



Robert Shaw Primary School Computing Curriculum

Curriculum Vision

At Robert Shaw, we believe in the importance of Computing to prepare children for a future in a digital world.

At Robert Shaw there will be a cross-curricular approach to the teaching of digital skills, enabling pupils to become confident and safe users of technology. All children will become digitally literate and use their skills to support their learning across the curriculum.

This is:

To enable children to become confident, effective users of technology.

To prepare children for a future in an environment that is shaped by technology.

To enable children to stay safe online.

Our parents and carers will have increased involvement with their child's learning journey through the use of platforms such as Showbie and Class Dojo and will be increasingly aware of the potential of digital technology.

Throughout the curriculum journey, from the start of EYFS to the end of year 6, children will learn about three strands of Computing:

CS = Computer science

Learning how digital technology works, problem solving skills and programming.

IT= Information technology and digital skills

Learning to use digital technology to create, manipulate and store projects. This has 4 key areas of:

Photography, drawing, sound and film.

Each term children will develop their digital skills and create a digital project outcome that can be presented and evaluated.

DL = Digital literacy

Learning to be safe, responsible users of digital technology. This is covered through 8 key areas of:

Self- image and identity

Online relationships

Online reputation

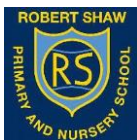
Online bullying

Managing online information

Health, wellbeing and lifestyle

Privacy and security

Copyright and ownership



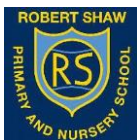
Robert Shaw Primary School Computing Curriculum

CS = Computer science

IT = Information technology and digital skills

DL = Digital literacy

	Autumn	Spring	Summer
Nursery	Holding a iPad Simple functions of an iPad	Beebots basics Create patterns using lines and shapes. Choose a colour from preset choices.	Hold the iPad correctly and securely. Take a photograph. Listen and respond to different sounds.
Reception	CS Holding a iPad Simple functions of an iPad IT Take a photograph using an iPad. Take a photograph to be printed and used as a writing prompt. DL Self-image and identity Online relationships Online reputation	CS Beebots basics IT Continue, copy and create patterns. Rotate shapes Listen to and talk about music. Explore music making. DL Online bullying Managing online information	CS Codespark app IT Use props to record role play and retelling of stories. Record a video clip using the camera or other app such as chatterpix kids. DL Health, wellbeing and lifestyle Privacy and security Copyright and ownership



Robert Shaw Primary School Computing Curriculum

Year 1	CS Technology around us (4 lessons- see planning doc) IT Firework digital art for book covers DL Self-image and identity Online relationships Online reputation	CS Rodocodo – year 1 – introduction, sequencing, debugging. IT Bean diary using photo and sound (voice recording) using Book creator or keynote. DL Online bullying Managing online information	CS Rodocodo- year 1- loops, functions and review. IT Video- retell of a fairy tale using puppets DL Health, wellbeing and lifestyle Privacy and security Copyright and ownership
Year 2	CS IT around us (4 lessons- see planning doc) IT Self-portrait digital art (pop art) Photography- Self portrait photos DL Self-image and identity Online relationships Online reputation	CS Rodocodo- year 2- sequencing, debugging, loops IT All about Malaysia App design and creation using interactive keynote template. DL Online bullying Managing online information	CS Rodocodo- functions, loops, debugging, review IT Great fire of London podcast interview recording. DL Health, wellbeing and lifestyle Privacy and security Copyright and ownership
Year 3	CS Connecting Computers(4 lessons- see planning doc) IT– Video- about the different cultures and clothing in the class. DL Self-image and identity Online relationships Online reputation	CS Rodocodo- Year 3- loops, functions, loops (patterns) IT– Infographic about saving the oceans using Keynote. Including own drawings and digital art. DL Online bullying Managing online information	CS Rodocodo- year 3- debugging, functions, loops IT Record the diary of a Viking settler, add sound effects. DL Health, wellbeing and lifestyle Privacy and security Copyright and ownership



