

Steam Mills Whole School Theme Computing: Year A

Article 17: You have the right to get information that is important to your well-being, from radio, newspaper, books, computers and other sources. Adults should make sure that the information you are getting is not harmful, and help you find and understand the information you need.

	should make sure that the information you are getting is not harmful, and help you tind and understand the information you need.		
	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
	Theme: Explorers E-safety (4 sessions – linked to PSHE) PURPLE MASH – YEAR 1 UNIT (Year A) National Curriculum: 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.	Theme: Weather Year 1 Purple Mash – Maze Explorers National Curriculum: Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	Theme: Royal Forest of Dean Purple Mash Year 2 – Effective Searchers Unit - We are researchers and collectors (researching a topic/finding images) National Curriculum Recognise common uses of information technology beyond
Class 2 Year 1/2	Rainbow Skills Progression Identify things they see on screen Remember and recall information they have seen on screen Recognise ICT around them Explore information from various ICT sources Know that information comes in different forms Find information on the internet Use the space bar	 Rainbow Skills Progression Enjoy simple computer games Play computer games Recognise things around them which respond to signals and instructions Explain what has happened when using ICT for control Predict what might happen when controlling 	 School Use technology safely and respectfully Rainbow Skills Progression Use names for ICT components – e.g. mouse Find information on the internet Recognise different ways of using ICT and decide which to use
	 YEAR 1 CODING LESSON PURPLE MASH	 Control an avatar in a game Digital literacy: I can recognise some ways in which the internet can be used to communicate using games. (PSHE Link). 	 Store documents into a folder and retrieve them Use clip art to add and resize a picture Use shortcuts to insert objects and delete them Make a simple slide show

devices; and that programs execute by following precise and unambiguous instructions (Year 2)

Rainbow Skills

- Use a mouse or key pad to make marks
- Write simple ideas and make lists
- Use names for ICT components e.g. mouse, keyboard
- Move objects around on a screen
- Repeat a series of actions for a purpose
- Recognise things around them which respond to signals and instructions
- Use the space bar
- Understand how to make something move
- Give a single instruction to make something happen
- Move and control a programmable toy

Digital Literacy:

- E-Safety (Mandatory) I can give examples of how I (might) use technology to communicate with people I know.
- I can explain how this could be either in real life or online. (PSHE Link)
- I can identify rules that help keep us safe and healthy in and beyond the home when using technology.
- I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).
- I can describe the people I can trust and can share this with; I can explain why I can trust them.

Resources: Switched On Computing Class Pack 1 and 2.

Barefoot Computing (register online – free resources)

Twinkl

- I can explain how this could be either in real life or online. (PSHE Link)
- I can talk about how I can use the internet to find things out.
- I can identify devices I could use to access information on the internet.
- I can give simple examples of how to find information (e.g. search engine, voice activated searches)
- I can recognise that I can say 'no' /
 'please stop' / 'I'll tell' / 'I'll ask' to
 somebody who asks me to do
 something that makes me feel sad,
 embarrassed or upset. (PSHE Link)

Resources: Switched On Computing Class
Pack 1 and 2.
Barefoot Computing (register online – free
resources)

Twinkl

Creating Pictures (Year 2 Purple Mash) - based on the Forest of Dean (Do as a whole day block) National Curriculum

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Use technology safely and respectfully

Rainbow Skills

- Understand the importance of ICT
- Recognise different ways of using ICT and decide which to use
- Take digital photos
- Use shape tools to draw
- Recognise the importance of ICT in the real world
- Record using video and sound, and amend what they have recorded

Digital Literacy:

- I can describe rules about how to behave online and how I follow them – apply to using equipment.
- I can explain what bullying is and can describe how people may bully others – being nice about others, working together (PSHE Link)
- I know that work I create belongs to me.
- I can name my work so that others know it belongs to me.

Resources: Switched On Computing Class Pack 1 and 2.

