

The STM Computing Curriculum

National Curriculum aims & purpose:	Curriculum Design and Intent	
<p>Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial system. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.</p> <p>Aims:</p> <p style="text-align: center;"><u>Computer Science</u></p> <ul style="list-style-type: none"> • To enable children to become confident coders on a range of devices. • To create opportunities for collaborative and independent learning. • To develop children's understanding of technology and how it is constantly evolving. <p style="text-align: center;"><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • To enable a safe computing environment through appropriate computing behaviours. • To allow children to explore a range of digital devices. • To promote pupils' spiritual, moral, social and cultural development. <p style="text-align: center;"><u>Information Technology</u></p> <ul style="list-style-type: none"> • To develop ICT as a cross-curricular tool for learning and progression. • To promote learning through the development of thinking skills. • To enable children to understand and appreciate their place in the modern world. 	<p>At STM, we believe that Computing is an integral part of preparing children to live in a world where technology is continuously and rapidly evolving, so much so that children are being prepared to work with technology that doesn't even exist yet. For this reason, we feel that it is important that children can participate in the creation of these new tools to fully grasp the relevance of and the possibilities of emerging technologies thus preparing them for the world of work.</p> <p>The Computing in the National Curriculum expectations split the teaching and learning of Computing into three strands (Computer Science, Digital Literacy and Information Technology). It is therefore important that children recognise the difference between what makes each one relevant to their future, as well as their everyday lives. High quality teaching of Computing, from Reception through to Year 6, utilises a combination of practical lessons and theory lessons designed to promote discussion and nurture understanding, which are also relevant to other areas of the curriculum such as PSHE and Citizenship.</p>	
Links to learning in EYFS:	STM Connections Curriculum	STM Plus Curriculum
<ul style="list-style-type: none"> • Explores colour and how colours can be changed • Develops an understanding of using lines to enclose a space, and begins to use drawing to represent actions and objects based on imagination, observation and experience • Develops their own ideas through experimentation with diverse materials, e.g. light, projected image, loose parts, watercolours, powder paint, to express and communicate their discoveries and understanding. • Expresses and communicates working theories, feelings and understandings using a range of art forms, e.g. movement, dance, drama, music and the visual arts. 	<ul style="list-style-type: none"> • Maths - exploring patterns, symmetry and sequences, and recognising how certain numerical strings (eg. the Fibonacci sequence) can be obtained in patterns. • PE/ Science – Using data loggers to report on human changing. • English – Using technology to create and edit work. Use eBooks to engage children in reading. • Geography – Using maps online. • History – Research through various search engines. • RE – Using computers to create work and share with other individuals. 	<ul style="list-style-type: none"> • Work with external computer scientists. • Meet working Computer Scientists to discuss application of skills in real world. • See a Computer Scientist in action and talk to them about their work, process and inspirations • Visit work places/ museums, both locally and nationally, and have opportunities to learn more about the historical and cultural significance of the progress they witness. • Work collaboratively on a large-scale program. • Share their work on a designed website or local/global links and receive feedback from their peers. • Experience the process of 'being' a Computer Scientist, working on canvas, using an easel, organising, using and caring for their tools and seeking out new inspiration.

Computing Long Term Plan*

The following units that are linked to are only examples and can be used and adapted to support teaching and unit plans.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Eafety	Computer Skills	Word Processing	Programming Toys	Programming: Scratch Jr	Painting
Year 2	Eafety	Using Technology	Algorithms	Computer Art	Programming: Scratch Jr	Presentation Skills
Year 3	Eafety	Programming with Algorithms	Presentation Skills	Internet Research and Communication	Programming using Scratch	Databases
Year 4	Eafety	Word Processing	Programming Or Programming	Using and Applying Skills	Animation - Audio editing - Photo Editing	Animation
Year 5	Eafety	Programming	Programming II	Audio and Sound	Blogging/ Vlogging	Data Presentation
Year 6	Eafety	Webpages Including Communication	Programming	Programming II (a selection of lesson progressions using BBC Micro:bit)	Movies	Databases
Eafety		Programming	Handling Data	Multimedia	Technology in our Lives	