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Year 4	CS The Internet (4 lessons- see planning doc) IT Digital art in the style of Frida Khalo (drawing) Photo journalism/ article using own photographs about Suffragettes playground march. DL Self-image and identity Online relationships Online reputation	CS Rodocodo-Year 4- Loops, functions, trickier loops IT Clips video- saving the rainforests (using AR) DL Online bullying Managing online information	CS Year 4- debugging, loops, selection (if), review IT Musical composition inspired by Greeks topic. DL Health, wellbeing and lifestyle Privacy and security Copyright and ownership
Year 5	CS Sharing Information (4 lessons- see planning doc) IT Photo editing project Landscape drawing of a place that is special to them. DL Self-image and identity Online relationships Online reputation	CS Roocodo- Year 5- debugging, functions & loops, nested loops. IT Podcast interview linked to Hamlet. DL Online bullying Managing online information	CS Rodocodo- Year 5- if statements, repeat loops, variables, review IT Create a life of an evacuee documentary video. DL Health, wellbeing and lifestyle Privacy and security Copyright and ownership
Year 6	CS Communication (4 lessons- see planning doc) IT – Record a video about themselves. Silhouette self portrait image published on Keynote with text added to describe themselves. DL Self-image and identity Online relationships Online reputation	CS Rodocodo- year 6- Functions & loops, repeat loops, variables. IT Record a podcast debate about sustainable tourism. DL Online bullying Managing online information	CS Rodocodo- Year 6- Selection, while loops, debugging. IT Islamic art using tessellation DL Health, wellbeing and lifestyle Privacy and security Copyright and ownership



Robert Shaw Primary School Computing Curriculum

Year 1- Computer science

Objectives:

NC Objectives:

Pupils should be taught to:

- recognise common uses of information technology beyond school
- 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

Key Factual Learning:

- ✓ To identify technology
- ✓ To identify a computer and its main parts
- ✓ Use everyday examples to describe step-by-step instructions
- ✓ Put instructions in order so they make sense
- ✓ Test and debug instructions and code
- ✓ Understand that a loop is used to repeat a command.

Suggested Activities:

Autumn

- Technology in our classroom (lesson 1) activities
- Using a keyboard (lesson 2)
- Using a computer responsibly

Spring

- Introduction
- Sequencing
- Debugging

Summer

- Loops
- Functions
- Review
- Tinker time/ application of skills on Codespark

Key Vocabulary:

Sequence, step, modify, command, bug, debug, iPad, keyboard, screen, technology.

Resources:

Teach computing lesson resources on the server OR register on their website: <https://teachcomputing.org/curriculum>

Rodocodo app



Robert Shaw Primary School Computing Curriculum

Year 1- Digital literacy

Objectives:

NC Objectives:

Pupils should be taught to:

- 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 Factual Learning:

- ✓ I know we can encounter things online that we like/ don't like and that are make believe.
- ✓ Know what passwords are used for.
- ✓ Recognise more detailed examples of private information (e.g. school name).
- ✓ Explain why they need to ask a trusted adult before sharing.
- ✓ I can explain why work I create using technology belongs to me.
- ✓ Recognise there are people online who could make someone feel upset.
- ✓ Give examples of when and how to speak to a trusted adult.
- ✓ I can describe what information I should not put online without asking a trusted adult first.
- ✓ Explain rules to keep myself safe when using technology in and out of home.
- ✓ Give examples of how I might use technology to communicate with others.
- ✓ Examples of when to ask for permission to do something.
- ✓ I can describe how to behave online in ways that do not upset others.

