Progression of Skills & Knowledge

At St Jude's C of E Infant School

Contents

Introduction 3
Year 1 - Computing 4
Year 1 - 2BeSafe Breakdown 5
Year 2 - Computing 6
Year 2 - 2BeSafe Breakdown 7

Introduction

This document provides an overview of the progression of skills and knowledge outcomes of children against each National Curriculum objective for Computing for the academic years 1 to 6.

The outcomes shown for each National Curriculum objective provide a generalised summary. Each of the objectives is placed into either Computer Science, Digital Literacy or Information Technology.

Units taught in the scheme often cover more than one National Curriculum objective. Where very strong dominance towards an objective is covered by particular units, these will be listed in the outcomes section.

It's important to note that more detailed information on each year group and unit can be found by looking at the Knowledge and Progress Area found in the Computing Scheme of Work.

- Declarative & Procedural Knowledge Documents - Provide an outline of the specific knowledge and skills that children should acquire and demonstrate by the end of each unit.
- Prior and Future Learning Links Documents - Show learning prior, within year and beyond year in relation to a specific unit being taught.

Teaching Digital Literacy: The majority of digital literacy is taught through the use of 2BeSafe, our online safety scheme, although units in the Computing Scheme of Work do have elements of digital literacy objective coverage. A breakdown of outcomes is provided for each year group page.

Year 1 - Computing

	Computer Science			Information Technology	Digital Literacy	
National Curriculum Statement	**Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions**	**Create and debug simple programs.**	**Use logical reasoning to predict the behaviour of simple programs.**	**Use technology purposefully to create, organise, store, manipulate and retrieve digital content.**	**Recognise common uses of information technology beyond school.**	**Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.**
Outcome	Children understand that an algorithm is a set of ordered instructions that is used to solve a problem or achieve an objective. When they code, they understand that they are using an algorithm and turning it into something that the computer can interpret. **Unit Coverage** ● Creating & Following Instructions ● Coding	Children can create simple instructions for someone to follow, building up to creating a simple program that a computer can follow by arranging code blocks. They will recognise simple errors in a program such as the way an object is moving and attempt to debug in a purposeful way. **Unit Coverage** ● Creating & Following Instructions ● Coding	When looking at simple programs, children use logical reasoning based upon their understanding of the desired algorithm and their knowledge of code blocks to predict outcomes. They focus on objects and their actions and the events that initiate these actions. **Unit Coverage** ● Coding	Children can name, save and retrieve their work and follow simple instructions to access online resources. They create and combine digital content such as images, sound and text with a purpose. **Unit Coverage** ● Introduction to PM ● Creative Computing ● Data Explorers ● Animated Stories ● Making Beats	Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can comment on the specific purpose of technology examples they encounter. **Unit Coverage** ● Technology Around Us	**See 2BeSafe for breakdown** **Unit Coverage** ● Technology Around Us

Year 1 - 2BeSafe Breakdown

National Curriculum Statement relating to Computing:

Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

2BeSafe Themes							
Copyright and Ownership	Health, Wellbeing and Lifestyle	Managing Online Information	Online Bullying	Online Relationships	Online Reputation	Privacy and Security	Self-Image and Identity
Children begin to explain why their creations belong to them, for example "I designed it" or "I filmed it." They learn how to save their work with a clear name so it is recognised as theirs. They also understand that work created by other people does not belong to them, even if they save a copy.	Children begin to explain the rules that help them stay safe when using technology, both at home and in other places.	Children are introduced to simple ways of finding information using digital tools like search engines or voice assistants. They learn that the internet contains all kinds of content — things they like, things they don't like, and things that may be real or make-believe. They also practise asking a trusted adult for help if they see something that upsets or worries them.	Children learn how to behave online in positive ways that do not upset others. They practise giving examples of kind and respectful behaviour.	Children learn that they should ask permission before doing things online and understand why this is important. They practise communicating with people they know, with adult support, and begin to explore why it matters to be kind, considerate, and respectful to others online - even if people don't always find the same things funny or upsetting.	Children start to understand that information shared online can stay there and be copied by others. They learn that some information should not be shared without checking with a trusted adult first.	Children are introduced to the idea of passwords and how they help protect information, accounts, and devices. They learn to recognise more detailed personal information, such as where they live or go to school, and are taught that they should always ask a trusted adult before sharing any of this online.	Children start to recognise that, just like in real life, there may be people online who could upset or embarrass them. They learn when and how to tell a trusted adult if something worries them and understand that adults can help keep them safe.

