

# Year 1 Computing Yearly Overview

## Autumn/Spring/Summer

### E-Safety

- Begin to understand what personal information is and who you can share it with
- Keep passwords private
- Begin to recognise who can see information stored in different places
- Recognise the difference between real and imaginary online experiences
- Know that not everyone is what they say they are online
- Make sure an adult knows what they are doing online
- Know what to do and who to tell when they see something unexpected or worrying online
- Recognise the internet is an exciting place to be but understand the need for a balance in how they spend their time
- Begin to recognise different ways to communicate online and understand the importance of always being kind and polite
- Understand that an adult needs to know when you are communicating with others online
- Understand there are a variety of sources of information and begin to understand the differences
- Recognise different types of content on websites (e.g. adverts, links)
- Know that something's may not be true or safe online
- Recognise age-appropriate websites, apps and games
- Know that sometimes pictures and words on the Internet cannot be copied because they belong to someone else

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<ul style="list-style-type: none"> <li>• Consolidate mouse skills</li> <li>• Practise logging in using the class log in and password</li> <li>• Practice keyboard skills</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to work on the mouse and keyboard skills</li> <li>• Switching a computer on/off,</li> </ul>	<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Give instructions to my friend and follow their instructions to move around</li> <li>• Describe what happens when I</li> </ul>	<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Describe what actions I need to do to make something happen</li> <li>• Press the buttons in the correct order to make my</li> </ul>	<p><b>Technology in our lives</b></p> <ul style="list-style-type: none"> <li>• Recognise ways that technology is used in my home and community.</li> <li>• Begin to identify some of the benefits of using technology.</li> <li>• Recognise ways that technology is used in my home and community.</li> </ul>	<p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Be creative with different technology tools.</li> <li>• Save information in a special place and retrieve it again.</li> <li>• Use technology to create and present my ideas.</li> </ul>

<ul style="list-style-type: none"> <li>Learn to login on PurpleMash and how to navigate the website</li> </ul>	<ul style="list-style-type: none"> <li>Logging on/off,</li> <li>Saving work,</li> <li>Printing,</li> <li>Copy and pasting images/saving images.</li> <li>Resizing images.</li> </ul>	<p>press buttons on a robot</p> <ul style="list-style-type: none"> <li>Describe what actions I need to do to make something happen</li> <li>Describe what happens when I press the buttons on a robot</li> <li>Begin to predict what will happen for a short sequence of instructions</li> <li>Begin to use software/apps to create movement and patterns on a screen, use the word debug when I correct mistakes when I program.</li> </ul>	<p>robot do what I want</p> <ul style="list-style-type: none"> <li>Begin to predict what will happen for a short sequence of instructions</li> <li>Begin to use software to create movement and patterns on a screen</li> <li>Use the word debug when I correct mistakes when I program</li> </ul>	<ul style="list-style-type: none"> <li>Recognise the ways we use technology in our classroom.</li> <li>Use links to websites to find information.</li> <li>Begin to identify some of the benefits of using technology.</li> </ul>	
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# Year 2 Computing Yearly Overview

## Autumn/Spring/Summer

### E-Safety

- Begin to understand what personal information is and who you can share it with
- Keep passwords private
- Begin to recognise who can see information stored in different places
- Recognise the difference between real and imaginary online experiences
- Know that not everyone is what they say they are online
- Make sure an adult knows what they are doing online
- Know what to do and who to tell when they see something unexpected or worrying online
- Recognise the internet is an exciting place to be but understand the need for a balance in how they spend their time
- Begin to recognise different ways to communicate online and understand the importance of always being kind and polite
- Understand that an adult needs to know when you are communicating with others online
- Understand there are a variety of sources of information and begin to understand the differences
- Recognise different types of content on websites (e.g. adverts, links)
- Know that something's may not be true or safe online
- Recognise age-appropriate websites, apps and games
- Know that sometimes pictures and words on the Internet cannot be copied because they belong to someone else