Suggested Activities:

Self- image and identity

Teacher led activity 1

Online relationships

Teacher led activity 1

Independent task activity 1

Online reputation

Teacher led activity 1

Independent task activity 1

Online bullying

Teacher led activity 1

Independent task activity 1

Managing online information

Teacher led activity 1

Independent task activity 1

Health, wellbeing and lifestyle

Teacher led activity 1

Independent task activity 1

Privacy and security

Teacher led activity 2

Independent task 2

Copyright and ownership

Teacher led activity 1

Key Vocabulary:

Password, private, trusted adult, belonging, safety

Resources

National online safety website

Resources for each lesson are on the server in computing → 22 -23 → online safety



Robert Shaw Primary School Computing Curriculum

Year 1- Information technology and digital skills

Objectives:

NC Objectives:

Pupils should be taught to:

- use technology purposefully to create, organise, store, manipulate and retrieve digital content

Key Factual Learning:

- ✓ Edit a photo using markup. For example, to add labels to an image.
- ✓ Use zoom and focus when taking a photo.
- ✓ Use fill tools
- ✓ Use colour selection
- ✓ Use different brushes
- ✓ Record sound.
- ✓ Use play, pause and record.
- ✓ Use the camera to focus when creating a clip.
- ✓ Choose a subject and create a short clip using the camera.
- ✓ Record a voiceover
- ✓ Insert photos in pages or keynote.
- ✓ Add titles and captions
- ✓ Create a simple pictogram.
- ✓ Retrieve work from a location (e.g. Showbie)

Suggested Activities:

Autumn – Digital art (drawing)

- Create a firework image for topic book front covers

Spring – Photography and sound

- Create a digital bean diary using keynote or book creator

Summer- video

- Recording retells of Fairy tales using puppets, pictures and drama

Other opportunities:

- Labelling parts of the body using mark up tools
- Recording science investigation results in a pictogram
- Voice notes to explain ideas
- Seasonal photo walks
- Video a weather report
- Creating a presentation about different oceans or continents.

Key Vocabulary:

Edit, zoom, focus, fill, colour, record, play, clip, title.

Key resources:

Everyone can create teacher guide (book on iPad)

Everyone can create guides: Drawing, Photo, Music and Video (books on iPad)

Apple teacher learning centre : <https://appleteacher.apple.com/#/home/resources>



Robert Shaw Primary School Computing Curriculum

Year 2- Computer science

Objectives:

NC Objectives:

Pupils should be taught to:

- recognise common uses of information technology beyond school
- 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

Key Factual Learning:

- ✓ To recognise the uses and features of information technology
- ✓ To identify information technology beyond school
- ✓ To explain how information technology helps us
- ✓ To recognise that choices are made when using information technology
- ✓ Deconstruct a large problem or task into smaller steps
- ✓ Create a series of steps to solve a problem or complete a task
- ✓ Name functions
- ✓ Test and debug code

Suggested Activities:

Autumn

- What is IT lesson
- IT in the World lesson
- The benefits of IT lesson
- Using IT in different ways lesson

Spring

- Sequencing
- Debugging
- Loops

Summer

- Functions
- Loops
- Debugging
- review
- Application of skills on Tynker (space cadet)

Key Vocabulary:

Function, toggle, command, technology, debug, test

Resources:

Teach computing lesson resources on the server OR register on their website: <https://teachcomputing.org/curriculum>
Rodocodo app and teacher login on web browser.



Robert Shaw Primary School Computing Curriculum

Year 2- Digital literacy

Objectives:

NC Objectives:

Pupils should be taught to:

- 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 Factual Learning:

- ✓ Explain rules for keeping personal information private.
- ✓ Explain how some people may have devices at home that connect to the internet.
- ✓ Use key words in search engines.
- ✓ Navigate a simple webpage.
- ✓ Explain the difference between things that are true or made up.
- ✓ Recognise that content on the internet may belong to other people.
- ✓ Explain how people may act and look differently online and offline.
- ✓ Know some online issues that could make someone feel sad and how they could get help.
- ✓ Explain how to use technology safely in different environments (e.g. at home, at school).
- ✓ Give examples of how someone might use technology to communicate with someone they don't know offline and why this might be risky.
- ✓ Explain who should be asked before sharing things about themselves and others.
- ✓ Explain why they have a right to say no, and who will help them if they are worried.
- ✓ Explain what bullying is and how it makes someone feel.

