Year 1

Computing systems and networks - Technology around us
I can identify technology.
I can identify a computer and its main parts.
I can use a mouse in different ways.
I can type using a keyboard.
I can use a keyboard to edit text.
I can create rules for using technology responsibly.

Creating media – digital painting
I can describe what freehand tools do.
I can use the shape and line tools.
I can make careful choices when painting a digital picture and explain why I have made that choice.
I can compare painting a picture on a computer and on paper.

Programming A – moving a robot
I can explain what a given command will do.
I can combine forwards and backwards commands to make a sequence.
I can combine four direction commands to make sequences.
I can plan a simple program.
I can find more than one solution to a problem.

Data and information – grouping data
I can label objects.
I can identify that objects can be counted.
I can describe objects in different ways.
I can count objects with the same properties.
I can compare groups of objects.
I can answer questions about groups of objects.

Creating media – digital writing
I can use a computer to write.
I can add and remove text on a computer.
I can change the look of text on a computer and explain why I have made that choice.
I can compare typing on a computer to writing on paper.

Programming B – programming animations
I can choose a command for a given purpose.
I can show that a series of commands can be joined together.
I can identify the effect of changing a value.
I can explain that each sprite has its own instructions.
I can design parts of a project.
I can use my algorithm to create a program.

Online safety
I can recognise that there may be people online who could make someone feel sad, embarrassed, or upset.
I can give examples of when I should ask permission to do something online and explain why this is important.
I can recognise that information can stay online and could be copied.
I know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened.
I can explain rules to keep myself safe when using technology both in and beyond the home.
I can explain how passwords are used to protect information, accounts and devices.
I understand that work created by me using technology belongs to me and others' work does not belong to me even if I save a copy

Year 2

Computing systems and networks - IT around us
I can recognise the uses and features of information technology.
I can identify the uses of IT in school.
I can identify IT beyond school.
I can explain how IT helps us.
I can explain how to use IT safely.
I can recognise that choices are made when using IT.

Creating media – digital photography
I can use a digital device to take a photograph.
I can make choices when taking a photograph.
I can describe what makes a good photograph.
I can decide how a photograph can be improved.
I can use tools to change an image.
I can recognise that photos can be changed.

Programming A – robot algorithms
I can describe a series of instructions as a sequence.
I can explain what happens when we change the order of instructions.
I can use logical reasoning to predict the outcomes of a program.
I can explain what programming projects can have code and artwork.
I can design an algorithm.
I can create and debug a program that I have written.

Data and information – pictograms
I can recognise that we can count and compare objects using tally charts.
I can recognise the objects can be represented as pictures.
I can create a pictogram.
I can select objects by attribute and make comparisons.
I can recognise that people can be described by attributes.
I can explain that we can present data information using a computer.

Creating media – digital music
I can say how music can make us feel.
I can identify that there are patterns in music.
I can experiment with sound using a computer.
I can use a computer to create a musical pattern.
I can create music for a purpose.
I can review and refine my computer work.

Programming B – programming quizzes
I can explain that a sequence of commands has a start.
I can explain that a sequence of commands has an outcome.
I can create a program using a given design.
I can change a given design.
I can create a program using my own design.
I can decide how my project can be improved.

Online safety
I can explain how other people may look and act differently online and offline.
I can describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure.
I can explain how information put online about someone can last for a long time.
I can explain what bullying is, how people may bully others and how bullying can make someone feel.
I can explain why some information I find online may not be real or true.
I can explain how passwords can be used to protect information, accounts and devices.
I can recognise that content on the internet may belong to other people.