Barefoot Computing (register online – free resources) Twinkl **Theme: Egypt** Theme: Vikings and Saxons Theme: Local Industry **Creating graphs through Word E-safety** (3 sessions – linked to PSHE) Purple Mash Y3 – Simulations **PURPLE MASH Y3 LESSONS** Purple Mash Y3 – Graphing – linked to science Purple Mash Y4 - Logo Y3 TOUCH TYPING UNIT PURPLE MASH **National Curriculum: National Curriculum:** alongside Select, use and combine a variety of Design, write and debug programs Purple Mash – Year 4 Writing for different software on a range of digital devices to that accomplish specific goals, design and create a range of programs, including controlling or simulating audiences systems and content to accomplish physical systems; solve problems by **National Curriculum:** given goals decomposing them into smaller Understand computer networks including the parts internet; how they can provide multiple IN SCIENCE UNIT PROPERTIES OF MATERIALS. Use sequence, selection, and services, such as the world wide web; and CHILDREN CAN RECORD RESULTS IN A repetition in programs; work with the opportunities they offer for SPREADSHEET AND CREATE GRAPHS FROM variables and various forms of input communication and collaboration. THIS DATA. and output Select, use and combine a variety of Rainbow Skills Use logical reasoning to explain Class 3 software on a range of digital devices to **Year 3/4** Recognise the importance of ICT in the how some simple algorithms work design and create a range of programs, and to detect and correct errors in real world systems and content to accomplish given Use ICT to organise and present their algorithms and programs aoals Use technology safely, respectfully and work responsibly; recognise Fill in a data collection sheet Rainbow Skills acceptable/unacceptable behaviour; Enter information to make a graph Understand how to make identify a range of ways to report concerns Recognise terms – e.g. cell, row, column something move about content and contact. Present information using a range of Give a single instruction to make software something happen THIS TERM WILL HAVE E-SAFETY THEN RECAP Use ICT across a range of subjects Understand the importance of SKILLS TO DO WITH TYPING, MICROSOFT clear and precise instructions WORD, USING SHORT CUTS WITH KEYBOARD Purple Mash Y4 - Effective Searching - Use algorithms to control THAT THE CHILDREN CAN THEN APPLY. Research into Theme – History movement Create and debug simple Rainbow Skills **National Curriculum:** programs **Word Processing** Control an avatar in a game

- Use ICT to organise and present their work
- Use a spell checker
- Create and position text, alter font and align text
- Change page layout
- Find and use stored information
- Use word count, bullets, numbering
- Order and organise text using a word processing program
- Format text towards a specific purpose (TITLE should be bolder etc than the document)

Communication

- Find information on the internet
- Understand different ways to send a message
- Recognise an email address
- Use @ in emails
- Send an email and reply to one
- Navigate a website by clicking on links
- Use the back button to return to a previous website page
- Understand the importance of email safety
- Keep their own personal information private
- Recognise immediately when online safety is compromised and know how to get support
- Understand and use networks
- Add an attachment to an email

Digital Literacy:

E-Safety (Mandatory)

 Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

Rainbow Skills

- Find information on the internet
- Navigate a website by clicking on links
- Use the back button to return to a previous website page
- Recognise immediately when online safety is compromised and know how to get support
- Understand and use networks
- Use a search program and understand how to rank information
- Know how to distinguish between good and bad information found on the internet

Digital Literacy:

Education for a Connected World: Online relationships (PSHE Link), Privacy and managing information online, Online bullying (PSHE Link).

Resources: Switched On Computing Class
Pack 3 and 4.

Barefoot Computing (register online – free
resources)
Twinkl

NOTE: Potential to use Data Logger in Science for Sound.

Use ICT to control events and sense physical data

- Make appropriate choices in simulations and models
- Program an external device
- Design and write simple programs
- Debug programs when they go wrong
- Use control commands to draw shapes

Digital Literacy:

Education for a connected World: Health, well-being and lifestyle, online relationships, Privacy and security (PSHE Link)

Resources: Switched On Computing
Class Pack 3 and 4.

Barefoot Computing (register online –
free resources)
Twinkl

NOTE: Potential to use Data Logger in Science for Plants to measure the best place for sunlight when) growing plants. Can also monitor light throughout an experiment.