Suggested Activities:

Self-image and identity

Teacher led activity 3
Independent activity 1

Online relationships

Teacher led activity 4
Independent activity 2

Online reputation

Teacher led activity 2
Independent activity 2

Online bullying

Teacher led activity 2
Independent activity 2

Managing online information

Teacher led activity 2
Independent activity 2

Health, wellbeing and lifestyle

Teacher led activity 2
Independent activity 2

Privacy and security

Teacher led activity 1
Independent activity 1

Copyright and ownership

Teacher led activity 2
Independent activity 2

Key Vocabulary:

Connect, internet, personal, webpage, search engine, communicate, bullying

Resources:

National online safety website

Resources for each lesson are on the server in computing → 22 -23 → online safety



Robert Shaw Primary School Computing Curriculum

Year 2- Information technology and digital skills

Objectives:

NC Objectives:

Pupils should be taught to:

- use technology purposefully to create, organise, store, manipulate and retrieve digital content

Key Factual Learning:

- ✓ Create a photo album to organize and save work.
- ✓ Use different perspectives when taking photos.
- ✓ Take self-portrait and portrait photos.

- ✓ Use tracing to create a digital piece of art
- ✓ Create word art
- ✓ Create digital Self portraits

- ✓ Create a sound composition

- ✓ Write a script for a short clip.
- ✓ Add simple effects with support.
- ✓ Begin to use green screen techniques with support
- ✓ Add a title.

- ✓ Make digital books with own photos and videos.
- ✓ Use photos and videos. Add titles and captions to slides.
- ✓ Type numbers into a table

Suggested Activities:

Autumn – photography and digital art

- Take self portrait photos and edit in the style of different artists
- Create digital word art and images to represent ourselves and values.

Spring – video

- Create an app about Malaysia. Use keynote template.

Summer – Sound

- Record an interview with someone who escaped from the Great Fire of London

Other opportunities:

- Recording voice notes to show understanding
- Creating videos using puppets to retell stories
- Record results of science investigations on numbers
- Create a presentation about Nottingham
- Publish stories using pages or book creator
- Edit photos to look like they are from the past

Key Vocabulary:

Album, perspectives, self-portrait, tracing, word art, compose, script, effects, green screen, title, caption.

Key resources:

Everyone can create teacher guide (book on iPad)

Everyone can create guides: Drawing, Photo, Music and Video (books on iPad)

Apple teacher learning centre : <https://appleteacher.apple.com/#/home/resources>



Robert Shaw Primary School Computing Curriculum

Year 3- Computer science

Objectives:

NC Objectives:

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

Key Factual Learning:

- ✓ To explain how digital devices function
- ✓ To identify input and output devices
- ✓ To recognise how digital devices can change the way we work
- ✓ To explain how a computer network can be used to share information
- ✓ Identify a loop in code
- ✓ Deconstruct a large problem or task into smaller steps
- ✓ Create a sequence of commands and repeat that sequence using a loop
- ✓ Test and debug instructions and code

Suggested Activities:

Autumn

- How does a digital device work lesson
- What parts make up a digital device lesson
- How do digital devices help us lesson
- How am I connected lesson

Spring

- Mastering basic loops
- Using functions
- Loops- spotting patterns

Summer

- Debugging- fixing bugs
- Functions- creating functions
- Loops- trickier patterns
- Review
- Application of skills on Tynker (dragon spells)

Key Vocabulary:

Review: command, function, bug, debug

New: loop, digital device, internet, network, input, output

Resources:

Teach computing lesson resources on the server OR register on their website: <https://teachcomputing.org/curriculum>

Rodocodo app and teacher web browser login



Robert Shaw Primary School Computing Curriculum

Year 3 - Digital literacy

Objectives:

NC Objectives:

Pupils should be taught to:

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

Key Factual Learning:

