**Computing Curriculum Progression Key Stage 2**

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| **CYCLE A** | LCC Question | **Can you feel the force? (SCIENCE)** | **Why is electricity important? (SCIENCE)** | **Are Rainforests really important? (GEOGRAPHY)** |
| Knowledge | **Hardware/Software: LEGO WeDo**   * understand what an algorithm is. * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * understand how to sequence, select, and repeat in programs. * understand variables and various forms of input and output. | **Software: SCRATCH**   * understand what an algorithm is. * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | **Software: LKS2 POWERPOINT**  **Software: UKS2 EXCEL**   * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. |
| Skills | **LKS2**   * I can follow a sequence of instructions to build the various models for LEGO We Do. * I can use technology to program an electronic robot (e.g. microbits, LEGO We Do etc.). * I can use a variable to make a change e.g. making scratch avatar jump higher. * I can debug a program, algorithm or a set of instructions. * I can detect and correct errors in algorithms and programs. | **LKS2**   * I can follow an algorithm in Scratch e.g. to replicate a circuit, to turn on and off lights * I can debug a program, algorithm or a set of instructions to ensure electricity themed game or program runs. * I can use a variable to make a change e.g. to change rate the lights flash on and off. * I can detect and correct errors in algorithms and programs. * I can present data using a range of programs e.g. use PowerPoint to show data on green electricity vs. carbon footprint electricity as lead by teacher. | **LKS2**   * I can touch type all keys on keyboard (using BBC Dance Mat). * I can select, use and combine a variety of software (including internet services). * I can design and create a range of programs, systems and content e.g. using PowerPoint, Publisher and Word. * I can produce documents and presentations with increasing competence, incorporating different layouts and effects as appropriate. * I can create documents and presentations for a purpose to share information with others, e.g. I can produce newspaper / leaflet. * I can begin to show an awareness of audience. * I can share information with link class in another school to find out about a different locality. * I can contribute to a class / school blog. * I am aware of safety issues relating to online collaboration. * I can explain why using avatar and online name is advisable. |
| **UKS2**   * I can create my own sequence of instructions to build models that can be programmed, e.g. a plant-watering system. * I can write algorithms including repetition and loops. * I can design, write and debug programs that accomplish **specific goals,** e.g. creating a maze for an avatar * I can use logical reasoning to explain how some simple algorithms work * I can detect and correct errors in algorithms and programs * I can explain my reasoning to a partner or group. | **UKS2**   * I can create an algorithm in Scratch, e.g. to replicate a circuit, to turn on and off lights * I can debug a program, algorithm or a set of instructions, e.g. to ensure electricity themed game or program runs. * I can use a variable to make a change e.g. to change rate the lights flash on and off. * I can detect and correct errors in algorithms and programs. * I can present data using a range of programs e.g. Excel (spreadsheet program) * I can use a range of data appropriate for purpose. | **UKS2**   * I can touch type all keys on keyboard including capital letters. * I can select, use and combine a variety of software (including internet services). * I can design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. * I can produce documents and presentations with a common theme, to provide consistency of font and style. * I can show an awareness of audience. * I can produce presentations with multimedia elements, and with slides in a non-linear design, e.g. buttons to give options within the presentation. * I can produce a presentation that acts as a branching database to classify a set of items. * I can send and receive emails, being wary of spam and how to deal with it. * I am aware that information posted online leaves a digital footprint. * I am aware of the potential consequences of my digital footprint and conduct myself appropriately online. |
| LCC Question | **Why is Brazil in the news? (GEOGRAPHY)** | **Where do mummies come from? (HISTORY)** | **Who or what is Skara Brae? (HISTORY)** |
| Knowledge | **Hardware/Software: DIGITAL DEVICES**   * understand how to select, use and combine a variety of software (including internet services) on a range of digital devices. * understand how to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | **Software: SCRATCH**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | **Software: POWERPOINT/INTERNET**   * understand how to use technology safely, respectfully and responsibly. * understand how to recognise acceptable/unacceptable behaviour * identify a range of ways to report concerns about content and contact. * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. * understand how to use search technologies effectively. * appreciate how results are selected and ranked, and be discerning in evaluating digital content. |