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Esafety <ul style="list-style-type: none"> • I can keep my password private. • I can tell you what personal information is. • I can tell an adult when I see something unexpected or worrying online. • I can talk about why it's important to be kind and polite. • I can recognise an age appropriate website. • I can agree and follow sensible e-Safety rules. 	Computer Skills <ul style="list-style-type: none"> • I can recognise the ways we use technology in our classroom. • I can recognise ways that technology is used in my home and community. • I can use links to websites to find information. • I can begin to identify some of the benefits of using technology. 	Word Processing <ul style="list-style-type: none"> • I can talk about the different ways in which information can be shown. • I can use technology to collect information, including photos, video and sound. • I can sort different kinds of information and present it to others. • I can add information to a pictograph and talk to you about what I have found out. • I can use the keyboard or a word bank on my device to enter text (Multimedia). 	Programming Toys <ul style="list-style-type: none"> • I can describe what happens when I press buttons on a robot. • I can press the buttons in the correct order to make my robot do what I want. • I can describe what actions I will need to do to make something happen and begin to use the word algorithm. • I can begin to predict what will happen for a short sequence of instructions. 	Programming: Scratch Jr <ul style="list-style-type: none"> • I can give instructions to my friend and follow their instructions to move around. • I can begin to use software/apps to create movement and patterns on a screen. • I can use the word debug when I correct mistakes 	Painting <ul style="list-style-type: none"> • I can use technology to collect information, including photos, video and sound (Technology in Our Lives). • I can be creative with different technology tools. • I can use technology to create and present my ideas. • I can save information in a special place and retrieve it again.
Possible resources	Safer Internet Be Internet Legends ChildNet Smartie the Penguin Internet Matters	Chrome books	Google Docs	Code and Go Mouse Robot	Scratch Jr	Slides Sketch.io

<p>Year 2</p>	<p>Esafety</p> <ul style="list-style-type: none"> • I can explain why I need to keep my password and personal information private. • I can describe the things that happen online that I must tell an adult about. • I can talk about why I should go online for a short amount of time. • I can talk about why it is important to be kind and polite online and in real life. • I know that not everyone is who they say they are on the Internet. 	<p>Using Technology</p> <ul style="list-style-type: none"> • I can tell you why I use technology in the classroom. • I can tell you why I use technology in my home and community. • I am starting to understand that other people have created the information I use. • I can identify benefits of using technology including finding information, creating and communicating. • I can talk about the differences between the Internet and things in the physical world. 	<p>Algorithms</p> <ul style="list-style-type: none"> • I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions. • I can tell you the order I need to do things to make something happen and talk about this as an algorithm. • I can program a robot or software to do a particular task. 	<p>Poster Designs</p> <ul style="list-style-type: none"> • I can use technology to organise and present my ideas in different ways. • I can use the keyboard on my device to add, delete and space text for others to read. • I can tell you about an online tool that will help me to share my ideas with other people. • I can save and open files on the device I use. 	<p>Programming: Scratch Jr</p> <ul style="list-style-type: none"> • I can look at my friend's program and tell you what will happen. • I can use programming software to make objects move. • I can watch a program execute and spot where it goes wrong so that I can debug it. 	<p>Presentation Skills</p> <ul style="list-style-type: none"> • I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder. • I can make and save a chart or graph using the data I collect. • I can talk about the data that is shown in my chart or graph. • I am starting to understand a branching database. • I can tell you what kind of information I could use to help me investigate a question.
	<p>Possible resources</p>	<p>Safer Internet Be Internet Legends ChildNet Smartie the Penguin Internet Matters</p>	<p>Chrome Books</p>	<p>Code and Go Mouse Robot</p>	<p>Slides</p>	<p>Scratch Jr</p>