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<ul style="list-style-type: none"> <li>• Using technology Using the Internet</li> <li>• Understand what is a computer?</li> <li>• Use PowerPoint to create fact-files (this can be</li> </ul>	<ul style="list-style-type: none"> <li>• Researching for information independently,</li> <li>• Creating documents using the Internet and publishing software (Word,</li> </ul>	<p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Use technology to present my ideas in different ways</li> <li>• Use the keyboard on my device to add / delete and space text for others to read</li> <li>• Save and open files on the device I use</li> </ul>		<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Bee bots - writing algorithms on flashcards then programming the beebots.</li> <li>• Debug (fix) algorithms where necessary to achieve desired goal.</li> <li>• Give instructions to my friend and physically follow their instructions.</li> </ul>	

<p>linked with the topic)</p>	<p>Publisher, PowerPoint).</p> <ul style="list-style-type: none"><li>• Formatting the document appropriately to present information.</li><li>• Use technology to organise and present my ideas in different ways</li><li>• Save and open files on the device I use</li></ul>	<ul style="list-style-type: none"><li>• Use variety of software such as good maps to find and locate different locations</li></ul>	<ul style="list-style-type: none"><li>• Tell you the order I need to do things to make something happen and talk about this as an algorithm.</li><li>• Program a robot to do a particular task.</li><li>• Watch a program execute and spot where it goes wrong so that I can debug it.</li><li>• Tell you the order I need to do things to make something happen and talk about this as an algorithm.</li><li>• Look at my friend's program and tell you what will happen.</li></ul>
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# Year 3 Computing Yearly Overview

## Autumn/Spring/Summer

### E-Safety

- Keep personal information and passwords private
- Choose a secure password and screen name
- Make sure an adult knows what I am doing online and know how to report concerns
- Recognise excessive use of technology devices
- Begin to consider the need to protect devices from viruses
- Understand that any personal information shared online can be seen and used by others
- Know to use online tools to collaborate and communicate with others and know the importance of doing this responsibly
- Recognise the effect their writing or images might have on others
- Recognise that information on websites may not be accurate or reliable and may be used for manipulation, persuasion or promote bias
- Recognise the responsibility for making sure information shared online is reliable
- Recognise that websites can use different methods to advertise products
- Recognise age appropriate websites, apps and games
- Understand the need to identify whether material can be shared before using it in work
- Ask permission to use content created by others

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<ul style="list-style-type: none"> <li>• Put programming commands into a sequence to achieve a specific outcome</li> <li>• Plan and sequence instructions on a robot to make it achieve a specific outcome</li> <li>• Detect a problem in an algorithm which could result in unsuccessful programming</li> <li>• Keep testing my program and can recognise when I need to debug it</li> <li>• Describe the algorithm I will need for a simple task</li> </ul>		<ul style="list-style-type: none"> <li>• Topic Related (Poems and Vikings)</li> <li>• Create different effects with different technology tools</li> <li>• Combine a mixture of text, graphics and sound to share my ideas and learning.</li> <li>• Evaluate my work and improve its effectiveness</li> <li>• Collect data to answer a question</li> </ul>		<p><b>Lets Create</b></p> <ul style="list-style-type: none"> <li>• Using a variety of programs to create different patterns (<u>Link this to your Art Topic</u>) <u>2Simple/J2E logo</u></li> </ul>	<ul style="list-style-type: none"> <li>• Use search tools to find and use an appropriate website</li> <li>• Save and retrieve work on the Internet, the school network, or my own device.</li> <li>• Talk about the parts of a computer.</li> </ul>

- Break an open-ended problem up into smaller parts

- Talk about the different ways data can be organised
- Use a data logger to monitor changes and talk about the information it collects

- Describe the World Wide Web as the part of the Internet that contains websites
- Use search tools to find and use an appropriate website
- About whether I can use images that I find online in my own work

# Year 4 Computing Yearly Overview

## Autumn/Spring/Summer

### E-Safety

- Keep personal information and passwords private
- Choose a secure password and screen name
- Make sure an adult knows what I am doing online and know how to report concerns
- Recognise excessive use of technology devices
- Begin to consider the need to protect devices from viruses
- Understand that any personal information shared online can be seen and used by others
- Know to use online tools to collaborate and communicate with others and know the importance of doing this responsibly
- Recognise the effect their writing or images might have on others
- Recognise that information on websites may not be accurate or reliable and may be used for manipulation, persuasion or promote bias
- Recognise the responsibility for making sure information shared online is reliable
- Recognise that websites can use different methods to advertise products
- Recognise age appropriate websites, apps and games
- Understand the need to identify whether material can be shared before using it in work
- Ask permission to use content created by others

