

Computing - Year 3 and Year 4

Below are the computing units that children will study across Year 3 and Year 4 at The Rydal Academy. They are split into half terms or terms depending on the length of the unit. There is a brief explanation of each focus area and suggestions for activities that you can do with your child at home to support their learning.

Year 3		Year 4	
Autumn 1	<p>Password Phishing Children will learn about how people may try to ‘phish’ for their password and how important it is to create strong passwords that they change frequently. Can your child explain 2 or 3 different ways that people may try to find out somebody’s password? Watch this video https://www.youtube.com/watch?v=q5DYkzOrz_I and create a strong password with your child.</p> <p>Networking Children will learn about how devices can be connected to a network through a server, such as in school, and that there are different drives that users have different access to. They will also learn about sorting networks and how the computer processes things. Ask your child to draw a diagram showing the different network types.</p>	Autumn 1	<p>Caught in the web: How to stay safe online Using a story book, Caught in the web, children will learn about staying safe online including fake profiles, strong passwords, cyberbullying and the difference between ‘real’ and ‘online’ friends. Ask your child to create a poster demonstrating how to stay safe online – You could even safely look online for examples.</p> <p>Creating a Maths Quiz on Scratch Children will be developing their knowledge of custom blocks, lists and loop throughs by creating a Maths Quiz (using their very own quiz master) that asks and validates answers and gives them a score at the end of the game. Ask your child to create a maths quiz, if possible, on Scratch, otherwise on paper. Can they explain how to validate the correct and incorrect answers?</p> <p>Hyperlinks on Microsoft PowerPoint Children will learn how to insert hyperlinks to texts and images in their PowerPoint to link them to another slide, within the document, or to a webpage. Can your child explain when they might use a hyperlink? If possible, allow them to demonstrate their skills on a home device.</p>
Autumn 2	<p>Managing time online Children will learn about managing their time online and the negative affects too much screen time can have. Create a poster/timetable together that they can use at home to limit their screen time. Use this website for a toolkit to help with this: https://www.internetmatters.org/resources/digital-resilience-toolkit/digital-resilience-toolkit-6-10-year-olds/</p> <p>Basic Concepts and creating a Dance Party on Scratch Children will be recapping their knowledge of costumes whilst focussing on the Scratch library. They will use Sprites that have lots of costumes to create a dance party involving sounds from the library and random sounds. Use these links to create a dance party at home with all the family: https://www.barefootcomputing.org/docs/default-source/at-home/dance_moves_activity.pdf?sfvrsn=c15391ea_2 https://www.barefootcomputing.org/docs/default-source/at-home/dance_moves_supporting_worksheets.pdf?sfvrsn=754791ea_0</p> <p>Animations on Microsoft PowerPoint Children will learn how to add animations to text and images in PowerPoint, including timers and sounds. Can your child explain what an animation on PowerPoint is? If possible, ask them to demonstrate their skills on a home device.</p>	Autumn 2	<p>What are Social influencers? Children will learn that Social influences are paid to look or behave a certain way on social media which sets unrealistic expectations. Discuss your child’s favourite YouTuber, or person online, and ask them what they like about them and remind them that, although they can like them, some things they do are because they are being paid. You could even research some of the highest paid YouTubers: https://www.forbes.com/sites/maddieberg/2019/12/18/the-highest-paid-youtube-stars-of-2019-the-kids-are-killing-it/#1874051b38cd</p> <p>Search engines and forums Children will learn about online reviews and how forums and YouTube tutorials can be used to get answers to questions. Together, with your child, think of some questions that you would like to find the answer to. For example, how to complete (a game) or how to get mud out of the carpet or where’s the best place to buy (something the child likes). Ask your child to model how to safely search the internet and use reviews and forums to find answers.</p> <p>Keyboard Shortcuts Children will learn about keyboard shortcuts to help them become quicker and more efficient when using a keyboard. Can your child teach you the most common keyboard shortcuts? If you have a Mac device, do they know what to press instead of ctrl?</p>
Spring 1	<p>How do pop-up advertisements persuade us? Children will learn that adverts are used to persuade them to stay on a game longer through the use of ‘winning coins’ or a leader board. Ask your child to explain the different persuasive techniques that adverts use and why they should ignore them.</p> <p>Working with lists and sound in Scratch Children will be developing their knowledge of algorithms in Scratch by learning about ‘Lists’ and creating buttons so that the user can edit their lists. Can your child explain what lists they have been learning about and what they do? If possible, your child could use https://scratch.mit.edu/ to demonstrate their skills.</p> <p>Using Templates on Microsoft Publisher Children will learn how to use templates in Publisher when making leaflets. Can your child explain what a template it? And when is the best time to use a template?</p>	Spring 1	<p>How do we leave a Digital footprint? Children will learn that every time they visit a website, leave a comment or post a photo or video, it leaves a trail on the internet that can never be removed. They will discuss scenarios where people have even uploaded videos of others doing something that is unacceptable and how it could affect their life in the future. Discuss your child’s understanding of acceptable behaviour on, and offline and how it could affect their future.</p> <p>Developing Logo Children will be developing their skills on MSW Logo by creating procedures, learning how to use the RGB colour scheme, setting the position of the turtle and creating a Space Scene. Can your child show you how to create different colours using the RGB colour scheme? Can they direct you from one place to another using commands they have learnt?</p>

