



ST AIDAN'S

CATHOLIC PRIMARY SCHOOL

Learning and growing together, inspired by the love of Jesus

Computing

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Year 1

Topics

- What is a computer?
- Modern Tales (Online Safety)
- My Online Life
- My Friends the Robot
- News Presenter

What is a Computer?

National curriculum

Children will learn about computers, their different parts and their peripherals. They will learn new digital skills as they work with text and images. The children will create algorithms and programs using Scratch Jr.

Sequence of lessons

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What are computers and all those extra bits?
<u>2</u>	How are computer games made?
<u>3</u>	What is a program?
<u>4</u>	Can you fix a program?
<u>5</u>	How can 'repeat' instructions be used?
<u>6</u>	Can you turn an algorithm into program?

Key vocabulary

Logical Reasoning	Algorithm	Sprite	QR Code
Computer / Tablet	Keyboard	Login / Sign in	Loop (repeat)
Scratch Jr	Microphone	Mouse	Selfie
Smart Speaker / TV	Bug (debugging)	Website	Program
Digital Device	Camera	Printer	Technology
Save / Share	Hard Drive	App	Record

Modern Tales (Online Safety)

National curriculum

Using the vehicle of the children's stories, the children will learn to navigate the rules of online safety and communication. The children will learn about web searching, basic keyboard skills and creating digital content. The children will finally make a simple animation based on an online situation they may encounter

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is a digital device?
<u>2</u>	What is a search engine?
<u>3</u>	Who can we trust online?
<u>4</u>	What is animation?
<u>5</u>	Can you use animation to tell a story?
<u>6</u>	Can you use animation to tell a story?

Key Vocabulary:

Internet	QR Code	Personal Information	Follow
Trust	App / Application	Login	Share
Online	Risks	Private	Profile
Password	Digital Device	Website	Trusted adult

My Online Life

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. (CS)
- Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. (CS)
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (IT)
- Recognise common uses of information technology beyond school. (DL)
- 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. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Who can help us online?
<u>2</u>	How can we communicate online? What should we share online?
<u>3</u>	What is online bullying, and how should we deal with it?
<u>4</u>	How should I behave online?
<u>5</u>	What information should not be shared online?
<u>6</u>	Can you find information online? Who owns the information online?

Key Vocabulary:

Device	Smart Device	Selfie	Online Bullying
Online	App	Text	email
Technology	Open	Keyboard	Communication
Internet / Web	Trusted Adult	Pupil Journal	Search Engine
Tablet / iPad	Share	Avatar	Keyword
Computer	Personal Information	Password	Image

My Friend the Robot

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. (CS)
- Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. (CS)
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (IT)
- Recognise common uses of information technology beyond school. (DL)
- 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. (DL)

Sequence of lessons

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What are robots?
<u>2</u>	How do you give robots instructions?
<u>3</u>	How do you program a robot?
<u>4</u>	How do you program a robot?
<u>5</u>	Can you apply the computing skills you have learnt?
<u>6</u>	Can you apply the computing skills you have learnt?

Key Vocabulary:

Logical Reasoning	Algorithm	Robot	QR Code
Computer / Tablet	Keyboard	Program	Microphone
Digital Device	Bug (debugging)	Camera	Selfie
Font	Digital Device	App	Record
Save / Share	Processor	Machine	Instructions
Text	BeeBot	Sequence	Sensors

News Presenter

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. (CS)
- Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. (CS)
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (IT)
- Recognise common uses of information technology beyond school. (DL)
- 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. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is news?
<u>2</u>	What is a logo?
<u>3</u>	How can we type on a computer to tell someone our news?
<u>4</u>	How can I use a device to record a news story?
<u>5</u>	Can you make up a story from just a picture?
<u>6</u>	What is data?

Key Vocabulary:

App	Image	Online / Offline	Keyboard
Tool	Button	Icon	Video
Save / Store / Export	QR Code (scan)	Upload	Font
Illustration	News	Computer	Tablet / iPad
Technology	Digital Device	Data	Information
Menu	Edit	Search	Screenshot

Email Me

National curriculum

- Age appropriate skills for the use of core devices and applications within their setting.
- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.
- Recognise common uses of information technology beyond school. Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Sequence of lessons (bitesize unit):

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is digital communication?
<u>2</u>	What are the rules about sending messages?