- ✓ I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why
- ✓ I can explain what it means to 'know someone' online and why this might be different from knowing someone offline.
- ✓ I can explain what is meant by 'trusting someone' online, why this is different to 'liking someone' online, and why it is important to be careful about who to trust online including what information and content they are trusted with.
- ✓ I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried.
- ✓ I can give example of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing anything personal
- ✓ I can describe appropriate ways to behave towards other people online and why this is important.
- ✓ I can give examples of how bullying behaviour could appear online and how someone can get support.
- ✓ I can explain the difference between a belief, an opinion and a fact and give examples of how and where they might be shared online.
- ✓ I can explain that not all opinions shared may be accepted as true or fair by others (E.g. monsters under the bed)
- ✓ I can explain why spending too much time using technology can sometimes have a negative impact on anyone.
- ✓ I can explain why some online activities have age restrictions
- ✓ I can describe simple strategies for creating and keeping passwords private.
- ✓ I can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.

Suggested Activities:

Self-image and identity

Independent activity 2 (could use the slides to support the teaching of this)

Online relationships

Teacher led activity 2

Online reputation

Independent activity 1

Online bullying

Independent activity 2

Managing online information

Teacher led activity 2

Health, wellbeing and lifestyle

Interactive lesson plans activity 1

Privacy and security

Interactive lesson plans activity 1

Copyright and ownership

Interactive lesson plans activity 1

Key Vocabulary:

Avatar, trust, like, appropriate, bullying, opinions, facts, age restriction, passwords, permission



Robert Shaw Primary School Computing Curriculum

Year 3 – Information technology and digital skills

Objectives:

NC Objectives:

Pupils should be taught to:

- 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

Key Factual Learning:

- ✓ Take photos to use in tutorials/ instructions
- ✓ Editing- crop, rotate, straighten.
- ✓ Light and dark (start to explore lighting and different light sources- e.g sun, classroom lights, shade).
- ✓ Design icons and logos
- ✓ Create digital art in a cartoon style.
- ✓ Create and edit a sound composition.
- ✓ Trim and crop films.
- ✓ Add titles and transitions.
- ✓ Make digital books and/or slideshows.
- ✓ Create a table to present data

Suggested Activities:

Autumn – video

- Create a film about the different cultures in the class and how these affect different ways of dressing

Spring – drawing and data

- Design a logo for a reusable bag
- Create an infographic about saving the oceans including digital art.

Summer –sound and photo

- Record excerpts from a diary of a Viking settler (written by the children in English). Add sound effects.
- Science investigation into light and shadow- present in keynote. Show results in a table.

Other opportunities:

- Create a class recipe book for different dishes from around the World.
- Use numbers to create a table in maths to represent data collected. E.g favourite food or sport. Then use this to answer questions and reason about the data.

Key Vocabulary:

Crop, rotate, straighten, light, dark, icon, logo, trim,

Key resources:

Everyone can create teacher guide (book on iPad)

Everyone can create guides: Drawing, Photo, Music and Video (books on iPad)

Apple teacher learning centre : <https://appleteacher.apple.com/#/home/resources>



Robert Shaw Primary School Computing Curriculum

Year 4 – Computer science

Objectives:

NC Objectives:

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

Key Factual Learning:

- ✓ To describe how networks physically connect to other networks
- ✓ To recognise how networked devices make up the internet
- ✓ To outline how websites can be shared via the World Wide Web (WWW)
- ✓ To describe how content can be added and accessed on the World Wide Web (WWW)
- ✓ Associate a variable name with a given value
- ✓ Change the value assigned to a variable
- ✓ Understand the different Swift types you can assign to a variable, including true/false (Booleans), numbers (Ints), words (Strings), colours (colour literals) and images (image literals)
- ✓ Test and debug instructions and code

Suggested Activities:

Autumn

- Connecting networks lesson
- What is the internet made of lesson
- Sharing information lesson
- What is a website lesson – Will require some editing

Spring

- Loops- spotting patterns
- Functions- creating functions
- Loops- trickier loops

Summer

- Debugging
- Loops- nested loops
- Selection- if statements
- Review

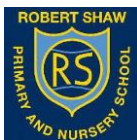
Key Vocabulary:

Variable, data, Boolean, network, world wide web, test, debug.