<p>Year 3</p>	<p>Esafety</p> <ul style="list-style-type: none"> • I can talk about what makes a secure password and why they are important. • I can protect my personal information when I do different things online. • I can use the safety features of websites as well as reporting concerns to an adult. • I can recognise websites and games appropriate for my age. • I can make good choices about how long I spend online. • I ask an adult before downloading files and games from the Internet. • I can post positive comments online. 	<p>Programming with Algorithms</p> <ul style="list-style-type: none"> • I can break an open-ended problem up into smaller parts. • I can put programming commands into a sequence to achieve a specific outcome. • I can describe the algorithm I will need for a simple task. • I can detect a problem in an algorithm which could result in unsuccessful programming. 	<p>Presentation Skills</p> <ul style="list-style-type: none"> • I can create different effects with different technology tools. • I can combine a mixture of text, graphics and sound to share my ideas and learning. • I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker. • I can evaluate my work and improve its effectiveness. • I can use an appropriate tool to share my work online. 	<p>Internet Research and Communication</p> <ul style="list-style-type: none"> • I can save and retrieve work on the Internet, the school network or my own device. • I can talk about the parts of a computer. • I can tell you ways to communicate with others online. • I can describe the World Wide Web as the part of the Internet that contains websites. • I can use search tools to find and use an appropriate website. • I think about whether I can use images that I find online in my own work. 	<p>Programming using Scratch</p> <ul style="list-style-type: none"> • I can put programming commands into a sequence to achieve a specific outcome. • I keep testing my program and can recognise when I need to debug it. • I can use repeat commands. 	<p>Databases</p> <ul style="list-style-type: none"> • I can talk about the different ways data can be organised. • I can search a ready-made database to answer questions. • I can collect data help me answer a question. • I can add to a database. • I can make a branching database. • I can use a data logger to monitor changes and can talk about the information collected.
<p>Possible resources</p>	<p>Safer Internet Be Internet Legends ChildNet Smartie the Penguin Internet Matters</p>	<p>CS Unplugged</p>	<p>Slides (possible start point)</p>	<p>Google Docs</p>	<p>Scratch</p>	<p>J2Data – Free Log in</p>

<p>Year 4</p>	<p>Esafty</p> <ul style="list-style-type: none"> • I choose a secure password and an appropriate screen name when I am using a website. • I can talk about the ways I can protect myself and my friends from harm online. • I use the safety features of websites as well as reporting concerns to an adult. • I know that anything I share online can be seen by others. • I choose websites, apps and games that are appropriate for my age. • I can help my friends make good choices about the time they spend online. • I can talk about why I need to ask a trusted adult before downloading files and games from the Internet. • I comment positively and respectfully online and through text messages. 	<p>Word Processing</p> <ul style="list-style-type: none"> • I can tell you whether a resource I am using is on the Internet, the school network or my own device. • I can identify key words to use when searching safely on the World Wide Web. • I think about the reliability of information I read on the World Wide Web. • I can tell you how to check who owns photos, text and clipart. • I can create a hyperlink to a resource on the World Wide Web. • I can recognise that websites use different methods to advertise products. 	<p>Programming</p> <ul style="list-style-type: none"> • I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts. • I can use an efficient procedure to simplify a program. • I can use a sensor to detect a change which can select an action within my program. • I know that I need to keep testing my program while I am putting it together. • I can use a variety of tools to create a program. • I can recognise an error in a program and debug it. • I recognise that an algorithm will help me to sequence more complex programs 	<p>Using and Applying Skills</p> <ul style="list-style-type: none"> • I can organise data in different ways. • I can collect data and identify where it could be inaccurate. • I can plan, create and search a database to answer questions. • I can choose the best way to present data to my friends. • I can use a data logger to record and share my readings with my friends. • I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology. (Programming) 	<p>Animation</p> <ul style="list-style-type: none"> • I can use photos, video and sound to create an atmosphere when presenting to different audiences. • I am confident to explore new media to extend what I can achieve. • I can change the appearance of text to increase its effectiveness. • I can create, modify and present documents for a particular purpose. 	<p>Animation</p> <ul style="list-style-type: none"> • I can use a keyboard confidently and make use of a spellchecker to write and review my work. • I can use an appropriate tool to share my work and collaborate online. • I can give constructive feedback to help friends to help them improve their work and refine my own work.
	<p>Possible resources</p>	<p>Safer Internet Be Internet Legends ChildNet Smartie the Penguin Internet Matters</p>	<p>Tinyeye Fake Sites: Dog Island Tree Octopus</p>	<p>Scratch</p>	<p>Google Forms Google Sheets</p>	<p>Scratch Brushninja</p>

