**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.
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| 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.
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| **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.
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| 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.
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| 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.
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| 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.
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* 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
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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.
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 | **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
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| 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.
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* 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.
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