

Yearly Overview - Year 1



Objectives	Content:	NC Coverage
(1) Introduction & getting started	Classroom rules. Starting and shutting down. Understanding the equipment. Health and safety in IT rooms. Opening programs. Saving work. Basics of using writer.	ITKS1B ITKS1C
(2) Christmas poems	Using writer, students will produce a series of Christmas poems that can be printed out and taken to their classroom. Learning keyboard skills, formatting, layout and presentation techniques.	ITKS1B ITKS1C
(3) Draw - Staying safe on the Internet	Learn to use Draw tools. Use an image and text boxes. Manipulate them in Draw. Learn how to copy and paste into different software. Produce a poster on "Staying safe on the Internet"	ITKS1C DLY1A
(4) Easter Cards	Design and produce an Easter card using writer, Draw and the Internet. Combine all data and format correctly.	ITKS1A/B/C
(5) Algorithms & Intro to programming using Code for life	Learn what algorithms are and how to write basic algorithms for daily activities in the home such as making toast. Use writer to produce a table / list - also learning formatting skills in writer.	CSY1A
	Describe the common uses of programming outside school. Use Win Logo to guide an object around a screen. Introduce simple decomposition - breaking a big problem down into smaller parts. Introduce Code for life - look at how it works.	DLY1B ITKS1



AUTUMN TERM

WINTER TERM

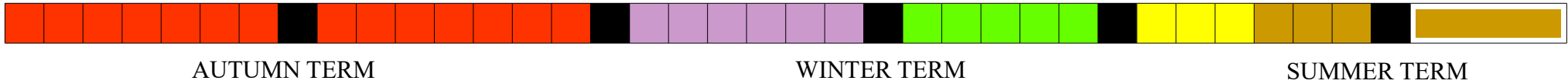
SUMMER TERM

Yearly Overview - Year 2



Objectives	Content:	NC Coverage
<p>(1) General computer skills. Understand the basic skills in using the keyboard and mouse. Saving and retrieving work. Using correct software features.</p>	<p>Get the students to understand the basic skills they will need in the coming years such as:</p> <ul style="list-style-type: none"> • Saving their work with correct names and in the right place. • Using the correct fonts, styles, positioning, tables pre-set headers etc. • Inserting images - DTP work, Capturing images from Internet and modifying • Using the correct software - Word Vs Draw. • 2nd half term produce a Christmas card using the skills learnt + import images. 	<p>ITKS1A ITKS1B</p>
<p>(2) Word Processed piece of work using Internet research about Keeping personal information private when using technology</p>	<ul style="list-style-type: none"> • Introduce simple searching skills when using Google. Look at how to write search criteria. • Discuss what is "personal information" and why we shouldn't share it • Produce a piece of written work - DTP using Writer explaining this topic. 	<p>DLY2A ITKS1C</p>
<p>(3) Use IT to create, store and organise digital content purposefully. Write a simple program. Use Logo programming language</p>	<p>Students need to be able to save and open their work correctly. Understand user names. Follow written instructions. Explain Logo instructions. Practice writing and predicting programs. Use Logo to produce and De-bug programs.</p>	<p>ITKS1A CSY2B CSY2D CSY2C</p>
<p>(4) Dangers of the Internet and social media. Produce a leaflet in Draw.</p>	<p>This is a basic introduction - Yr6 goes into much more detail.</p> <ul style="list-style-type: none"> • Using Draw and the Internet to get information and capture images - produce a leaflet. • Layout and formatting is to be concentrated on • Deciding on and choosing the best and most appropriate information to use 	<p>DLKS1A DLY2A</p>

<p>(5) Programming. Code for life.</p>	<p>Students will learn programming using graphical object oriented software and cover:</p> <ul style="list-style-type: none"> • Will understand that programs execute by following instructions. • Will create a simple program • Will de-bug a simple program 	<p>CSY2A CSY2B CSY2C</p>
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Yearly Overview - Years 3/4



Objectives	Yearly Task (2 Yr Cycle)	Content:	NC Coverage
(1) Opportunities from computer networks	1	Computer networks - internal . Look at Intranet and their uses. Why join computers together. <ul style="list-style-type: none"> Understand the opportunities computer networks offer for communication 	DLY3_4F
	2	Computer networks - external - Internet . Opportunities for wider communication and work collaboration. <ul style="list-style-type: none"> Understand how computer networks can provide multiple services - world wide web 	DLY3_4E
(2) Write code that instructs a turtle to carry out set tasks	1	Use Win Logo to write a sequence of code to carry out set tasks: Can design and de-bug programs that accomplish specific goals Can design and create programs that use sequences Use logical reasoning to detect and correct errors in programs	CSY3_4A CSY3_4B CSY3_4D
	2	Use control software to control real life events such as a robot in a work place, railway crossing, greenhouse system. Can design and de-bug programs that accomplish specific goals Can design and create programs that use sequences Use logical reasoning to detect and correct errors in programs	CSY3_4A CSY3_4B CSY3_4D CSY3_4C
(3) Spreadsheet modelling	1	Spreadsheet skills will be taught through a range of tasks . Collect and combine data and information Design and create content to accomplish a given goal	ITY3_4B ITY3_4C
	2	Modelling will be taught and shown the use of a working model in the world of work - such as a business Collect and combine data and information Design and create content to accomplish a given goal	

