

**Subject: Computing
Year 2**

Term 1.1 – Computing systems and networks 1: What is a computer?

Vocab	Knowledge	Outcomes
Battery Buttons Camera Computer Desktop Device Digital Digital recorder Electricity Function Input Invention Keyboard Laptop Monitor Mouse Output Paying till Scanner Screen System Tablet Technology Video Wires	<ul style="list-style-type: none"> • To know the difference between a desktop and laptop computer. • To know that people control technology. • To know some input devices that give a computer an instruction about what to do (output). • To know that computers often work together. 	Pupils who are secure will be able to: <ul style="list-style-type: none"> • Name some computer peripherals and their function. • Recognise that buttons cause effects. • Explain that technology follows instructions. • Recognise different forms of technology. • Design an invention which includes inputs and outputs. • Explain the role of computers in the world around them.

Term 1.2 - Computing systems and networks 2: Word processing

Vocab	Knowledge	Outcomes
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Backspace Bold Copy Copyright Cut Delete Forward button Highlight Home row Home screen Image Import Italics Keyboard Keyboard character Keyboard shortcut Keyword Layout Navigate Paste Redo Search Space bar Text Text effects Touch typing Underline Undo Word processing	<ul style="list-style-type: none"> • To know that touch typing is the fastest way to type. • To know that I can make text a different style, size and colour. • To know that “copy and paste” is a quick way of duplicating text. 	Pupils who are secure will be able to: <ul style="list-style-type: none"> • Explain which are the home row keys and how to find them for typing. • Use the spacebar and backspace correctly. • Type and make simple alterations to text using buttons on a word processor. • Search for, import and alter appropriate images for a text document. • Modify text in a document. • Use copy and paste to copy text from one document to another. • Explain what information is safe to be shared online.
Term 2.1- Programming 1: Algorithms and debugging		
Vocab	Knowledge	Outcomes

<p>Abstraction Algorithm Artificial intelligence Bug Clear Correct Data Debug Decompose Error Key features Loop Predict Unnecessary</p>	<ul style="list-style-type: none"> • To understand what machine learning is and how it enables computers to make predictions. • To know that loops in programming are where you set a certain instruction (or instructions) to be repeated multiple times. • To know that abstraction is the removing of unnecessary detail to help solve a problem. 	<p>Pupils who are secure will be able to:</p> <ul style="list-style-type: none"> • Decompose a game to predict the algorithms. • Give a definition for 'decomposition'. • Write clear and precise algorithms. • Create algorithms to solve problems. • Use loops in their algorithms to make their code more efficient. <p>Explain what abstraction is.</p>
Term 2.2 - Programming 2: ScratchJr		
Vocab	Knowledge	Outcomes
<p>Algorithm Animation Blocks Bug Button CGI Computer code Code Debug Fluid Icon Imitate Instructions Loop 'On tap'</p>	<ul style="list-style-type: none"> • To know that coding is writing in a special language so that the computer understands what to do. • To understand that the character in ScratchJr is controlled by the programming blocks. • To know that you can write a program to create a musical instrument or tell a joke. 	<p>Pupils who are secure will be able to:</p> <ul style="list-style-type: none"> • Explore a new application independently. • Explain what the blocks on ScratchJr do and use them for a purpose. • Recognise a loop in coding and why it is useful. • Use a code to create an animation of an animal moving. • Use code to follow <i>and</i> create an algorithm. <p>Program code to run 'on tap'. Explain the role of the blocks in a program they have created.</p>

Programming Repeat ScratchJR Sequence Sound recording		
Term 3.1 - Creating media: Stop motion		
Vocab	Knowledge	Outcomes
Algorithm Animation Blocks Bug Button CGI Computer code Code Debug Fluid Icon Imitate Instructions Loop 'On tap' Programming Repeat ScratchJR Sequence Sound recording	<ul style="list-style-type: none"> • To know that coding is writing in a special language so that the computer understands what to do. • To understand that the character in ScratchJr is controlled by the programming blocks. • To know that you can write a program to create a musical instrument or tell a joke. 	<p>Pupils who are secure will be able to:</p> <ul style="list-style-type: none"> • Explore a new application independently. • Explain what the blocks on ScratchJr do and use them for a purpose. • Recognise a loop in coding and why it is useful. • Use a code to create an animation of an animal moving. • Use code to follow <i>and</i> create an algorithm. • Program code to run 'on tap'. • Explain the role of the blocks in a program they have created.
Term 3.2 - Data handling: International Space Station		
Vocab	Knowledge	Outcomes

<p>Algorithm Astronaut Data Digital Digital content Experiment Galaxy Insulation Interactive map International Space Centre International Space Station Interpret Laboratory Monitor Planet Satellite Sensor Space Temperature Thermometer Water reservoir</p>	<ul style="list-style-type: none"> • To understand that you can enter simple data into a spreadsheet. • To understand what steps you need to take to create an algorithm. • To know what data to use to answer certain questions. • To know that computers can be used to monitor supplies. 	<p>Pupils who are secure will be able to:</p> <ul style="list-style-type: none"> • Describe and explain how astronauts' survival needs are met aboard the ISS. • Identify and digitally draw items which fulfil basic human needs when aboard the ISS. • Read the correct temperature on a thermometer. • Design a display showing everything that needs to be monitored by sensors on the ISS. • Create an algorithm that addresses all plants' needs. • Explain how space exploration can benefit life on Earth. • Read data to identify whether a planet might be habitable.
Online safety – to be taught throughout the year		
Vocab	Knowledge	Outcomes
<p>Accept Comment Consent Content Deny Emojis Offline Online</p>	<ul style="list-style-type: none"> • To understand the difference between online and offline. • To understand what information I should not post online. • To know what the techniques are for creating a strong password. • To know that you should ask permission from others before 	<p>Pupils who are secure will be able to:</p> <ul style="list-style-type: none"> • Explain what is meant by online information. • Recognise what information is safe to be shared online. • Explain why we need passwords and what makes a strong password.

<p>Password Permission Personal information Pop ups Pressure Private information Reliable Share Terms and conditions Trusted adult</p>	<p>sharing about them online and that they have the right to say 'no.'</p> <ul style="list-style-type: none"> • To understand that not everything I see or read online is true. 	<ul style="list-style-type: none"> • Understand that they need to ask permission before sharing content online and explain why. • Understand that they have the right to deny their permission to information about them being shared online. • Say who they can ask for help with online worries. • Use some strategies to work out if online information is reliable or not.
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