Hampton Vale
Primary Academy

Whole Curriculum Overview

HAMPTON VALE PRIMARY ACADEMY

	Computing - Progression throughout HVPA			
	Autumn term (Digital Literacy focus)	**Spring term** (Multimedia focus)	**Summer term** (Computer Science focus)	People in computing
R	Practicing writing letters on Ipad painting app/ notes	Experimenting with taking photos, videos and recording audio	Play basic coding games (Beebots)	
1	Developing typing skills	Taking and editing photos	Coding explored through foos app/ BeeBot app	Steve jobs (Autumn) - Co-founder of Apple
2	Presenting information	Recording and editing video	Coding in ScratchJr - Creating a quiz	Bill Gates (Autumn) - Co-founder of Microsoft.
3	Gathering and presenting Data	2D animation	Kodu - Intro to game dev.	Larry Page & Sergey Brin (Autumn) - creators of Google Walt. Disney (Spring) - One of the most important people in animation
4	Introduction to Google Sheets	Creating a brochure about esafety	Block based coding (scratch) -	Ada Lovelace (Autumn) - 'the first computer programmer'
5	Advanced Google Sheets project	Recording podcasts about a school trip	Text based coding - Fundamentals	Mark Zuckerberg (Autumn) Nikola Tesla (Spring) Alan Turing (Summer) - Solved the enigma code, basis for first computer, early AI work
6	Collaborative google slides project	Create a music video - link to end of year production	Text based coding - Simple maze	Jeff Bezos (Autumn Elon Musk (Summer)

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	Digital Literacy focus			
	Objective	Digital Skills	Digital Responsibility and Safety	Hooks/ extras
R	Practice writing/ forming letters in drawing apps/ in notes	Know how to turn off and on a device. (ipad + computer) Know how to login to a computer. Know how to use a mouse and keyboard.	How to correctly turn off and on a device. Understand how to log in to a computer (summer term)	
1	Developing typing skills	Writing in notes app and playing some typing games to build fluency. To understand how to use “special” keys on an ipad.	Understand the responsibilities of using a computer/ Ipad	
2	Using MS powerpoint		Deepen understanding of how to use a computer.	
3	Gathering and presenting data	To be able to digitally create tally charts and pictograms and interpret the data they have found.	Using search engines. Be discerning in evaluating digital content.	
4	Create a google Sheets project	To be able to input data To be able to use basic formulas To be able to use basic styling features	To understand we should only store certain data (intro to GDPR)	
5	To create an advanced Google Sheets project	To be able to use conditional formatting to make their sheet reactive. To be able to	Staying safe online - Social media. Link to real world working strategies.	

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	Multimedia focus			
	Objective	Digital skills	Digital Responsibility and safety	Hooks
R	Experimenting with taking photos, videos and recording audio	To be able to take photos To be able to take videos Make audio recordings Experiment on GarageBand	Understanding photo/ video permissions	
1	Taking and editing photos	Each lesson focuses on a different skill. Photo taking and editing skills	Understanding photo/ video permissions Real/ fake images	
2	Recording and editing video	To take short videos and edit together to create a project.	Understanding photo/ video permissions	Go to the hall and watch previous years end project
3	2D animation - Combines photo editing and video Science link? E.g. melting/ freezing			
4	Creating a brochure relating to a school trip - Photo editing, further consideration of presentation			
5	Recording podcasts - introduce audio editing + combine with video skills.			
6	Create a music video			Dave Read from Romsey Mill to

HAMPTON VALE PRIMARY ACADEMY

	Computer Science focus			
	Objective	Digital Skills (Links to NC)	Digital responsibility and Safety	Hook/ extras
R	Play basic coding games (Beebots)	Find specific apps Understand the	Understanding that we should only go on age appropriate apps.	
1	Coding explored through foos app/ BeeBot app	Understand what algorithms are and begin to code their own simple algorithms		Pupils make instructions for a robot to make a sandwich. Teacher does the instructions.
2	Coding explored through foos app/ BeeBot app/ ScratchJr	Create simple algorithms. Begin to debug their own work.		
3	Block based coding (scratch)	Write and debug programs that accomplish specific goals		
4	Block based coding (scratch)	Recognise patterns within code and implement 'loops' to simply code.		
5	Text based coding - Fundamentals, creating shapes, changing colours, moving an object	Use logical reasoning to explain how some simple algorithms work.	Plagiarism - creating original code/ siting what has helped us	
6	Text based coding - Simple maze	Be able to detect and correct errors within complex algorithms.		Play the maze first (competitive aspect)

HAMPTON VALE PRIMARY ACADEMY

Key stage 1

Pupils should be taught to:

- 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.

Key stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Useful sites and resources

https://teachcomputing.org/curriculum/key-stage-1/data-and-information-pictograms/creating-pictograms Useful for support with planning.

https://www.qr-code-generator.com/guides/how-to-create-a-qr-code/ Create QR codes that link to websites for pupils using Ipads.

https://www.create-learn.us/blog/scratchjr-project-ideas-for-kids/ Scratch projects.
https://www.stem.org.uk/resources/elibrary/resource/359084/scratch-junior

HAMPTON VALE PRIMARY ACADEMY

Hampton Vale
Primary Academy

Reception Curriculum

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Reception (Embedded in Continuous Provision)		
Digital Literacy	**Multimedia**	**Computer Science**
Essential skills for using ipads	Taking photos	Explore basic coding apps eg beebots
	Taking videos	
	Recording audio	

HAMPTON VALE PRIMARY ACADEMY

Hampton Vale
Primary Academy

Year 1 Curriculum

HAMPTON VALE PRIMARY ACADEMY

Year 1 (18 lessons)					
Digital Literacy		**Multimedia**		**Computer Science**	
Microsoft word typing practice (Ipads/ Hubble)	6 lessons	Taking and editing photos	6 lessons	Creating and understanding basic algorithms	3 lessons
				Coding principles explored through 'Foos' app	3 lessons

HAMPTON VALE PRIMARY ACADEMY

Year 1

Strand 1: Digital Literacy

Area 1: Using MS word on Ipads and typing practice	6 lessons	**People in Computing: Steve Jobs - Co-founder of Apple** **Lesson 1: Fundamental typing skills** **Retrieval:** Finding letters on paper computer keyboards (ipad screenshot) Children to open writing app on ipads. Model under the visualiser how to: - Type letters - Use the spacebar, delete button and enter button to start a new line Allow children some time to experiment and familiarise themselves with the keyboards. Then model: - Tapping the shift button to use capital letters - Pressing the 123 button to find the full stop button Show pictures on the board and ask the children to write a sentence about it. Challenge children to include adjectives, noun phrases and full stops. **Lesson 2: Using numbers and special characters** **Retrieval:** Show pictures of spacebar, delete, return, shift and '123'. Ask the children what each of these buttons is used for. Explain that today the children will be practicing using numbers to write basic maths questions. Have some maths questions on the board and then model typing them out under the visualiser, highlighting the '123' button and 'shift' button to find different buttons on the keyboard such as + - and =. Children to try to copy and then write the answers on the Ipads. If children finish, challenge them to create some of their own maths questions.

