Kingfisher Hall
PRIMARY ACADEMY

Computing knowledge and skills progression

Computing National Curriculum Aims:

The national curriculum for computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology.

Intent:

To equip children with knowledge and skills needed for an increasingly digital world.

Children will make links to other subject areas to enable them to have computational understanding of the world. They will learn how to create and adapt programmes, understand how computer systems work while using technology safely and respectfully. From nursery to year 6 children will study computer science, information and technology and digital literacy.

Implementation:

The computing curriculum is delivered through the National centre for computing Education (NCCE) which is underpinned by 12 key pedagogical principles that are embedded within the units of work. We use the 'Teach computing' scheme of work from year 1 to 6, ensuring consistency and progression throughout the school
The progression of the computing scheme has been organised into interconnected networks called learning graphs which teachers use to ensure progression through concepts and skills. We deliver computing content through a spiral curriculum where themes are revisited through each year group, building on prior learning.
In EYFS children explore computing through many areas of their learning where they begin to understand and use algorithms to solve problems.

Information Technology
Whole School Yearly Overview

KEY	Data and information					
	Computer Systems and Networking					
	Creating Media					
	Programming					
TERM	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
EYFS	**Continuous Provision**					
Year 1	**Technology around us**	**Digital painting**	**Moving a robot**	**Grouping data**	**Digital Writing**	**Programming**
Year 2	**IT around us**	**Digital photography**	**Robot Algorithms**	**Pictograms**	**Digital music**	**programming quizzes**
Year 3	**Connecting Computers**	**Animation**	**Sequence in Music**	**Branching databases**	**Desktop publishing**	**Events and actions in programs**
Year 4	**The Internet**	**Audio editing**	**Repetition in shapes**	**Data logging**	**Photo Editing**	**Repetition in games**
Year 5	**Systems and searching**	**Video production**	**Selection in physical computing**	**Flat file databases**	**Victor graphs**	**Selection in quizzes**
Year 6	**Communication and collaboration**	**Vector Drawing**	**Variables in games**	**Spreadsheets**	**3D modelling**	**Sensing movement**

EYFS – Nursery and Reception

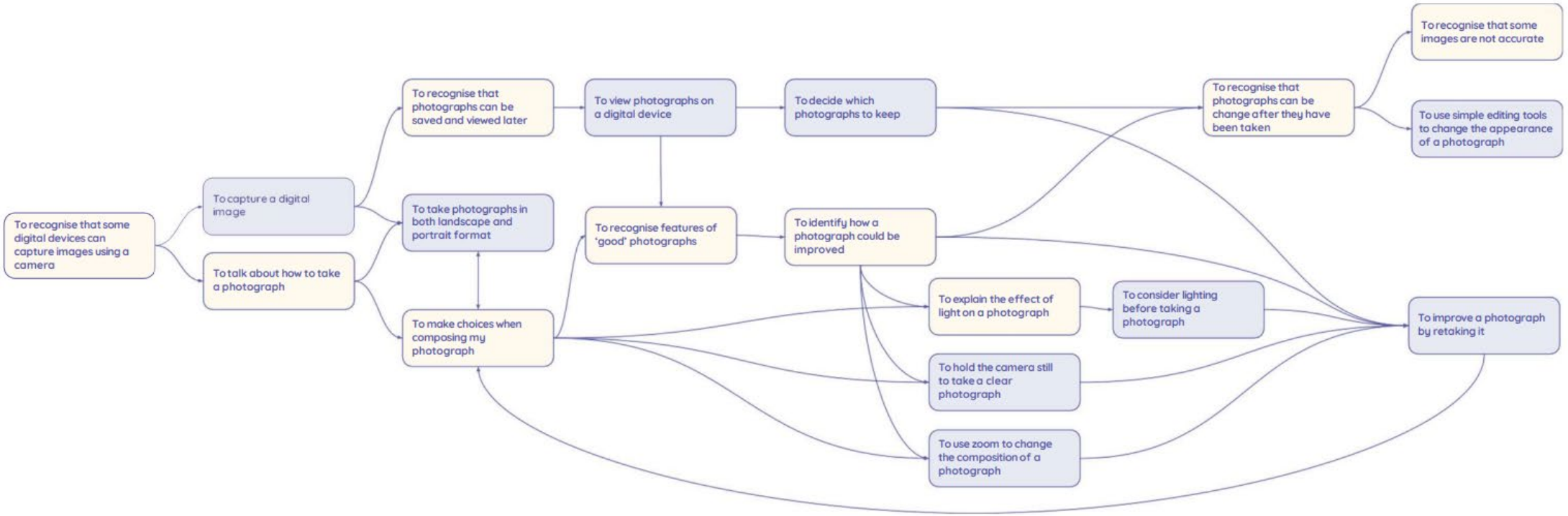
Computing in EYFS ensures that pupils enter year 1 with a strong foundation, builds problem-solving abilities, encourages resilience and supports other areas of their learning. Integrating computing into EYFS, pupils will also begin to build their digital literacy and their understanding of e-safety. Computing in EYFS is centered around play-based activities that focus on building children's listening skills, curiosity and creativity and problem solving.

EYFS computing can be seen in many ways through our learning and play bases activities. Here are some examples;

- Directional language
- Thinking about algorithms as a set of instructions such as making a sandwich, writing a postcard
- Taking a photography with a camera or tablet
- Playing games on the interactive whiteboard
- Digital painting on the interactive whiteboard
- Exploring mechanical toys
- Using a Bee-bot
- Watching a video clip
- Listening to music
- Role play areas
- Building things – construction

Year 2 Aut 1

Learning graph
Year 2 - Creating media - Digital photography

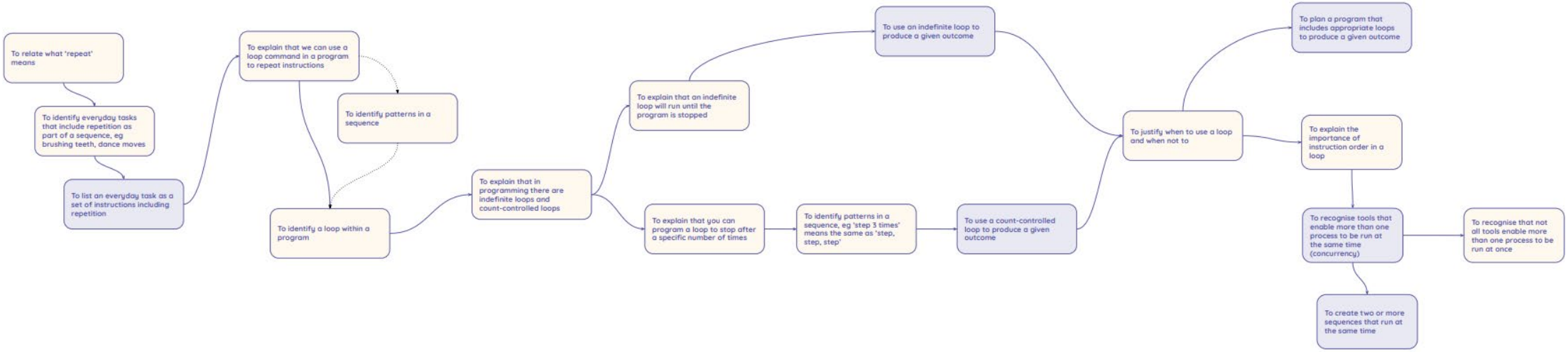


Year 4 Spring 1

National Centre for Computing Education

Raspberry Pi

Learning graph
Year 4 – Repetition in shapes



Teach Computing Curriculum

Primary Journey