



Lawford Curriculum Overview - [Computing]

Year Group	Autumn		Spring		Summer	
	Question/curriculum area Key Knowledge Key Skills	Concepts BV	Question/curriculum area Key Knowledge Key Skills	Concepts BV	Question/curriculum area Key Knowledge Key Skills	Concepts BV
Reception	Information technology – what is technology and how to use it Knowledge: To know what technology is To know where to find it To know the purpose of different types of technology To know what an ipad is used for To know how to trouble shoot on an ipad To know the use of a QR code Skills: I can sort types of technology into where we might find him To explain what technology is in their own age appropriate way and give some examples To independently use an ipad To scan a QR code on an ipad To apply computing skills to continuous provision activities	Identity Change	Digital literacy – How do I stay safe on the internet Knowledge: To know how to stay safe when using the internet I can recognise some ways in which the internet can be used to communicate. To know how to trouble shoot on the internet Skills: I can give examples of how I (might) use technology to communicate with people I know. Discuss scenarios and how to stay safe when communicating with people on the internet Computer science – robots and programming the indi cars Knowledge: To know what an algorithm is To know that robots need instructions to work To know what debugging means Skills: To program an indi car by giving it instructions To use the beetbot app on the ipads to give instructions To debug the beebots and indi cars Information technology – using a computer Knowledge: To know different apps on an ipad To know which app is most appropriate for your use To know how to use a mouse and keyboard Skills: To use paint on an ipad	Identity Change	Computer science -animation and AR Knowledge: To know how animations, move on j2E To know how to debug an animation To know what AR is Skills: To use j2E to create an animation To debug an animation To use sandbox to create AR See digitals skills passport – summer 2	Identity Change

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			To use j2E jit to draw a picture To use a computer/mouse/keyboard to draw a picture To use the class laptop to access busy things			
1	See Digital skills passport for autumn 1 Computer science – algorithms Key Knowledge: Understand what an algorithm is Understand how algorithms are implemented on digital devices. Understand algorithms are a sequence of instructions in everyday context. Skills: I can take real-world problems and plan a sequence of steps to solve them. Recognise examples of algorithms in everyday digital devices. predict the behaviour of a simple program.	Change	Digital literacy – e-safety Knowledge: Identify personal information that should not be shared online. Understand that information shared online can last for a long time. Know that information which is put online stays for a long time and can be easily copied. Recognise that there may be people online who could make someone feel sad, embarrassed or upset. Understand why it is important to be kind and respectful online. Understand what to do if someone is being bullied online. Understand the concept of needing permission to do something online. Skills: Discuss what should I share online? what should I not share online? If something happens I can give examples of how I can speak to a trusted adult. Identify situations where permission is required. Explain the importance of seeking permission to protect personal and others' information online. Information technology – using a computer Knowledge: recognise common uses of information technology beyond school.	Care Power Identity	Information technology – digital writing Knowledge: I can use technology purposefully to manipulate digital content. I can use technology purposefully to create digital content. Skills: Open a word document Recognise keys on a keyboard Identify and find keys on a keyboard I can enter text into a computer I can use letter, number, and space keys I can use backspace to remove text I can select a word by double-clicking I can select all of the text by clicking and dragging I can change the font See Digital skills passport for summer 2	

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			I can use technology purposefully to manipulate digital content. Skills: I can make marks on a screen and explain which tools I used I can draw lines on a screen and explain which tools I used I can use the paint tools to draw a picture I can make marks with the square and line tools I can use the shape and line tools effectively I can use the shape and line tools to recreate the work of an artist			
2	Information technology -IT in school and the wider world Knowledge: recognise the uses and features of information technology. To know the uses of information technology in the school. To know information technology beyond school. recognise the benefits of information technology. know how to use information technology in different ways and how to keep safe Skills: I can use technology purposefully to organise digital content. I can discuss what information technology is used beyond school. To make a radio show about information technology	Identity	Computer science – algorithms/ scratch Knowledge: To know what is computer science/coding To know what an algorithm is To know that programs execute by following precise and unambiguous instruction. Skills: Debug simple programs by predicting the actions in the code. Create simple programs Use logical reasoning to predict the behaviour of simple programs. Digital literacy – e-safety Knowledge: I can use technology safely and keep my personal information private To know how other people make look and act differently online to offline I know how someone might use technology to communicate with others they do not know and know the risks. I know who I should ask before sharing things about myself or others online. I can identify who can help me if something happens online.	Change Care	Computer science – lego spike Knowledge: To know that programs execute by following precise and unambiguous instruction Skills: Debug simple programs by predicting the actions in the code Create simple programs Summer 2 – see digital passport	Change

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			I know why I should ask a trusted adult before clicking 'yes', 'agree' online. I know that any information about someone can be seen by others online. I know who I can talk to if I think someone has made a mistake about putting something online. I understand what online bullying is and who can help with this. Skills: Use technology to purposefully create digital content comparing the benefits of different programs. I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened.			
3	See digital skills passport – Autumn 1 Information technology – input and output devices Knowledge: I can recognise familiar forms of input and output devices and how they are used Skills: I can make efficient use of familiar forms of input and output devices With support select and use a variety of software to accomplish goals	Identity Change	Digital literacy – e-safety Knowledge: Understand that the internet is a large network of computers and that information can be shared between computer I can explain what is meant by the term ‘identity’. I can explain ways in which someone might change their identity depending on what they are doing online I can explain what it means to ‘know someone’ online and why this might be different from knowing someone offline. Skills: I can explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos. I can describe and assess the benefits and the potential risks of sharing information online. I can describe what is appropriate to say and do in different online settings / platforms (e.g.	Identify Change Fairness Care	Digital literacy -e-safety Knowledge: Recognise what is acceptable and unacceptable behaviour. Know how bullying behaviour could appear online and how someone can get support. Understand that computer networks enable the sharing of data and information Skills: I can discuss the important of not sharing personal information online I can use real life scenarios to talk about being safe online. Create a sway to discuss cyberbullying Computer science – repetition loops – scratch Knowledge: Use logical reasoning to explain how some algorithms work Skills:	Identify Change Fairness Care Power Conflict