HAMPTON VALE PRIMARY ACADEMY

Year 1

Strand 1: Digital Literacy

Area 1: Using MS word on Ipads and typing practice	6 lessons	**People in Computing: Steve Jobs - Co-founder of Apple** **Lesson 3: Practicing login details and typing games to build fluency.** **Retrieval:** Ask children to write a number in to notes app/ certain piece of punctuation by pressing shift first. Show children their login details. Practice typing their login details on the "Notes" app. EXT: practice typing skills on the following apps - Typing jets - Keyboard climber 2 - Keyboard ninja - Flappy typing https://www.qr-code-generator.com/guides/how-to-create-a-qr-code/ QR code generator to get children quickly logged onto websites when using ipads

HAMPTON VALE PRIMARY ACADEMY

Year 1		
Strand 1: Digital Literacy		
Area 1: Using MS word on Ipads and typing practice	6 lessons	**People in Computing: Steve Jobs - Co-founder of Apple** **Lesson 4: Entering login details at the hubble** **Retrieval:** Ask children to find certain keys on a keyboard at the Hubble. Explain in the classroom the children will be going to the hubble. Outline expectations in classroom. Model to children entering their login details to login to a computer. Use visualiser to show specific keys children may be unfamiliar with due to the difference between Ipad layout and Keyboard. Children to practice entering their login details at the hubble Explain why it is important to logout of a computer - stops others from having access to your account. Explain that we press the 'Log off' button and not 'Shut down' so that they computers are ready to be used by other children. Children to then practice logging out.

HAMPTON VALE PRIMARY ACADEMY

Year 1		
Strand 1: Digital Literacy		
Area 1: Using MS word on Ipads and typing practice	6 lessons	**People in Computing: Steve Jobs - Co-founder of Apple** **Lesson 5: Air dropping items** **Retrieval: Practice typing their login details on the "Notes" app.** **Explain to children that we can share files on Ipads with the airdrop feature. Explain that we should only accept items files from people that we know, we should not accept files from strangers.** **Challenge children to write a sentence about what they have done at the weekend and share it with the teacher.** **Lesson 6: Publish writing from writing book on Ipads** **Retrieval:** Finding certain keys on keyboard. Using shift to add capitals and finding the full stop button. Children to review a piece of writing from their writing books and practice publishing it on ipads. At the end of the lesson, children to airdrop the file to teacher. Teacher to store in class file on Google drive.

HAMPTON VALE PRIMARY ACADEMY

Year 1		
Strand 2: Multimedia		
Area 1: Taking and editing photos	6 lessons	**People in Computing:** **Lesson 1: Taking photos on an Ipad + intro to editing app** Show under visualiser: - opening camera app - taking photos Allow children 5 minutes to take photos Show how to view and delete photos Show children the app and allow children time at the end of the lesson to independently explore the editing tools. **Lesson 2: Landscape vs portrait + cropping and rotating.** **Retrieval:** which photo is landscape/ which is portrait 5 minutes to take photos Model under visualiser: - Using the crop feature to get rid of parts of a picture - Using the rotate button to change the orientation of a photo -

HAMPTON VALE PRIMARY ACADEMY

Year 1		
Strand 2: Multimedia		
Area 1: Taking and editing photos	6 lessons	**People in Computing:** **Lesson 3:** 5 minutes to take photos **Lesson 4:** 5 minutes to take photos

HAMPTON VALE PRIMARY ACADEMY

Year 1		
Strand 2: Multimedia		
Area 1: Taking and editing photos	6 lessons	**People in Computing:** **Lesson 5:** 5 minutes to take photos **Lesson 6:** 5 minutes to take photos

HAMPTON VALE PRIMARY ACADEMY

Year 1		
Strand 3: Computing		
Area 1: Creating and understanding basic algorithms	3 lessons	**People in Computing: Steve jobs - Co-founder of Apple** **Lesson 1:** **Lesson 2:** **Lesson 3:**

HAMPTON VALE PRIMARY ACADEMY

Year 1		
Strand 3: Computing		
Area 2: Coding principles explored through the Foos app	3 lessons	**People in Computing: Steve jobs - Co-founder of Apple** **Lesson 1:** **Lesson 2:** **Lesson 3:**

HAMPTON VALE PRIMARY ACADEMY

Hampton Vale
Primary Academy

Year 2 Curriculum

HAMPTON VALE PRIMARY ACADEMY

Year 2 (18 lessons)					
Digital Literacy		**Multimedia**		**Computer Science**	
Collecting and processing data	4 lessons	Video recording and editing	6 lessons	ScratchJR quiz	6 lessons
Presenting data	2 lessons				

HAMPTON VALE PRIMARY ACADEMY

Year 2

Strand 1: Digital Literacy

Area 1: Google slides	6 lessons	**People in Computing: Larry Page & Sergey Brin (Autumn) - creators of Google** **Lesson 1: Introduce task, introduce Google drive and children to gather info on google docs** Tell the children that they will be creating a presentation about your science/ writing/ history and geography topic. Before creating the presentation, explain that you are going to be gathering evidence on Google Docs. Explain to access Google Docs we need to log onto Google drive. Explain that Google Docs is saved on Google Drive which is a cloud based storage system. Briefly explain the difference between local storage and cloud based storage. (local = on the device, cloud = saved to a server and can be accessed on multiple devices). Highlight pros of cloud based storage. Next model logging into Google Drive and creating a new 'Google Docs' in 'My Drive'. Once Children have set up documents, Explain that we need to consider where we are getting our information from. Certain sites are more trustworthy than others. E.g. BBC Bitesize is more reliable than wikipedia. Allow them to start gathering information for their presentation on Google Docs but question them throughout where they have got their information from to consider its reliability. Ensure that children are not copying and pasting information but are rewording it to make sure they understand it - explain that when they are older and have to write essays that this is a really important skill to have.