<p>Year 5</p>	<p>Esafety</p> <ul style="list-style-type: none"> • I can choose a secure password and screen name. • I protect my password and other personal information. • I can explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to an adult. • I know that anything I post online can be seen, used and may affect others. • I can talk about the dangers of spending too long online or playing a game. • I can explain the importance of communicating kindly and respectfully. • I can discuss the importance of choosing an age-appropriate website, app or game. • I can explain why I need to protect my computer or device from harm. 	<p>Programming</p> <ul style="list-style-type: none"> • I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. • I can refine a procedure using repeat commands to improve a program. • I can use a variable to increase programming possibilities. • I can change an input to a program to achieve a different output. 	<p>Programming II</p> <ul style="list-style-type: none"> • I can use 'if' and 'then' commands to select an action. • I can talk about how a computer model can provide information about a physical system. • I can use logical reasoning to detect and debug mistakes in a program. • I use logical thinking, imagination and creativity to extend a program 	<p>Audio and Sound</p> <ul style="list-style-type: none"> • I can select an appropriate online or offline tool to create and share ideas. • I can review and improve my own work and support others to improve their work • I can use text, photo, sound and video editing tools to refine my work. • I can use the skills I have already developed to create content using unfamiliar technology. • I can select, use and combine the appropriate technology tools to create effects that will have an impact on others. 	<p>Blogging/ Vlogging</p> <ul style="list-style-type: none"> • I can describe different parts of the Internet. • I can use different online communication tools for different purposes. • I can use a search engine to find appropriate information and check its reliability. • I can recognise and evaluate different types of information I find on the World Wide Web. • I can describe the different parts of a webpage. • I can find out who the information on a webpage belongs to. • I know which resources on the Internet I can download and use. • I can describe the ways in which websites advertise their products to me. 	<p>Data Presentation</p> <ul style="list-style-type: none"> • I can use a spreadsheet and database to collect and record data. • I can choose an appropriate tool to help me collect data. • I can present data in an appropriate way. • I can search a database using different operators to refine my search. • I can talk about mistakes in data and suggest how it could be checked.
	<p>Possible resources</p>	<p>Safer Internet Be Internet Legends ChildNet Smartie the Penguin Internet Matters</p>	<p>Scratch</p>	<p>Scratch Makey Makey</p>	<p>Twisted Wave Can record and save to Google Drive</p>	<p>Google Sites</p>

Year 6	Esafety	Webpages	Programming	Programming II	Movies	Databases	
	<ul style="list-style-type: none"> • I protect my password and other personal information. • I can explain the consequences of sharing too much about myself online. • I support my friends to protect themselves and make good choices online, including reporting concerns to an adult. • I can explain the consequences of spending too much time online or on a game. • I can explain the consequences to myself and others of not communicating kindly and respectfully. • I protect my computer or device from harm on the Internet. 	<ul style="list-style-type: none"> • I can tell you the Internet services I need to use for different purposes. • I can describe how information is transported on the Internet. • I can select an appropriate tool to communicate and collaborate online. • I can talk about the way search results are selected and ranked. • I can check the reliability of a website. • I can tell you about copyright and acknowledge the sources of information that I find online. • I know that websites can use my data to make money and target their advertising . 	<ul style="list-style-type: none"> • I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. • I can explain and program each of the steps in my algorithm. • I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm. 	<ul style="list-style-type: none"> • I can recognise when I need to use a variable to achieve a required output. • I can use a variable and operators to stop a program. • I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen. • I can use logical reasoning to detect and correct errors in a algorithms and programs. 	<ul style="list-style-type: none"> • I can talk about audience, atmosphere and structure when planning a particular outcome. • I can confidently identify the potential of unfamiliar technology to increase my creativity. • I can combine a range of media, recognising the contribution of each to achieve a particular outcome. • I can tell you why I select a particular online tool for a specific purpose. • I can be digitally discerning when evaluating the effectiveness of my own work and the work of others. 	<ul style="list-style-type: none"> • I can plan the process needed to investigate the world around me. • I can select the most effective tool to collect data for my investigation. • I can check the data I collect for accuracy and plausibility. • I can interpret the data I collect. • I can present the data I collect in an appropriate way. • I use the skills I have developed to interrogate a database. 	
Possible resources	Safer Internet Be Internet Legends ChildNet Smartie the Penguin Internet Matters	Google Sites	Scratch	Scratch Micro:Bit	Clipchamp – Free product is very usable	Google Forms Google Sheets	
Esafety		Programming		Handling Data		Multimedia	Technology in our Lives