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<ul style="list-style-type: none"> <li>• Use a variety of tools to create a program</li> <li>• Use an efficient procedure to simplify a program</li> <li>• Recognise an error in a program and debug it</li> <li>• Know that I need to keep testing my program while I am putting it together</li> <li>• Recognise that an algorithm will help me sequence more complex programs</li> <li>• Recognise that an algorithm will me to sequence more complex problems</li> </ul>		<ul style="list-style-type: none"> <li>• Organise data in different ways</li> <li>• Collect data and identify where it could be inaccurate.</li> <li>• Use a datalogger to record and share my readings with my friends</li> <li>• Plan, create and search a database to answer questions</li> </ul>		<p>The Internet History of computers</p>	<ul style="list-style-type: none"> <li>• Use photos, video and sound to create an atmosphere when presenting to different audiences</li> <li>• Explore new media to extend what i can achieve</li> <li>• Create, modify and present documents for a specific purpose</li> </ul>

- Recognise that using algorithms will also help solve problems in other learning such as maths

- Give constructive feedback to my friends to help them improve their work and consider my own work in the same way
- Check who owns photos, text and clipart

# Year 5 Computing Yearly Overview

## **Autumn/Spring/Summer**

### **E-Safety**

- Keep personal information and passwords private and know how to choose screen names and passwords for different purposes
- Understand appropriate and inappropriate use of the Internet
- Recognise when the use of technology devices becomes obsessive and be ready to ask for help
- Recognise their own right to be protected from the inappropriate use of technology by others and be ready to say no to inappropriate requests
- Understand how to protect devices
- Recognise the responsibility to report concerns and keep themselves and others safe
- Understand that any personal information they share online can be seen by others
- Use social networking websites appropriately, keeping an adult informed of any online activity
- Make good choices when presenting themselves online
- Understand how to protect yourself from cyber bullying or causing hurt to others
- Respect the rights of other users
- Recognise that websites have an author and some people may publish content that is not accurate
- Understand reasons why people might publish content that is not reliable
- Know to check and critically evaluate information found online
- Recognise the consequences of using unreliable information
- Know that websites can collect data and that they can use this to make money and target their advertising
- Know how to check apps, games and websites are age appropriate
- Recognise that material on the internet belongs to someone else and know what can be downloaded to use in work

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Introduction to Binary codes Scratch Projects</li> <li>• Refine a procedure using repeat commands to improve a program</li> <li>• Use 'if' and 'then' commands to select an action</li> </ul>		<p><b>Data Handling</b></p> <ul style="list-style-type: none"> <li>• Choose an appropriate tool to help me collect data</li> <li>• Talk about mistakes in data and suggest how it could be checked</li> <li>• Present data in an appropriate way</li> <li>• Select, use and combine the appropriate technology tools to</li> </ul>		<p><b>How does the internet work?</b></p> <ul style="list-style-type: none"> <li>• Describe different parts of the Internet</li> <li>• Use a search engine to find appropriate information and check its reliability</li> </ul>	<p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• Use text, photo, sound and video editing tools to refine my work</li> <li>• Select, use and combine the appropriate</li> </ul>

<ul style="list-style-type: none"> <li>• Decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.</li> <li>• Use a variable to increase programming possibilities.</li> <li>• Use logical reasoning to detect and debug mistakes in a program.</li> <li>• Change an input to a program to achieve a different output</li> <li>• Logical thinking, imagination and creativity to extend a program.</li> </ul>	<p>create effects that will have an impact on others</p> <ul style="list-style-type: none"> <li>• Review and improve my own work and support others to improve their work</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise and evaluate different types of information I find on the World Wide Web</li> </ul> <p><b>Create a booklet on PurpleMash to present information collected on what is the Internet?</b></p>	<p>technology tools to create effects that will have an impact on others</p> <ul style="list-style-type: none"> <li>• Use the skills I have already developed to create content using unfamiliar technology</li> <li>• Evaluate my work and improve its effectiveness</li> <li>•</li> </ul>
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# Year 6 Computing Yearly Overview