Year 3

Computing systems and networks – connecting computers
I can explain how digital devices function.
I can identify input and output devices.
I can recognise how digital devices can change the way we work.
I can explain how a computer network can be used to share information.
I can explore how digital devices can be connected.
I can recognise the physical components of a network.
Creating media – stop-frame animation
I can explain that animation is a sequence of drawings or photographs.
I can relate animated movement with a sequence of images.
I can plan an animation.
I can identify the need to work consistently and carefully.
I can review and improve an animation.
I can evaluate the impact of adding other media to an animation.
Programming A – sequencing sounds
I can explore a new programming environment.
I can identify that commands have an outcome.
I can explain that a program has a start.
I can recognise that a sequence of commands can have an order.
I can change the appearance of my project.
I can create a project from a task description.
Data and information – branching databases
I can create questions with yes/no answers.
I can identify the attributes needed to collect data about an object.
I can create a branching database.
I can explain why it is helpful for a database to be well structured.
I can plan the structure of a branching database.
I can independently create a notification tool.
Creating media – desktop publishing
I can recognise how text and images convey information.
I can recognise that text and layout can be edited.
I can choose appropriate page settings.
I can add content to a desktop publishing publication.
I can consider how different layouts can suit different purposes.
I can consider the benefits of desktop publishing.
Programming B – events and actions
I can explain how a sprite moves in an existing project.
I can create a program to move a sprite in four directions.
I can adapt of program to a new content.
I can develop my program by adding features.
I can identify and fix bugs in a program.
I can design and create a maze-based programme.
Online safety
I can explain how people can represent themselves in different ways online.
I can explain what it means to 'know someone' online and why this might be different from knowing someone offline.
I can explain the need to be careful before sharing anything personal.
I can give examples of how bullying behaviour could appear online and how someone can get support.
I can explain the difference between a 'belief', an 'opinion' and a 'fact. and can give examples of how and where they might be shared online.
I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable.
I can describe simple strategies for creating and keeping passwords private.
I can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.

Year 4

Computing systems and networks – The Internet
I can describe how networks physically connect to other networks.
I can recognise how networked devices make up the internet.
I can outline ow content can be added and accessed on the World Wide Web (WWW)
I can describe how content can be added and accessed on the World Wide Web (WWW)
I can recognise how the content of the WWW is created by people.
I can evaluate the consequences of unreliable content.

Creating media – audio production
I can identify that sound can be recorded.
I can explain that audio recordings can be edited.
I can recognise the different parts of creating a podcast project.
I can apply audio editing skills independently.
I can combine audio to enhance my podcast project.
I can evaluate the effective use of audio.

Programming A – repetition in shapes
I can identify the accuracy in programming is important.
I can create a programme in text-based language.
I can explain what 'repeat' means.
I can modify a count-controlled loop to produce a given outcome.
I can decompose a task into small steps.
I can create a program that uses count-controlled loops to produce a given outcome.

Data and information – data logging
I can explain that data gathered over time can be used to answer questions.
I can use a digital device to collect data automatically.
I can explain that a data logger collects 'data points' from sensors over time.
I can recognise how a computer can help us analyses data.
I can identify the data needed to answer questions.
I can use data from sensors to answers questions.

Creating media – photo editing
I can explain that the composition of digital images can be changed.
I can explain that colours can be changed in digital images.
I can explain how cloning can be used in editing.
I can explain that images can be combined.
I can combine images for a purpose.
I can evaluate how changes can improve an image.

Programming B – repetition in games
I can develop the use of count-controlled loops in a different environment.
I can explain that in programming there are infinite loops and count controlled lops.
I can develop a design that includes two or more loops which run at the same time.
I can modify an infinite loop in a given programme.
I can design a project that includes repetition.
I can create a project that includes repetition.

Online safety
I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.
I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.
I can explain ways that some of the information about anyone online could have been created, copied or shared by others.
I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them.
I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.
I can identify times or situations when someone may need to limit the amount of time they use technology.
I know what the digital age of consent is and the impact this has on online services asking for consent.
I can give some simple examples of content which I must not use without permission from the owner.

Year 5

Computing systems and networks – systems and searching
I can explain that computers can be connected together to form systems.
I can recognise the role of computers systems in our lives.
I can experiment with search engines.
I can describe how search engines select results.
I can explain how search results are ranked.
I can recognise why the order of results is important, and to whom.