Use ICT to control events and sense physical data

	Education for a connected World: Privacy and Security, Online reputation, Self-image and identity (PSHE Links) Copyright and ownership. Resources: Switched On Computing Class Pack 3 and 4. Barefoot Computing (register online – free resources) Twinkl		
	Theme: Space	Theme: South America	Theme: Mayans
	E-safety (at least 3 sessions – linked to PSHE) PURPLE MASH Year 5	Using Concept Maps (Year 5 Purple Mash)	Purple Mash – Y5 Coding then Game Creator (Year 5)
	Darlanhara a (Durranta Alarah Varranta)	National Curriculum:	
	Databases (Purple Mash Year 5)	Select, use and combine a variety of	National Curriculum:
	Networks (Purple Mash Year 6)	software on a range of digital devices to	Design, write and debug programs
	 Create a database 	design and create a range of programs,	that accomplish specific goals,
	Marks and Control of	systems and content to accomplish	including controlling or simulating
	National Curriculum:	given goals	physical systems; solve problems by
	 Use technology safely, respectfully and 	 Use search technologies effectively, 	decomposing them into smaller
	responsibly; recognise	appreciate how results are selected and	parts
Class 4	acceptable/unacceptable behaviour;	ranked, and be discerning in evaluating	Use sequence, selection, and
Year 5/6	identify a range of ways to report	digital content	repetition in programs; work with
	concerns about content and contact.	- · · · · · · · · · · · · · · · · · · ·	variables and various forms of input
	Understand computer networks including	Rainbow Skills	and output
	the internet; how they can provide	 Present information using a range of 	Use logical reasoning to explain
	multiple services, such as the world wide	software	how some simple algorithms work
	web; and the opportunities they offer for	Analyse a range of information using ICT	and to detect and correct errors in
	communication and collaboration	Capture sound, still and video images	algorithms and programs
	Use search technologies effectively, appreciate how results are selected and	using a range of hardware	D 1 1 2 2 W
	appreciate how results are selected and	Save documents and images into	Rainbow Skills
	ranked, and be discerning in evaluating	different formats for different purposes	 Design and write simple programs
	digital content	Organise a wide range of information	 Debug programs when they go
	Rainbow Skills	using ICT and save it in appropriate ways	wrong

- Recognise immediately when online safety is compromised and know how to get support
- Conduct a safe internet search and refine it for both speed and accuracy
- Know how to distinguish between good and bad information found on the internet
- Rank information found on the internet in order of importance and relevance
- Extrapolate the best information and summarise it using ICT
- Make a home page for a website
- Use information to hypothesise and speculate in a range of everyday situations
- Use a range of concepts and ideas when presenting across different subjects

Digital Literacy:

E-Safety (Mandatory)

Education for a connected World: Privacy and Security, Online reputation, Self-image and identity, Online Bullying (PSHE Links), Copyright and ownership

Resources: Switched On Computing Class
Pack 5 and 6.
Barefoot Computing (register online – free
resources)
Twinkl

- Use video chat in school (Zoom the presentation!)
- Add, amend and combine different forms of information in different ways
- Use a range of concepts and ideas when presenting across different subjects

Digital Literacy:

Education for a connected World: Health, well-being and lifestyle, online relationships. Privacy and security (PSHE Link)

Resources: Switched On Computing Class
Pack 5 and 6.

Barefoot Computing (register online – free
resources)
Twinkl

- Use control commands to draw shapes
- Work with variables and various forms of input and output
- Adapt and modify programs and add refinements
- Use simulations to explore patterns and relationships
- Make predictions about what might happen in a game program
- Understand that poor input equals unreliable results
- Use sequence, selection, and repetition in control

Digital Literacy

Education for a Connected World: Copyright and ownership, Online relationships (PSHE Link), Privacy and managing information online, identity and security.

Word Processing (Year 5 – 5.8 Unit Google sheets)

National Curriculum:

 Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish given goals

Rainbow Skills

- Use ICT in a range of subjects
- Use ICT to control events and sense physical data – for example in a weather program

 Understand the use of sensors to monitor and measure Use ICT to measure sound, light, temperature
Resources: Switched On Computing Class Pack 5 and 6. Barefoot Computing (register online – free resources) Twink

Steam Mills Whole School Computing: Year B

Article 17: You have the right to get information that is important to your well-being, from radio, newspaper, books, computers and other sources. Adults should make sure that the information you are getting is not harmful, and help you find and understand the information you need.