HAMPTON VALE PRIMARY ACADEMY

Year 2

Strand 1: Digital Literacy

Area 1: Google slides	6 lessons	**People in Computing: Larry Page & Sergey Brin (Autumn) - creators of Google** **Lesson 2: Intro to Google Slides** **Retrieval:** local vs cloud based storage Model how to: - Add text boxes - Add images, change size and orientation - Add additional slides Model on hubble computer. Show children one skill at a time and give them time to practice and apply each skill to their work. Talk about adding gathering additional information for our presentation. Explain that another issue we face when gathering information is 'Fake news. Fake news is false or misleading information presented as news.' Show an example of obvious fake news e.g. Children who go to football club are to be paid to go to school.

HAMPTON VALE PRIMARY ACADEMY

Year 2

Strand 1: Digital Literacy

Area 1: Google slides	6 lessons	**People in Computing: Larry Page & Sergey Brin (Autumn) - creators of Google** **Lesson 3: Designing and adding text** Model how to: - Bold/ underline. Italic text - Change font and size - Ordering images and text within a slide Model on hubble computer. Show children one skill at a time and give them time to practice each skill. Allow time for children to find more information for their presentations and independently practice the skills taught in this lesson **Lesson 4: Designing and adding text** Model how to: - Adding animations (text fade in/ out, moving images) - Adding transitions Model on hubble computer. Show children one skill at a time and give them time to practice each skill. Allow time for children to find more information for their presentations and independently practice the skills taught in this lesson

HAMPTON VALE PRIMARY ACADEMY

Year 2

Strand 1: Digital Literacy

Area 1: Google slides	6 lessons	**People in Computing: Larry Page & Sergey Brin (Autumn) - creators of Google** **Lesson 5: Editing and finalising designs** Focus on presentation and layout in preparation for lesson 6 in which the children will be presenting their work to their peers in small groups on Ipads from the classroom. Remind children of skills previously learnt (leave on hubble computer screen as prompt for children.) - Bold/ underline. Italic text - Change font and size - Ordering images and text within a slide - Adding animations (text fade in/ out, moving images) - Adding transitions **Lesson 6: Presenting (link to Oracy)** Children to present their work in the classroom to one another in small groups from Ipads. Highlight to the children that we have been able to access their work due to it being saved on cloud based storage (as on ipads and not in hubble). **Oracy links for presenting:** - Pace of speech - Pronunciation **Oracy links for questioning:** - Listening - Questioning

HAMPTON VALE PRIMARY ACADEMY

Year 2		
Strand 2: Multimedia		
Area 1: Recording video and video editing	6 lessons	**People in Computing:** **Lesson 1:** **Lesson 2:** **Lesson 3:** **Lesson 4:** **Lesson 5:** **Lesson 6:**

HAMPTON VALE PRIMARY ACADEMY

Year 2		
Strand 3: Computing		
Area 1: ScratchJr quiz (ipads)	6 lessons	**Lesson 1: Introduction to scratch - backgrounds and sprites** Introduce the children to scratch Show them how to open the app and explain basic features Show children how to add sprites and change backgrounds Give children a description of what sort of setting you need them to make - children to then create Repeat **EXT:** allow the children 5 - 10 minutes at the end of the lesson to explore the coding elements of scratch and children to feedback what they have learnt at the end of the lesson. **Lesson 2: Using basic commands** **Lesson 3: expanding commands**

Year 2		
Strand 3: Computing		
Area 1: ScratchJr quiz (ipads)	6 lessons	**Lesson 4: Design and plan a project** **Lesson 5: Creating a project** **Lesson 6: Evaluating and debugging** Give children 5 minutes at the start of the lesson to review

HAMPTON VALE PRIMARY ACADEMY

Hampton Vale
Primary Academy

Year 3 Curriculum

HAMPTON VALE PRIMARY ACADEMY

Year 3 (18 lessons)					
Digital Literacy		**Multimedia**		**Computer Science**	
Collecting and processing data	4 lessons	2D animation Pivot	6 lessons	Kodu World Creation	3 lessons
Presenting data	2 lessons			Kodu Basic Coding	3 lessons

HAMPTON VALE PRIMARY ACADEMY

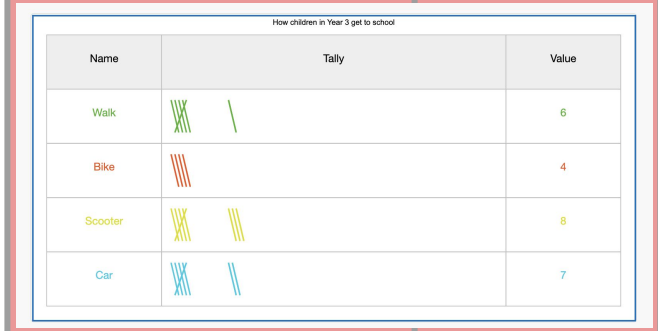
Year 3

Strand 1: Digital Literacy

Area 1: Collecting and processing data

Lesson 1 outcome:
Pupils to digitally create a tally chart

4 lessons


How children in Year 3 get to school

Name	Tally	Value
Walk	𝍸 \	6
Bike	𝍸	4
Scooter	𝍸 𝍸	8
Car	𝍸 𝍸	7

People in Computing:

Lesson 1: Creating tally charts

Retrieval: What is a tally chart? (Maths link)

In this lesson, pupils will create tally charts about how their peers get to school. E.g. walking, driving, bike, scooter or other.

Children to create physical tally charts on paper.
Then children to the following website to attempt digitising their tally chart.
https://www.meta-chart.com/tally#/your-charts

Once children have finished, ask the children questions about their tally charts such as “do more children walk, or drive to school” to test the children's understanding of their data.