Creating media – video production
I can explain what makes a video effective.
I can identify digital devices that can record video.
I can capture video using a range of techniques.
I can create a storyboard.
I can identify that video can be improved through reshooting and editing.
I can consider the impact of the choices made when making and sharing a video.

Programming A – selection in physical computing
I can control a simple circuit connected to a computer.
I can write a program that includes count-controlled loops.
I can explain that a loop can stop when a condition is met.
I can explain that a loop can be used to repeatedly check whether a condition has been met.
I can design a physical project that includes selection.
I can create a program that controls a physical computing project.

Data and information – flat file databases
I can use a form to record information.
I can compare paper and computer-based databases.
I can outline how you can answer questions by grouping and then sorting data.
I can explain that tools can be used to select specific data.
I can explain that computer programs can be used to compare data visually.
I can use a real-world database to answer questions.

Creating media – vector graphics
I can identify that drawing tools can be used to produce different outcomes.
I can create a vector drawing by combining shapes.
I can use tools to achieve a desired effect.
I can recognise that vector drawings consist of layers.
I can group objects to make them easier to work with.
I can apply what I have learned about vector drawings.

Programming B – selection in quizzes
I can explain how selection is used in computer programs.
I can relate that a conditional statement connects a condition to an outcome.
I can explain how selection directs the flow of a program.
I can design a program which uses selection.
I can create a program which uses selection.
I can evaluate my program.

Online safety
I can explain how identity online can be copied, modified or altered.
I can explain that there are some people I communicate with online who may want to do me or my friends harm and can recognise that this is not my / our fault.
I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect.
I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying.
I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful.
I can describe ways technology can affect health and well-being both positively and negatively.
I can explain what a strong password is and demonstrate how to create one.
I can give examples of content that is permitted to be reused and know how this content can be found online.

Year 6

Computing systems and networks – communication and collaboration
I can explain the importance of internet addresses.
I can recognise how data is transferred across the internet.
I can explain how sharing information online can help people to work together.
I can evaluate different ways of working together online.
I can recognise how we communicate using technology.
I can evaluate different methods of online communication.

Creating media – web page creation
I can review an existing website and consider its structure.
I can plan the features of a web page.
I can consider the ownership and use of images (copyright).
I can recognise the need to preview pages.
I can outline the need for a navigation path.
I can recognise the implications of linking to content owned by other people.

Programming A – variables in games
I can define a 'variable' as something that is changeable.
I can explain why a variable is used in a program.
I can choose how to improve a game by using variables.
I can design a project that builds on a given example.
I can use my design to create a project.
I can evaluate my project.

Data and information - spreadsheets
I can create a data set in a spreadsheet.
I can build a data set in a spreadsheet.
I can explain that formulas can be used to produce calculated data.
I can apply formulas to data.
I can create a spreadsheet to plan an event.
I can choose suitable ways to present data.

Creating media – 3D modelling
I can recognise that you can work in three dimensions on a computer.
I can identify that digital 3D objects can be modified.
I can recognise that objects can be combined in a 3D model.
I can create a 3D model for a given purpose.
I can plan my own 3D model.
I can create my own digital 3D model.

Programming B – sensing movement
I can create a program to run on a controllable device.
I can explain that selection can control the flow of a program.
I can update a variable with a user input.
I can use a conditional statement to compare a variable to a value.
I can design a project that uses inputs and outputs on a controllable device.
I can develop a program to use inputs and outputs on a controllable device.

Online safety
I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.
I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not.
I can explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.
I can describe how to capture bullying content as evidence to share with others who can help me.
I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online
I can explain why information that is on a large number of sites may still be inaccurate or untrue.
I recognise and can discuss the pressures that technology can place on someone and how / when they could manage this
I can describe effective ways people can manage passwords and I can explain what to do if a password is shared, lost or stolen.
I can demonstrate how to make references to and acknowledge sources I have used from the internet.