

Year 2 — Information technology around us

Computing systems and networks

Prior learning retrieved

Year 1 computing, device handling and digital fluency

New knowledge / skill

recognise the uses and features of information technology; identify the uses of information technology in the school; identify information technology beyond school; explain how information technology helps us; explain how to use information technology safely; recognise that choices are made when using information technology

Why this? Why now?

Learners will develop their understanding of what information technology (IT) is and will begin to identify examples. They will discuss where they have seen IT in school and beyond, in settings such as...

Careers link

IT technician; network engineer; systems engineer

SMSC link

Social/moral: collaborate respectfully, use technology responsibly and explain choices. Spiritual/cultural: develop curiosity, creativity and confidence with digital tools.

Climate / sustainability

Use technology purposefully; where authentic, connect tasks to efficient systems, environmental data, sustainable choices or reducing unnecessary resource use.

Key resources / platform

Examples/images of IT in different places; devices; sorting resources.

Key vocabulary

information technology • IT • computer • device • purpose • workplace • shop • school • home • benefit

Year 2 — Information technology around us: Sessions 1–3

Session-by-session breakdown • learning objective • necessary resources

1

What is IT?

To recognise the uses and features of information technology

Examples/images of IT in different places; devices; sorting resources.

2

IT in school

To identify the uses of information technology in the school

Examples/images of IT in different places; devices; sorting resources.

3

IT in the world

To identify information technology beyond school

Examples/images of IT in different places; devices; sorting resources.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Information technology around us: Sessions 4–6

Session-by-session breakdown • learning objective • necessary resources

4

The benefits of IT

To explain how information technology helps us

Examples/images of IT in different places; devices; sorting resources.

5

Using IT safely

To explain how to use information technology safely

Examples/images of IT in different places; devices; sorting resources.

6

Using IT in different ways

To recognise that choices are made when using information technology

Examples/images of IT in different places; devices; sorting resources.

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Year 2 — Computer skills and Seesaw

Digital literacy / platform fluency

Prior learning retrieved

Y1 device handling, login and Seesaw routines

New knowledge / skill

log in independently using school routines; open the correct app or activity and move between tasks; type short responses using space, backspace, shift and punctuation; use photo, drawing, text and voice tools for a purpose; save work and check it before submitting; choose an appropriate digital tool to communicate learning

Why this? Why now?

Pupils build on Year 1 device routines so they can log in, create responses, save, review and submit work with greater independence.

Careers link

IT support technician; teacher; digital administrator

SMSC link

Social/moral: collaborate respectfully, use technology responsibly and explain choices. Spiritual/cultural: develop curiosity, creativity and confidence with digital tools.

Climate / sustainability

Use technology purposefully; where authentic, connect tasks to efficient systems, environmental data, sustainable choices or reducing unnecessary resource use.

Key resources / platform

School devices; relevant NCCE/Teach Computing software and unit resources; teacher demonstration materials.

Key vocabulary

device • login • username • password • mouse • trackpad • keyboard
• app • activity • save • submit • Seesaw

Year 2 — Computer skills and Seesaw: Sessions 1–3

Session-by-session breakdown • learning objective • necessary resources

1

Independent login

To log in independently using school routines

School devices; relevant NCCE/Teach Computing software and unit resources; teacher demonstration materials.

2

Opening and switching

To open the correct app or activity and move between tasks

School devices; relevant NCCE/Teach Computing software and unit resources; teacher demonstration materials.

3

Typing efficiently

To type short responses using space, backspace, shift and punctuation

School devices; relevant NCCE/Teach Computing software and unit resources; teacher demonstration materials.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Computer skills and Seesaw: Sessions 4–6

Session-by-session breakdown • learning objective • necessary resources

4

Creating on Seesaw

To use photo, drawing, text and voice tools for a purpose

School devices; relevant NCCE/Teach Computing software and unit resources; teacher demonstration materials.

