's C of E Primary School Curriculum Plan

Subject: Computing

Year: 5

Term: Summer



Unit: Programming – Selection in Programming



Vocabulary	Knowledge	Understanding	Skills
	Children will know (that).....	Children will understand (that).....	Children will be able to.....
<p>circuit– a pathway for electricity to move through</p> <p>microcontroller – a small device that can be programmed to control other devices connected to it.</p> <p>LED – a light emitting diode, when electricity passes through it, it produces light.</p> <p>Infinite loop – a section of commands within a code, that continually repeat with no end point.</p> <p>Count controlled loop – A section of commands that repeat for a set number of times.</p> <p>Do until loop – A section of commands that repeat until the program dictates that they should</p>	<p>A microcontroller can be used to control devices.</p> <p>The microcontroller follows commands (or a program) inputted into a computer device attached to it.</p> <p>That a program is read in a set way.</p> <p>Block programming means the commands can be seen in blocks on the screen.</p> <p>Blocks link together to create a program.</p> <p>More than one device can be connected to a microcontroller.</p> <p>A count controlled loop can create a flashing light.</p>	<p>How to control a simple circuit connected to a computer.</p> <p>That a condition is something that can be either true or false and is a statement that needs to be met to allow something else to happen. (e, whether a value is more than 10 or whether a button has been pressed)</p> <p>What the different functions are of different loops, including 'infinite', 'count controlled' and 'Do until'.</p> <p>Which devices work effectively with a programmed count controlled loop.</p> <p>Programs that involve count controlled loops.</p>	<p>Design and build a simple circuit to connect a microcontroller to a computer</p> <p>program a microcontroller to light an LED</p> <p>connect more than one output device to a microcontroller</p> <p>design sequences for given output devices</p> <p>create a program that features a count controlled loop and describe how it works.</p> <p>Create a program that uses a condition to stop a repeating light pattern.</p>

<p>stop or another action needs to happen.</p> <p>Condition - is a statement that needs to be met to allow something else to happen.</p> <p>Output – what the program does, that action it performs.</p> <p>Device – digital equipment or component.</p> <p>Components – different devices connected to the microcontroller.</p> <p>Sequence a set order things occur in.</p> <p>Modify – Make small changes</p> <p>De Bug – to check for errors and correct them</p>	<p>A condition is something that need to be met to allow something to happen.</p> <p>We use conditions to change the action that the computer does.</p>	<p>How conditions in programs can change the actions of the computer or device.</p> <p>And identify a condition that can start an action.</p> <p>That a condition can be programmed to be checked to identify if it is still true or false.</p>	<p>Deign a drawing of a project (including a program, devices, selection and conditions) and describe what the project will do.</p> <p>Can evaluate and de bug a project that they are designed and implement it.</p> <p>Apply understanding of controllers, selection and conditions in real life scenarios and technology familiars to them.</p>
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