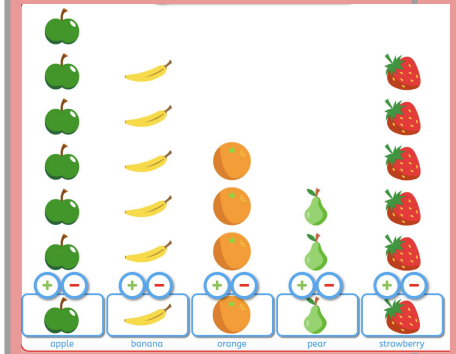
HAMPTON VALE PRIMARY ACADEMY

Year 3

Strand 1: Digital Literacy

Area 1: Collecting and processing data

Lesson 2 outcome:
Pupils to digitally create a pictogram



4 lessons

People in Computing:

Lesson 2: Creating pictograms

Retrieval suggestion: Interpreting tally chart data

In this lesson, pupils will create a pictogram relating to their peers favourite fruits using the following website: https://www.j2e.com/j2data/

Model using the add and subtract button to add more items to pictograms 

Model using the undo and redo button to undo mistakes at the top of the page 

EXT: Children to create physical pictogram to compare how efficient it is to create a digital vs physical pictogram

Tell the children that sometimes it is better to use a computer to complete certain tasks. In this case it is much faster to click a button than to cut and stick pictures. Another example would be when writing a school letter, the Headteacher would have to write 600 copies and then post them all. Explain that this would take a long time and copies could also get lost.

Ask the children if they can think of any other examples where using a computer might be a better option than physically creating something.

https://www.qr-code-generator.com/guides/how-to-create-a-qr-code/ **QR code generator**

HAMPTON VALE PRIMARY ACADEMY

Year 3

Strand 1: Digital Literacy

Area 1: Collecting and processing data **<u>Lesson 3 outcome:</u>** Pupils to create a tally chart and a pictogram and compare them.	4 lessons	**People in Computing:** **Lesson 3: Evaluating how we display data** **Retrieval: counting in 5's (for tally charts)** Give children a premade set of data relating to children's favourite colour Ask the children to make a tally chart displaying the data Then ask the children to create a pictogram displaying the data. (have QR codes for both different sites on the same slide so that children are able to progress at their own pace) https://www.meta-chart.com/tally#/your-charts Tally charts https://www.j2e.com/j2data/ Pictograms https://www.qr-code-generator.com/guides/how-to-create-a-qr-code/ QR code generator Ask the children, which graph is easier to use and interpret and to explain why. Explain that pictograms can be more helpful as they provide us with a clear visual representation. Tally charts are generally more useful when created by hand to quickly keep track of data.

HAMPTON VALE PRIMARY ACADEMY

Year 3		
Strand 1: Digital Literacy		
Area 1: Collecting and processing data **<u>Lesson 4 outcome:</u>**	4 lessons	**People in Computing:** **Lesson 4: Gathering data based on attributes** **Retrieval:** Explain that an attribute is a feature of an object and that all objects have attributes. Show example of items grouped by their colour and explain that colour is an attribute. Other attributes could include: number of wheels on a vehicle, shoe size. Show children two groups and ask them how they have been grouped based on their attributes. Children to create a pictogram based on the attributes. E.g. colour of pencils in a pot

HAMPTON VALE PRIMARY ACADEMY

Year 3

Strand 1: Digital Literacy

Area 2: Presenting data	3 lessons	**People in Computing:** **Lesson 5: Comparing people (attributes)** **Retrieval:** What is an attribute Explain that people have different attributes. Children to discuss different attributes. Allow children to create a pictogram collecting data about their peers physical attributes. **Lesson 6: Presenting data and considering data collection** Provide children with tally chart, ask them to create a block diagram relating to colours Explain that sometimes it is okay to share data and sometimes it is not. Provide examples of when it is not such as your password or house number to a stranger. Ask the children who would they tell if they were asked to share data that they did not want to. Ensure by the end all are aware that they can tell a trusted adult from home or at school or anyone else they trust. https://www.j2e.com/j2data/ to create basic data digrams https://www.qr-code-generator.com/guides/how-to-create-a-qr-code/ QR code generator to get children quickly logged onto websites when using ipads

HAMPTON VALE PRIMARY ACADEMY

Year 3		
Strand 2: Multimedia		
Area 1: 2D animation	6 lessons	**People in Computing: Walt. Disney (importance in animation)** **Lesson 1:** **Lesson 2:** **Lesson 3:** **Lesson 4:** **Lesson 5:** **Lesson 6:**

HAMPTON VALE PRIMARY ACADEMY

Year 3		
Strand 3: Computing		
Area 1: Kodu world creation	3 lessons	**People in Computing:** **Lesson 1:** **Lesson 2:** **Lesson 3:**

HAMPTON VALE PRIMARY ACADEMY

Year 3		
Strand 3: Computing		
Area 2: Kodu Basic coding	3 lessons	**People in Computing:** **Lesson 1:** **Lesson 2:** **Lesson 3:**

HAMPTON VALE PRIMARY ACADEMY

Hampton Vale
Primary Academy

Year 4
Curriculum

HAMPTON VALE PRIMARY ACADEMY

Year 4 (18 lessons)					
Digital Literacy		**Multimedia**		**Computer Science**	
Google sheets project	6 lessons	Creating a brochure relating to a school trip	6 lessons Canva Hubble	Block based coding Scratch	6 lessons

HAMPTON VALE PRIMARY ACADEMY

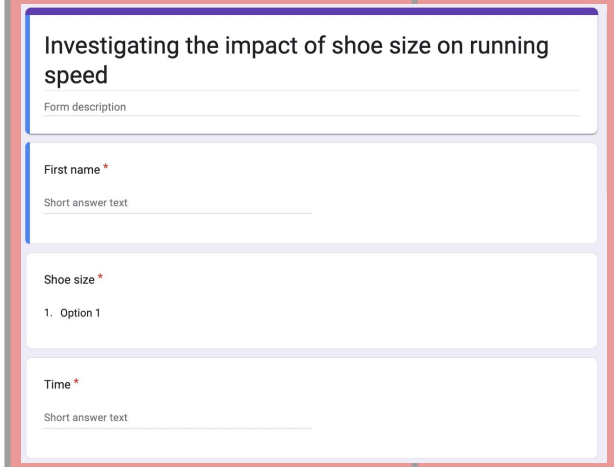
Year 4

Strand 1: Digital Literacy

Area 1: Google sheets project

Lesson 1 outcome:
Create a Google Form and collect data

6 lessons



People in Computing: Ada Lovelace - 'the first computer programmer'

Lesson 1: Collecting data with Google Forms

Introduce and explain what data is. Explain how we can collect data and who might collect data and why they would collect it. Explain that the pupils will be conducting and investigation to see if there is a correlation between shoe size and running speed.

