Whole School Computing Intent Overview

Yellow Phase Foundations for Computing (End of Year Expectations)

Knowledge- Learners should know:	Skills- Learners should be able to:
Some ways technology may be used to communicate	Talk to a trusted adult if they feel unsafe when using technology
Rules that keep us safe in home & at school when using technology	Use everyday technology
Ways someone can be unkind online & how it can make others feel	Explore on screen activities by clicking (cause & effect)
That work I create belongs to me	Identify simple examples of my personal information (name, address, birthday etc.,)

Year 1

Autumn		Spring	Summer	
Digital Citizenship	**Digital Literacy**	**Computer Science: Algorithm**	**Information Technology**	**Digital Literacy:** **Data Handling & Digital Creativity**
Know & understand the main, simple online safety rules Explain why it is important to be kind & respectful to people online & give examples Understand there may be people online who could make us feel sad, embarrassed or upset Know who is a trusted adult & when to speak to them (butterfly feeling) Know that information can stay online & could be copied Describe what type of information should not be put online	Log on & log off the school network Save work in a file on Purplemash & the school network Type sentences in the correct format (capital letters, space & full stops) Insert images into a simple software programme Change font, colour & size of text Explain & describe the main keys on a keyboard used for typing e.g., space bar, shift, full stop etc. Use icons to change text e.g., bold, italics, centre, etc. Use the 'undo' icon to fix mistakes	Understand what algorithms are & plan a simple algorithm Give & follow simple instructions, which include straight line or turning commands Create a simple algorithm using a Beebot Debug a simple program causing an unexpected outcome Predict if a simple algorithm will work Break a problem down into smaller parts	Explain what a browser is, how to open one & use simple keywords in search engines to find information Identify where or who to go to for help if something online causes worry or upset Explain why passwords are used to protect information & devices Recognise examples of personal information that should not be shared online without asking a trusted adult Explain why work created using technology belongs to them Identify icons for applications on the desktop & launch accordingly Conduct a computing pioneer study on Jack Kilby and Robert Noyce and the invention of the microchip.	Create a pictogram by entering data into a graph making program (2 Graph) Answer simple questions using a pictogram (2Graph) Use an iPad to take photographs Explore sounds in a music programme or sound app
British Value: Develop an understanding & acceptance of the consequences of their behaviour & actions **UNCRC Article:** **Article 16:** Every child has the right to privacy	**British Value:** Use of imagination & creativity in their learning **UNCRC Article:** **Article 29:** Education must develop every child's personality, talents & abilities to the full	**British Value:** Display a willingness to participate in & respond positively to artistic activities **UNCRC Article:** **Article 29:** Education must develop every child's personality, talents & abilities to the full	**British Value:** Develop their ability to recognise the difference between right & wrong **UNCRC Article:** **Article 17**: Every child has the right to reliable information from the media & internet	**British Value:** Display a willingness to participate in & respond positively to artistic activities **UNCRC Article:** **Article 31:** Every child has the right to take part in a wide range of artistic activities

Blue - Essential Computing Skills

Year 1 ~ End of Year Expectations

Knowledge ~ Learners should know:	Skills ~ Learners should be able to:
Some key ways to use technology safely	Recognise warning signs while online and get help
That personal information must be kept private & why we use passwords	Type a sentence correctly using a word bank or copying from a written piece
That an algorithm is a series of instructions	Save their work in a folder
Some of the uses of technology in their own home & at school	Record sound & play it back
	Programme a beebot to make a planned journey
	Find information from websites

Throughout and at the end of unit of work all learners will have been assessed against the relevant year group expectations (knowledge and skills) utilising bespoke Kahoot low-stakes quiz assessments and appropriate assessment tasks.

Year 2

Autumn		Spring	Summer	
Digital Citizenship	**Digital Literacy**	**Computer Science: Events Program**	**Information Technology**	**Digital Literacy: Data Handling**
Explain & know the simple online safety rules

Describe & explain how information about me can be seen by other people

Understand & explain the rules for keeping information private online

Identify where to go for help if they are worried about something online

Understand that information can stay online a long time & that we leave a digital footprint

Describe ways in which people might make themselves look different online

Understand cyber-bullying, how it makes people feel & how to report it | Log onto a school computer & save work in folders

Type using both hands

Use keyboard shortcuts to edit typed text

Use spelling & grammar check to check typed text

Use the enter/return key to add breaks in typed work

Insert a picture into a word document by saving it from the internet

Change the orientation of my work from portrait to landscape & explain my choice

Insert a page border & basic table | Understand that computers need precise instructions

Explain what programs & events are & understand that programs need events to begin

Use different techniques to start a program e.g., by clicking, timed, etc.