Key Terms & Vocabulary

eMail
Send/Receive
Personal Information
Menu
Attachment

Keyboard
Sign-in
Website
Rules
Shift Key

Mouse
Communicate
Search
App
Password

Online
Emoji
Login
Messages

Year 2

Topics

- Book creator
- Online Buddies
- My Online Life
- Code a Story
- Making Games
- Presentations and Typing

Book Creator

National curriculum

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

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Know what Book Creator is
<u>2</u>	Add text and a picture
<u>3</u>	Edit my Book Creator
<u>4</u>	Create a full book
<u>5</u>	Present my book

Key Vocabulary:

Book creator, present, edit, picture, text

Online Buddies

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. (CS)

- Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. (CS)
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (IT)
- Recognise common uses of information technology beyond school. (DL)
- 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. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	How can we use digital devices to communicate?
<u>2</u>	Who should we communicate with when using technology?
<u>3</u>	Can you use a digital device to communicate positively?
<u>4</u>	Let's send a message
<u>5</u>	What would you do?
<u>6</u>	Can you work together with a buddy?

Key vocabulary:

Reputation	Data / Information	Software / app	Communicate
Self Image	Online Bullying	Interact	Digital Book
Risks	Identity	Fictitious/Fake	Images
Private	Profile	Copyright	Post
Template	Empathy	Trust	WWW
Username	Chat	Password	Avatars

My Online Life

National curriculum

My Online Life has been developed to improve children's knowledge of the risks of their online lives and to develop skills when using online services. It takes an holistic approach to each of the different elements of their online lives. This module follows the UKCCIS Education for a Connected World-Framework which aims to "describe the Digital knowledge and skills that children and young people should have the opportunity to develop at different ages and stages of their lives. It highlights what a child should know in terms of current online technology, its influence on behaviour and development, and what skills they need to be able to navigate it.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Can you trust everyone you meet online?
<u>2</u>	How do you use the internet to communicate?
<u>3</u>	Do you always think before you post or comment online?
<u>4</u>	Do you understand the terms online bullying and the consequences of it?
<u>5</u>	Can you believe everything you read online?
<u>6</u>	How should I behave online?

Key Vocabulary

Reputation, self image, risks, private, online bullying. Identity, profile, empathy, copyright, trust, password

Code a story

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. (CS)
- Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. (CS)
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (IT) • Recognise common uses of information technology beyond school. (DL)
- 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. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is programming?
<u>2</u>	How do I make a character wait?
<u>3</u>	What is a repeat instruction?
<u>4</u>	How can we add sound in Scratch Jr?
<u>5</u>	What is the 'say' block?
<u>6</u>	Can you amaze me with your programming skills?

Key Vocabulary:

Logical Reasoning	Algorithm	Screenshot	QR Code
Computer / Tablet	Keyboard	Program	Microphone
Digital Device	Bug (debugging)	Camera	Selfie
Scratch Jr	Digital Device	App	Record
Save / Share	Programming Block	Screen Recording	Instructions
Text	Command	Sequence	Repeat / Loop

Making Games

National curriculum

(MS) I can save, share and retrieve my digital work.

(MS) I can use technology to organise and present my ideas.

(CS) I can plan out an algorithm with a sequence of commands to carry out specific tasks.

(CS) I can identify 'bugs' in computer programs and use the term debug in context.

(CS) I can create a simple repeat loop.

(CS) I can create a simple game program. (CS) I can predict the outcome of a sequence of blocks in Scratch. (IT) I can use design and formatting to enhance my digital work. (IT) I can create with technology. E.g. Video, animation, 3D (DL) I can use online services to communicate safely. (Online Relationships) (DL) I know the rules of using technology at home or in school. (Health well being

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What are coding blocks?
<u>2</u>	What is a repeat loop?
<u>3</u>	Can you turn code into an algorithm?
<u>4</u>	Can you create an algorithm and program to solve a problem?
<u>5</u>	Can you create a game with Scratch Jr?
<u>6</u>	Can you code your own game?

