

## The Computing curriculum at St Finbar's

- Our computing curriculum is for all children.

| Core skills | Year-group End-of-Year Epectations |   |    |    |    |    |    |
|-------------|------------------------------------|---|----|----|----|----|----|
|             | N                                  | R | Y1 | Y2 | Y3 | Y4 | Y5 |

|                       |  |  |  |  |   |  |
|-----------------------|--|--|--|--|---|--|
| Digital literacy (DL) | Can show an awareness of how IT is used for communication beyond school.   | Can show an awareness of how IT is used for a range of purposes beyond school.   | To decide whether a web page is relevant for a given purpose or question.  | Can decide whether digital content is relevant for a given purpose or question.  | Can decide whether digital content is reliable and unbiased.  | Can form an opinion about the effectiveness of digital content. Taking into account the intended audience and purpose of the content.  |
|                       | Can mention some of the ways in which IT is used to communicate beyond school. E.g. They might know that some people use social media such as Facebook, email, video calls or online greetings to say happy birthday to their friends. | To name a number of purposes for which IT is used beyond school.<br><br>To know that adults can share work and discuss ideas in online communities; that photos can be taken, edited and shared easily using digital technology. To know the web is made up of information shared by people. | Form a judgement about whether a web page is appropriate for finding out the answer to a question they have or for a given purpose.<br><br>To use email and videoconferencing in class.<br><br>When working as part of the class, the child can use email effectively and participate in a | Can form a judgement about whether a web page, such as a Wikipedia article, or other digital content is appropriate for finding out the answer to a question they have or for a given purpose.<br><br>To work collaboratively with classmates on a shared wiki.<br><br>To work collaboratively | Can discuss whether particular content (such as a web page, other children's pages or blog posts) is reliable and whether it has been written from a neutral point of view.<br><br>Be able to spot some examples of bias in digital content.<br><br>To work collaboratively with classmates on a class website or blog. | Can form a judgement as to, and provide reasons for, the extent to which they consider digital content to be effective. The content might be an app, media resources or marketing materials.<br><br>Can use online tools to plan and carry out a |

- Our curriculum is a skills-based one; using knowledge and understanding of other subjects to develop their computing skills and ability to stay safe when online.
- Our curriculum is progressive; building on previous years' knowledge, understanding and skills.
- Our curriculum is organised into broad areas of learning and core skills; following the National Curriculum (2014) - Digital literacy
  - Information technology
  - Computer science
  - Online safety

|                                    |  |   |   |  |  |  |   |
|------------------------------------|--|---|---|--|--|--|---|
|                                    |  |   | To understand people use email for a range of purposes and in a variety of contexts.                                      | whole-class videoconference.   | with their peers on a shared project, such as a class wiki, making useful contributions and providing feedback to others.  | Can work productively and positively with others when developing a shared website or contributing to a class blog.   | collaborative project.<br><br>To make use of an online tool to plan and carry out a collaborative project (such as developing an app).                        |
| <b>Information technology (IT)</b> |  | Use technology purposefully to create digital content.<br><br>Use technology purposefully to store digital content.<br><br>Use technology purposefully to retrieve digital content. | Use technology purposefully to organise digital content.<br><br>Use technology purposefully to manipulate digital content | Use search technologies effectively.<br><br>Use a variety of software to accomplish given goals.<br><br>Collect information<br>Design and create content.<br><br>Present information | Select a variety of software to accomplish given goals.<br><br>Select, use and combine internet Services.<br><br>Analyse information.<br><br>Evaluate information.<br><br>Collect data and present data. | Combine a variety of software to accomplish given goals.<br><br>Select use and combine software on a range of digital devices.<br><br>Analyse data.<br><br>Evaluate data.<br><br>Design and create systems | Undertake creative projects with challenging goals.<br><br>Use multiple applications [Work with] applications across a range of devices.<br><br>Collect data. |

|                       |                                 |   |  |   |   |   |
|-----------------------|---------------------------------|---|--|---|---|---|
| Computer science (CS) | Understand what algorithms are. | Understand that algorithms are implemented as programs on digital devices.          | Write programs that accomplish specific goals. | Design programs that accomplish specific goals.                 | Solve problems by decomposing them into smaller parts.            | Use computational abstractions.                             |
|                       | Create simple programs.         | Understand that programs execute by following precise and unambiguous instructions. | Use sequence in programs.                      | Design and create program.                                      | Use selection in programs.  | Model state of real world problems.                         |
|                       |                                 | Debug simple programs.  | Work with various forms of input.              | Debug programs that accomplish specific goals.                  | Work with variables.  | Use a programming language to solve computational problems. |
|                       |                                 | Use logical reasoning to predict the behaviour of simple programs.                  | Work with various forms of output.             | Use repetition in programs.                                     | Use logical reasoning to explain how some simple algorithms work. | Understand simple Boolean logic.                            |
|                       |                                 |   |  | Control or simulate physical systems.                           | Use logical reasoning to detect and correct errors in algorithms. | Understand how numbers can be represented in binary.        |
|                       |                                 |   |  | Use logical reasoning to detect and correct errors in programs. |   |   |

|  |  |  |  |   |  |  |
|--|--|--|--|---|--|--|
|  |  |  |  | Understand how computer networks can provide multiple services, such as the world wide web. | Understand computer networks including the internet. | Understand the hardware components that make up computer systems.                  |
|  |  |  |  | Appreciate how search results are selected.   | Appreciate how search results are ranked.            | Understand how text can be represented digitally in the form of binary digits.     |
|  |  |  |  |   |  | Understand how pictures can be represented digitally in the form of binary digits. |

|                           |  |   |   |   |   |  |   |
|---------------------------|--|---|---|---|---|--|---|
| <p>Online safety (OS)</p> |  | <p>Use technology safely.</p> <p>Keep personal information private.</p> <p>Recognise common uses of information technology beyond school.</p> | <p>Use technology respectfully.</p> <p>Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> | <p>Use technology responsibly.</p> <p>Identify a range of ways to report concerns about contact.</p> <p>Recognize acceptable / unacceptable Behaviour online.</p> | <p>Understand the opportunities computer networks offer for communication.</p> <p>Identify a range of ways to report concerns about content.</p> <p>Recognize acceptable / unacceptable Behaviour online.</p> | <p>Understand the opportunities computer networks offer for collaboration.</p> <p>Be discerning in evaluating digital Content.</p> | <p>Understand a range of ways to use technology respectfully.</p> <p>Recognise inappropriate content.</p> <p>Recognise inappropriate contact.</p> <p>Recognise inappropriate conduct.</p> <p>Know how to report concerns.</p> <p>Reuse digital artefacts for a given audience.</p> <p>Attend to usability of digital artefacts.</p> |
|                           |  |   |   |   |   |  | <p>Understand a range of ways to use technology safely.</p>   |