Resources:

Teach computing lesson resources on the server OR register on their website: <https://teachcomputing.org/curriculum>

Rodocodo on iPads, teacher login on web browser for resources



Robert Shaw Primary School Computing Curriculum

Year 4 – Digital literacy

Objectives:

NC Objectives:

Pupils should be taught to:

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

Key Factual Learning:

- ✓ I can explain how my online identity can be different to my offline identity.
- ✓ I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.
- ✓ I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this
- ✓ I can describe strategies for safe and fun experiences in a range of online social environments e.g. livestreaming, gaming platforms.
- ✓ I can give examples of how to be respectful to others online and how to recognise healthy and unhealthy behaviours.
- ✓ I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts, feelings and beliefs.
- ✓ I can describe how to find out information about others by searching online.
- ✓ I can explain ways that some of the information about anyone online could have been created, copied or shared by others
- ✓ I can recognise when someone is upset, hurt or angry online.
- ✓ I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affects how others feel about them (their reputation).
- ✓ I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure.
- ✓ When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to use it.

Suggested Activities:

Self-image and identity

Teacher led activity 1

Online relationships

Teacher led activity 3

Online reputation

Teacher led activity 1

Online bullying

Teacher led activity 1

Managing online information

Teacher led activity 4

Independent activity 1

Health, wellbeing and lifestyle

Teacher led activity 1

Privacy and security

Teacher led activity 1

Copyright and ownership

Teacher led activity 2

Key Vocabulary:

Identity, perceive, interact, respectful, content, reputation, consent

National Online safety website has all resources when logged in.

Resources also saved on the server in the Computing folder.



Robert Shaw Primary School Computing Curriculum

Year 4 – Information technology and digital skills

Objectives:

NC Objectives:

Pupils should be taught to:

- 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

Key Factual Learning:

- ✓ Photo journalism- use photography to tell a story
- ✓ Using different filters and camera angles (including zoom)
- ✓ Edit a photo, changing the colours to look like it is from the past.
- ✓ Sketching
- ✓ Portraits
- ✓ Use software to create and edit a sound composition for a specific purpose.
- ✓ Add sound effects to a short film/ video/animation.
- ✓ Add subtitles to a video clip.
- ✓ Use pages and/or keynote to present photos and text.
- ✓ Use appropriate text formatting.
- ✓ Make charts and graphs from tables in numbers.

Suggested Activities:

Autumn – drawing and photography

- Create artwork in the style of Frida Kahlo
- Photograph each other with their suffragette march signs etc. Then edit this photo to look like it was taken in the past. Use it in a report about the event, using a pages template to create this.

Spring – video

- Create a video about deforestation using AR (WWF app)

Summer –sound

- Create a musical composition linked to the topic of The Greeks
- Present science/ maths investigation in a table and chart using numbers

Other opportunities

- Creating graphs in maths using a table of data.
- Using AR to explore rainforests
- Using maps to explore different locations
- Videos and posters to show learning from a topic
- Tourist video explaining the history of Greece.

Key Vocabulary:

Filters, camera angles, sketching, subtitles, formatting

Key resources:

Everyone can create teacher guide (book on iPad)

Everyone can create guides: Drawing, Photo, Music and Video (books on iPad)

Apple teacher learning centre : <https://appleteacher.apple.com/#/home/resources>



Robert Shaw Primary School Computing Curriculum

Year 5 – computer science

Objectives:

NC Objectives:

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

Key Factual Learning:

- ✓ To explain that computers can be connected together to form systems
- ✓ To recognise the role of computer systems in our lives
- ✓ To recognise how information is transferred over the internet
- ✓ To explain how sharing information online lets people in different places work together
- ✓ Describe what conditionals are
- ✓ Demonstrate the use of conditions in everyday situations
- ✓ Code using conditionals

Suggested Activities:

Autumn

- Systems lesson
- Computer systems and us lesson
- Transferring information lesson
- Working together lesson (use iPads to create/ edit shared documents in a group)

Spring

- Debugging
- Functions & Loops custom solutions
- Loops- nested loops

Summer

- Selection- If statements
- Loops- repeat until
- Variables- tracking changes
- Review

Key Vocabulary:

Computer systems, sharing information. Conditionals, debug, Boolean, condition, control flow, else/if statement, execute, if statements.