Predict how a program will work using logical reasoning

Create a program to make a character move in a game, including direction & turning commands

Debug a programme that has caused an unexpected outcome | Use simple key words in search engines

Refine searches to limit search results

Describe how to navigate a webpage using links, back buttons tabs, etc.

Understand the difference between true & fictional information from reliable & unreliable websites

Understand that some content on the internet belongs to other people & why (Copyright)

Describe & explain rules for keeping personal information private (e.g., creating & protecting passwords)

Conduct a computing pioneer study on Tim Berners Lee and the creation of the WWW | Plan a simple tree diagram to sort information (2Question)

Create a branching database

Search a database to find information & answer simple questions

Create simple graphs & bar charts

Find information & answer simple questions using graphs |
| **British Value:**

Develop an understanding & acceptance of the consequences of their behaviour & actions

UNCRC Article:

Article 16: Every child has the right to privacy | **British Value:**

Use of imagination & creativity in their learning

UNCRC Article:

Article 29: Education must develop every child's personality, talents & abilities to the full | **British Value:**

Use of imagination & creativity in their learning

UNCRC Article:

Article 29: Education must develop every child's personality, talents & abilities to the full | **British Value:**

Develop their ability to recognise the difference between right & wrong

UNCRC Article:

Article 17: Every child has the right to reliable information from the media & internet | **British Value:**

Display a willingness to participate in & respond positively to artistic activities

UNCRC Article:

Article 31: Every child has the right to take part in a wide range of artistic activities |

Blue - Essential Computing Skills

Year 2 ~ End of Year Expectations

Knowledge ~ Learners should know:	Skills ~ Learners should be able to:
Where to go for help if they are concerned about anything they see online	Recognise online bullying behaviour
That people might behave and communicate differently online	Save & retrieve work in different folders
Ways technology is used in school & outside of school	Use Keyboard shortcuts to edit digital content
That programs require precise instructions & events to begin	Use a search engine to find relevant, factual information
That people own online work	Write a simple program & test it
	Predict what the outcome of a simple program will be (logical reasoning)

Throughout and at the end of unit of work all learners will have been assessed against the relevant year group expectations (knowledge and skills) utilising bespoke Kahoot low-stakes quiz assessments and appropriate assessment tasks.

Year 3

Autumn		Spring	Summer	
Digital Citizenship	**Digital Literacy**	**Computer Science: Sequence**	**Information Technology**	**Digital Literacy: Digital Creativity**
Use technology safely, responsibly & appropriately Explain what 'identity' means & how digital footprints contribute to online identities Understand how to represent themselves in different ways online Describe ways people who have similar likes & interests can connect online Identify the difference between online friends & real-life friends Identify & explain the risks of putting personal information online Explain & know the online safety rules about cyber-bullying Understand that too much technology can have a negative impact	Type a number of sentences using the keyboard Use the tab key to indent paragraphs Use cut, copy & paste icons & shortcuts to reorder text Use format wrapping, rotate, move & resize to change the layout of text boxes & images Format Wordart, changing the size, colour & border of text Use a variety of table tools e.g., fill, merge cells, split cells, etc. Explain the difference between save & save as & create a folder to save work, giving it an identifiable name	Explain what a sequence is Use & edit a pre-written program to achieve a specific outcome Sequence a simple program using Logo to create a line drawing of a simple 2D shape Solve problems by decomposing them into smaller parts Use logical reasoning to explain what will happen next Identify & debug errors in a sequence Predict how a change in a sequence may impact on the outcome of a program	Use key vocabulary & phrases in search engines Explain what autocomplete is & how to find the best suggestion Explain the difference between a 'belief', an 'opinion' & a 'fact' & where these might be shared online Describe simple strategies for creating & keeping passwords safe & private Explain why information should only be shared with trusted people & how to talk to a trusted adult if they feel unsure or pressured Describe how devices can collect & share information with others through computer networks Explain the consequences of copying somebody else's work from online (Copyright) Conduct a computing pioneer study on Ada Lovelace and the programming of the first computer	Create an eBook using PowerPoint Use bullet points, speech bubbles, auto shapes & text boxes Edit images using tools in Paint or photo-manipulation software Insert images in a variety of ways Create & add sounds effects & animation to the eBook
British Values: Develop their willingness to reflect on their experiences & that of others Develop an understanding & acceptance of the consequences of their behaviour & actions **UNCRC Articles:** **Article 13**: Every child has the right to seek & receive all kinds of information, as long as it is within the law **Article 16:** Every child has the right to privacy	**British Values:** Develop a use of imagination & creativity in their learning Display a willingness to participate in & respond positively to creative & artistic activities **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents & abilities to the full **Article 31:** Every child has the right to part in a range of artistic activities	**British Values:** Use of imagination & creativity in their learning **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents & abilities to the full **Article 31:** Every child has the right to part in a range of artistic activities	**British Values:** Develop their ability to recognise the difference between right & wrong Develop an understanding & acceptance of the consequences of their behaviour & actions **UNCRC Articles:** **Article 13**: Every child has the right to seek & receive all kinds of information, as long as it is within the law **Article 17**: Every child has the right to reliable information from the media & internet	**British Values:** Display a willingness to participate in & respond positively to artistic activities Develop a use of imagination & creativity in their learning **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents & abilities to the full **Article 31:** Every child has the right to part in a range of artistic activities