Key vocabulary:

Repeat,code,backdrop,sequence,images,program,debug,code,loops,execute/run,characters,upload

Presentations and typing

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. (CS)

- Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. (CS)
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content. (IT)
- Recognise common uses of information technology beyond school. (DL)
- 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. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is technology?
<u>2</u>	Can you design a presentation about you and technology?
<u>3</u>	How can I find images online?
<u>4</u>	Can I add video to my presentation?
<u>5</u>	What is animation?
<u>6</u>	What is data?

Key vocabulary:

Technology	Animation	Powerpoint	Edit
Tech	Transition	Keynote	Save
Keyboard	Delete	Slides	Load
Typing	Data	Copyright	Online
Text	Presentation	Software / app	Internet
Font	Digital	Title Page	Search Engine

Year 3

Topics

- Online detectives
- My Online Life
- Be Digitally Awesome
- Rainforests

Online Detectives

National curriculum

- (IT) I can make judgements about the usefulness of information.
- (IT) I can use search tools to find and use an appropriate website.
- (IT) I can search for and use information from a range of sources.
- (IT) I can make exact searches on the world wide web.
- (IT) I can analyse information and make accurate searches.
- (IT) I can evaluate my work and improve its effectiveness.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Can you use the world wide web to authenticate facts?
<u>2</u>	Can you use the world wide web to identify places?
<u>3</u>	Can you use the world wide web to identify a mystery person?
<u>4</u>	Can you search for images on the world wide web?
<u>5</u>	Can you use information within pictures to identify them?
<u>6</u>	Reflect, Evaluate and Feedback?

Key vocabulary:

Facts, images, search, information, search engine, authenticate,

My

Online Life

National curriculum

My Digital Life has been developed to improve children's knowledge of the risks of their online lives and to develop skills when using online services. It takes a holistic approach to each of the different elements of their online lives. The resources included in this module are aimed at stimulating classroom discussions about certain situations that may arise when online and to get the children to think critically about their online lives. N.B. This module follows the UKCCIS Education for a Connected World-Framework which aims to "describe the Digital knowledge and skills that children and young people should have the opportunity to develop at different ages and stages of their lives. It highlights what a child should know in terms of current online technology, its influence on behaviour and development, and what skills they need to be able to navigate it.

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is your online identity?
<u>2</u>	How can you build positive online relationships and be a good digital citizen?
<u>3</u>	How can I create a positive online reputation?
<u>4</u>	What is online bullying and what can I do about it?
<u>5</u>	Do you really know how to use the internet?
<u>6</u>	Can technology impact on your health?

Key vocabulary

Reputation, self image, risks, private, online bullying, identity, profile, empathy, copyright, trust, password

Be Digitally
Awesome

National curriculum

This unit is all about ensuring the children possess basic digital skills. The children will be learning about file types, clouds, word processing and creating spreadsheets and presentations.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Do you know the basics of using technology?
<u>2</u>	Do you know what apps to use?
<u>3</u>	Can you use a browser?
<u>4</u>	Can you create a document?
<u>5</u>	Can you create a presentation?
<u>6</u>	Can you create a spreadsheet?

Key vocabulary:

App, application, cloud, file, folder, Giga Byte, Mega Byte, Digital Content, Shortcut, Browsers, Bookmark, Copyright, Search Engine, URL, Font, Spreadsheet, Presentation, Word Processing, Multimedia, Hyperlink, Formulae

Rainforests

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. (CS)
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. (CS)
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. (CS)
- 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. (CS & DL)
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. (CS & DL)
- 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. (IT)
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What are Rainforests, and where are they?
<u>2</u>	How can we use technology to explore a rainforest?
<u>3</u>	What are rainforest layers?
<u>4</u>	Can you make a poster to help save the rainforests?
<u>5</u>	Can I write a voiceover for a rainforest video?
<u>6</u>	Can I record a voice-over for a rainforest video?

Key Vocabulary:

iPad	Research	Download	Bar Chart
Computer	Export	Data	Information
Device	QR Code	Keyword	Font
App / Application	Video (Editing)	Voice Over	Media
Technology	Audio	Broadcast	Search
Digital	Browser	Recording	AR

Year 4

Topics

- Hour of Code
- My Online Life
- Real or Fake
- Endangered Animals

Hour of Code

National curriculum

(IT) I can improve the quality and presentation of my work using editing and formatting techniques.