Year group	E-safety	Programming	Handling Data	Multimedia	Technology in our Lives
Year 1	<ul style="list-style-type: none"> • I can keep my password private. • I can tell you what personal information is. • I can tell an adult when I see something unexpected or worrying online. • I can talk about why it's important to be kind and polite. • I can recognise an age appropriate website. • I can agree and follow sensible e-Safety rules. 	<ul style="list-style-type: none"> • I can give instructions to my friend and follow their instructions to move around. • I can describe what happens when I press buttons on a robot. • I can press the buttons in the correct order to make my robot do what I want. • I can describe what actions I will need to do to make something happen and begin to use the word algorithm. • I can begin to predict what will happen for a short sequence of instructions. • I can begin to use software/apps to create movement and patterns on a screen. • I can use the word debug when I correct mistakes 	<ul style="list-style-type: none"> • I can talk about the different ways in which information can be shown. • I can use technology to collect information, including photos, video and sound. • I can sort different kinds of information and present it to others. • I can add information to a pictograph and talk to you about what I have found out. 	<ul style="list-style-type: none"> • I can be creative with different technology tools. • I can use technology to create and present my ideas. • I can use the keyboard or a word bank on my device to enter text. • I can save information in a special place and retrieve it again. 	<ul style="list-style-type: none"> • I can recognise the ways we use technology in our classroom. • I can recognise ways that technology is used in my home and community. • I can use links to websites to find information. • I can begin to identify some of the benefits of using technology.



VC ACADEMY

Year 2

- I can explain why I need to keep my password and personal information private.
- I can describe the things that happen online that I must tell an adult about.
- I can talk about why I should go online for a short amount of time.
- I can talk about why it is important to be kind and polite online and in real life.
- I know that not everyone is who they say they are on the Internet.

- I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions.
- I can tell you the order I need to do things to make something happen and talk about this as an algorithm.
- I can program a robot or software to do a particular task.
- I can look at my friend's program and tell you what will happen.
- I can use programming software to make objects move.
- I can watch a program execute and spot where it goes wrong so that I can debug it.

- I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder.
- I can make and save a chart or graph using the data I collect.
- I can talk about the data that is shown in my chart or graph.
- I am starting to understand a branching database.
- I can tell you what kind of information I could use to help me investigate a question.

- I can use technology to organise and present my ideas in different ways.
- I can use the keyboard on my device to add, delete and space text for others to read.
- I can tell you about an online tool that will help me to share my ideas with other people.
- I can save and open files on the device I use.

- I can tell you why I use technology in the classroom.
- I can tell you why I use technology in my home and community.
- I am starting to understand that other people have created the information I use.
- I can identify benefits of using technology including finding information, creating and communicating.
- I can talk about the differences between the Internet and things in the physical world.



ST THOMAS
MORE
VC ACADEMY

Year 3

- I can talk about what makes a secure password and why they are important.
- I can protect my personal information when I do different things online.
- I can use the safety features of websites as well as reporting concerns to an adult.
- I can recognise websites and games appropriate for my age.
- I can make good choices about how long I spend online.
- I ask an adult before downloading files and games from the Internet.
- I can post positive comments online.

- I can break an open-ended problem up into smaller parts.
- I can put programming commands into a sequence to achieve a specific outcome.
- I keep testing my program and can recognise when I need to debug it.
- I can use repeat commands.
- I can describe the algorithm I will need for a simple task.
- I can detect a problem in an algorithm which could result in unsuccessful programming.

- I can talk about the different ways data can be organised.
- I can search a ready-made database to answer questions.
- I can collect data help me answer a question.
- I can add to a database.
- I can make a branching database.
- I can use a data logger to monitor changes and can talk about the information collected.

- I can create different effects with different technology tools.
- I can combine a mixture of text, graphics and sound to share my ideas and learning.
- I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker.
- I can evaluate my work and improve its effectiveness.
- I can use an appropriate tool to share my work online.

- I can save and retrieve work on the Internet, the school network or my own device.
- I can talk about the parts of a computer.
- I can tell you ways to communicate with others online.
- I can describe the World Wide Web as the part of the Internet that contains websites.
- I can use search tools to find and use an appropriate website.
- I think about whether I can use images that I find online in my own work.



ST THOMAS
MORE
VC ACADEMY

Year 4

- I choose a secure password and an appropriate screen name when I am using a website.
- I can talk about the ways I can protect myself and my friends from harm online.
- I use the safety features of websites as well as reporting concerns to an adult.
- I know that anything I share online can be seen by others.
- I choose websites, apps and games that are appropriate for my age.
- I can help my friends make good choices about the time they spend online.
- I can talk about why I need to ask a trusted adult before downloading files and games from the Internet.
- I comment positively and respectfully online and through text messages.

- I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts.
- I can use an efficient procedure to simplify a program.
- I can use a sensor to detect a change which can select an action within my program.
- I know that I need to keep testing my program while I am putting it together.
- I can use a variety of tools to create a program.
- I can recognise an error in a program and debug it.
- I recognise that an algorithm will help me to sequence more complex programs.
- I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.