Blue - Essential Computing Skills

Year 3 ~ End of Year Expectations

Knowledge ~ Learners should know:	Skills ~ Learners should be able to:
What is meant by a digital footprint	Plan a simple sequence of instructions, including directional instructions
Online identities can be different to real world identities	Create a program using a simple sequence that accomplishes a specific goal
The impact of people being unkind online	Navigate the internet to complete simple, accurate searches
That computer networks share information between devices	Use some features of Microsoft Word & PowerPoint effectively
Different ways they can get help if they are concerned	Create strong passwords and share information safely
The difference between an algorithm and a program	Save work to a specific location with a recognisable name
	Have a healthy balance between online and real-life activity

Throughout and at the end of unit of work all learners will have been assessed against the relevant year group expectations (knowledge and skills) utilising bespoke Kahoot low-stakes quiz assessments and appropriate assessment tasks.

Year 4

Autumn		Spring	Summer	
Digital Citizenship	**Digital Literacy: Digital Creativity**	**Computer Science: Repeat & Loops**	**Information Technology**	**Digital Literacy: Data Handling**
Describe strategies for safe & fun experiences on a range of online social environments Explain online identity using digital footprints & how it may be different to offline identities Describe how information about individuals can be found by searching them online & ways this could be created, copied or shared by others Identify & describe how cyber-bullying might take place through a range of online media (e.g., images, videos, text, chat) Explain how using technology can be both a positive & negative distraction Suggest strategies to limit the amount of time spent using technology when needed	Storyboard a short film clip or animation using PowerPoint Insert images, hyperlinks & sounds into PowerPoint Take a series of pictures to form a short animation Edit, merge, collage & add text to digital photographs on a range of devices Review & edit work & talk about the changes made	Understand what a loop or repeat is & why it is used in a sequence Use loops or repeat commands in programs confidently Detect & debug errors in algorithms Independently select & sequence to make programs Transfer & apply coding skills between different software & on different devices	Understand how computing networks can provide different services by sharing information Understand that many people sharing an opinion does not make it true Explain what is meant by fake news & how to make accurate judgements about the accuracy of online content Describe strategies for keeping information private in different online contexts, knowing that internet use is never fully private Explain what the digital age of consent is & the impact this has on online services asking for consent Describe some of the methods used to encourage people to buy things online Give examples of content which must not be used without permission from the owner (e.g., videos, music, images) & explain why Conduct a computing pioneer study on Hedy Lamar and the foundation for WiFi	Enter a basic formula into Excel Edit a spreadsheet changing text, colour, columns & rows Insert & delete rows & columns on a spreadsheet Use spreadsheets to create a graph Use SUM to calculate rows in a spreadsheet Use data to answer 'what if...?' questions Decide which graph would be best suited for their data & use suggested graphs
British Values: Develop their ability to recognise the difference between right & wrong Develop an understanding & acceptance of the consequences of their behaviour & actions **UNCRC Articles:** **Article 13**: Every child has the right to seek & receive all kinds of information, as long as it is within the law **Article 16:** Every child has the right to privacy	**British Values:** Develop a use of imagination & creativity in their learning Display a willingness to participate in & respond positively to artistic activities **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents & abilities to the full **Article 31:** Every child has the right to part in a range of artistic activities	**British Values:** Use of imagination & creativity in their learning **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents & abilities to the full **Article 31:** Every child has the right to part in a range of artistic activities	**British Values:** Develop a sense of enjoyment & fascination in learning about themselves, others & the world around them Develop their willingness to reflect on their experiences & that of others **UNCRC Articles:** **Article 13 & 17**: Every child has the right to seek & receive all kinds of reliable information from the media or internet, as long as it is within the law	**British Values:** Develop a use of imagination & creativity in their learning **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents & abilities to the full **Article 31:** Every child has the right to part in a range of artistic activities

