Our Computing Constellation Pathway

Our learning is out of this world

EYFS

Autumn | Spring | Summer

Familiarity with Technology

In EYFS, we will become more familiar with technology ready for our computing lessons in Year 1. This will involve taking photographs with cameras and tablets; playing games on an interactive screen; using phones in the role play area; using keyboards in the role play area; using talking pegs; using walkie-talkies outside.

Year 1

Autumn

Grouping and Sorting

We will learn how to sort items on a computer based on criteria and common features.

Pictograms

We will learn how to collect data and present it in picture format using software on a computer.

Technology Outside of School

We will visit our local community to find examples of technology is used.

Spring

Maze Explorers

We will learn how to use the direction keys to move a character. We will also learn to create a simple algorithm and debug it.

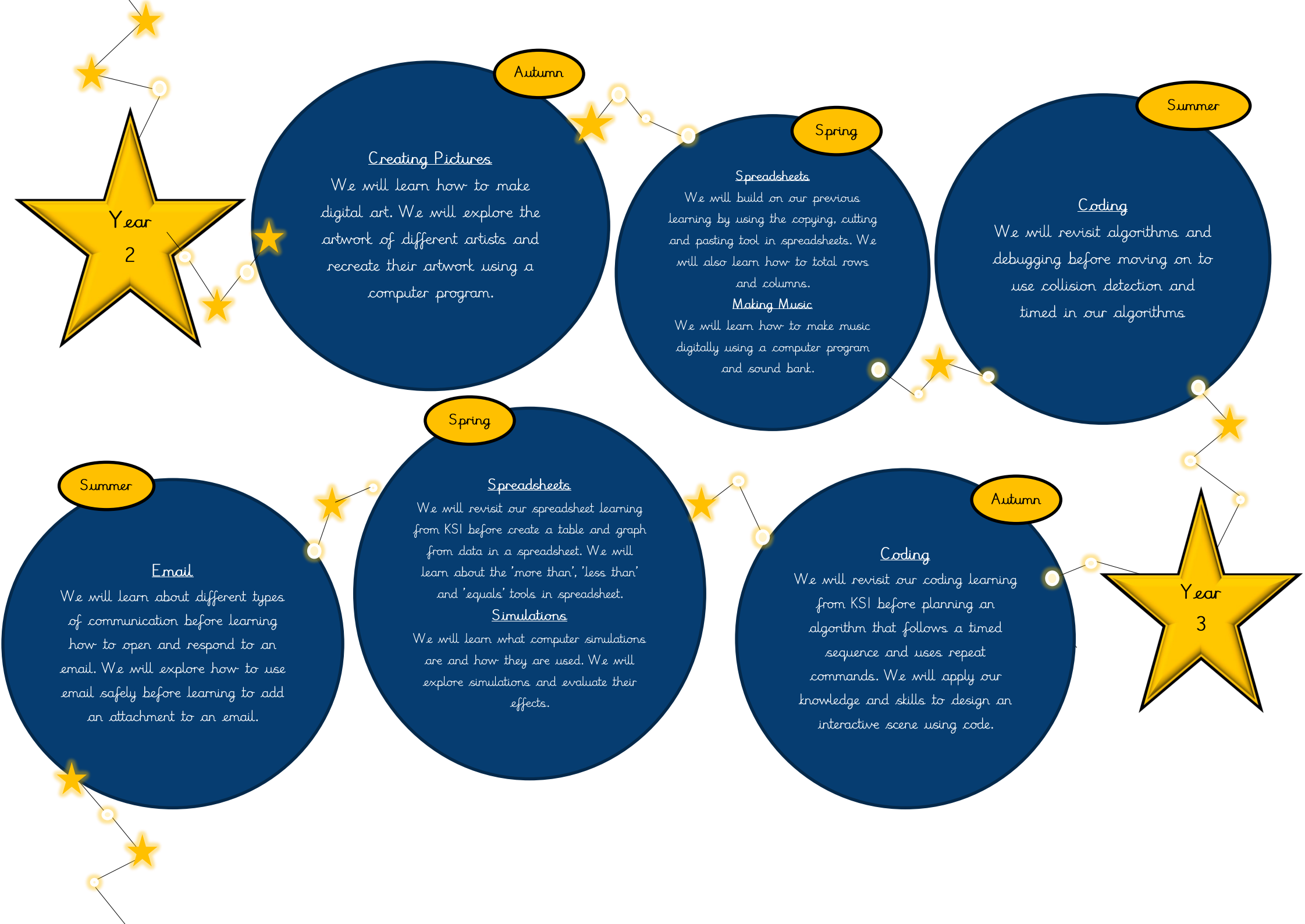
Spreadsheets

We will learn about the different features of a spreadsheet including rows and columns. We will learn to put data into cells.

Summer

Coding

We will learn more about writing algorithms and debugging. We will draw symbols to represent instructions in a computer program.


Year 2
Autumn
Creating Pictures
We will learn how to make digital art. We will explore the artwork of different artists and recreate their artwork using a computer program.
Spring
Spreadsheets
We will build on our previous learning by using the copying, cutting and pasting tool in spreadsheets. We will also learn how to total rows and columns.
Making Music
We will learn how to make music digitally using a computer program and sound bank.
Summer
Coding
We will revisit algorithms and debugging before moving on to use collision detection and timed in our algorithms
Summer
Email
We will learn about different types of communication before learning how to open and respond to an email. We will explore how to use email safely before learning to add an attachment to an email.
Spring
Spreadsheets
We will revisit our spreadsheet learning from KS1 before create a table and graph from data in a spreadsheet. We will learn about the 'more than', 'less than' and 'equals' tools in spreadsheet.
Simulations
We will learn what computer simulations are and how they are used. We will explore simulations and evaluate their effects.
Autumn
Coding
We will revisit our coding learning from KS1 before planning an algorithm that follows a timed sequence and uses repeat commands. We will apply our knowledge and skills to design an interactive scene using code.