- I can organise data in different ways.
- I can collect data and identify where it could be inaccurate.
- I can plan, create and search a database to answer questions.
- I can choose the best way to present data to my friends.
- I can use a data logger to record and share my readings with my friends.

- I can use photos, video and sound to create an atmosphere when presenting to different audiences.
- I am confident to explore new media to extend what I can achieve.
- I can change the appearance of text to increase its effectiveness.
- I can create, modify and present documents for a particular purpose.
- I can use a keyboard confidently and make use of a spellchecker to write and review my work.
- I can use an appropriate tool to share my work and collaborate online.
- I can give constructive feedback to my friends to help them improve their work and refine my own work.

- I can tell you whether a resource I am using is on the Internet, the school network or my own device.
- I can identify key words to use when searching safely on the World Wide Web.
- I think about the reliability of information I read on the World Wide Web.
- I can tell you how to check who owns photos, text and clipart.
- I can create a hyperlink to a resource on the World Wide Web.
- I can recognise that websites use different methods to advertise products.

Year 5

- I can choose a secure password and screen name.
- I protect my password and other personal information.
- I can explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to an adult.
- I know that anything I post online can be seen, used and may affect others.
- I can talk about the dangers of spending too long online or playing a game.
- I can explain the importance of communicating kindly and respectfully.
- I can discuss the importance of choosing an age-appropriate website, app or game.
- I can explain why I need to protect my computer or device from harm.

- I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.
- I can refine a procedure using repeat commands to improve a program.
- I can use a variable to increase programming possibilities.
- I can change an input to a program to achieve a different output.
- I can use 'if' and 'then' commands to select an action.
- I can talk about how a computer model can provide information about a physical system.
- I can use logical reasoning to detect and debug mistakes in a program.
- I use logical thinking, imagination and creativity to extend a program.

- I can use a spreadsheet and database to collect and record data.
- I can choose an appropriate tool to help me collect data.
- I can present data in an appropriate way.
- I can search a database using different operators to refine my search.
- I can talk about mistakes in data and suggest how it could be checked.

- I can use text, photo, sound and video editing tools to refine my work.
- I can use the skills I have already developed to create content using unfamiliar technology.
- I can select, use and combine the appropriate technology tools to create effects that will have an impact on others.
- I can select an appropriate online or offline tool to create and share ideas.
- I can review and improve my own work and support others to improve their work.

- I can describe different parts of the Internet.
- I can use different online communication tools for different purposes.
- I can use a search engine to find appropriate information and check its reliability.
- I can recognise and evaluate different types of information I find on the World Wide Web.
- I can describe the different parts of a webpage.
- I can find out who the information on a webpage belongs to.
- I know which resources on the Internet I can download and use.
- I can describe the ways in which websites advertise their products to me.

Year 6

- I protect my password and other personal information.
- I can explain the consequences of sharing too much about myself online.
- I support my friends to protect themselves and make good choices online, including reporting concerns to an adult.
- I can explain the consequences of spending too much time online or on a game.
- I can explain the consequences to myself and others of not communicating kindly and respectfully.
- I protect my computer or device from harm on the Internet.

- I can deconstruct a problem into smaller steps, recognising similarities to solutions used before.
- I can explain and program each of the steps in my algorithm.
- I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.
- I can recognise when I need to use a variable to achieve a required output.
- I can use a variable and operators to stop a program.
- I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen.
- I can use logical reasoning to detect and correct errors in a algorithms and programs.
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- I can plan the process needed to investigate the world around me.
- I can select the most effective tool to collect data for my investigation.
- I can check the data I collect for accuracy and plausibility.
- I can interpret the data I collect.
- I can present the data I collect in an appropriate way.
- I use the skills I have developed to interrogate a database.
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- I can talk about audience, atmosphere and structure when planning a particular outcome.
- I can confidently identify the potential of unfamiliar technology to increase my creativity.
- I can combine a range of media, recognising the contribution of each to achieve a particular outcome.
- I can tell you why I select a particular online tool for a specific purpose.
- I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.
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- I can tell you the Internet services I need to use for different purposes.
- I can describe how information is transported on the Internet.
- I can select an appropriate tool to communicate and collaborate online.
- I can talk about the way search results are selected and ranked.
- I can check the reliability of a website.
- I can tell you about copyright and acknowledge the sources of information that I find online.
- I know that websites can use my data to make money and target their advertising .
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BE ALL YOU CAN BE

VC ACADEMY