Resources:

Teach computing lesson resources on the server OR register on their website: <https://teachcomputing.org/curriculum>
Rodocodo app on iPads. Teacher login on website to access resources and admin.



Robert Shaw Primary School Computing Curriculum

Year 5 – Digital literacy

Objectives:

NC Objectives:

Pupils should be taught to:

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

Key Factual Learning:

- ✓ I can demonstrate how to make responsible choices about having an online identity, depending on context.
- ✓ I can explain that there are some people I can communicate with online who may want to do me or my friends harm/ I can recognise this is not my/our fault.
- ✓ I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups)
- ✓ I can demonstrate how to support others (including those who are having difficulties) online.
- ✓ I can describe ways that information about anyone online can be used by others to make judgements about an individual and why these may be incorrect.
- ✓ I can describe how what one person perceives as playful joking and teasing (including banter) might be experienced by others as bullying
- ✓ I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.
- ✓ I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.
- ✓ I can identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads.
- ✓ I can explain what a strong password is and demonstrate how to create one.
- ✓ I can assess and justify when it is acceptable to use the work of others.

Suggested Activities:

Self-image and identity

Teacher led activity 2

Online relationships

Teacher led activity 1

Online reputation

Teacher led activity 2

Online bullying

Managing online information

Independent activity 2

Health, wellbeing and lifestyle

Independent activity 1

Privacy and security

Teacher led activity 2

Copyright and ownership

Independent activity 2

Key Vocabulary:

Responsible, online communities, positive contributions, judgement, trustworthy, validity, reliability, evidence, ads, pop-ups.



Robert Shaw Primary School Computing Curriculum

Year 5 – Information technology and digital skills

Objectives:

NC Objectives:

Pupils should be taught to:

- 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

Key Factual Learning:

- ✓ Adjust focus and exposure
- ✓ Using different angles
- ✓ Editing- enhancing using contrast, saturation.

- ✓ Use perspective in landscape drawings.

- ✓ Use software to create and edit an interview recording.
- ✓ Use live loops and layers to create a chosen effect.

- ✓ Improve green screen clips using crop and resize.
- ✓ Use editing tools on clips.

- ✓ Type articles in pages using own photographs.
- ✓ Use hyperlinked slides in keynote.
- ✓ Use spreadsheets to collect and present data in numbers

Suggested Activities:

Autumn – photo and drawing

- Create a digital drawing of a landscape that represents their place in the World- a special place, country, location. Use the internet to support them with ideas.

- Photo editing project resulting in a silhouette portrait. Add to a keynote with writing about themselves added. Add animations/ linked slides and publish.

Spring- sound

- Create a podcast interview as characters from Hamlet. Edit and add background music created on garageband.

Summer – video

- Create information videos in the style of 1940s information films, e.g. how to put on a gas mask, what to do during an air-raid

Other opportunities:

- Collect and present scientific investigations in science using charts and tables.

Key Vocabulary:

Focus, exposure, contrast, perspective, live loops, green screen, hyperlink, numbers

Key resources:

Everyone can create teacher guide (book on iPad)

Everyone can create guides: Drawing, Photo, Music and Video (books on iPad)

Apple teacher learning centre : <https://appleteacher.apple.com/#/home/resources>



Robert Shaw Primary School Computing Curriculum

Year 6 – Computer science

Objectives:

NC Objectives:

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

Key Factual Learning:

- ✓ To identify how to use a search engine
- ✓ To describe how search engines select results
- ✓ To explain how search results are ranked
- ✓ To recognise why the order of results is important, and to whom
- ✓ Describe what types and initialisation are
- ✓ Demonstrate the use of types and initialisation in an everyday situation
- ✓ Code using types and initialisation