Blue - Essential Computing Skills

Year 4 ~ End of Year Expectations

Knowledge - Learners should know:	Skills - Learners should be able to:
What computer networks do & how they provide multiple services	Sequence a program using a loop or repeat command
How to search for specific information & know which information is useful & accurate	Make an accurate prediction of a program outcome & explain their reasoning
Which software is useful to complete a specific task	Debug coding when the outcome is not as expected
How to recognise acceptable & unacceptable behaviour online	Produce a short film or animation
How online content & behaviour can impact and influence other people	Create a simple spreadsheet
Anyone can search online profiles for information	Use many features of Microsoft Word & PowerPoint effectively
Positives and negatives of using technology at home and at school	

Throughout and at the end of unit of work all learners will have been assessed against the relevant year group expectations (knowledge and skills) utilising bespoke Kahoot low-stakes quiz assessments and appropriate assessment tasks.

Year 5

Autumn		Spring	Summer	
Digital Citizenship	**Digital Literacy: Data Handling**	**Computer Science: Selections & Conditionals**	**Information Technology**	**Digital Literacy**
Demonstrate responsible choices about online identity depending on the context & audience Understand how online identities can be copied & altered Describe how to help others online & make positive contributions to online communities Understand the impact false information can have on individuals & an audience Explain differences between online & offline bullying, reconising technology specific forms of communication & explain how to get help Know how to block & report users Describe online services that provide help & support (CEOP & ChildLine) Understand how technology can affect health & wellbeing positively & negatively & strategies for ensuring a positive impact	Enter data into a database I have created Collect quality information using a data collection form Use databases to create a graph Select the most appropriate form of graph for a data set & explain choice Interpret graphs of data from a variety of sources	Explain what a conditional is Plan & write an algorithm using: commands, sequence, repetition & selection (If…then…) Detect & debug errors in more complex algorithms & programs Use selection to create games in which the user must make a choice Use skills & understanding of selection in more than 2 programs	Understand what an operating system is & why it is important Identify the key internal parts of a computer & describe what each part does Understand what it means to be sceptical of online content & when this is important Explain key concepts including: information, reviews, fact, opinion, belief, reliability & evidence How stereotypes are amplified online & influence how people think about others Explain what a strong password is & demonstrate how to create one Understand what app permissions are & give some examples Understand & justify when it may be acceptable to use the work of others & how to credit sources Conduct a computing pioneer study on Bill Gates and the founding of Windows	Select appropriate tools to add emphasis & effects to digital work Explain choices about formatting & layout Consider whether work is suitable for the audience Draft & redraft written work by deleting, inserting & replacing text & images Design & evaluate a 3D model with a specific goal
British Values: Develop their willingness to reflect on their experiences & that of others Develop an understanding & acceptance of the consequences of their behaviour & actions **UNCRC Articles:** **Article 13**: Every child has the right to seek & receive all kinds of information	**British Values:** Develop a use of imagination & creativity in their learning Display a willingness to participate in & respond positively to artistic activities **UNCRC Articles:** **Article 17**: Every child has the right to reliable information	**British Values:** Develop a use of imagination & creativity in their learning Display a willingness to participate in & respond positively to artistic activities **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents & abilities	**British Values:** Develop a sense of enjoyment & fascination in learning about themselves, others & the world around them Develop their ability to recognise the difference between right & wrong **UNCRC Articles:** **Article 13 & 17**: Every child has the right to seek & receive all kinds of reliable information from the media	**British Values:** Develop a use of imagination & creativity in their learning Display a willingness to participate in & respond positively to artistic activities **UNCRC Articles:** **Article 29:** Education must develop every child's personality, talents **Article 31:** Every child has the right to part in a range of artistic activities

Article 16: Every child has the right to privacy			or internet, as long as it is within the law	

Blue - Essential Computing Skills
Year 5 ~ End of Year Expectations

Knowledge ~ Learners should know:	Skills ~ Learners should be able to:
How to make responsible choices when using technology about online identity & communicating with others A number of ways to report online concerns & get help How to consider the reliability of online information The different types of online bullying & how to recognise these What the internal parts of a computer are and how they work	Create a graph from a database using excel Write a program that uses conditional/selection to achieve a specific outcome Predict the outcome of a programme and the implications of reordering code Debug code when the outcome is not as expected Redraft written digital content using a range of formatting tools Promote health and wellbeing with regards to technology use Find, save and import images from the internet

Throughout & at the end of unit of work all learners will have been assessed against the relevant year group expectations (knowledge & skills) utilising bespoke Kahoot low-stakes quiz assessments & appropriate assessment tasks.

