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| Strand | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| ***Computer Science*** | | | | | | |
| ***Programming*** | *I can understand and create* ***algorithms*** *(steps or rules as instructions, e.g. how to make a sandwich)*  *I understand that algorithms must be precise and unambiguous* | *I can* ***predict*** *the behaviour of simple programs*  *I can create and run a* ***program*** *(an algorithm or multiple algorithms that can be understood by a computer)*  *I can* ***debug*** *(find and fix a problem) within a simple program* | *I can use* ***selection*** *in my programs. (Also known as* ***conditionals*** *or* ***If / Then*** *statements). (e.g. if a character moves onto a yellow square, then gain two points)*  *I can create a sequence of commands to produce a given outcome*  *I can recognise that the order of commands will produce a different outcome* | *I can create a program that uses* ***loops*** *to achieve a particular outcome*  *I can recognise that some programs can be run at the same time (concurrency)*  *I can* ***decompose*** *(break into smaller chunks) a programming problem* | *I can create an* ***‘if... then... else...’*** *statement that will result in different outcomes*  *I can explain that instructions in a program will produce specific outcomes*  *I can create and modify a* ***count*** *or* ***event-controlled*** *loop* | *I can identify a* ***variable*** *in an existing program*  *I can use* ***variables*** *of my own creation within my programming* |
| ***Controlling hardware and Understanding Machines*** | *I can identify examples of* ***technology*** *in the classroom* | *I can identify the major parts of* ***digital devices*** *(e.g. keyboard, screen, power, batteries, touchscreen)*  *I can* ***identify*** *information technology in the school, home, and beyond*  *I can create* ***rules*** *for using technology safely* | *I can control or simulate* ***programmable hardware*** *(e.g. a Sphero robot)*  *I can identify* ***networked devices*** *around me (e.g. networked printer, wireless laptop)*  *I can identify* ***inputs*** *and* ***outputs*** *of common computing devices (e.g inputs: keys on a keyboard, temperature sensor, tilting a device; outputs: screen display, printer)* | *I can recognise that the* ***world wide web*** *is part of the internet*  *I understand that the global interconnection of networks is the internet* | *I can recognise the role of* ***computer systems*** *in our lives*  *I understand that* ***connections*** *between computers allow us to work together* | *I can* ***program*** *and* ***debug*** *multiple functions on programmable hardware (e.g. with a Microbit)*  *I can explain that search results are ordered, and this is called* ***ranking***  *I can explain how search engines make money by selling* ***advertising space*** |

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| ***Information Technology*** | | | | | | |
| ***Operate, Understand and Implement*** | *I can use* ***apps*** *or* ***websites*** *to aid my learning*  *I can* ***save and retrieve*** *work that I have produced (includes* ***auto-save****)*  *I can move a* ***cursor*** *with the trackpad and* ***click*** *on an icon*  *I can place* ***items*** *into groups (e.g. these shapes are all red)*  *I can decide on* ***labels*** *for groups (e.g. these shapes all have four sides)* | *I can* ***type*** *and* ***edit*** *basic text*  *I can use* ***two-finger scrolling*** *on a touchpad*  *I can use the* ***shift key*** *to create capital letters*  *I can* ***enter data*** *into a computer system*  *I can use a computer to* ***present*** *data*  *I can use a computer to answer questions on data* | *I know how to* ***search*** *for items on the internet*  *I can use technology to organise and manipulate* ***digital content***  *I can* ***type*** *to achieve a specific goal*  *I can type* ***basic punctuation*** *correctly within on-screen writing*  *(spaces, commas, full stops, question marks)*  *I can perform a* ***two-finger click or right-click*** *to access additional options*  *I can create questions with yes / no answers to categorise objects*  *I can retrieve information from different levels of a branching database* | *I can* ***type*** *to achieve a specific goal, including accurate punctuation and spelling check*  *I can use a digital device to* ***collect data*** *automatically*  *I can choose how often to collect* ***data samples*** | *I can edit**and**improve* ***on-screen writing****, including digital thesaurus use*  *I can combine a variety of* ***software*** *(programs that run on computers) to accomplish given goals*  *I understand that* ***emails*** *and other digital communications can be sent and received from various types of digital device*  *I can choose multiple criteria to* ***search data*** *to answer a given question (****AND and OR****)*  *I can choose which* ***attribute*** *to sort data by to answer a given question*  *I can choose an appropriate graph to visually compare data* | *I can propose relevant questions that can be answered using data*  *I recognise that data can be calculated using different operations*  *I can* ***re-order*** *on-screen sentences for clarity, purpose or effect*  *I can* ***type at speed*** *with accurate spelling and use of punctuation conventions* |