Suggested Activities:

Autumn

- Searching the web lesson
- Selecting search results lesson
- How search results are ranked lesson
- How are searches influenced lesson

Spring

- Functions & loops- solutions
- Loops- repeat until
- Variables- tracking changes

Summer

- Selection- If else
- Loops- while
- Debugging
- Apply skills on a Scratch project

Key Vocabulary:

Boolean, dot notation, initialisation, instance, integer, method, property, type

Resources:

Teach computing lesson resources on the server OR register on their website: <https://teachcomputing.org/curriculum>

Rodocodo app on I pads. Teacher login on website for resources and admin.



Robert Shaw Primary School Computing Curriculum

Year 6 – Digital literacy

Objectives:

NC Objectives:

Pupils should be taught to:

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

Key Factual Learning:

- ✓ I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.
- ✓ I can explain the importance of asking until I get the help needed.
- ✓ I can explain how sharing something online may have an impact positively or negatively.
- ✓ I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not.
- ✓ I can describe how things shared privately online can have unintended consequences for others. E.g. Screen-grabs
- ✓ I can explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this.
- ✓ I can describe how to capture bullying content as evidence (e.g. Screen-grab, URL, profile) to share with others who can help me.
- ✓ I can explain how someone would report online bullying in different contexts.
- ✓ I can explain how and why some people may present opinions as facts; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal.
- ✓ I can define the terms 'influence', 'manipulation', and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news.)
- ✓ I can describe simple ways to increase privacy on apps and services that provide privacy settings.

Suggested Activities:

Self-image and identity

Teacher led activity 3

Online relationships

Independent activity 3 (with some input/ explanation).

Online reputation

Teacher led activity 3

Online bullying

Teacher led activity 2

Managing online information

Teacher led activity 3

Health, wellbeing and lifestyle

Teacher led activity 2

Privacy and security

Independent activity 1

Copyright and ownership

Teacher led activity 1

Key Vocabulary:

Content, critically evaluate, consequences, capture evidence, opinions as facts, influence, manipulation, persuasion, privacy, apps



Robert Shaw Primary School Computing Curriculum

Year 6- Information technology and digital skills

Objectives:

NC Objectives:

Pupils should be taught to:

- 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

Key Factual Learning:

- ✓ Create silhouette portraits using collage skills
- ✓ Use animation in keynote to create a GIF
- ✓ Use colour, shapes and lines to create patterns.
- ✓ Select appropriate software to create, edit and improve a sound composition for a specific purpose.
- ✓ Use a range of camera angles: wide, close up, pan, zoom.
- ✓ Consider light, shadow
- ✓ Add animated subtitles to a film
- ✓ Type articles in pages using own photographs and using different layouts.
- ✓ Use slide animation in keynote.
- ✓ Use formulas to present data in numbers.

Suggested Activities:

Autumn- video and photo

- Create a short film about themselves.
- Create a silhouette portrait, presented in keynote as an animated GIF.

Spring – sound

- Record, edit and publish a podcast debate about sustainable tourism.

Summer – drawing and data

- Create Islamic art using tessellation
- Use numbers to collect, analyse, evaluate and present data (link to science or maths).

Other opportunities:

- Representing data in charts, tables and graphs in maths and science lessons
- Using AR apps to learn about scientific concepts
- Creating posters and infographics to share learning
- Presenting to others using keynote

Key Vocabulary:

Silhouette, animation, tessellation, compose, camera angles, animated subtitles, layout, formulas.

Key resources:

Everyone can create teacher guide (book on iPad)

Everyone can create guides: Drawing, Photo, Music and Video (books on iPad)

Apple teacher learning centre : <https://appleteacher.apple.com/#/home/resources>

Formulas in Numbers: <https://appleteacher.apple.com/#/asset/part/T022019A>

Sketchnotes page 21 onwards in Everyone can create drawing



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