Spring 2	<p>Managing information Children already know what their personal information is and that they shouldn't share it with strangers online however now they will learn that they input their personal information when signing up to Apps. Most Apps make you enter certain details, but they must think carefully about what they include, can they enter a username rather than their real name? Does the App need to know your location for the game? And so on. Ask your child to discuss and explain how to keep their information to a minimum when signing up to new games. You could even do this together by signing up to a new App.</p> <p>Pattern drawing Children will be creating patterns using shapes, lines and stamping different Sprites, in Scratch. Ask your child to draw similar patterns on paper using pens/pencils etc. Do they think it is easier to do on paper or Scratch?</p>	<p>Why do age restrictions exist? Children will learn about the effects of using products at a younger age than stated in the age restriction. They will also focus on video games by discussing why these age restrictions are in place. Ask your child to explain the affects to you, whether it is a game, film or other things such as gambling or smoking.</p> <p>Networks Children will learn about the internet as a network. Can they draw a diagram, or explain, how the internet connects to us all?</p> <p>Responsible Use Children will develop their knowledge of copyright by learning about intellectual property and how trademarks are a form of copyright. Watch some adverts on TV, can your child identify the trademarks?</p>
Summer 1	<p>Online challenges Children will learn about safe and dangerous online challenges, as well as how safe challenges can become dangerous. They will learn how to successfully research a challenge and what to do before they accept to carry one out. Can your child explain what to do if they want to do an online challenge? (For example, research, ask an adult, never do it alone etc.)</p> <p>Introduction to Logo Children will learn to use a different piece of software called 'MSWLogo'. They will create shapes and patterns using commands such as forward, backward, left and right. Can your child instruct you to draw a shape by using the commands?</p>	<p>Online bullying Children will learn about how people use words to bully others online using messages or comments. Discuss how 'sticks and stones may break my bones, but words can never hurt me' does not apply to the world anymore and how they can get support if they feel bullied online. Use this website for games or information about staying safe online: https://www.thinkuknow.co.uk/8_10/</p> <p>Creating 'Space invaders' on Scratch Children will be developing their programming skills further by creating a 'Space Invaders' game that involves controlling a spaceship left and right as well as shoot a laser at the aliens. Once destroyed they will make a sound and disappear. If the aliens reach the bottom, it will broadcast 'Game Over!' If possible, allow your child to demonstrate their skills on https://scratch.mit.edu/ otherwise, can they explain the main things they learnt whilst making 'Space Invaders'?</p>
Summer 2	<p>Online relationships Children will learn how to stay safe when communicating online, even with known friends. This includes how to be respectful to others online. Ask your child to create a poster about having respectful, responsible relationships online. (For example, using appropriate language, not using family member's bank details, wearing appropriate clothing and using a blank background when vlogging, etc). Use this website for games or information about staying safe online: https://www.thinkuknow.co.uk/8_10/</p> <p>Manipulate images using Paint Children will learn how to edit images and use layering to create new images using Paint. Can your child explain what layering is and how to use it when creating a new image? If possible, allow them to demonstrate on a home device.</p>	<p>Unsafe Communication Children will recap safe online environments and develop their knowledge about 'online' friends. Ask your child if they play with strangers online and discuss how this can still be a safe relationship as long as you don't share any personal information, no matter how long you've 'known' them for. Reiterate to your child that if they ever feel uncomfortable, then they must tell you or another trusted adult to help them block the user from their game/website. Use this website for games or information about staying safe online: https://www.thinkuknow.co.uk/8_10/</p> <p>Blogging Children will learn about blogging on WordPress. This involving formatting text, modifying images, inserting polls, embedding maps and including tags to make their blog more searchable. Can your child tell you things that they might blog about? You could search and read child-friendly blogs together.</p> <p>Cropping and editing images on Microsoft Office Children will learn how to crop and edit images in Microsoft Office using the crop tool and different formatting tools such as, transparency, colour, corrections, alignment and removing background. If possible, allow your child to demonstrate cropping and editing images on a home device.</p>