5

Saving and reviewing

To save work and check it before submitting

School devices; relevant NCCE/Teach Computing software and unit resources; teacher demonstration materials.

6

Choosing a tool

To choose an appropriate digital tool to communicate learning

School devices; relevant NCCE/Teach Computing software and unit resources; teacher demonstration materials.

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Year 2 — Digital photography

Creating media

Prior learning retrieved

Year 1 computing, device handling and digital fluency

New knowledge / skill

use a digital device to take a photograph; make choices when taking a photograph; describe what makes a good photograph; decide how photographs can be improved; use tools to change an image; recognise that photos can be changed

Why this? Why now?

Learners will learn to recognise that different devices can be used to capture photographs and will gain experience capturing, editing, and improving photos. Finally, they will use this knowledge to...

Careers link

Digital designer; content creator; creative technologist

SMSC link

Social/moral: collaborate respectfully, use technology responsibly and explain choices. Spiritual/cultural: develop curiosity, creativity and confidence with digital tools.

Climate / sustainability

Use technology purposefully; where authentic, connect tasks to efficient systems, environmental data, sustainable choices or reducing unnecessary resource use.

Key resources / platform

Tablet/camera; image files; simple photo-editing tools.

Key vocabulary

photograph • camera • capture • portrait • landscape • framing • focus • lighting • edit • crop • filter

Year 2 — Digital photography: Sessions 1–3

Session-by-session breakdown • learning objective • necessary resources

1

Taking photographs

To use a digital device to take a photograph

Tablet/camera; image files; simple photo-editing tools.

2

Landscape or portrait?

To make choices when taking a photograph

Tablet/camera; image files; simple photo-editing tools.

3

What makes a good photograph?

To describe what makes a good photograph

Tablet/camera; image files; simple photo-editing tools.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Digital photography: Sessions 4–6

Session-by-session breakdown • learning objective • necessary resources

4

Lighting

To decide how photographs can be improved

Tablet/camera; image files; simple photo-editing tools.

5

Effects

To use tools to change an image

Tablet/camera; image files; simple photo-editing tools.

6

Is it real?

To recognise that photos can be changed

Tablet/camera; image files; simple photo-editing tools.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Digital music

Creating media

Prior learning retrieved

Y1 digital media and Y2 computer fluency

New knowledge / skill

digital/non-digital music, rhythm, patterns, pitch, tempo, sequencing, review/edit

Why this? Why now?

Develops purposeful digital creation and pattern recognition in an accessible creative context.

Careers link

Composer; sound designer; audio engineer

SMSC link

Spiritual/cultural: explore how music expresses mood, identity and creativity.
Social: listen respectfully to different musical choices and give constructive feedback.

Climate / sustainability

Use nature/environment sounds or create music for a sustainability message where relevant.

Key resources / platform

Internet-enabled device; Chrome Music Lab; optional untuned percussion/headphones.

Key vocabulary

music • sound • rhythm • pattern • note • pitch • tempo • sequence • digital • edit • refine

Year 2 — Digital music: Sessions 1–3

Session-by-session breakdown • learning objective • necessary resources

1

How music makes us feel

To say how music can make us feel

Internet-enabled device; Chrome Music Lab;
optional untuned percussion/headphones.

2

Rhythms and patterns

To identify that there are patterns in music

Internet-enabled device; Chrome Music Lab;
optional untuned percussion/headphones.

3

How music can be used

To experiment with sound using a computer

Internet-enabled device; Chrome Music Lab;
optional untuned percussion/headphones.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Digital music: Sessions 4–6

Session-by-session breakdown • learning objective • necessary resources

4

Notes and tempo

To use a computer to create a musical pattern

Internet-enabled device; Chrome Music Lab; optional untuned percussion/headphones.

5

Creating digital music

To create music for a purpose

Internet-enabled device; Chrome Music Lab; optional untuned percussion/headphones.

