

Computing Knowledge and Skills Year 3

By the end of Year 3 the children should be able to:

Programming and Physical Computing

- describe what an algorithm is. I can create an algorithm with scaffolding.
- describe what an algorithm is. I can decompose a more complex problem.
- describe what iteration is. I can use iteration in a program with limited assistance.
- describe what selection is. I can use selection in a program with limited assistance.
- explain design choices for a program with assistance. I can write an algorithm for a given program using iteration.
- create a program from an algorithm with limited assistance using a visual programming language. I can follow a plan to create sprites and backgrounds.

Multi-media Computing

- describe what a script is and what is included in a script. I can write a script which includes speech and sounds with limited assistance.
- describe what makes a good quality recording. I can record a script with a microphone with limited assistance.
- describe what the word import means in relation to audacity. I can import audio and manipulate it by changing timing and length.
- describe what pitch and tempo are. I can add effects and change pitch and tempo of audio with limited assistance.
- describe what reverb is and why we might use reverb when editing audio. I can use reverb to edit audio with limited assistance.
- describe what the word export means. I can export my completed radio show into an audio file with limited assistance.

Computer Systems and Networks

- describe what a search engine is and how it works. I can use Boolean operators in online searches with limited assistance.
- describe what fake news is and its impact on people who believe it. I can use reasoning to decide if information found online can be trusted with limited assistance.
- describe what primary and secondary research are. I can use word processing software to create a questionnaire to gather data with limited assistance.
- use spreadsheet software to create an organised collection of data gathered online with limited assistance.
- describe what a graph is and why there are different types of graphs. I can log primary and secondary data in a spreadsheet and present it using graphs with limited assistance.
- create a presentation to present research findings visually and in text format with limited assistance.

Date Information and Modelling

- describe what data and a spreadsheet are. I can create a spreadsheet to log data with limited assistance.
- describe what a cell and cell reference are. I can use cell references accurately to play spreadsheet battleships with assistance.
- describe what a row, column and graph are. I can create a spreadsheet with a graph with limited assistance.
- describe what a formula is and what symbols are used for different calculations in formulas. I can use a range of formulas in a spreadsheet with limited assistance
- describe what a branching database is. I can create a branching database with limited assistance.
- describe what each of the key words in the presenting data unit of work mean. I can create a shopping spreadsheet with limited assistance.

Digital Citizenship

- explain what is meant by the term identity. I can explain how I can represent myself in different ways online. I can explain ways in which and why I might change my identity depending on what I am doing online (e.g gaming or social media). I can record and edit sound to create a podcast with limited assistance
- describe ways people who have similar likes and interests can get together online. I can give examples of technology specific forms of communication (e.g. emojis, acronyms, text speak). I can explain some risks of communicating online with others I don't know well. I can explain why I should be careful who I trust online and what information I can trust them with. I can explain what it means to 'know someone' or 'trust someone' online and why this might be different from knowing someone in real life. I can edit sound and make digital music to create a podcast with limited assistance.
- explain why spending too much time using technology can sometimes have a negative impact on me; I can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos). I can edit sound and make digital music to create a podcast with limited assistance.
- know how to search for information about myself online. I can recognise that I need to be careful before I share anything about myself or others online. I know who I should ask if I am not sure if I should put something online. I can describe rules about how to behave online and how I follow them. I can give reasons why I should only share information with people I choose to and can trust. I can explain that if I am not sure or I feel pressured, I should ask a trusted adult. I can describe simple strategies for creating and keeping passwords private. I can give digital citizenship advice to others with limited assistance.
- explain why I should be careful who I trust online and what information I can trust them with. I can explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or worried. I can explain how my and other people's feelings can be hurt by what is said or written online. I can explain what it means to 'know someone' online and why this might be different from knowing someone in real life. I can give digital citizenship advice to others with limited assistance.
- give digital citizenship advice to others with limited assistance.