

Computing Knowledge and Skills Year 5

By the end of Year 5 the children should be able to:

Programming and Physical Computing

- describe what pixels and sprites are. I can create a range of sprites using pixels with limited assistance.
- describe what game controllers are. I can use visual code to create moving sprites using the x and y axis with limited assistance.
- describe what a variable is. I can use visual code to program a score variable to increase, with limited assistance
- create a background which includes walls a sprite cannot cross with limited assistance.
- describe what selection is. I can use selection in visual code to add collectables and score to a game with limited assistance.
- describe what coordinates are and how they are used in a game. I can use coordinates to make a computer-controlled sprite, with limited assistance.

Multi-media Computing

- state what photo editing and a spot healing brush are and why it's used. I can edit a photo using the spot healing brush with limited assistance.
- describe what the clone tool is. I can edit a photo using the clone tool with limited assistance.
- describe what the gradient tool is. I can edit a photo using the gradient tool with limited assistance
- describe what the lasso and warp tools are. I can edit a photo using the lasso and warp tools with limited assistance.
- describe what each of the photo editing tools are. I can edit an animated poster by combining with another, using a range of photo editing tools with limited assistance.
- describe what each of the photo editing tools are. I can edit a photo by combining with another, using a range of photo editing tools with limited assistance.

Computer Systems and Networks

- research computing events online and describe more than one fact relating to each event in my own words with limited assistance.
- describe what an abacus and punch card are. I can use an abacus and punch card.
- describe the role of the enigma machine, cipher, and Alan Turing in WWII. I can use a cipher to encode and decode messages with limited assistance.
- describe how technology has changed over time. I can create a technology timeline using desktop publishing software with limited assistance.
- compare graphics, sound, controllers, storyline, and entertainment level of retro computer games to modern day games
- describe what virtual reality and artificial intelligence are and how they're used. I can create an advert for future technology, choosing my own software.

Date Information and Modelling

- describe methods for analysing local transport data in a spreadsheet. I can create a spreadsheet to analyse local transport with limited assistance.
- describe what a spreadsheet sort is. I can input data to a spreadsheet and apply various sorts with limited assistance
- describe what a spreadsheet filter is. I can input data to a spreadsheet and apply various filters with limited assistance.
- describe what data validation is. I can use data validation to apply rules to spreadsheets with limited assistance.
- describe what the IF and CountIF functions are. I can use the IF and CountIF functions in a spreadsheet with limited assistance.
- describe what each of the key words from this unit of work are. I can use a wide range of data analysis techniques with limited assistance.

Digital Citizenship

- explain how to block abusive users. I can explain how I would report online bullying on the apps and platforms that I use. I can describe the helpline services who can support me and what I would say and do if I needed their help. I can create an influencer video including actions to take when faced with danger online with limited assistance.
- explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our fault. I can make positive contributions and be part of online communities. I can describe the helpline services who can support me and what I would say and do if I needed their help. I can create an influencer video including information about online communities with limited assistance.
- search for information about an individual online and create a summary report of the information I find. I can describe ways that information about people online can be used by others to make judgments about an individual. I can create an influencer video including information about digital footprints with limited assistance.
- understand the difference between online mis-information and disinformation. I can explain what is meant by 'being sceptical'. I can give examples of when and why it is important to be 'sceptical'. I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can create an influencer video including information about fake news with limited assistance.
- explain how many free apps or services may read and share my private information with others. I can explain how and why some apps may request or take payment for additional content and explain why I should seek permission from a trusted adult before purchasing. I can create an influencer video including information about sharing data with limited assistance.
- create an influencer video including information about digital citizenship with limited assistance.