

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.

	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Class 2 Year 1/2	Theme: Explorers E-safety (at least 2 sessions – linked to PSHE) 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 Progression	Theme: Weather We are game testers (exploring how computer games work) 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 We are researchers and collectors (researching a topic/finding images) National Curriculum Recognise common uses of information technology beyond school Use technology safely and respectfully
	 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 Year 1s - We are treasure hunters (using programmable toys - Beebots leading to Scratch 	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 Control an avatar in a game	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 Store documents into a folder and retrieve them Use clip art to add and resize a picture
	Jnr) Year 2's -We are astronauts (Programming on screen Scratch Junior and Turtle Logo) National Curriculum: Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs (Junior scratch on the ipads or turtle logo at Y1/2 level)	 Digital literacy: I can recognise some ways in which the internet can be used to communicate using games. (PSHE Link). I can explain how this could be either in lls for Learning, Learning for Life 	 Use shortcuts to insert objects and delete them Make a simple slide show We are photographers (taking better photos) National Curriculum Use technology purposefully to

are implemented as programs on digital 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

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

- 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

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

Year 3's Word Processing

Year 4's – applying Word Processing skills We are communicators (Communicating
safely on the internet – link to digital literacy)
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
- Find and use stored information
- Use word count, bullets, numbering
- Order and organise text using a word

Theme: Vikings and Saxons Creating graphs through Word 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

IN SCIENCE UNIT PROPERTIES OF MATERIALS, CHILDREN CAN RECORD RESULTS IN A SPREADSHEET AND CREATE GRAPHS FROM THIS DATA.

Rainbow Skills

- Recognise the importance of ICT in the real world
- Use ICT to organise and present their work
- Fill in a data collection sheet
- Enter information to make a graph
- Recognise terms e.g. cell, row, column
- Present information using a range of software
- Use ICT across a range of subjects

Research into Theme – History National Curriculum:

 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

Theme: Local Industry We are software developers (programming Turtle Logo and Scratch) 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

- Understand how to make something move
- Give a single instruction to make something happen
- Understand the importance of clear and precise instructions
- Use algorithms to control movement
- Create and debug simple programs
- Control an avatar in a game
- 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

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) Copyright and ownership.

Resources: Switched On Computing Class Pack 3 and 4.

Barefoot Computing (register online – free resources)
Twinkl

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

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

Theme: Space

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

We are web developers

(Create a website linked to our learning/research about Space)

 Create an ebook/presentation on how website was created

National Curriculum:

- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
- 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

Class 4 Year 5/6

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

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
- Rank information found on the internet in

Theme: South America

We are film makers

(sharing experience, interviews and presentations – link to Amazon and deforestation research)

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

- Present information using a range of software
- Analyse a range of information using ICT
- Capture sound, still and video images using a range of hardware
- Save documents and images into different formats for different purposes
- Organise a wide range of information using ICT and save it in appropriate ways
- 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

Theme: Mayans

We are game developers

(Develop and interactive game linked to Mayans i.e. Pok-a-Tok) Scratch/Kodu

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

- Design and write simple programs
- Debug programs when they go wrong
- 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

- 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

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

- 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.

We are data collectors

(Temperatures for Properties – 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

- 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.

make sure that the information you are getting is not harmful, and help you find and understand the information you need.					
	<u>Autumn</u>	Spring	<u>Summer</u>		
Class 2 Year 1/2	Theme: London E-safety (at least 2 sessions) 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 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 Year 1s - We are treasure hunters (using programmable toys - Beebots leading to Scratch Jnr) Year 2's -We are astronauts (Programming on screen Scratch Junior and Turtle Logo) National Curriculum: Create and debug simple programs Use logical reasoning to predict the behaviour of simple programs (Junior scratch on the ipads or turtle logo at Y2 level)	Theme: Important People We are zoologists (collecting data about bugs – Science) National Curriculum: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Recognise common uses of information technology beyond school Rainbow Skills Recognise things around them which respond to signals and instructions Repeat a series of actions for a purpose 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: 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	Theme: Home and Away We are storytellers (illustrating an e-book) 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 Rainbow Skills 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 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 Record using video and sound, and amend what they have recorded		

- 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

- 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

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)

Year 3's Word Processing

Year 4's – applying Word Processing skills We are communicators (Communicating safely on the internet – link to digital literacy)

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

Class 3 Year 3/4

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 Processina

- 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

Theme: Extraordinary Earth We are meteorologists (presenting the

We are meteorologists (presenting the weather)
Or

We are Scientists (presenting learning on light - use of data logger) 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 – financial transactions, hoax emails, self-

Theme: Romans

We are programmers (Scratch: Questions and Quizzes) – about 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!)

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

- 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

image (PSHE Link)

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

- 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

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

We are bloggers

(sharing experiences, research and learning on WW2, cryptography – link to Enigma)

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

Class 4 Year 5/6

> 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 aet 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

Theme: Rivers

We are data organisers

(Using excel, collate data about rivers around the world forming graphs to compare ~ present to audience)

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)

Theme: Ancient Greece

We are authors

(Animated Stories/Scratch - link to Greek Myths and Legends)

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

- 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
- Use sequence, selection, and repetition in control

- 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)

- 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