	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
	Theme: London E-safety (at least 2 sessions) Purple Mash Year 2 E-safety	Theme: Important People Purple Mash Year 1 – Spreadsheets Purple Mash Year 2 - Spreadsheets	Theme: Home and Away Purple Mash Year 1 Animated Stories
	National Curriculum: 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. Rainbow Skills	National Curriculum: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Recognise common uses of information technology beyond school Work towards collecting Data about bugs	 National Curriculum 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
Class 2 Year 1/2	 Identify things they see on screen Remember and recall information they have seen on screen Recognise ICT around them Explore information from various ICT sources Know that information comes in different forms Find information on the internet 	 (Science) and creating own spreadsheet Rainbow Skills Recognise things around them which respond to signals and instructions Repeat a series of actions for a purpose 	 Rainbow Skills Write simple ideas and make lists Record their own voice and that of others (to tell the story through the book or to remind them of story) Use shape tools to draw
	Purple Mash Year 1 – Lego Builders (Year 2 to explore Scratch OR Hour of Code for further challenge) National Curriculum: Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs (Junior scratch on the ipads/turtle logo/Hour of code at Y2 level)	 Know that information comes in different forms Understand the importance of ICT Recognise different ways of using ICT and decide which to use Fill in a data collection sheet Digital Literacy:	 Use the space bar Store documents into a folder and retrieve them Use clip art to add and resize a picture Use shortcuts to insert objects and delete them Make a simple slide show Recognise the importance of ICT in the real world

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions (Y2)
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs

Rainbow Skills

- Use a mouse or key pad to make marks
- Write simple ideas and make lists
- Use names for ICT components e.g. mouse, keyboard
- Move objects around on a screen
- Repeat a series of actions for a purpose
- Recognise things around them which respond to signals and instructions
- Use the space bar
- Understand how to make something move
- Give a single instruction to make something happen
- Move and control a programmable toy

Digital Literacy:

- E-Safety (Mandatory)
- I can explain how this could be either in real life or online. (PSHE Link)
- I can describe rules about how to behave online and how I follow them.
- I can identify rules that help keep us safe and healthy in and beyond the home when using technology.
- I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).

Resources: Switched On Computing Class Pack 1 and 2.

Barefoot Computing (register online – free resources)

Twinkl, iPads, Chrome Books, Bee Bots

- I can talk about how I can use the internet to find things out.
- I can identify devices I could use to access information on the internet.
- I can give simple examples of how to find information (e.g. search engine, voice activated searches)
- I can describe rules about how to behave online and how I follow them.

Resources: Switched On Computing Class
Pack 1 and 2.
Barefoot Computing (register online – free
resources)
Twinkl
Data Loggers

 Record using video and sound, and amend what they have recorded

Digital Literacy:

- I can describe rules about how to behave online and how I follow them.
- I can explain how this could be either in real life or online. (PSHE Link)
- I can give examples of how I (might) use technology to communicate with people I know – if we were to publish the book...
- I can describe the people I can trust and can share this with; I can explain why I can trust them. (PSHE Link)

Resources: Switched On Computing Class
Pack 1 and 2.
Barefoot Computing (register online – free
resources)

Twinkl, iPads, Chrome Books, ebook app, adobe sparx

Theme: Stone Age and Iron age

E-safety (at least 2 sessions – linked to PSHE)

Purple Mash Year 4 Online Safety

Purple Mash – Year 3 Touch typing alongside Purple Mash – Year 4 Writing for different audiences

National Curriculum:

- 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.
- Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish given goals
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

THIS TERM WILL HAVE E-SAFETY THEN RECAP SKILLS TO DO WITH TYPING, MICROSOFT WORD, USING SHORT CUTS WITH KEYBOARD THAT THE CHILDREN CAN THEN APPLY.

Rainbow Skills Word Processing

- Use ICT to organise and present their work
- Use a spell checker

Class 3

Year 3/4

- Create and position text, alter font and align text
- Change page layout

Theme: Extraordinary Earth

Purple Mash – Year 3 Branching

Databases

Purple Mash – Year 3 Presenting: Google Slides – could link to Science

National Curriculum:

 Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish given goals

Rainbow Skills

- Make a simple slide show Make a simple slide show
- Recognise the importance of ICT in the real world
- Record using video and sound, and amend what they have recorded
- Use ICT to organise and present their work
- Enter information to make a graph
- Find and use stored information
- Search databases
- Use ICT across a range of subjects
- Add animation to presentations
- Use ICT to control events and sense physical data – for example in a weather program

Digital Literacy:

Education for a connected World: Health, well-being and lifestyle, online security –

Theme: Romans Purple Mash – Year 4 Coding – link to the theme

National Curriculum:

- Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish given goals
- 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. (link to Romans built networks in very different ways!)