| Skills | **LKS2**   * I can use software under the control of the teacher. * I can use software with increasing independence. * I can combine software (e.g. importing an edited image or video into a presentation or web page). * I can use internet services, for example, cloud-based tools such as Google Drive, Office 365 or image-editing sites. * I can present data using a range of programs e.g. using PowerPoint/Publisher/Word to present information about Brazil. * I can create digital music, animations or work with digital photos/images, e.g. cropping photos of Brazil and adding text/detail to image. * I can produce documents with text and images, using formatting and editing tools with increasing confidence. * I can create presentations incorporating text and images. * I am beginning to add effects considering audience and appropriateness of different effects. * I know how to email, including adding and opening attachments. * I send and receive emails with a purpose, e.g. to share information with link school in Brazil if possible. * I can write emails with an appropriate and respectful tone * I understand the difference between online and face-to-face. | **LKS2**   * I can design an algorithm in Scratch, e.g. to replicate a mummy walking. * I can debug a program, algorithm or a set of instructions, e.g. in an Egypt themed game. * I can detect and correct errors in algorithms and programs. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. | **LKS2**   * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain how not all information found on the internet is accurate, and why this might be so. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. |
| **UKS2**   * I can select software to complete a task for myself (from the full range of applications installed on computers, smartphones and tablets at home or at school, or available to them via the web). * I can use vector based software create a design or logo by grouping and copying sections of an image. * I can create an image by grouping and repeating sections and ordering shapes as needed, e.g. design a city plan in Brazil or imaginary country. * I can design and take photos for product design, e.g. to accompany the game I have programmed. * I can adjust the colours to given different effects and edit the photos . * I can plan out and create an animation, e.g. to retell a story, for a TV campaign for Brazil. * I can edit and improve the animation by adding sounds and titles. | **UKS2**   * I can design and create a game incorporating variables * I can test my game and correct errors as I go. * I can design and write a program linked to physical systems and sensors, e.g. the light goes on when the light level drops, or the alarm goes off when a burglar opens the door. | **UKS2**   * I can use the internet to productively search for information and resources to support my work in other subjects. * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. |

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| **CYCLE B** | LCC Question | **Where is your shadow? (SCIENCE)** | **What’s the best material? (SCIENCE)** | **Why is Stockport special? (GEOGRAPHY)** |
| Knowledge | **Hardware/Software: LEGO WeDo**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | **Hardware/Software: EXCEL/DIGITAL DEVICES**   * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information | **Software: SCRATCH**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.   **Hardware/Software: INTERNET**   * understand how to use technology safely, respectfully and responsibly. * understand how to recognise acceptable/unacceptable behaviour. * identify a range of ways to report concerns about content and contact. * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration * understand how to use search technologies effectively. * appreciate how results are selected and ranked, and be discerning in evaluating digital content. |
| Skills | **LKS2**   * I can follow a sequence of instructions to build the various models for LEGO We Do. * I can use technology to program an electronic robot (e.g. microbits, LEGO We Do etc.). * I can use a sensor/variable to make a change, e.g. lights on and off. * I can debug a program, algorithm or a set of instructions. * I can detect and correct errors in algorithms and programs. * I can create procedures and use within a longer program. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. | **LKS2**   * I can use software under the control of the teacher. * I can use software with increasing independence. * I can combine software (e.g. importing an edited image or video into a presentation or web page). * I can use internet services, for example, cloud-based tools such as Google Drive, Office 365 or image-editing sites. * I can present data using a range of programs e.g. using PowerPoint/Publisher/Word PowerPoint, Publisher, Word etc. relating to materials. * I can create digital music, animations or work with digital photos/images, e.g. zooming in on different materials. * I can produce documents with text and images, using formatting and editing tools with increasing confidence. * I can create presentations incorporating text and images. * I am beginning to add effects considering audience and appropriateness of different effects. | **LKS2**   * I can follow an algorithm in Scratch e.g. to replicate a circuit, to turn on and off lights * I can debug a program, algorithm or a set of instructions, e.g. to ensure electricity themed game or program runs. * I can use a variable to make a change, e.g. to change rate the lights flash on and off. * I can detect and correct errors in algorithms and programs. * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain why not all information found on the internet is accurate, and why this might be so. * I can explain how some sites may show bias, e.g. newspapers with political stance. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. |
| **UKS2**   * I can create my own sequence of instructions to build models that can be programmed, e.g. a plant-watering system. * I can write algorithms including repetition and loops. * I can design, write and debug programs that accomplish **specific goals,** e.g. creating a maze for an avatar * I can use logical reasoning to explain how some simple algorithms work * I can detect and correct errors in algorithms and programs * I can explain my reasoning to a partner or group. | **UKS2**   * I can select software to complete a task for myself (from the full range of applications installed on computers, smartphones and tablets at home or at school, or available to them via the web). * I can use vector based software create a design or logo by grouping and copying sections of an image. * I can create an image by grouping and repeating sections and ordering shapes as needed, e.g. design an outfit or item of clothing. * I can design and take photos for product design, e.g. to accompany the game I have programmed. * I can adjust the colours to given different effects and edit the photos . * I can plan out and create an animation to retell a story. * I can edit and improve the animation by adding sounds and titles. | **UKS2**   * I can design and create a game incorporating variables * I can test my game and correct errors as I go. * I can design and write a program linked to physical systems and sensors, e.g. the light goes on when the light level drops, or the alarm goes off when a burglar opens the door. * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. |