Year 6

Autumn		Spring	Summer	
Digital Citizenship	**Digital Literacy**	**Computer Science: Variables**	**Information Technology**	**Digital Literacy: Digital Creativity**
Recognise & understand what discrimination online might look like & how to challenge it	Choose, select & use a combination of software to present work	Explain what a variable is	Explain how search engines work & how results are selected & ranked	Create a memory eBook of time in school
Describe online issues that may make us feel uncomfortable, sad, worried or scared	Select appropriate tools independently & explain choices	Confidently use events, repeats, selection & variables	Explain & understand how some sites present opinions & beliefs as facts	Add images & text to eBook
Give examples of how to get help both on & offline	Explain how work has been edited & improved to suit the audience	Use a variable in a variety of programming software	Define the terms 'influence', 'manipulation' & 'persuasion' & explain how I might encounter these online, including the influence of persuasive design	Draft & redraft written work by deleting, inserting & replacing text to improve clarity & create mood
Understand the impact of sharing online can positive & negative impacts on own reputation (digital footprint) & others	Interpret graphs of data collected from a variety of sources	Decompose a problem & methodically create a program to solve it	Demonstrate strategies to recognise & challenge the validity of 'facts'	Evaluate & explain how eBook is suitable for their audience (other children in school)
Explain strategies that can be used to protect online reputations, including degrees of anonymity		Evaluate effectiveness of programming & suggest improvements	Understand how to identify, flag & report inappropriate content	Create a film clip adding images, special effects, music & voice over
Describe how to respect others online including respecting boundaries about what is shared about them online		Confidently use the 'Blockly' programming language	Describe simple ways to increase privacy on apps & services that provide privacy settings	
Describe how to capture cyber-bullying content as evidence & report it in different contexts			Suggest what technology might look like in twenty years' time	
Understand & explain age-related regulations on games & technology			Conduct a computing pioneer study on Alan Turing solving the enigma code and identify AI	
Assess, self-regulate & action strategies to limit the impact of technology on health (e.g., night-shift mode, regular breaks, correct posture, sleep, diet & exercise)				
British Values:	**British Values:**	**British Values:**	**British Values:**	**British Values:**
Develop their willingness to reflect on their experiences & that of others	Develop a use of imagination & creativity in their learning	Develop a use of imagination & creativity in their learning	Develop a sense of enjoyment & fascination in learning about themselves, others & the world around them	Develop a use of imagination & creativity in their learning
Develop an understanding & acceptance of the consequences of their behaviour & actions	Display a willingness to participate in & respond positively to artistic activities	Display a willingness to participate in & respond positively to artistic activities	Develop their ability to recognise the difference between right & wrong	Display a willingness to participate in & respond positively to artistic activities
UNCRC Articles:	**UNCRC Articles:**	**UNCRC Articles:**	**UNCRC Articles:**	**UNCRC Articles:**
Article 13: Every child has the right to seek & receive all kinds of information, as long as it is within the law	**Article 29:** Education must develop every child's personality, talents & abilities to the full	**Article 29:** Education must develop every child's personality, talents & abilities to the full	**Article 13 & 17**: Every child has the right to seek & receive all kinds of reliable information from the media or internet, as long as it is within the law	**Article 29:** Education must develop every child's personality, talents & abilities to the full
Article 16: Every child has the right to privacy				

Blue - Essential Computing Skills

Year 6 ~ End of Year Expectations

Knowledge ~ Learners should know:	Skills ~ Learners should be able to:
How search engine results are selected & ranked & can provide misleading information	Critically evaluate and reject inappropriate online representation
How to present information in a way that makes is easier for the audience to understand	Have an awareness of abstraction when programming
The potential dangers in using aspects of technology & when & how to alert somebody if they feel uncomfortable	Write a program that combines more than one attribute
	Transfer coding skills between different software
Ways to maintain a positive online reputation that doesn't impact others or themselves	Develop a sequenced program that has repetition & variables identified
How to capture evidence of online bullying	Evaluate the reliability and usefulness of a website
Common systems that regulate age-related content	Use strategies to avoid being influenced by misinformation online
How technology was developed by key figures	Understand copyright and hoe to cite references

Throughout and at the end of unit of work all learners will have been assessed against the relevant year group expectations (knowledge and skills) utilising bespoke Kahoot low-stakes quiz assessments and appropriate assessment tasks.