| ***Multimedia and Sound*** | *I can use an* ***app*** *or* ***website*** *to make graphical marks or pictures* | *I can use* ***technology*** *to capture (e.g. with an iPad) and manipulate (position, re-size, rotate) photos*  *I can create audio using digital technology* | *I can design and create an* ***animation*** *(e.g. stop-frame animation on an iPad)*  *I can recognise that different* ***font styles*** *and* ***effects*** *are used for particular purposes* | *I can plan for a podcast or music production*  *I can* ***record*** *and* ***edit*** *sound using digital technology as part of a podcast or music production* | *I can edit* ***video****, bringing together different media elements (e.g. stills, video, captions and sound) to produce an effective final product*  *I understand that a vector image is comprised of separate objects*  *I understand that vector graphics are made from lines and shapes* | *I can recognise the components of a web page layout*  *I can devise my own web design which contains clear navigation structures (menus, hyperlinks etc.)*  *I can* ***modify and adjust*** *objects in a 3D space (e.g. using Tinkercad)*  *I can recognise the difference when working with 3D objects in comparison to 2D shapes* |

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| ***Digital Literacy*** | | | | | | |
| ***Self-image and Identity*** | *If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust.* | *I can describe ways in which people might make themselves look different online.* | *I can describe ways in which media can shape ideas about gender.* | *I can explain how my online identity can be different to the identity I present in ‘real life’.* | *I can explain how identity online can be copied, modified or altered.* | *I can explain how I can represent myself in different ways online.* |
| ***Online relationships*** | *I can recognise some ways in which the* ***internet*** *can be used to communicate.* | *I can explain some risks of communicating* ***online*** *with others I don’t know well.* | *I can explain how my and other people’s feelings can be hurt by what is said or written online.* | *I can explain what it means to ‘know someone’ online and why this might be different from knowing someone in real life.* | *I can explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming).* | *I can demonstrate how I would support others (including those who are having difficulties) online.* |
| ***Online reputation*** | *I can describe what information I should not put* ***online*** *without asking a trusted adult first.* | *I can explain how information put online about me can last for a long time.* | *I know who I should ask if I am not sure if I should put something online.* | *I can describe how others can find out information about me by looking online.* | *I can describe ways that information about people online can be used by others to make judgments about an individual.* | *I can describe some simple ways that help build a positive online reputation.* |
| ***Online bullying*** | I can describe how to behave online in ways that do not upset others | | *I can describe rules about how to behave online and how I follow them.* | I can explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them (their reputation). | I can explain how I would report online bullying on the apps and platforms that I use. | I can identify a range of ways to report concerns both in school and at home about online bullying. |
| ***Managing online information*** | *I can identify devices I could use to access information on the internet.* | *I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).* | *I can evaluate digital content and can explain how I make choices from search results.* | *I can* ***analyse*** *information and differentiate between ‘opinions’, ‘beliefs’ and ‘facts’.* | *I can explain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs true.* | *I can demonstrate strategies to enable me to analyse and evaluate the validity of ‘facts’ and I can explain why using these strategies are important.* |
| ***Health, well-being and lifestyle*** | *I can explain rules to keep us safe when we are using technology both in and beyond the home.* | *I can create* ***rules*** *for using technology* ***safely*** | *I can identify situations when I might need to limit the amount of time I use technology.* | *I can describe ways technology can affect healthy sleep and can describe some of the issues.* | *I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.* | *I can assess and action different strategies to limit the impact of technology on my health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise).* |
| ***Privacy and security*** | *I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).* | *I can explain why I should always ask a trusted adult before I share any information about myself online.* | *I can describe simple strategies for creating and keeping passwords private.* | *I can explain how internet use can be monitored.* | *I can explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others.* | *I can evaluate different methods of online communication* |
| ***Copyright and ownership*** | *I can name my work so that others know it belongs to me.* | *I can recognise that content on the internet may belong to other people.* | *I can explain why copying someone else’s work from the internet without permission can cause problems.* | *I can assess and justify when it is acceptable to use the work of others.* | *I can demonstrate the use of search tools to find and access online content which can be reused by others.* | *I can recognise the implications of linking to (and using) content owned by other people - adjusted* |