| LCC Question | **Where does the Mersey go? (GEOGRAPHY)** | **Could you be the next Willy Wonka? (HISTORY)** | **Where does the Mersey go? (HISTORY)** |
| Knowledge | **Hardware/Software: COMPUTER NETWORKS**  **POWERPOINT/ WORD**   * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | **Hardware/Software: INTERNET**   * understand how to use technology safely, respectfully and responsibly. * understand how to recognise acceptable/unacceptable behaviour * identify a range of ways to report concerns about content and contact. * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. * understand how to use search technologies effectively. * appreciate how results are selected and ranked, and be discerning in evaluating digital content. | **Software: SCRATCH**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. |
| Skills | **LKS2**   * I can use software under the control of the teacher. * I can use software with increasing independence. * I can combine software (e.g. importing an edited image or video into a presentation or web page). * I can use internet services, for example, cloud-based tools such as Google Drive, Office 365 or image-editing sites. * I can present data using a range of programs e.g. using PowerPoint/Publisher/Word to present information about inventions. * I can create digital music, animations or work with digital photos/images, e.g. cropping photos of inventions and adding text/detail to image. * I can produce documents with text and images, using formatting and editing tools with increasing confidence. * I can create presentations incorporating text and images. * I am beginning to add effects considering my audience and the appropriateness of different effects. * I know how to email, add and open attachments. * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain how not all information found on the internet is accurate, and why this might be so. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. | **LKS2**   * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain why not all information found on the internet is accurate, and why this might be so. * I can explain how some sites may show bias, e.g. newspapers with political stance. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. | **LKS2**   * I can design an algorithm in Scratch, e.g. with a water-based theme. * I can debug a program, algorithm or a set of instructions, e.g. with a water-based theme. * I can detect and correct errors in algorithms and programs. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. |
| **UKS2**   * I can select software to complete a task for myself (from the full range of applications installed on computers, smartphones and tablets at home or at school, or available to them via the web). * I can use vector based software create a design or logo by grouping and copying sections of an image. * I can create an image by grouping and repeating sections and ordering shapes as needed, e.g. design an outfit or item of clothing.. * I can design and take photos for product design, e.g. to accompany the game I have programmed. * I can adjust the colours to given different effects and edit the photos. * I can plan out and create an animation, e.g. to retell a story. * I can edit and improve the animation by adding sounds and titles. * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. | **UKS2**   * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. | **UKS2**   * I can design and create a game incorporating variables * I can test and correcting errors as I go. * I can design and write a program linked to physical systems and sensors e.g. the light goes on when the light level drops or the alarm goes off when a burglar opens the door. |

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| **CYCLE C** | LCC Question | **Why does the seesaw go up and down? (SCIENCE)** | **Which came first, the chicken or the egg? (SCIENCE)** | **What makes the Earth angry? (GEOGRAPHY)** |
| Knowledge | **Hardware/Software: LEGO WeDo**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | **Software: EXCEL**   * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | **Software: SCRATCH**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. |
| Skills | **LKS2**   * I can follow a sequence of instructions to build the various models for LEGO We Do. * I can use technology to program an electronic robot (e.g. microbits, LEGO We Do etc.). * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. | **LKS2**   * I can use software under the control of the teacher. * I can use software with increasing independence. * I can combine software (e.g. importing an edited image or video into a presentation or web page). * I can use internet services, for example, cloud-based tools such as Google Drive, Office 365 or image-editing sites. * I can present data using a range of programs e.g. using PowerPoint/Publisher/Word to present information. * I can create digital music, animations or work with digital photos/images, e.g. cropping photos and adding text/detail to image. * I can produce documents with text and images, using formatting and editing tools with increasing confidence. * I can create presentations incorporating text and images. * I am beginning to add effects considering my audience and the appropriateness of different effects. * I know how to email, add and open attachments. * I send and receive emails with a purpose, e.g. to share information with another school. * I can write emails with an appropriate and respectful tone * I understand the difference between online and face-to-face. | LKS2   * I can design an algorithm in Scratch, e.g. with a storm/volcano theme. * I can debug a program, algorithm or a set of instructions, e.g. with a storm/volcano theme. * I can detect and correct errors in algorithms and programs. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. |