(4) Desk Top Publishing + Theory task	1	Health and safety using ICT Students will investigate the problems with using ICT equipment - and explain how they can be avoided	DLY3_4A
	2	Computer System Poster: <ul style="list-style-type: none"> Look at all of the parts of a typical computer system Learn the skills of laying out a professional poster for an intended audience. 	
(5) Programming with Scratch	1	Students will learn Object Oriented Programming using Scratch. <ul style="list-style-type: none"> A game can be used to teach the basics. 	CSY3_4A CSY3_4B CSY3_4D
	2	Students will learn Object Oriented Programming using Scratch. <ul style="list-style-type: none"> Control physical systems Devise a control system to control a real life situation 	CSY3_4C CSY3_4A CSY3_4B
Code for life programming.	1	General dangers of the Internet - theory time. <ul style="list-style-type: none"> Continue with the levels in Code for life. 	DLY1B ITKS1
	2	Dangers of Social Media - theory time. <ul style="list-style-type: none"> Continue with Code for life levels. 	DLY1B ITKS1

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Content for Yr 3 & 4

Year 3 and 4 will carry out a series of individual task rather than one large connected piece of work which Yr5 & 6 complete.

- More time is spent in this year on learning the basics and understanding them before they move up to the next class.
- A two year scheme is produced where there are two tasks each.
- Yr 4 carry out more advanced work with extension tasks used to differentiate between Yr3 and Yr4.

Yearly Overview - Years 5/6



Objectives	Yearly Task (2 Yr Cycle)	Content:	NC Coverage
(1) Investigate use of Internet Social media & E-Safety leaflet	1	Investigate and evaluate the use of social media , its advantages and dangers. Produce a presentation for school use and a hand-out to take home - dangers of internet . Identify a range of ways to report concerns about content and contact	DLY5_6A, 6B
	2	Investigate and evaluate the use and impact the Internet has on people. Produce a presentation for use in school and a handout for home - looking at advantages / disadvantages. Appreciate how search results are ranked Understands the basic workings of computer networks including the Internet Understands the opportunities that networks offer to collaborative working.	DLY5_6C, D, E, F.
(2) How the Internet works Algorithms.	1	Understands the basic workings of computer networks including the Internet Understand what algorithms are and how / why we all use them.	DL5_6E CSY1A
	2	Understands the opportunities that networks offer to collaborative working .	DL5_6F
(3) Greenfoot programming - Textual coding Use control software to simulate a real situation	1	Produce a game where they: Pong Game <ul style="list-style-type: none"> • Can design the program and explain what it will do • De-bug the program • Use logical reasoning to identify errors and devise alternative coding • Solve problems in writing programs by decomposing them into smaller parts • Simulate physical situations 	CSY5_6B CSY5_6D
	2	Use programming to control a situation such as Crab Game : <ul style="list-style-type: none"> • Use variables within the program • Can use logical reasoning to explain how some algorithms work and detect and correct errors in them. • Can use selection (Do If) and repetition (Loops) in programs 	CSY5_6E CSY5_6A CSY5_6C

(4) Programming. More advanced coding of a game	1	We will continue with programming A car racing game will be produced.	ITY5_6A ITY5_6B ITY5_6C DLY5_6D
	2	A range of stationery will be required for the business : <ul style="list-style-type: none"> • Use presentation software to produce a website to advertise the business • Produce a business card for yourself using camera and manipulation software 	
(5) Database of people involved / products or stock	1	The zoo needs a database of things like stalls / goods <ul style="list-style-type: none"> • Tables, forms, queries and reports can be produced. 	
	2	The business will a database of such things as staff, stock and suppliers <ul style="list-style-type: none"> • Tables, forms, queries and reports can be produced. 	
(6) Spreadsheet for costs / takings	1	The zoo needs a costings spreadsheet working out how much things will cost - staying within a budget	
	2	The business will need a profit / loss spreadsheet to see if we have made a profit.	
Code for life Programming	1	Students will work through the levels.	
	2		

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Main task for year:

IT (Information Technology) and DL(Digital Literacy) will be covered using one task which links all software in a "real world" example such as organising a school fund raising day, sports trip abroad etc.