(CS) I can use conditional statements such as “If”, “Then” & “When” to control devices / achieve specific outcomes.

(CS) I can use conditional statements such as “If”, “Then” & “When” to control devices / achieve specific outcomes.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is the Hour of Code?
<u>2</u>	How can I give instructions to an on screen sprite?
<u>3</u>	Can you use computing vocabulary?
<u>4</u>	How can I use code to animate?
<u>5</u>	How can I use code to animate?
<u>6</u>	How can I use code to animate?

Key Vocabulary:

Website, program, block, conditional, loop, sequence, run, command, sprite

My Online Life

National curriculum

- My Digital Life has been developed to improve children's knowledge of the risks of their online lives and to develop skills when using online services. It takes a holistic approach to each of the different elements of their online lives.
- The resources included in this module are aimed at stimulating classroom discussions about certain situations that may arise when online and to get the children to think critically about their online lives.
- This module follows the UKCCIS Education for a Connected World-Framework which aims to "describe the Digital knowledge and skills that children and young people should have the opportunity to develop at different ages and stages of their lives. It highlights what a child should know in terms of current online technology, its influence on behaviour and development, and what skills they need to be able to navigate it."

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is your Online Identity?
<u>2</u>	Can you control your own online reputation?
<u>3</u>	How do you build safe online relationships?
<u>4</u>	What can you do to stop online bullies?
<u>5</u>	How do you interpret online information? What does it mean for your own online profiles?
<u>6</u>	How can you ensure technology does not take over your life?
<u>7</u>	How can you protect your online information and accounts?
<u>8</u>	Who owns content online?

Key Vocabulary:

Reputation, self image, risks, private, online bullying, identity, profile, copyright, trust, password

Real
or Fake

National curriculum

- (DL) I can explain what Fake News is.
- (DL) I can explain how social media is used to help Fake News Spread.
- (DL) I can analyse data and make informed judgements about the validity of that data.
- (DL) I can use a search engine and I am aware that not everything I read online is correct.
- (DL) I can identify Fake News Stories.
- (DL) I can evaluate information presented to me to make informed choices about what is Fake News.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is a Fake News?
<u>2</u>	Can you identify Fake News?
<u>3</u>	Why would anyone share Fake News? How can you spot fake news?
<u>4</u>	Can you identify fake news stories?
<u>5</u>	Can you identify fake news stories?
<u>6</u>	Reflect, Feedback and Improve?

Key vocabulary:

Fake news, verify, reporting, media, sceptical

Endangered Animals

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. (CS)
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. (CS)
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. (CS)
- 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. (CS & DL)
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. (CS & DL)
- 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. (IT)
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is an endangered animal?
<u>2</u>	What is a habitat?
<u>3</u>	Why are endangered animals so at risk?
<u>4</u>	How can we create graphics?
<u>5</u>	How can we add audio narration to our social media graphic?
<u>6</u>	How can social media be used to raise awareness?

Key vocabulary:

iPad / Computer	Screenshot	Download	Presentation
Illustration	Creative commons	AI (Artificial Intelligence)	Copyright
Digital Device	QR Code	Keyword	Font
App / Application	Video (Editing)	Voice Over	Social Media
Technology	Audio	Media / Digital Media	Search Engine
Computer Generated	Browser	Save/export	Emoji

Year 5

Topics

- Lost in Space
- My Online Life
- Youtuber
- Web designer
- Binary Messages

Lost In Space

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. (CS) 3

- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. (CS)
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. (CS)
- 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. (CS & DL)
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. (CS & DL)
- 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. (IT)
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is decomposition?
<u>2</u>	Can you use the internet to explore the solar system?
<u>3</u>	What are sprites?
<u>4</u>	How does a program make a decision?
<u>5</u>	Can you debug your program
<u>6</u>	Can you improve your program

Key Vocabulary:

Logical Reasoning	Algorithm	Decomposition	Flow Chart
Variable	Augmented Reality (AR)	Login / Sign in	Share
Online	Risks	Sign in	Profile
Password	Digital	Website	Program
Command	Flow Chart	Code Block	Variables
Save	Private Information	Value / Operators	Input / Output

My Online Life

National curriculum

- My Online Life has been developed to improve children's knowledge of the risks of their online lives and to develop skills when using online services. It take an holistic approach to each of the different elements of their online lives.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What does your online life say about you?
<u>2</u>	Know what an online community is
<u>3</u>	Know what judgements people make about people online
<u>4</u>	Protect yourself from online bullies
<u>5</u>	The impact of technology on sleep
<u>6</u>	Being secure online

Key Vocabulary:

Reputation, online bullying, copyright, self image, identity, trust, risks, profile, password, private

Youtuber

National curriculum

(DL) I can explain what is meant by the term vlogger.
(DL) I can explain what online bullying is and discuss empathy and effects. (DL) I can critically analyse the positives and negatives of being a vlogger
(DL) I can identify the potential risks when putting content online
(DL) I can create a subject specific vlog.
(DL) I can edit my vlog
(DL) I can construct a persuasive argument for or against becoming a Vlogger

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Know what a youtuber is
<u>2</u>	Why are YouTubers popular? How do they make money as a YouTuber?
<u>3</u>	What happens when it goes wrong?
<u>4</u>	Can you create your own vlog?
<u>5</u>	Can you edit your video so it could be broadcast online?
<u>6</u>	How can I improve my vlog?

Key Vocabulary:

Vlog, Youtuber, product placement, online bullying, transitions, record, edit, content

Web Designer

National curriculum

- (IT) I can improve the quality and presentation of my work using editing and formatting techniques.
- (CS) I can explore networks and internet traffic.
- (DL) I understand the need for copyright and the consequences of ignoring it. (Copyright) (CS) I can create a very basic web page using HTML.
- (DL) I can collaborate with others to develop and improve work. (DL) I can use a search engine and I am aware that not everything I read online is correct. (Online Bullying)
- (DL) I can create a subject specific vlog and understand the potential risks of sharing content online. (MS / IT) I can film and produce a short video with elements such as text, images, narration and music.
- (MS / IT) I can make a QR codes that links to a piece of my own work. (IT) I can use unfamiliar technology to create content and share my ideas. E.g. Augmented Reality, VR, 3D, digital music etc

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Is technology changing the world around us?
<u>2</u>	What is the internet?
<u>3</u>	What is HTML?
<u>4</u>	What is web content?
<u>5</u>	How can we create a website and content?
<u>6</u>	How do you publish a website?

Key Vocabulary:

Streaming, Youtuber, LAN, Infringe Copyright, Upload, VLOG, Pixel, ISP, Plagiarism, Bits and Bytes, TCP/IP, Services, Record, IP Address, Bandwidth, HTML, Edit

Binary Messages

National curriculum

- Computer Science (CS): 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. Appreciate how [search] results are selected and ranked.
- Information Technology (IT): Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Use search technologies effectively.
- Digital Literacy (DL): Understand the opportunities [networks] offer for communication and collaboration. 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.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is binary? Can you convert binary into decimal numbers?
<u>2</u>	Can you send secret messages using binary?
<u>3</u>	What are Spreadsheets?
<u>4</u>	How can spreadsheets help us compute data?
<u>5</u>	Can you be the teacher?
<u>6</u>	Can you be the teacher?

Key Vocabulary:

Binary, TCP/IP, LAN, formula, bit and bytes, Bandwidth, HTML, Record, IP Address, ISP, Upload, Edit, Spreadsheet, Services, Augmented Reality

Year 6

Topics

- Online Safety Dilemmas
- Coding playgrounds
- My Online Life
- Money
- Quiz Show Host

Online Safety Dilemmas

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. (CS)
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. (CS)
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. (CS)
- 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. (CS & DL)
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. (CS & DL)
- 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. (IT)
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Do we understand the language of the internet?
<u>2</u>	How do we communicate online?
<u>3</u>	What information should I share online?
<u>4</u>	Can I explain how to stay safe when online gaming?
<u>5</u>	Can I identify fake news?
<u>6</u>	How can we make the internet a better place?