| **UKS2**   * I can design and create a game incorporating variables * I can test and correcting errors as I go. * I can design and write a program linked to physical systems and sensors e.g. the light goes on when the light level drops or the alarm goes off when a burglar opens the door. | **UKS2**   * I can select software to complete a task for myself (from the full range of applications installed on computers, smartphones and tablets at home or at school, or available to them via the web). * I can use vector based software create a design or logo by grouping and copying sections of an image. * I can create an image by grouping and repeating sections and ordering shapes as needed, e.g. design an outfit or item of clothing.. * I can design and take photos for product design, e.g. to accompany the game I have programmed. * I can adjust the colours to given different effects and edit the photos. * I can plan out and create an animation, e.g. to retell a story. * I can edit and improve the animation by adding sounds and titles. | **UKS2**   * I can design and create a game incorporating variables * I can test and correcting errors as I go. * I can design and write a program linked to physical systems and sensors e.g. the light goes on when the light level drops or the alarm goes off when a burglar opens the door. |
| LCC Question | **What’s so special about the USA? (GEOGRAPHY)** | **Who let the Gods out? (HISTORY)** | **Why are there air raid tunnels under Stockport? (HISTORY)** |
| Knowledge | **Hardware/Software** **GRAPHIC MODELLING/ DIGITAL DEVICES**   * understand how to use search technologies effectively. * appreciate how results are selected and ranked, and be discerning in evaluating digital content. * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | **Software: SCRATCH**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | **Hardware/Software** E-SAFETY/INTERNET   * understand how to use technology safely, respectfully and responsibly. * understand how to recognise acceptable/unacceptable behaviour * identify a range of ways to report concerns about content and contact. * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. * understand how to use search technologies effectively. * appreciate how results are selected and ranked, and be discerning in evaluating digital content. |
| Skills | **LKS2**   * I can use software under the control of the teacher. * I can use software with increasing independence. * I can combine software (e.g. importing an edited image or video into a presentation or web page). * I can use internet services, for example, cloud-based tools such as Google Drive, Office 365 or image-editing sites. * I can present data using a range of programs e.g. using PowerPoint/Publisher/Word to present information. * I can create digital music, animations or work with digital photos/images, e.g. cropping photos and adding text/detail to image. * I can produce documents with text and images, using formatting and editing tools with increasing confidence. * I can create presentations incorporating text and images. * I am beginning to add effects considering my audience and the appropriateness of different effects. * I know how to email, add and open attachments. * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain how not all information found on the internet is accurate, and why this might be so. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. | **LKS2**   * I can design an algorithm in Scratch, e.g. with an ancient Greek theme. * I can debug a program, algorithm or a set of instructions, e.g. with a storm/volcano theme. * I can detect and correct errors in algorithms and programs. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. | **LKS2**   * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain how not all information found on the internet is accurate, and why this might be so. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. |
| **UKS2**   * I can select software to complete a task for myself (from the full range of applications installed on computers, smartphones and tablets at home or at school, or available to them via the web). * I can use vector based software create a design or logo by grouping and copying sections of an image. * I can create an image by grouping and repeating sections and ordering shapes as needed, e.g. design a city plan in USA or imaginary country. * I can design and take photos for product design, e.g. to accompany the game I have programmed. * I can adjust the colours to given different effects and edit the photos . * I can plan out and create an animation, e.g. to retell a story, for a TV campaign for USA. * I can edit and improve the animation by adding sounds and titles. * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. | **UKS2**   * I can design and create a game incorporating variables * I can test and correcting errors as I go. * I can design and write a program linked to physical systems and sensors e.g. the light goes on when the light level drops or the alarm goes off when a burglar opens the door. | **UKS2**   * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. |

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| **CYCLE D** | LCC Question | **What’s in our body? (SCIENCE)** | **Are you strong enough? (SCIENCE)** | **What makes mountains magnificent? (GEOGRAPHY)** |
| Knowledge | **Software: SCRATCH/OTHER PROGRAMMING SOFTWARE**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | **Software: LKS2 MICROSOFT OFFICE**  **UKS2 EXCEL**   * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | **Software: COMPUTER NETWORKS**   * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. |
