Computing - Year 1 and Year 2

Below are the computing units that children will study across Year 1 and Year 2 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 1	Year 2
Autumn 1 **What is a computer?** Children will learn about different types of computers, the different parts of a computer and what can be done on a computer. Can your child explain what they know about computers? **Hector's World: Keeping your personal information safe.** Children will learn about staying safe online by not sharing their personal information. Read this online story about Digi Duck https://www.childnet.com/resources/digiduck-stories/digiducks-famous-friend Can your child explain what their personal information is? **Learning to use a keyboard** Children will learn about the layout of a keyboard and what the different keys are for using a printout of a keyboard. If possible, can your child demonstrate their knowledge using a keyboard at home? You could play fastest finger, who will find the given key first?	**How is technology used in the environment?** Children will learn about technology that is used in our everyday lives. Can your child tell you about technology on roads, drive through's and in various rooms in your house? They could make a poster about the popular use of technology. **Working with Sprites on Scratch** Children will develop their programming skills by using their knowledge of algorithms to create characters that change costumes, move around the background and continue to move 'forever'. If possible, your child could demonstrate their skills using https://scratch.mit.edu/
Autumn 2 **Should you share photos online without permission?** Here is the story of DigiDuck that will be used to teach the children about sharing photos online: https://www.childnet.com/resources/digiduck-stories/digiducks-big-decision **Algorithms in real life** The children will learn that algorithms are a set of precise instructions. Use these links to create an algorithm for making a pizza and have your own pizza party: https://www.barefootcomputing.org/docs/default-source/at-home/pizza_party_supporting_worksheets.pdf?sfvrsn=d54091ea_0 https://www.barefootcomputing.org/docs/default-source/at-home/pizza_party_activity.pdf?sfvrsn=154d91ea_2	**Stranger Danger online** Children will learn that people online are strangers unless they actually know them in real life. However, they must be aware that people can pretend to be somebody else so they must be careful. Watch this clip together and carefully discuss what to do if they accidentally give out some personal information. https://www.youtube.com/watch?v=-nMUbHuffO8 **Create an 'Identity Game' on Scratch** Children will develop their programming skills by using a program called Scratch to make an Identity game where the user is asked questions about their chosen character until there is only one identity left. It is similar to an online version of 'Guess Who?'. They will be introduced to if-statements. Can your child give you any examples of if-statements? Such as, **if** it is raining **then** Miss Waller will use an umbrella **else** she won't use an umbrella. **Editing font (including Word Art) on Microsoft Office** Children will learn how to edit their text using different font, boldness, italics, underlining, shadows as well as using Word Art for headers. If possible, allow your child to demonstrate their skills using a home device.
Spring 1 **Why are there age restrictions?** Children will learn about what age restrictions are and why they are in place. Are they able to explain, and possibly find, any age restrictions in your home? (Such as films, game console games). **Simple algorithms using scratch** Children will develop their algorithm knowledge (a set of precise instructions) by using a program called Scratch to order algorithms. If they are not in the correct order, the algorithm will not work. Ask your child to verbally create an algorithm about getting dressed for school, they could even carry it out while they tell you. **Learning to Log in** Children will be given their log in credentials to learn how to log into the school network. Can they remember and/or practise writing their log in down on paper at home?	**What is fake news? What is plagiarism?** Children will develop their skills in identifying what information is true or untrue whilst searching online. Ask your child to explain how they would recognise real or fake information. Can they show you any fake news online? **Using Digital Technology** Children will be introduced to their 'digital footprints' and how they should not write anything nasty or upsetting online as this has consequences. They will also be introduced to search engines, including Junior Safe Search and how to research topics online. They will also learn about how images and documents are saved as files, in folders with names and extensions types. Ask your child to show you how to safely carry out research on a chosen topic i.e elephants. **Inserting Images using Microsoft Office** Children will learn how to insert images on MS Word, Publisher and PowerPoint from files, clip art and webpages. If possible, ask your child to demonstrate their skills on a home device. If this is not possible, can they explain how to do it?