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			opinions, values, information, shares, 'likes', 'forwards'). Computer science – Lego spike Knowledge: To know how some algorithms work Skills: I can design, write and debug programs that control or simulate visual even Use logical reasoning to explain how some algorithms work		I can design, write and debug programs that control or simulate visual events	
4	See digital skills passport – Autumn 1 Digital literacy Knowledge: I can explain how my online identity can be different to my offline identity.` I understand and can give reasons why passwords are important. I can describe simple strategies for creating and keeping passwords private. I can explain the importance of privacy and how it is needed to keep both myself and others safe. I can explain what a strong password is I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat). I can explain ways that some of the information about me online could have been created, copied or shared by others. Skills: Discuss appropriate ways to seek hel to stay safe online.	Identity Care Fairness	Computer science – Lego spike Knowledge: Use logical reasoning to detect and correct errors in algorithms and programs Skills: I can select, use and combine a variety of software, systems and content that accomplish given goal	Change	Information technology Knowledge: Understand where to go for help and support when he/she has concerns about content or contact on the internet or other online technologies Understand how results are selected and ranked by search engines Skills: Use technology responsibly and understand that communication online may be seen by others With support select and use a variety of software on a range of digital devices Computer science – coding Knowledge: Use logical reasoning to detect and correct errors in algorithms and programs Skills: I can select, use and combine a variety of software, systems and content that accomplish given goal	Identity Care Fairness Change
5	Computer science – Lego spike Knowledge: To know how to input a set of instructions to a device.	Identity Care Fairness	Information technology Knowledge: I can independently select and use appropriate software for a task	Identity Care Fairness	Computer science Knowledge: To know how to input a set of instructions to a device.	

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	To know how instructions can effect a device. Skills: Design, input and test and increasingly complex set of instructions to a programme or device. Design, write and debug programs what accomplish specific goals, including controlling or simulation system designs. Write and test simple programs that follow a sequence of instructions. Digital literacy Knowledge: Understand the need to only select age appropriate content understand how computer networks enable computers to communicate and collaborate I can describe how things shared privately online can have unintended consequences for others i.e. screen grabs. I understand what it means to ‘know someone’ online and why this might be different from knowing someone in real life. Skills: use filters in search technologies effectively and appreciate how results are selected and ranked I can demonstrate responsible choices about my online identity, depending on context. I can explain strategies anyone can use to protect their ‘digital personality’ and online reputation, including degrees of anonymity. I know what to do if my password is lost or stolen. I can explain why I should be careful who I trust online and what information I can trust them with. I can describe ways that information about people online can be used by others to make judgments about an Individual.		I can identify a range of ways to report concerns about content and contact in and out of school I can give examples of technology specific forms of communication (e.g. emojis, memes and GIFs). I can identify ways the internet can draw us to information for different agendas e.g. website notifications, pop-ups, targeted ads. I can explain that there are some people I communicate with online who may want to do me or my friends harm. Skills: I can independently select, use and combine a variety of software to design and create content for a given audience		To know how instructions can effect a device. Skills: Design, input and test and increasingly complex set of instructions to a programme or device. Design, write and debug programs what accomplish specific goals, including controlling or simulation system designs. Write and test simple programs that follow a sequence of instructions.	
6	Computer science Knowledge: learn how codes were used during WW2 to hide messages	Identity Care Fairness	Digital literacy Knowledge: Identify a range of ways to report concerns about content and contact in and out of school	Identity Care Fairness	Information technology Knowledge: To know how to input into cell and how to read the cell reference	

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	History of computing resource - Alan Turing and the impact coding had on hiding messages during WW2. Skills: Include use of sequences, selection and repetition with the hardware used to explore real world systems Information technology Knowledge: Understand the need to only select age appropriate content Skills: I can independently select, use and combine a variety of software to design and create content for a given audience I can independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information Use technology respectfully and responsibly		I can describe ways in which media can shape ideas about gender. I can identify messages about gender roles and make judgements based on them. To know 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. To know that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this Skills: Collecting, analysing, evaluating and presenting data and information design and create a range of programs, systems and content for a given audience Begin to use internet searches within his/her own creations to share and transfer data to a third party Use filters in search technologies effectively and is discerning when evaluating digital content I can challenge and explain why it is important to reject inappropriate messages about gender online. I can explain how sharing something online may have an impact either positively or negatively. I can explain what app permissions are and can give some examples from the technology or services I use. I can describe simple ways to increase privacy on apps and services that provide privacy settings. I can describe how things shared privately online can have unintended consequences for others i.e. screen grabs. Information technology Knowledge:		To know Use of Excel to budget Skills: I can independently select, use and combine a variety of software to design and create content for a given audience I can independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information Use technology respectfully and responsibly Computer science Knowledge: Skills: write and test simple programs with opportunities for selection, where a particular result will happen based on actions or situations controlled by the user	

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			Understand the need to only select age appropriate content Skills: I can independently select, use and combine a variety of software to design and create content for a given audience I can independently select, use and combine a variety of software to collect, analyse, evaluate and present data and information Use technology respectfully and responsibly			