Before children start collecting data, explain that we only need to be collecting relevant data. Ask children what data they might need to collect for our investigation and some pieces of data we might not need e.g. date of birth.

Tell the children that we will be collecting our data on Google Forms and then next week we will be inputting our data onto Google Sheets in the following weeks and implementing some formulas and creating graphs.

Children to login to ipads to create their Google Form. Model how to
- Log in to Google and create a new Form.
- How to change the name, headings and questions
- How to enter preview mode to enable children to fill out their forms
- How to view responses.

Once children have completed their forms, head to the playground and children to work in groups of 3.
- 1 child to run
- 1 child to time the child running
- 1 child with ipad to collect data

Children to swap over roles while on the playground to ensure they can all have a go.

At the end of the lesson, ask children, when would it be useful to collect data using Google forms in the wider world.

HAMPTON VALE PRIMARY ACADEMY

Year 4

Strand 1: Digital Literacy

Area 1: Google sheets project

Lesson 2 outcome:
Children to create and input data into a Google Sheet

Name	Shoe size	Time (seconds)
a	4	31
b	5	23
c	6.5	21
d	3	40
e	4.5	36
f	6	27
g	6	21
h	4.5	40
i	3	26
j	4	31

6 lessons

People in Computing: Ada Lovelace - 'the first computer programmer'

Lesson 2: Processing data with Google sheets

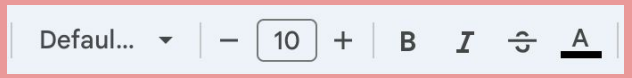
Children to login to Google drive and create a new Google Sheet. Explain the fundamentals of Google sheets.

- It is made up of cells
- Each cell has its own name based on its position on the sheet
- Each column has a letter and each row has a number

Quick activity: say some cell names e.g. A7, C6 and children to find that box on their spreadsheets.

Teacher to have prepared whole class data for children to use.
Model inputting heading and some data and leave an example on the large monitor for children to refer to.
Children to practice inputting data from the data sheet.

EXT: highlight these buttons to pupils:



Remind them that they have used all of these buttons when using Google slides and allow them some time to experiment with the different fonts, colours and font sizes to stylise their sheet.

Children to add a second sheet to their document, copy and paste their work into the new sheet and experiment with the different features highlighted above. Does not need to be modelled as using the styling features will be taught in detail in lesson 4

HAMPTON VALE PRIMARY ACADEMY

Year 4

Strand 1: Digital Literacy

Area 1: Google sheets project

Lesson 3 outcome:
Data to be reordered by using filters

Name	Shoe size	Time (secon
a	4	31
b	5	23
c	6.5	21
d	3	40
e	4.5	36
f	6	27
g	6	21
h	4.5	40
i	3	26
j	4	31

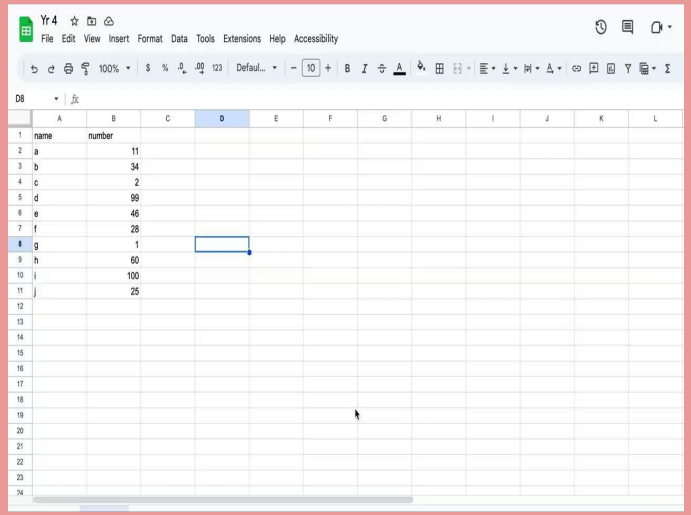
Name	Shoe size	Time (secon
c	6.5	21
g	6	21
b	5	23
i	3	26
f	6	27
a	4	31
j	4	31
e	4.5	36
d	3	40
h	4.5	40

6 lessons

People in Computing: Ada Lovelace - 'the first computer programmer'

Lesson 3: Organising data from A-Z

Video showing how to organise data from A-Z (including organising numbers)



Break each part of this skill down into smaller, more manageable steps to support.
Print off with screen shots of each step to support SEN/ LA

EXT: Model adding a new sheet. Provide children with a second set of data relating to the experiment and allow them to practice independently inputting their data and then using the 'Data' button to order their results.

HAMPTON VALE PRIMARY ACADEMY

Year 4

Strand 1: Digital Literacy

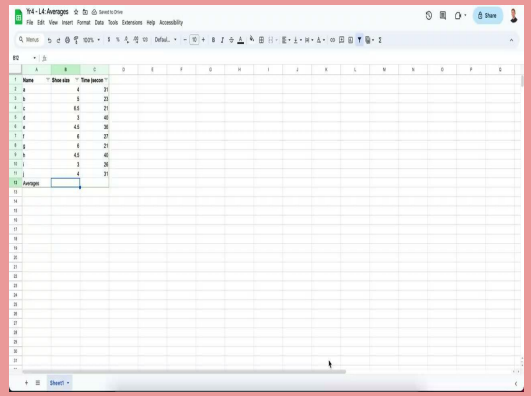
Area 1: Google sheets project

6 lessons

People in Computing: Ada Lovelace - 'the first computer programmer'

Lesson 4: Basic formula (finding the mean) and

Children to use =average to find the average shoe size and time to run in the set distance in the playground



Children to use the following buttons to stylise their work and explain that we do this to help make our spreadsheets easier to read and to highlight key information. Model how to change the colour of a cell and add borders with these buttons but allow children to add their own style to their work and experiment with other buttons

Lesson 4 outcome:
Children to find average shoe size and times and stylise their sheets

Name	Shoe size	Time (secon
a	4	31
b	5	23
c	6.5	21
d	3	40
e	4.5	36
f	6	27
g	6	21
h	4.5	40
i	3	26
j	4	31
Averages	4.65	29.6

