Coleridge Computing Curriculum 2016-17
Medium Term Plan

Nursery Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Using a computer	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes and move objects	• Any programme where objects can be moved. • Monitors turn on and off computers at end of day.
Algorithms (*a set of step-by-step instructions*) - Off Computer	• Give and Follow instructions (*make this explicit to children that this is what happens when you use a computer and this is how people make computer programmes, games and apps*) • Put pictures in correct order	• One child acts as a 'human robot' while another is their 'programmer.' Programmer gives a sequence of instructions for how the human robot should move (*i.e. walk forward 5 steps, stop, turn left, etc.)* • Put pictures from a story or an event that has happened in correct order
Algorithms - On Computer	• Give and Follow instructions	• Programme Beebots to go through an obstacle course, tunnels, bowling, etc.

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Reception Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Using a computer	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes and move objects	• Any programme where objects can be moved. • Monitors turn on and off computers at end of day.
Algorithms (*a set of step-by-step instructions*) - Off Computer	• Give and Follow instructions (*make this explicit to children that this is what happens when you use a computer and this is how people make computer programmes, games and apps*) • Put pictures in correct order	• One child acts as a 'human robot' while another is their 'programmer.' Programmer gives a sequence of instructions for how the human robot should move (*i.e. walk forward 5 steps, stop, turn left, etc.)* • Put pictures from a story, event, instructions/recipe in correct order
Algorithms - On Computer	• Give and Follow instructions	• Programme Beebots to go through an obstacle course, tunnels, bowling, etc.

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Year 1 Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Using a computer to Create a Piece of Work	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes • Create a piece of work • Save a piece of work	• Monitors turn on and off computers at end of day. • Use Microsoft Word to type a message. • Save message onto a folder on the system (in Data ideally). • Could be a Teacher or TA led activity. • Could link to other area of the curriculum.
Algorithms (*a set of step-by-step instructions*) - Off Computer	• Give and Follow instructions (*make this explicit to children that this is what happens when you use a computer and this is how people make computer programmes, games and apps*) • Put pictures in correct order	• One child acts as a 'human robot' while another is their 'programmer.' Programmer gives a sequence of instructions for how the human robot should move (*i.e. walk forward 5 steps, stop, turn left, etc.)* • Put pictures from a story, event, instructions/recipe in correct order
Algorithms - On Computer	• Give and Follow instructions	• Programme Beebots to go through an obstacle course, tunnels, bowling, etc.

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Year 2 Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Using a computer to Create a Piece of Work	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes • Create a piece of work • Save a piece of work	• Monitors turn on and off computers at end of day. • Use Microsoft Word to type a message. • Save message onto a folder on the system (in Data ideally). • Could be a Teacher or TA led activity. • Could link to other area of the curriculum.
Algorithms (*a set of step-by-step instructions*) - Off Computer	• Give and Follow instructions ○ *make this explicit to children that this is what happens when you use a computer and this is how people make computer programmes, games and apps* • Put pictures in correct order	• One child acts as a 'human robot' while another is their 'programmer.' Programmer gives a sequence of instructions for how the human robot should move (*i.e. walk forward 5 steps, stop, turn left, etc.)*
Algorithms - Off Computer	• Give and Follow instructions ○ *emphasise the importance of articulating 'precise' instructions.* ○ *make this explicit to children that this is what happens when you use a computer and this is how people make computer programmes, games and apps.*	• Barrier Games between two children ○ One child builds an object out of Lego or draws a picture which the second child cannot see. ○ First child then gives instructions for how to make identical creation. ○ Check if the second child's creation is the same or different in any way. ○ - Discuss how more precise language can help.

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Algorithms **- On Computer**	• Give a set of instructions	• Programme Beebots to go through an obstacle course, tunnels, bowling, etc. • Use the A.L.E.X. app on iPad to give a robot instructions for how to travel along a path as well as create paths.
Picture Editing	• Manipulating the appearance of photos	• Children take photo using iPad • In iPhotos, children edit the light and colour of a photo as well as cropping the image.

