Autumn 1 Year 2 Computing overview

Key facts

- Never give out personal information such as phone number, address, passwords or photos.
- Talk to your parents, teacher or guardians if you feel uncomfortable with what you have seen on the internet
- Be polite and respectful of others online. Never send a message to someone you would not say face to face.
- Never meet with someone you 'meet' online.
- When chatting online use a nick name that will not reveal anything about you

Prior Knowledge

Children will have basic knowledge of staying safe online from year 1.

Developing an understanding of how to safely connect with others.

Key Vocabulary

Internet, safely, online, reliable, personal information, password, citizen, technology

Brief summary/ overview

Children learn about the importance of being safe online. They will recognise situations which are unsafe, discuss signs and feelins that something is wrong and identify strategies to keep themselves safe online.

Resources

SMART Crew episodes

SMART Crew guidance and activities

Cross curricular links/visits

PSHE – staying safe, sharing ideas

English – diary entries, poster, instruction writing

Autumn 2 Year 2 Computing overview

Key facts

- Coding is when a computer is given commands to which it responds, computer programmers use many different languages to write computer programs.
- Computer code is everywhere, it's in electronic games, this website, tills at the supermarket.
- The actual concepts involved in computer coding aim to be very straight forward and can be broken down into the following things:
  - Take some input and do something with it. (e.g. press a button and make a doorbell ring, or take a number and multiply it by itself)
  - Do a sequence of tasks to achieve a more complicated objective
  - Repeat a sequence of tasks many times on a schedule or until a condition is met

Resources

Laptops

Purplemash logins

Developing an understanding of instructions, logic and sequences - coding.

Brief summary/ overview

Children will learn how to use computer algorithms including user inputs and using timers to specify when commands happen. The will also learn how to find errors in their program and to debug these so their animations run smoothly.

Prior Knowledge

Children will have done coding in year 1.

Key Vocabulary

Internet, safely, online, reliable, personal information, password, citizen, technology, control, motion, travel, direction, turn, text strings, user input, variables, blogs

Cross curricular links/visits

English – instructions

Spring 1 Year 2 Computing overview

Key facts

- A Spreadsheet is a computer program that imitates a paper worksheet.
- It shows a large sheet (like a sheet of paper) that has many cells in a grid of rows and columns.
- Users can put words or numbers into the cells, to make headings and store information (usually numbers).
- You can also move the grid lines around so that some cells are bigger than others, and change the colour or size of text/font, the same way font/text is changed in a word processor.
- The primary reason most people use spreadsheets is for automatic calculations.
- A user can add and subtract the numbers here, even if the numbers are not next to each other. This means the computer does all the math, and people only need to give the correct information.
- Another strength of spreadsheets, is that they can produce diagrams, like graphs and pie-charts, based on the data the user enters. Sometimes the numbers make more sense when the computer turns them into a picture.

Resources

Laptops

Purplemash logins

Developing an understanding of databases and their uses.

Brief summary/ overview

Children will learn how to touch type using purplemash programs. They will be introduce to spreadsheets and how these can display and record data. They will learn to use search engines safely and how they can gather information from this source.

Key Vocabulary

Internet, safely, online, reliable, personal information, password, citizen, technology, touch typing, spreadsheets, data, collection, operations, cells, rows, columns, images, search engines

Cross curricular links/visits

Maths – data collection

Spring 2 Year 2 Computing overview

Key facts

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- Users can put words or numbers into the cells, to make headings and store information (usually numbers).
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- The actual concepts involved in computer coding aim to be very straight forward and can be broken down into the following things:
  - Take some input and do something with it. (e.g. press a button and make a doorbell ring, or take a number and multiply it by itself)
  - Do a sequence of tasks to achieve a more complicated objective
  - Repeat a sequence of tasks many times on a schedule or until a condition is met

Develop free coding and data collection using databases.

Resources

Laptops

Purplemash logins

Prior Knowledge

Children have developed their coding ability with 2Code and have begun to use spreadsheets to collect data.

Key Vocabulary

Internet, safely, online, reliable, personal information, password, citizen, technology, touch typing, spreadsheets, data, collection, operations, cells, rows, columns, images, search engines, control, motion, travel, direction, turn, text strings, user input, variables, blogs

Brief summary/ overview

Children will develop their if/then skills for coding as well as building graphs and charts in a spreadsheet.

Cross curricular links/visits

Maths – data collection

English – instructions

PE – instruction games

Summer 1 Year 2 Computing overview

Key facts

- The actual concepts involved in computer coding aim to be very straight forward and can be broken down into the following things:
  - Take some input and do something with it. (e.g. press a button and make a doorbell ring, or take a number and multiply it by itself)
  - Do a sequence of tasks to achieve a more complicated objective
  - Repeat a sequence of tasks many times on a schedule or until a condition is met

Create own games through coding

Prior Knowledge

Children have developed their ability with coding via 2Code and may have knowledge of games from home.

Key Vocabulary

Internet, safely, online, reliable, personal information, password, citizen, technology, control, motion, travel, direction, turn, text strings, user input, variables, blogs

Resources

Laptops

Purplemash logins

Brief summary/ overview

Children will continuing to develop and deepen their coding skills to include debugging of errors in their programs

Cross curricular links/visits

English – instructions

PSHE – working as a team

Summer 2 Year 2 Computing overview

Key facts

- The principal subject is filmed or photographed against a background consisting of a single colour or a relatively narrow range of colours, usually blue or green because these colours are considered to be the farthest away from skin tone.
- The portions of the video which match the pre-selected colour are replaced by the alternate background video. This process is commonly known as "keying", "keying out" or simply a "key".

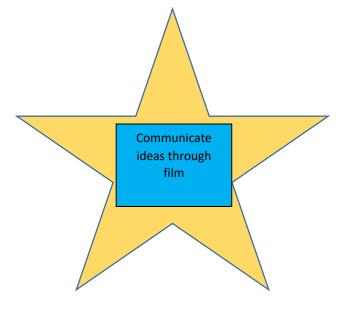### Communicate ideas through film

Prior Knowledge

Children will have used iPads to film and take photos in Year 1 and may have prior knowledge from outside of school.

Key Vocabulary

Internet, safely, online, reliable, personal information, password, citizen, technology, animation, motion, script, greenscreen, director, actor, cameraman

Brief summary/ overview

Children will learn about communication through different media. Children will take on different roles in developing their own video using green screen.

Resources

Laptops

Purplemash logins

iPads

Greenscreen

Cross curricular links/visits

English – script writing, persuasive language

PSHE – working as a team