| Skills | **LKS2**   * I can design an algorithm in Scratch, or other programming software * I can debug a program, algorithm or a set of instructions.. * I can detect and correct errors in algorithms and programs. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. | **LKS2**   * I can use software under the control of the teacher. * I can use software with increasing independence. * I can combine software (e.g. importing an edited image or video into a presentation or web page). * I can use internet services, for example, cloud-based tools such as Google Drive, Office 365 or image-editing sites. * I can present data using a range of programs e.g. using PowerPoint/Publisher/Word to present information. * I can create digital music, animations or work with digital photos/images, e.g. cropping photos and adding text/detail to image. * I can produce documents with text and images, using formatting and editing tools with increasing confidence. * I can create presentations incorporating text and images. * I am beginning to add effects considering my audience and the appropriateness of different effects. * I know how to email, add and open attachments. * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain how not all information found on the internet is accurate, and why this might be so. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. | **LKS2**   * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain how not all information found on the internet is accurate, and why this might be so. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. |
| **UKS2**   * I can design and create a game incorporating variables * I can test and correcting errors as I go. * I can design and write a program linked to physical systems and sensors e.g. the light goes on when the light level drops or the alarm goes off when a burglar opens the door. | **UKS2**   * I can select software to complete a task for myself (from the full range of applications installed on computers, smartphones and tablets at home or at school, or available to them via the web). * I can create an image by grouping and repeating sections and ordering shapes as needed, e.g. design a city plan in Brazil or imaginary country. * I can design and take photos for product design, e.g. to accompany the game I have programmed. * I can adjust the colours to given different effects and edit the photos . * I can plan out and create an animation, e.g. to retell a story, for a TV campaign for Brazil. * I can edit and improve the animation by adding sounds and titles. * I can present data and use a range of graph using a range of programs e.g. Excel (spreadsheet program) * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. | UKS2   * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. |
| LCC Question | **What is life like in the East? (GEOGRAPHY)** | **Is Stockport full of Mad Hatters? (HISTORY)** | **Is there anybody out there? (HISTORY)** |
| Knowledge | **Software: SCRATCH**   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. | INTERNET/E-SAFETY   * understand how to use technology safely, respectfully and responsibly. * understand how to recognise acceptable/unacceptable behaviour * identify a range of ways to report concerns about content and contact. * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. * understand how to use search technologies effectively. * appreciate how results are selected and ranked, and be discerning in evaluating digital content. | LEGO WEDO   * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. * solve problems by decomposing them into smaller parts. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use sequence, selection, and repetition in programs. * work with variables and various forms of input and output. * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. |
| Skills | **LKS2**   * I can design an algorithm in Scratch, or other programming software * I can debug a program, algorithm or a set of instructions.. * I can detect and correct errors in algorithms and programs. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. | **LKS2**   * I can navigate the internet with increasing confidence to find information and images safely. * I can explain that a web address is also called a URL (Unique Resource Locator), i.e. a unique address to find a website. * I can explain how not all information found on the internet is accurate, and why this might be so. * I can use information found on internet for a purpose, and share with others. * I can select information to write my own text; not just copy and paste information found. | **LKS2**   * I can design an algorithm in Scratch, or other programming software * I can debug a program, algorithm or a set of instructions.. * I can detect and correct errors in algorithms and programs. * I can plan out a program, breaking it into smaller steps when tackling the structure, and incorporating procedures. * I can explore online simulations, explaining rules behind the simulations and how they can be realistic / represent reality. * I can discuss how simulations can be used. |
| **UKS2**   * I can design and create a game incorporating variables * I can test and correcting errors as I go. * I can design and write a program linked to physical systems and sensors e.g. the light goes on when the light level drops or the alarm goes off when a burglar opens the door. | **UKS2**   * I can use the internet to productively search for information and resources to support my work in other subjects * I can explain how some sites may show bias, e.g. newspapers with political stance. * I am aware of copyright and I modify searches to retrieve images that can be used under Creative Commons licence, e.g. copyright free or able to use in Education for non-profit * I can write a list of websites as reference for work produced. * I can explain how to report concerns about websites or contact from strangers. | **UKS2**   * I can design and create a game incorporating variables * I can test and correcting errors as I go. * I can design and write a program linked to physical systems and sensors e.g. the light goes on when the light level drops or the alarm goes off when a burglar opens the door. |