Collaborative Learning

Year Four Knowledge

Software can be used collaboratively online to work as a team.

What type of comments and suggestions on a collaborative document can be helpful.

You can use images, text, transitions and animation in presentation slides.

Key vocabulary

average	collaborate	comment
data	data representation	edit
e-document	email	insert (file)
multiple choice	numerical data	online
presentation	rating	reply
resolve	reviewing comments	share
slide	spreadsheet	suggestion
survey	teamwork	transition

Unit outcomes

Pupils who are **secure** will be able to:

- ✓ Understand the need to be thoughtful when working on a collaborative document.
- ✓ Use comments to suggest changes to a document and understand how to resolve comments.
- ✓ Use a variety of different slide styles to convey information, including images and transitions.
- ✓ Create a Google Form with a range of different question types that will provide different types of answers, e.g. text, multiple choice or numerical values.
- ✓ Export data to a spreadsheet, highlighting data, using conditional formatting and calculating averages and sums of numbers.

Collaborative Learning

Year Four Skills

Understanding that computer networks provide multiple services, such as the world wide web, and opportunities for communication and collaboration.

Use online software for documents, presentations, forms and spreadsheets.

Using software to work collaboratively with others.

Understanding that software can be used collaboratively online to work as a team.

Recognising what appropriate behaviour is when collaborating with others online.

Further Coding with Scratch

Year Four Knowledge

That a variable is a value that can change (depending on conditions) and know that you can create them in Scratch.

What a conditional statement is in programming.

That using variables can help you to create a quiz on Scratch.

Key vocabulary

code block	conditional statement	coordinates
decompose	feature	information
negative number	orientation	position
program	project	script
sprite	stage	tinker
variable		

Unit outcomes

Pupils who are **secure** will be able to:

- ✓ Understand how to create a simple script in Scratch.
- ✓ Add or change a sprite and prevent it from rotating.
- ✓ Use decomposition to identify key features and understand how to decipher actions that make the quiz game work.
- ✓ Understand what a variable is and how to use the 'say' and 'ask' blocks.
- ✓ Create a variable and be able to use a variable to record a score.
- ✓ Understand what a variable is and how it works within a program.

Further Coding with Scratch

Year Four Skills

- Using decomposition to solve a problem by finding out what code was used.
- Using decomposition to understand the purpose of a script of code.
- Creating algorithms for a specific purpose.
- Coding a simple game.
- Incorporating variables to make code more efficient.
- Remixing existing code.

Website Design

Year Four Knowledge

To know that a website is a collection of pages that are all connected.

To know that websites usually have a homepage and subpages as well as clickable links to new pages, called hyperlinks.

To know that websites should be informative and interactive.

Key vocabulary

Assessment	Audience	Checklist
Collaboration	Content	Contribution
Create	Design	Embed
Evaluate	Features	Google SItes
Hobby	Homepage	Hyperlinks
Images	Insert	Online
Plan	Progress	Published
Record	Review	Style
Subpage	Tab	Theme

Unit outcomes

Pupils who are **secure** will be able to:

- ✓ Use most of the tabs (e.g. insert, pages, themes) on Google Sites on their website.
- ✓ Create a clear plan for their web page and begin to create it.
- ✓ Create a professional looking web page with useful information and a clear style, which is easy for the user to read and find information from.
- ✓ Create a clear plan by referring back to their checklist.
- ✓ Create four web pages with a range of features on their website.

Website Design

Year Four Skills

Building a web page and creating content for it.

Designing and creating a webpage for a given purpose.

Using software to work collaboratively with others.

Key vocabulary

Assessment	Audience	Checklist
Collaboration	Content	Contribution
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HTML

Year Four Knowledge

- To know and identify examples of HTML tags.

What changing the HTML does to alter the appearance of an object on the web.

Copyright means that those images are protected and to understand that people should use a 'Creative Commons' image search if they wish to use images from the internet.

What fake news is and ways to spot websites that carry this type of misinformation.

What the inspect tool is and ways of using it to explore and alter text and images.

Key vocabulary

code	content	copyright
CSS	end tag	fake news
hacker	heading	HTML
HTML tags	internet browser	paragraph
remixing	start tag	text
unplugged	URL	web page
web page elements		

Unit outcomes

Pupils who are **secure** will be able to:

- ✓ Recognise the role of HTML in a web page.
- ✓ Add text between the heading and paragraph tags.
- ✓ Explore a web page using the inspect tool.
- ✓ Explain how they altered the HTML to create their posters.
- ✓ Alter the basic elements within a web page using the inspect tool.
- ✓ Replace the text and images in a webpage.