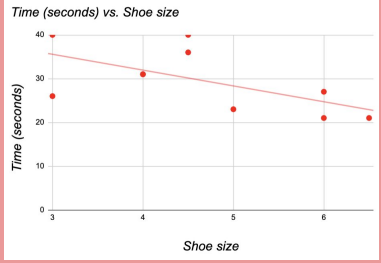
HAMPTON VALE PRIMARY ACADEMY

Year 4

Strand 1: Digital Literacy

Area 1: Google sheets project

Lesson 5 outcome:
Pupils to create a scatter graph to try and identify any trends/ correlations

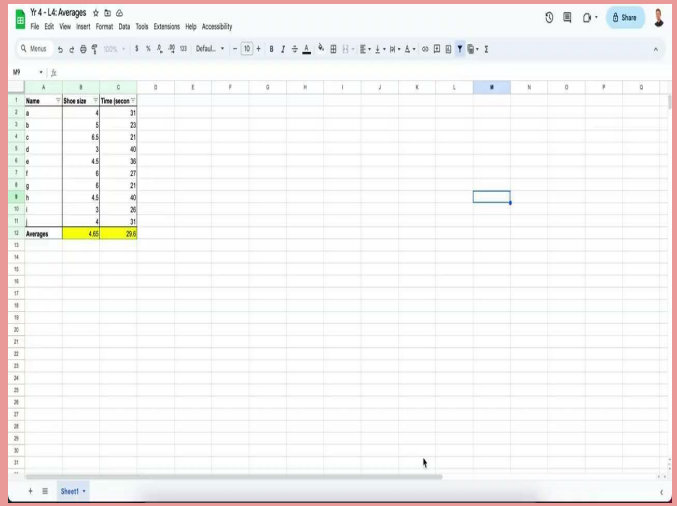


6 lessons

People in Computing: Ada Lovelace - 'the first computer programmer'

Lesson 5: Creating graphs in Google sheets

Children to create a scatter graph. Explain that we use graphs to help represent the findings of our data.



Explain that you can click any part of the graph and adjust it with the settings on the right.

HAMPTON VALE PRIMARY ACADEMY

Year 4

Strand 1: Digital Literacy

Area 1: Google sheets project **Lesson 6 outcome:** Pupils to take screenshots of their data and present it in Google Slides	6 lessons	**People in Computing: Ada Lovelace - 'the first computer programmer'** **Lesson 6: Presenting data in Google Slides** Children to use the graphs they have created to present the data in a brief powerpoint document. Children to link their scientific knowledge of factors that help plants to grow to explain their findings in the data. Children to link their Google sheets doc into Google slides.

HAMPTON VALE PRIMARY ACADEMY

Year 4		
Strand 2: Multimedia		
Area 1: Design a brochure about e-safety using Canva (online software)	6 lessons	**People in Computing:** **Lesson 1: What is a brochure? Show examples, create a list on the board of features of a brochure.** **Lesson 2: Introducing and exploring Canva** **Lesson 3: Designing and adding text** **Lesson 4: Designing and adding text** **Lesson 5: Editing and finalising designs (focus on presentation and layout)** **Lesson 6: Presenting Brochures (link to oracy) and evaluating work.**

HAMPTON VALE PRIMARY ACADEMY

Year 4		
Strand 3: Computing		
Area 1: Scratch project	6 lessons	**People in Computing:** **Lesson 1:** **Lesson 2:** **Lesson 3:** **Lesson 4:** **Lesson 5:** **Lesson 6:**

HAMPTON VALE PRIMARY ACADEMY

Hampton Vale
Primary Academy

Year 5 Curriculum

HAMPTON VALE PRIMARY ACADEMY

Year 5 (18 lessons)					
Digital Literacy		**Multimedia**		**Computer Science**	
Excel line graphs	6 lessons	Creating podcasts	6 lessons	Text based coding Building fundamental skills	6 lessons

HAMPTON VALE PRIMARY ACADEMY

Year 5

Strand 1: Digital Literacy

Area 1: Google Sheets project

Budgeting for the school disco

Lesson 1 outcome:
Pupils to set up Google sheets and input data (items, costs and quantity)

6 lessons

People in Computing: Jeff Bezos

Lesson 1: Introduce the task and inputting data

Explain to the children that they are going imagine that they are incharge of budgeting for the school disco. Teacher to create a sheet with items for the school disco e.g.sweets, chocolate, crisps, drinks etc.

Model inputting the headings for the table and then children to copy. Allow children to choose which items they want to put into the first column.

Children to also copy prices into the next column 3 and then choose how much they will need of each item in column 4. Tell the children not to worry about how much this will all come to as we will be using Google Sheets to calculate our costs.

EXT: if children have finished inputting their data, allow them some time to stylise their sheets, retrieving the skills from previous years lessons.

Item	Cost £	Quantity needed	Total cost
Dorritos	1	100	
Walkers crisps	0.5	100	
Harribo packs (small)	0.2	100	
Fruit shoots	0.5	100	
Capri sons	0.75	100	
Total			

Example sheet for costs/ items

Hampton Vale Primary Academy

School Disco order form 2023

Item	Cost
Water	£0.20
Fruit shoot	£0.35
Capri Sun	£0.50
Haribo Star mix	£0.20
Haribo Tangfastic	£0.20
Haribo Super mix	£0.20
Freddo bar	£0.15
Cadbury's Dairy Milk (small)	£0.40
Doritos	£0.60
Walkers crisps	£0.50
Pringles can (small)	£0.60

Budget:	£200

HAMPTON VALE PRIMARY ACADEMY

Year 5

Strand 1: Digital Literacy

Area 1: Google Sheets project

Budgeting for the school disco

Lesson 2 outcome:
Children to multiply costs and quantity cells

6 lessons

Item	Cost £	Quantity needed	Total cost £
Dorritos	1	100	100
Walkers crisps	0.5	100	50
Harribo packs (small)	0.2		0
Fruit shoots	0.5	100	50
Capri sons	0.75	100	75
Total			

People in Computing: Jeff Bezos

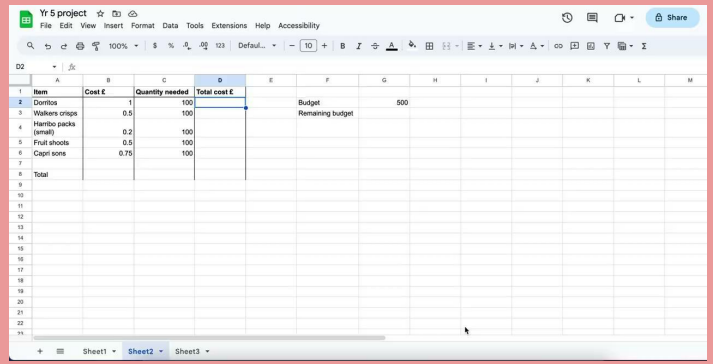
Lesson 2: Multiplying cells

Children to use = * to multiply cells together. E.g. multiplying cells B2 and C2 to find the total cost of buying multiple items. Example: =B2*C2.