Key Vocabulary:

Technology	Age Ratings	Content	Sources
Griefing	AI	In app purchase	Social Media
Doxxing	Personal info	Advertisement	Edit
Phishing	Oversharing	Contacts	Dilemma
Online	PEGI	Fake News	Internet
Communication	ESRB	Misinformation	Search Engine

Coding Playgrounds

National curriculum

(DL) I understand the impact technology can have on my health, wellbeing and lifestyle. (Health wellbeing).

(MS) I can create a consistent design for my presentation, and present to others.

(IT) I can improve the quality and presentation of my work using editing and formatting techniques.

(CS) I understand how computer networks work, including the internet.

(CS) I can write a program using a text based programming language.

(IT) I can create a digital storyboard to plan a project or investigation.

(MS) I can collaborate to create digital content.

(CS) I can use logical reasoning to detect and correct errors in algorithms and programs

(CS) I can test, debug and modify a program to improve it.

(CS) Design, plan & create a complex programs.

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	Why it is critical children understand technology?
<u>2</u>	Who makes all the amazing apps on the App Store?
<u>3</u>	Can you create your own app? What is text based coding?
<u>4</u>	Can you storyboard? Can you master Swift Playground?
<u>5</u>	Can you create a prototype? Can you master Swift Playground?
<u>6</u>	Can you present your app? Can you master Swift Playground

Key Vocabulary:

Key Terms & Vocabulary

App	Developers	Visual coding	Android
Mobile	Program	Cloud	Prototypes
Logo	Design	Content	Bugs
Feedback	Functions	Commands	For loop

My

Online Life

National curriculum

My Digital Life has been developed to improve children's knowledge of the risks of their online lives and to develop skills when using online services. It takes a holistic approach to each of the different elements of their online lives. The resources included in this module are aimed at stimulating classroom discussions about certain situations that may arise when online and to get the children to think critically about their online lives. N.B. This module follows the UKCCIS Education for a Connected World-Framework which aims to "describe the Digital knowledge and skills that children and young people should have the opportunity to develop at different ages and stages of their lives. It highlights what a child should know in terms of current online technology, its influence on behaviour and development, and what skills they need to be able to navigate it."

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	How does the internet and media shape our views?
<u>2</u>	How can you be a good Digital Citizen?
<u>3</u>	What does the information online say about us?
<u>4</u>	How would you deal with online bullying?
<u>5</u>	How do you make informed decisions online? Can you trust everything you read online?
<u>6</u>	Can technology impact on your health?
<u>7</u>	How secure are you with your online information and accounts?
<u>8</u>	Who owns the information on the internet?

Key Vocabulary:

reputation, self image, risks, private, online bullying, identity, profile, empathy, copyright, trust, password

Money

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. (CS)
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. (CS)
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. (CS)
- 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. (CS & DL)
- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. (CS & DL)
- 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. (IT)
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. (DL)

Sequence of lessons:

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	<u>What is money?</u>
<u>2</u>	<u>What is currency?</u>
<u>3</u>	<u>How can you earn money?</u>
<u>4</u>	<u>Protect your money. What are online scams?</u>
<u>5</u>	<u>What is the stock market, and how do people make money?</u>
<u>6</u>	<u>Did you make money on the stock market?</u>

Key vocabulary:

Digital Media	Design	Copyright	Formatting
Data	Graphics	Reverse Image Search	Digital Currency
Transparent / Opacity	Row & Column	Send / Share	Search Engine
Background	Artificial Intelligence	Keywords	Brainstorm
Spreadsheet	Personal Information	Upload	Contactless
Cell	Tools	Formula	Audio Clip

Quiz Show

Host

National curriculum

(IT) I can confidently identify the potential of unfamiliar technology to increase my creativity.

Sequence of lessons: (short 'Bite-Sized' unit)

<u>Lesson</u>	<u>Objective</u>
<u>1</u>	What is a quiz and what makes a good question?
<u>2</u>	Can you create a quiz using an online tool?
<u>3</u>	
<u>4</u>	
<u>5</u>	
<u>6</u>	

Key Vocabulary:

username