6

Reviewing and editing music

To review and refine our computer work

Internet-enabled device; Chrome Music Lab; optional untuned percussion/headphones.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Programming quizzes

Programming B

Prior learning retrieved

Year 1 ScratchJr Programming animations

New knowledge / skill

sequence, start/trigger, outcome, algorithm, program, sprites, backgrounds, event blocks, prediction and debugging

Why this? Why now?

Builds on Year 1 ScratchJr by moving from simple animations to prediction, design, multiple backgrounds and purposeful quiz programs.

Careers link

Games designer; software developer; app designer; quality assurance tester

SMSC link

Social: collaborate when planning, testing and debugging. Moral: give fair, useful feedback and consider the user. Spiritual: develop creativity and perseverance through iterative improvement.

Climate / sustainability

Quiz themes can connect with habitats, recycling, energy or biodiversity where purposeful; reinforce responsible device use and avoiding unnecessary printing.

Key resources / platform

Tablet/Chromebook/computer with ScratchJr; NCCE design sheets; teacher display; access to sprites, backgrounds and programming blocks.

Key vocabulary

sequence • start • trigger • command • outcome • algorithm • program • sprite • background • event block • predict • debug

Year 2 — Programming quizzes: Sessions 1–3

Session-by-session breakdown • learning objective • necessary resources

1

ScratchJr recap

To explain that a sequence of commands has a start

Device with ScratchJr; teacher display; NCCE lesson resources.

2

Outcomes

To explain that a sequence of commands has an outcome

Device with ScratchJr; prediction activities; NCCE lesson resources.

3

Using a design

To create a program using a given design

Device with ScratchJr; design sheet; sprites/backgrounds.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Programming quizzes: Sessions 4–6

Session-by-session breakdown • learning objective • necessary resources

4

Changing a design

To change a given design

Device with ScratchJr; quiz design sheet; sprites/backgrounds.

5

Designing and creating

To create a program using my own design

Device with ScratchJr; planning/design resources.

6

Evaluating

To decide how my project can be improved

Device with ScratchJr; completed project/design; evaluation prompts.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Pictograms

Data and information

Prior learning retrieved

KS1 sorting/counting and digital fluency

New knowledge / skill

data, tally charts, attributes, pictograms, comparing and presenting information

Why this? Why now?

Introduces formal data representation before KS2 databases and data logging.

Careers link

Data analyst; researcher; environmental scientist

SMSC link

Social/moral: represent people and information respectfully and fairly.
Cultural: recognise that data can describe groups while avoiding assumptions based on attributes.

Climate / sustainability

Collect class/school data such as travel choices, waste or biodiversity observations.

Key resources / platform

Internet-enabled device; J2E pictogram and chart tools; tally resources.

Key vocabulary

data • tally • tally chart • pictogram • object • attribute • compare • count • represent • information

Year 2 — Pictograms: Sessions 1–3

Session-by-session breakdown • learning objective • necessary resources

1

Counting and comparing

To recognise that we can count and compare objects using tally charts

Internet-enabled device; J2E pictogram and chart tools; tally resources.

2

Enter the data

To recognise that objects can be represented as pictures

Internet-enabled device; J2E pictogram and chart tools; tally resources.

3

Creating pictograms

To create a pictogram

Internet-enabled device; J2E pictogram and chart tools; tally resources.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.

Year 2 — Pictograms: Sessions 4–6

Session-by-session breakdown • learning objective • necessary resources

4

What is an attribute?

To select objects by attribute and make comparisons

Internet-enabled device; J2E pictogram and chart tools; tally resources.

5

Comparing people

To recognise that people can be described by attributes

Internet-enabled device; J2E pictogram and chart tools; tally resources.

6

Presenting information

To explain that we can present information using a computer

Internet-enabled device; J2E pictogram and chart tools; tally resources.

Online safety is taught through PHSRE; computing lessons reinforce safe, respectful and responsible use in context.