Software used:

- **Drawing program** - produce the logo, letterhead banner, business cards, ID cards and general image editing
- Word Processing - can be used for letter heads and letters sent home to parents
- **Spreadsheet** will be used to work out the costings
- **Database** will hold the names of individuals or stock
- **DTP** software can be used for leaflets
- Presentation software will be used for presentations or simple websites.

On a two year cycle, there will be two different tasks so the students complete a task each year but different each year. They will cover the criteria for IT and DL over the two year period - possibly twice.

This task will prepare students for entry to KS3 where they will need to understand how different software is combined to give the desired outcomes to the needs of different users.

Important - software skills / uses taught - not just "Microsoft Products".

Skills & Understanding Required (2015 Curriculum)



Year 1 Year 2 KS1

Curriculum is divided into three areas:

CS - Computer Science - Programming.

IT - Information Technology - Learning & Using software.

DL - Digital literacy - Knowing what software to use and when.

CS

CSY1A Students will spend time learning about simple Algorithms, Key learning point: The idea that you can write "programs" to complete tasks.

CSY2A Students will understand that programs execute by following instructions.

CSY2B Will create a simple program

CSY2C Will de-bug a simple program

CSY2D Use logical reasoning to predict what a program will do

CSY1B Students will explore the web based operating system SliverOS, to explore what an operating system is and how it allows programs to exist upon it.

IT

ITKS1A Use IT to create, store and organise digital content purposefully

ITKS1B To retrieve and manipulate digital content

ITKS1C Navigating the Internet

DL

DLKS1A Use technology safely and respectfully

DLY2A Keeps personal information private when using technology

DLY1A Know they should ask for help if unsure about any content or contact, and who to ask

DLY1B Can describe common uses for Information Technology beyond school

Additional Computer skills Taught

The first term up to Christmas will be used to teach basic computer skills such as:

- Rules regarding behaviour using computers and other peoples work
- Switching on / off
- Opening programs
- keyboard familiarisation
- Saving / opening work
- Using Writer
- Using Draw
- Using Internet
- Combining above three

Year 3/4

Year 5/6

CS

KS2

Lower KS2

- CSY3_4A Can design and de-bug programs that accomplish specific goals
- CSY3_4B Can design and create programs that use sequence
- CSY3_4C Control physical systems
- CSY3_4D Use logical reasoning to detect and correct errors in programs

Higher KS2

- CSY5_6A Work with variables
- CSY5_6B Solve problems in writing programs by decomposing them into smaller parts
- CSY5_6C Can use selection (Do If) and repetition (Loops) in programs
- CSY5_6D Simulate physical situations
- CSY5_6E Can use logical reasoning to explain how some algorithms work and detect and correct errors in them.

<http://www.teachprimarycomputing.org.uk/logical-reasoning-2/>

IT

Lower KS2

- ITY3_4A Can choose from a variety of software and Internet services to accomplish given goals
- ITY3_4B Collect and combine data and information
- ITY3_4C Design and create content to accomplish a given goal

Higher KS2

- ITY5_6A Can combine a variety of software to accomplish given goals on a range of digital devices
- ITY5_6B Can analyse and evaluate data and information
- ITY5_6C Design and create systems that accomplish given goals

DL

Lower KS2

- DLY3_4A Use technology responsibly
- DLY3_4B Can recognise acceptable / unacceptable behaviour and content
- DLY3_4C Appreciate how search results are selected
- DLY3_4D Is selective when using digital content
- DLY3_4E Understand how computer networks can provide multiple services - world wide web
- DLY3_4F Understand the opportunities computer networks offer for communication

Higher KS2

- DLY5_6A Understand the importance of using Information Technology safely, respectfully and responsibly
- DLY5_6B Identify a range of ways to report concerns about content and contact
- DLY5_6C Appreciate how search results are ranked
- DLY5_6D Is discerning about evaluating digital content
- DLY5_6E Understands the basic workings of computer networks including the Internet
- DLY5_6F Understands the opportunities that networks offer to collaborative working.

Breaking it down into possible topics

Year 1

CS - Look at a simple task in the home - making toast and write an algorithm for this

IT - learn to save, open and manipulate a piece of work that has images found on the Internet

DL - Produce a piece of work that explains how to stay safe while using the Internet. Produce a piece of work looking at how ICT is used outside of school - everywhere in our lives.

Year 2

CS - Introduce Scratch / Logo programming language.

IT - Use and navigate the internet - to find appropriate info / images combined in DTP task.

DL - Combine use of ICT outside school with dangers of Internet and use the internet to produce a poster / leaflet about dangers of Internet / social media - good & bad of both.

Year 3_4

CS - Design and de-bug a program

IT - DTP task covers all - possibly computer system poster using Draw, Google etc.

DL - Presentation with hyperlinks - the internet, using it, communicating. Covers Lower KS2

Year 5_6

CS - Find one task that covers all

IT - Use SS, DB and Writer to produce a single document - linked if possible

DL - Internet topic covering all higher KS2 content