Note - this will not work if the children have put the £ in cells they are trying to multiply.

Once pupils have done the first one, Google sheets will predict that they want to do the same in the following columns. The children can auto input the text by pressing 'tab' in each of the columns in their 'Total costs' Column'.

Show the children that we can double check the formula that is in each cell by clicking on it and looking at the bar at the top of the screen as the cell in the spreadsheet now only shows the answer of the formula it contains.



HAMPTON VALE PRIMARY ACADEMY

Year 5

Strand 1: Digital Literacy

Area 1: Google Sheets project

Budgeting for the school disco

Lesson 3 outcome:
Remaining budget cell to change colour depending on spending

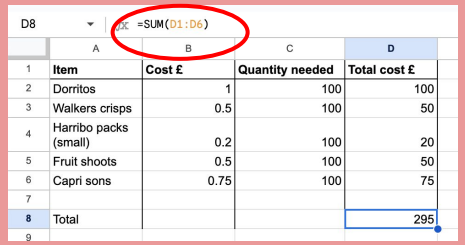
Budget	500
Remaining budget	205

Budget	500
Remaining budget	-1775

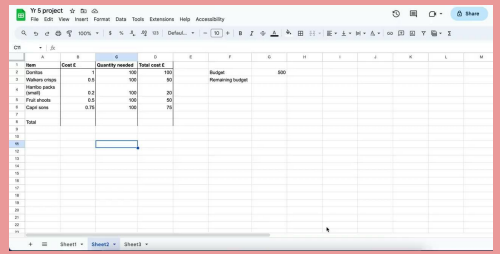
6 lessons

People in Computing: Jeff Bezos

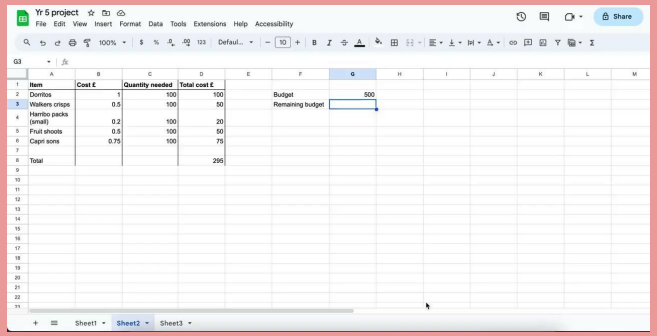
Lesson 3: Calculating costs and conditional formatting.
Introduce a budget for the class (between £300- £500) In year 4, the children learnt to use =SUM to find the total of an amount. Children to use =SUM to find out how much money they have spent.



	A	B	C	D
1	Item	Cost £	Quantity needed	Total cost £
2	Dorritos	1	100	100
3	Walkers crisps	0.5	100	50
4	Harribo packs (small)	0.2	100	20
5	Fruit shoots	0.5	100	50
6	Capri sons	0.75	100	75
7				
8	Total			295
9				



Children to then use the following formula to find the remaining budget
Note: G2 and D8 must correlate to cells for budget - total costs



See next slide for conditional formatting

HAMPTON VALE PRIMARY ACADEMY

Year 5

Strand 1: Digital Literacy

Area 1: Google Sheets project

Budgeting for the school disco

Lesson 3 outcome:
Remaining budget cell to change colour depending on spending

Budget	500
Remaining budget	205

Budget	500
Remaining budget	-1775

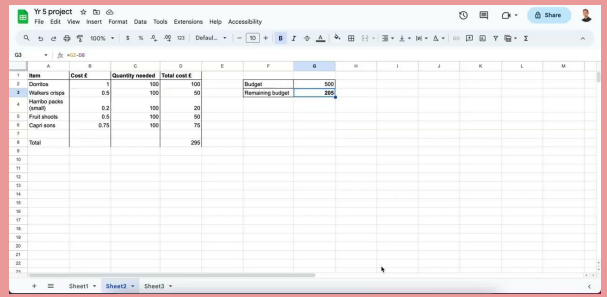
6 lessons

People in Computing: Jeff Bezos

Lesson 3: Calculating costs and conditional formatting.

Conditional formatting
Children to use conditional formatting to change the colour of the Remaining budget cell from green (if they remain within their budget) to red (if they exceed their budget).

Explain that conditional formatting is very similar to coding as we are creating an algorithm for the cell to follow. We are saying that if the cell has a value that is greater than or equal to 0, remain green. The second instruction for the cell is if the cell has a value that is less than 0, turn red.



Ask the children to check that their conditional formatting has work by changing the quantity of certain items so that their spending exceeds their budget. Once the children have seen that it works, change the values back so that they have not outspent their budget.

EXT: challenge pupils to have as close to an even amount of items as possible while using up as much of their budget as possible.

HAMPTON VALE PRIMARY ACADEMY

Year 5

Strand 1: Digital Literacy

Area 1: Google Sheets project

Budgeting for the school disco

Lesson 4 outcome:
To create a second sheet and add a markup and find profit per item sold

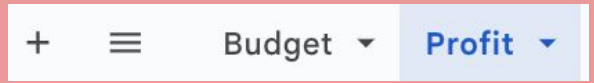
6 lessons

	A	B	C	D	E
	Item	**Cost £**	**Markup %**	**Selling cost**	**Profit per item**
	Dorritos	1	5%	1.05	0.05
	Walkers crisps	0.5	5%	0.525	0.025
	Harribo packs (small)	0.2	5%	0.21	0.01
	Fruit shoots	0.5	5%	0.525	0.025
	Capri sons	0.75	5%	0.7875	0.0375
	Total				

People in Computing: Jeff Bezos

Lesson 4: Calculating profits and using conditional formatting.

Explain that to make money for the school at our disco, we have to sell the items for more than we are buying them for. Model creating a second page and renaming the sheets to "Budget" and "Profit".