HTML

Year Four Skills

- Exploring the HTML on a web page.
- Remixing existing code.
- Translating HTML into text and images.
- Identifying HTML tags.
- Altering HTML on a live web page.
- Replacing images on a web page.
- Recognising that information on the internet might not be true or correct and that some sources are more trustworthy than others.

Computational Thinking

Year Four Knowledge

Combining computational thinking skills can help solve a problem.

Pattern recognition means identifying patterns to help them work out how the code works.

Algorithms can be used for several purposes, e.g. animation, game design, etc.

Key vocabulary

abstraction
algorithm
code
computational thinking
decomposition
input
logical reasoning
output
pattern recognition
script
sequence
variable

Unit outcomes

Pupils who are secure will be able to:

- ✓ Understand that problems can be solved more easily using computational thinking.
- ✓ Understand what the different code blocks do and create a simple game.
- ✓ Understand the terms **pattern recognition** and **abstraction** and how they help to solve a problem.
- ✓ Create a Scratch program which draws a square and at least one other shape.
- ✓ Understand how computational thinking can help to solve problems and apply computational thinking to problems they face.

Computational Thinking

Year Four Skills

Using decomposition to solve a problem by finding out what code was used.

Using decomposition to understand the purpose of a script of code.

Identifying patterns through unplugged activities.

Using past experiences to help solve new problems.

Using abstraction to identify the important parts when completing both plugged and unplugged activities.

Creating algorithms for a specific purpose.

Using abstraction and pattern recognition to modify code.

Investigating Weather

Year Four Knowledge

To know that computers can use different forms of input to sense the world around them so that they can record and respond to data ('sensor data').

To know that a weather machine is an automated machine that respond to sensor data.

To understand that weather forecasters use specific language, expression and pre-prepared scripts to help create weather forecast films.

Key vocabulary

accurate	climate zone	condensation
cylinder	degree Celsius	evaporation
extreme weather	filming	forecast
heat sensor	lightning	measurement
pinwheel	presenter	rain
satellite	script	sensor data
solar panel	temperature	thermometer
tornado	weather	weather forecast
wind speed		

Unit outcomes

Pupils who are **secure** will be able to:

- ✓ Search the web efficiently to find temperatures of different cities and record this accurately.
- ✓ Design a weather station that gathers and records sensor data, explaining how it works and the units of measurement it would use.
- ✓ Design an automated machine that uses selection to respond to sensor data.
- ✓ Search for and record weather forecast information in a spreadsheet and explain how this data is collected.
- ✓ Create a video which includes weather forecast information.

Investigating Weather

Year Four Skills

- Using tablets or digital cameras to film a weather forecast.
- Understanding that weather stations use sensors to gather and record data that predicts the weather.
- Using keywords to effectively search for information on the internet.
- Searching the internet for data.
- Designing a device that gathers and records sensor data.
- Recording data in a spreadsheet independently.
- Sorting data in a spreadsheet to compare using the 'sort by…' option.
- Understanding that data is used to forecast weather.

Online Safety

Year Four Knowledge

Some of the methods used to encourage people to buy things online.

Technology can be designed to act like or impersonate living things.

Technology can be a distraction and identify when someone might need to limit the amount of time spent using technology.

What behaviours are appropriate to stay safe and be respectful online.

Key vocabulary

accuracy	ad	advantage
advertisement	belief	bot
computer	disadvantage	distraction
fact	hashtag	Implications
in-app purchases	influencer	opinion
program	recommendation	reliable
risk	screen time	search results
snippets	sponsored	trustworthy

Unit outcomes

Pupils who are **secure** will be able to:

- ✓ Describe how to search over multiple platforms and be aware of the accuracy of the results presented.
- ✓ Describe some of the methods used to persuade people to buy online.
- ✓ Explain the difference between fact, opinion and belief and recognise these online.
- ✓ Explain what a bot is and give examples of different bots.
- ✓ Explain some positive and negative distractions of using technology and small strategies for reducing the time spent on technology.

Online Safety

Year Four Skills

- Understanding why some results come before others when searching.
- Understanding that information found by searching the internet is not all grounded in fact.
- Learning to make judgements about the accuracy of online searches.
- Identifying forms of advertising online.
- Reflecting on the positives and negatives of time online.
- Identifying respectful and disrespectful online behaviour.
- Recognising that information on the Internet might not be true or correct and that some sources are more trustworthy than others.