Year 2 - Computing

	Computer Science			Information Technology	Digital Literacy	
National Curriculum Statement	**Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions**	**Create and debug simple programs.**	**Use logical reasoning to predict the behaviour of simple programs.**	**Use technology purposefully to create, organise, store, manipulate and retrieve digital content.**	**Recognise common uses of information technology beyond school.**	**Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.**
Outcome	Children can create a computer program from an algorithm they have made, turning each step into code. They recognise that outputs from an on-screen program or physical device are directly attributed to the instructions they have coded. **Unit Coverage** • Route Explorers • Coding	Children can create programs that include more than one object type. They can alter attributes of objects purposefully and predict and observe the effect. They vary the flow of sequences through the use of timer commands. They can program buttons to initiate events in programs. They know that unexpected errors in their programs are due to the code they have created. They attempt to debug using logical reasoning, interpreting each line of code in sequence. **Unit Coverage** • Route Explorers • Coding	Children can identify the parts of a program that respond to specific events and initiate specific actions. Using a design plan or simple written algorithm, they can compare this against how a program is executing when in play mode. **Unit Coverage** • Route Explorers • Coding	Children know how to access digital content they have created or have been assigned . They use a range of software to create digital content and manipulate it with purpose. For example, creating spreadsheets to organise data, merging digital artifacts from different sources into a file. They know how to save and edit work. **Unit Coverage** • Creating Pictures • Spreadsheets • Questioning • Presenting Ideas • Making Music	Children identify a range of devices that connect to the internet and explain that the internet is used to access websites and find information. They can carry out simple keyword searches to find specific information. **Unit Coverage** • The Internet	**See 2BeSafe for breakdown** **Unit Coverage** • The Internet • 2Be Safe

Year 2 - 2BeSafe Breakdown

National Curriculum Statement relating to Computing:

Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

2BeSafe Themes

Copyright and Ownership	Health, Wellbeing and Lifestyle	Managing Online Information	Online Bullying	Online Relationships	Online Reputation	Privacy and Security	Self-Image and Identity
Children learn that content found online often belongs to other people. They begin to explain why it is important to respect that ownership.	Children learn that technology is used in many different environments, such as at home or in public places. They discuss simple guidance to keep themselves and others safe when using devices in these settings.	Children begin using simple keywords in search engines and practise navigating web pages using links, tabs, and buttons. They learn that voice assistants (like Alexa or Siri) are not real people. They also discuss the difference between "real" and "made up" information and learn that not everything they find online is true	Children are introduced to the concept of bullying. They learn what bullying is, how it can happen online, and how it can affect people's feelings. Importantly, they are taught that anyone being bullied is not to blame and that help is always available	Children start to understand that people may use technology to communicate with strangers, and why this can be risky. They learn about asking permission before sharing information, how to say "no" or "I'm not sure," and why it's important to respect other people's choices. They are encouraged to always ask a trusted adult before agreeing to anything online and to seek help if something happens without their consent.	Children find out that once information is online, it can last a long time and be seen by others. They are encouraged to ask for help if something is shared without consent or if the information is wrong.	Children develop their understanding of passwords and learn rules for keeping personal information private. They talk about what it means for something to be "private," practise creating and protecting passwords, and learn that many devices in the home are connected to the internet, such as toys, TVs, or even fridges.	Children begin to notice that people may look or behave differently online than they do in person. They talk about situations online that might feel worrying or upsetting and learn clear steps they can take to ask for help.