Tell the children our goal is to raise £200 for the school. We will start by adding 5% onto our costs to find our new selling costs and then working out how much p

Children to adjust prices as little as possible to reach the goal of £200 profit as if we increase the price too much, people won't be able to afford to buy items at the school disco.

Children to attempt to independently use conditional formatting to check if they have met their £200 profit

HAMPTON VALE PRIMARY ACADEMY

Year 5

Strand 1: Digital Literacy

Area 1: Google Sheets project Budgeting for the school disco	6 lessons	**People in Computing: Jeff Bezos** **Lesson 5: Creating pie charts for spending and for profits** Consider other graphs we could use, what the the pros and cons of using different charts? **Lesson 6:**

HAMPTON VALE PRIMARY ACADEMY

Year 5		
Strand 2: Multimedia		
Area 1: Creating podcasts about a school trip.	6 lessons	**People in Computing: Nikola Tesla - contributed to the creation of radio.** **Lesson 1: Talking about E-safety (police visit)** **Lesson 2:** **Lesson 3:** **Lesson 4:** **Lesson 5:** **Lesson 6:**

HAMPTON VALE PRIMARY ACADEMY

Year 5		
Strand 3: Computing		
Area 1:Text based coding (Building fundamental skills)	6 lessons	**People in Computing: Alan Turing (Summer) - Solved the enigma code, basis for first computer, early AI work** **Lesson 1:** **Lesson 2:** **Lesson 3:** **Lesson 4:** **Lesson 5:** **Lesson 6:**

HAMPTON VALE PRIMARY ACADEMY

Hampton Vale
Primary Academy

Year 6 Curriculum

HAMPTON VALE PRIMARY ACADEMY

Year 6 (18 lessons)					
Digital Literacy		**Multimedia**		**Computer Science**	
Collaborative Google Sheets project	6 lessons	Creating a music video	6 lessons	Text based coding Creating a ‘maze game’	6 lesson

HAMPTON VALE PRIMARY ACADEMY

Year 6

Strand 1: Digital Literacy

Area 1: Collaborative Google slides project **<u>Lesson 1 outcome:</u>** Children to…	6 lessons	**People in Computing: Mark Zuckerberg** **Lesson 1: Introduce roles and planning slides** Explain to the class that in many different professions and industries, working collaboratively is essential. Explain how the internet plays a vital role in helping to do this and that it can be achieved through sharing documents on Google Drive. Explain that over the next few weeks, pupils will be working collaboratively to create a Google slides document about e-safety. Very clearly explain the different roles each pupil within the team will play **Project manager:** - responsible for ensuring communication between editors and researchers. - Support with research and design were needed within the team. - Adding notes for changes onto slides to support team members **Researchers:** - Based on ipads in separate part of the hubble, away from creators. - Responsible for finding key information for different parts of the presentation on e-safety **Creators:** - Designing slides - Adding images, video - Links to other websites **Planning** - Children to plan out what different slides they will need as a team in preparation for the following lesson in which they will split up in the hubble and begin collaboratively planning their slides. **Practising working as a team** Researchers have two halves of a picture Creators have to draw the picture without looking at what the researchers have in front of them No PM for this task.

HAMPTON VALE PRIMARY ACADEMY

Year 6

Strand 1: Digital Literacy

Area 1: Collaborative Google slides project Presentation about staying safe online	6 lessons	**People in Computing: Mark Zuckerberg** **Lesson 2: Working collaboratively in the hubble** Children to be put into groups and all log on in the hubble. Explain that children will alternate roles each week to ensure everyone has a go at practicing the different skills required for working in a team. Team roles: - Project manager: Creating the document and sharing assist with gathering info and editing. (one PM each lesson to present work to class) - Researchers X2 - creators/ editors X2 Ensure pupils take their gmail login details to the hubble with them. Ask the Project manager of each group to create a Google Slides document in Google Drive Meanwhile, other children to be logging into the gmail accounts. Project manager to share file with all others in the group. Children to then all open the document and press the 'Star' button to enable them to find it quickly next time they log on.

HAMPTON VALE PRIMARY ACADEMY

Year 6

Strand 1: Digital Literacy

Area 1: Collaborative Google slides project Presentation about staying safe online	6 lessons	**People in Computing: Mark Zuckerberg** **Lesson 3: Using social media** Children to rotate roles in their groups. - Using certain sites at appropriate ages. - Posting and sharing appropriate content **Lesson 4: Youtube/ Netflix and other streaming platforms** - Watching appropriate content - Telling a trusted adultf something scares **Skills to teach** - Adding videos (provide children with links) - Adding audio - Adding photos stored on google drive - Links to different sections of our slides doc - Embedding links - Adding tables to powerpoint - Experimenting with slide ordering items on slide - Using word art

HAMPTON VALE PRIMARY ACADEMY

Year 6		
Strand 1: Digital Literacy		
Area 1: Collaborative Google slides project Presentation about staying safe online	6 lessons	**People in Computing: Mark Zuckerberg** **Lesson 5: General internet safety** - Passwords - Not clicking pop ups - Anti Virus software **Lesson 6: Cyber bullying** - Where to report it - What is it

HAMPTON VALE PRIMARY ACADEMY

Year 6		
New plan		
Area 1: Collaborative Google slides project Presentation about staying safe online	6 lessons	L1: Introduce roles and planning slides L2: Diving into groups/ roles - children to sit in separate areas of the hubble - Researchers to have ipad to give to editors + prevent copy and paste L3: Finishing slides, L4; creating second presentation about people in computing (link to previous people in computing) L5: FInishing slides L6: Presenting + link to oracy strands - Speaker notes

HAMPTON VALE PRIMARY ACADEMY

Year 6		
Strand 3: Computing		
Area 1: Text based coding (Creating a ‘maze game’)	6 lessons	**People in Computing: Elon Musk** **Lesson 1:** **Lesson 2:** **Lesson 3:** **Lesson 4:** **Lesson 5:** **Lesson 6:**

HAMPTON VALE PRIMARY ACADEMY

Year 6		
Strand 2: Multimedia		
Area 1: Creating a music video	6 lessons	**People in Computing:** **Lesson 1:** **Lesson 2:** **Lesson 3:** **Lesson 4:** **Lesson 5:** **Lesson 6:** **Music video for end of year performance to show at the end of the year**

HAMPTON VALE PRIMARY ACADEMY