Year 3

Year 4

Autumn

Coding

We will explore flowcharts and learn how 'if' statements work in coding. We will learn how co-ordinates are used in programming and learn how to use the repeat command whilst making a playable game using code.

Spring

Spreadsheets

We will learn how to add a formula to a cell to make calculations whilst also exploring different tools in spreadsheets. We will learn how to create a line graph from data in a spreadsheet.

Summer

Animation

We will learn how animations are made and make animated images using software before learning how to create stop motion animation.

Logo

We will learn how to give instructions in Logo to create shapes and patterns.

Year 5

Autumn

Coding

We will learn how codes and algorithms are used in programs and systems before planning an algorithm for sequences such as traffic lights.

Spring

Game Creator

We will explore elements of successful computer games before designing and creating our own games with characters and backgrounds.

Summer

Databases

We will learn what databases are and the different ways to search using them. We will learn to create avatars before entering information into a class database.

Year

Autumn

Coding

We will learn to create an algorithm for a program which includes timers and scores. We will also learn how to follow and create flowcharts for procedures before coding programs using text input.

Spring

Spreadsheets

We will learn to create a spreadsheet that can answer a mathematical question using a formula. We will apply this learning to creating a spreadsheet that shows cost and profit.

Summer

Blogging

We will explore the main features of a blog and the different ways they can be used. We will plan and create our own blog and learn to post comments on a class blog.

Networks

We will learn about the differences between the internet and the World Wide Web before learning about different types of network and how technology has progressed.

KS3

At KS3, pupils will build on their learning from primary school by learning about the following:

- Computational abstractions that model the state and behaviour of real-world problems.
- Understand key algorithms that reflect computational thinking (sorting and searching)
- Solve computational problems using programming
- Understand Boolean logic and how numbers can be represented in binary
- Understand how instructions are stored and executed within a computer system.