## **Autumn/Spring/Summer**

### **E-Safety**

- Keep personal information and passwords private and know how to choose screen names and passwords for different purposes
- Understand appropriate and inappropriate use of the Internet
- Recognise when the use of technology devices becomes obsessive and be ready to ask for help
- Recognise their own right to be protected from the inappropriate use of technology by others and be ready to say no to inappropriate requests
- Understand how to protect devices
- Recognise the responsibility to report concerns and keep themselves and others safe
- Understand that any personal information they share online can be seen by others
- Use social networking websites appropriately, keeping an adult informed of any online activity
- Make good choices when presenting themselves online
- Understand how to protect yourself from cyber bullying or causing hurt to others
- Respect the rights of other users
- Recognise that websites have an author and some people may publish content that is not accurate
- Understand reasons why people might publish content that is not reliable
- Know to check and critically evaluate information found online
- Recognise the consequences of using unreliable information
- Know that websites can collect data and that they can use this to make money and target their advertising
- Know how to check apps, games and websites are age appropriate
- Recognise that material on the internet belongs to someone else and know what can be downloaded to use in work

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<b>Data Handling</b> <ul style="list-style-type: none"> <li>• Plan the process needed to investigate the world around me including the use of a data logging device</li> </ul>	<b>Multimedia</b> <ul style="list-style-type: none"> <li>• Talk about audience, atmosphere and structure when planning a particular outcome.</li> </ul>	<b>Programming</b> <ul style="list-style-type: none"> <li>• Deconstruct a problem into smaller steps and can see how these are similar to solutions I have used before.</li> <li>• Explain and program each of the steps in my algorithm.</li> </ul>		<ul style="list-style-type: none"> <li>• Talk about the way search results are selected and ranked.</li> <li>• Check the reliability of a website.</li> </ul>	Green screen projects Use of sonic Pi to create sounds to add in their projects.

<p><i>and an online survey to gather data.</i></p> <ul style="list-style-type: none"> <li>• Select the most effective tool to collect data for my investigation.</li> <li>• Check the data I collect for accuracy and plausibility.</li> <li>• Interpret the data I collect.</li> <li>• Present the data I collect in an appropriate way.</li> <li>• Select the most effective tool to collect data for my investigation.</li> <li>• Interrogate a database and present the outcomes to an investigation.</li> </ul>	<ul style="list-style-type: none"> <li>• Confidently identify the potential of unfamiliar technology to increase my creativity.</li> <li>• Combine a range of media for a digital presentation, recognising the contribution of each to achieve a particular outcome.</li> <li>• Confidently identify the potential of unfamiliar technology to increase my creativity.</li> <li>• Be digitally discerning when evaluating the effectiveness of my own work and the work of others.</li> </ul>	<ul style="list-style-type: none"> <li>• Design an efficient program through the use of repeat procedures.</li> <li>• Use different inputs to control an onscreen action and predict what will happen.</li> <li>• Use a variable to achieve a required output including stopping a program.</li> <li>• Recognise errors in a program and link errors to a problem in the algorithm on which it is based.</li> <li>• Use different inputs (including sensors) to control a device or onscreen action and predict what will happen.</li> <li>• Explain and program each of the steps in my algorithm to achieve a planned outcome.</li> <li>• Evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.</li> <li>• Use logical reasoning to detect and correct errors in a algorithms and programs</li> </ul>	<ul style="list-style-type: none"> <li>• Tell you the Internet services we need for different purposes.</li> <li>• Describe how information is transported on the Internet.</li> <li>• <i>Discover where a website is hosted.</i></li> <li>• Describe the internet services required to create, share and evaluate a game</li> <li>• Use search engines to include appropriate facts and make use of appropriate resources within a game</li> <li>• Acknowledge the sources for resources used within a game</li> </ul>	
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