Spring 2	**What is copyright? Is everything on the internet true?** Children will learn that not everything on the internet is true. Can they explain why there are fake things on the internet? Search for a 'Tomato Spider' online and discuss how they know it is fake. **Directional algorithms** Children will develop their algorithm knowledge (a set of precise instructions) by using a program called Scratch. Using vocabulary such as forward, backward, left and right, can your child give you **verbal** directions from one place to another in the house or garden? Use these links to play Human Robot: https://www.barefootcomputing.org/docs/default-source/at-home/human_robot_supporting_worksheets.pdf?sfvrsn=8b4091ea_0 https://www.barefootcomputing.org/docs/default-source/at-home/human_robot_activity6fb9fddbdcfc6c779083ff0100ba3f46.pdf?sfvrsn=4a4591ea_0 **Introduction Microsoft Office: Similarities and differences of Word, Publisher and PowerPoint** Children will learn that they can use Microsoft Office to present information. Can they tell you the similarities and differences between Word, Publisher and PowerPoint? If possible, they could show you on a home device.	**Information sharing (Terms & Conditions, Cookies)** Children will be learning about how 'cookies' save their information on the internet and how it is important for an adult to read the terms and conditions of a newly installed App before entering their information. Together, look at some websites (all websites will ask you to accept the cookies) and discuss what information it will be saving about you. Here is some information about cookies: http://www.bbc.co.uk/webwise/guides/about-cookies **Creating 'Monkey Drop' on Scratch** Children will develop their programming skills by using a program called Scratch to make a Monkey Drop game. (https://scratch.mit.edu/). They will be introduced to creating variable for score and lives board. Can they explain to you how a score board works in Monkey drop? If possible, can your child access scratch to demonstrate how to create or play their game? **Design and Transitions on Microsoft PowerPoint** Children will learn how to use designs and transitions on MS PowerPoint. Can your child explain what a transition is? If possible, ask your child to demonstrate their new skills.
Summer 1	**Online relationships – How to be kind online.** Children will learn what acceptable online behaviour looks like. This video contains various internet safety tips, including someone being unkind: https://www.youtube.com/watch?v=aMSHtE42mmI Can your child create a poster about 'How to behave online'? **Drawing with algorithms** Children will develop their algorithm knowledge by using a program called Scratch. Using vocabulary such as forward, backward, left and right, can your child give you, verbal or written, directions to write numbers from 1 to 9? Or could they follow your directions?	**What is Cyberbullying?** Children will learn that cyberbullying is like 'real life' bullying but it can also be by an anonymous person. Can your child explain the different ways that people may be bullied online? Use this website with your child for more information about staying safe online: https://www.thinkuknow.co.uk/4_7/6-7-year-olds/ **What is input-output binary?** Children will develop their knowledge about algorithms by looking at inputs, steps and outputs then looking at strings and true and false statements. Ask them to create a table/diagram to explain inputs, steps and outputs, strings and true or false statements to you. Children will also be learning about binary numbers by looking at 1, 2, 4, 8, Can they teach you how to make different numbers such as 5 or 18 using binary?
Summer 2	**Saying No!** Children will learn that it is ok to say 'No' to people online if they feel uncomfortable or know that they are asking to do something wrong. They will also know to tell a trusted adult if this happens. Discuss what things that might make them feel uncomfortable online, discuss who their trusted adult is and practise saying 'No!' **Moving 'Ally the Antroid' on Scratch** Children will develop their programming/algorithms skills by using a program called Scratch to move Ally around different maps. Using vocabulary such as forward, backward, left and right, can your child **write** down directions from getting to one place to another in your house or garden?	**Managing time online** Children will learn that they should take time out from looking at screens such as the TV, tablets, laptops, phones and other devices to carry out physical activity or verbal conversations with their family. Can your child explain the best times to put their device down? (For example, before bedtime or when eating.) **Creating a Ping Pong game on Scratch** Children will develop their programming skills by using a program called Scratch to make a Ping Pong game. (https://scratch.mit.edu/). If possible, can your child access scratch to demonstrate how to create or play their game? If not, can they describe how they created it including any problems they faced?