Rainbow Skills

- Understand how to make something move
- Give a single instruction to make something happen
- Understand the importance of clear and precise instructions

- Find and use stored information
- Use word count, bullets, numbering
- Order and organise text using a word processing program
- Format text towards a specific purpose (TITLE should be bolder etc than the document)

Communication

- Find information on the internet
- Understand different ways to send a message
- Recognise an email address
- Use @ in emails
- Send an email and reply to one
- Navigate a website by clicking on links
- Use the back button to return to a previous website page
- Understand the importance of email safety
- Keep their own personal information private
- Recognise immediately when online safety is compromised and know how to get support
- Understand and use networks
- Add an attachment to an email

Digital Literacy: E-Safety (Mandatory)

Education for a connected World: Privacy and Security, Online reputation, Self-image and identity (PSHE Links), online security – financial transactions, hoax emails

Resources: Switched On Computing Class Pack 3 and 4. Barefoot Computing (register online – free resources) Twinkl financial transactions, hoax emails, selfimage (PSHE Link)

Resources: Switched On Computing Class
Pack 3 and 4.
Barefoot Computing (register online – free
resources)
Twinkl

- Use algorithms to control movement
- Create and debug simple programs
- Control an avatar in a game
- Make appropriate choices in simulations and models
- Design and write simple programs
- Debug programs when they go wrong
- Use control commands to draw shapes
- Add animation to presentations

Digital Literacy:

Education for a Connected World: Online relationships (PSHE Link), Privacy and managing information online, security and identity (PSHE Link), Copyright and ownership

Resources: Switched On Computing Class Pack 3 and 4.

Barefoot Computing (register online – free resources)

Twinkl

	Theme: World War II	Theme: Rivers	Theme: Ancient Greece
Class 4 Year 5/6	E-safety (at least 2 sessions – linked to PSHE) Purple Mash Year 6 Online Safety Purple Mash Year 6 Blogging National Curriculum: 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 Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Rainbow Skills Recognise immediately when online safety is compromised and know how to get support Conduct a safe internet search and refine it for both speed and accuracy Know how to distinguish between good and bad information found on the internet	Purple Mash Year 5 and 6 Spreadsheets National Curriculum: Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish given goals Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Rainbow Skills Save documents and images into different formats for different purposes Organise a wide range of information using ICT and save it in appropriate ways Add, amend and combine different forms of information in different ways Use a range of concepts and ideas when presenting across different subjects Create databases with fields, rows, columns We are Scientists (presenting learning on light - use of data logger ~ progression from Class 3)	Purple Mash Year 6 Coding leading into Purple Mash Year 6 Text Adventures National Curriculum: 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 Rainbow Skills Program an external device Design and write simple programs Debug programs when they go wrong Work with variables and various forms of input and output Adapt and modify programs and add refinements Use simulations to explore patterns and relationships Make predictions about what might happen in a game program Understand that poor input equals unreliable results

- Rank information found on the internet in order of importance and relevance
- Extrapolate the best information and summarise it using ICT
- Use a range of concepts and ideas when presenting across different subjects
- Use and add menu options, including hyperlinks
- Add special effects to work

Digital Literacy:

E-Safety (Mandatory)

Education for a connected World: Privacy and Security, Online reputation, Self-image and identity, Online Bullying (PSHE Links)

Resources: Switched On Computing Class
Pack 5 and 6.
Barefoot Computing (register online – free
resources)
Twinkl

National Curriculum:

 Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content to accomplish given goals

Rainbow Skills

- Use ICT in a range of subjects
- Use ICT to control events and sense physical data – for example in a weather program
- Understand the use of sensors to monitor and measure
- Use ICT to measure sound, light, temperature

Digital Literacy:

Education for a connected World: Health, well-being and lifestyle, online relationships. Privacy and security (PSHE Link)

Resources: Twinkl
Barefoot Computing (register online – free resources)

- Use sequence, selection, and repetition in control
- Add special effects to work
- Know that devices can have more than one pre-determined action or result
- Explore what-if scenarios

Digital Literacy:

Education for a Connected World: Copyright and ownership, Online relationships (PSHE Link), Privacy and managing information online, identity and security.

Resources: Switched On Computing Class
Pack 5 and 6.
Barefoot Computing (register online – free
resources)
Twinkl