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Year 3 Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information privat e • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Using a computer to Create a Piece of Work	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes • Create a piece of work that contains text and images. • Affect the appearance of text and photos. • Save a piece of work	• This should be taught as a whole class lesson. Children work independently or in pairs. • Use Microsoft Word, PowerPoint or Publisher to make a poster, book, leaflet, etc. • Children copy and paste a photo into their document (could be from a folder or from Google images, but if using Google, be sure to supervise) and then change the appearance of the photo. • Change the font, colour and size of text. • Save message onto a folder on the system (in Data ideally).
Algorithms (*a set of step-by-step instructions*) - On Computer	• Use code to design and write a programme that accomplishes a specific goal. • Explain how the algorithms they create work. • If the algorithm doesn't accomplish the goal, to be able to find and fix the error.	• Use Scratch Jr* on iPad to make a simple animation that tells a story. * *Scratch Jr allows children to snap together graphical programming blocks to make characters move, jump, dance and sing.*
Create an Animation	• Create an animation.	• Use animation programme on iPad or Laptop (I Can Animate, Stop Motion) along with iPad camera or webcam to create an animation to show a story, play, instructional video, etc.

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Create a Short film	• Use iPad to create a film showing a story, play, instructional video, etc. • Use iMovie on iPad to edit and add text and soundtrack.	• Children film each other using iPad. • Children save the video onto iMovie App. • Children use the app to cut out unwanted parts, add text (i.e. titles, credits) and additional sound (music, sound effects, narration, etc.)

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Year 4 Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Online Research	• Search online affectively to locate websites and navigate within them to find information they are looking for.	• Set children a research task (i.e. find out four facts about Tutankhamen). • Preselect one or more websites where the info can be found. • Children learn how to get to the website and search within it to find the information.
Using a computer to Create a Piece of Work	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes • Create a piece of work that contains text and images. • Affect the appearance of text and photos. • Save a piece of work	• This should be taught as a whole class lesson. Children work independently or in pairs. • Use PowerPoint to make a slide presentation with images, titles and bullet points. • Children copy and paste a photo into their document (could be from a folder or from Google images, but if using Google, be sure to supervise) and then change the appearance of the photo. • Change the font, colour and size of text. • Save presentation onto a folder on the system (in Data ideally).
Algorithms (*a set of step-by-step instructions*) - On Computer	• Use code to design and write a programme that accomplishes a specific goal. • Explain how the algorithms they create work. • If the algorithm doesn't accomplish the goal, to be able to find and fix the error.	• On laptops, children use Scratch to make a simple animation that tells a story. * *Scratch allows children to programme interactive stories, games and animations*

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Blogging	• Create a blog to communicate with others. • Make other people aware of their blog **A blog is a website where a writer can share their writing as well as provide hyper links to other work they have created.*	• Children create a blog on J2E (J2Bloggy) on LGFL website. • Their blog can be something they have written in another area of the curriculum (i.e. a piece of writing from English). • Create a link within their blog to another piece work they have created (i.e. an accompanying piece of art) • Children e-mail a link to their blog to their parents and teachers.
Data Handling	• Create a data representation (i.e. bar chart, pie chart, line graph, etc) of findings children have made.	• Children report data using Microsoft Excel
Create an Animation	• Create an animation.	• Use animation programme on iPad or Laptop (I Can Animate, Stop Motion) along with iPad camera or webcam to create an animation to show a story, play, instructional video, etc.
Create a Short film	• Use iPad to create a film showing a story, play, instructional video, etc. • Use iMovie on iPad to edit and add text and soundtrack.	• Children film each other using iPad. • Children save the video onto iMovie App. • Children use the app to cut out unwanted parts, add text (i.e. titles, credits) and additional sound (music, sound effects, narration, etc.)

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Year 5 Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Online Research	• Search online affectively to locate websites and navigate within them to find information they are looking for.	• Set children a research task (i.e. find out four facts about Tutankhamen). • Preselect one or more websites where the info can be found. • Children learn how to get to the website and search within it to find the information.
Using a computer to Create a Piece of Work	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes • Create a piece of work that contains text and images. • Affect the appearance of text and photos. • Add hyperlinks, actions and sounds • Save a piece of work	• This should be taught as a whole class lesson. Children work independently or in pairs. • Use PowerPoint to make a slide presentation with images, titles and bullet points, hyperlinks, sounds and actions. • Children copy and paste a photo into their document (could be from a folder or from Google images, but if using Google, be sure to supervise) and then change the appearance of the photo. • Change the font, colour and size of text. • Save presentation onto a folder on the system (in Data ideally).
Algorithms (*a set of step-by-step instructions*) - On Computer	• Use code to design and write a programme that accomplishes a specific goal. • Explain how the algorithms they create work. • If the algorithm doesn't accomplish the goal, to be able to find and fix the error.	• On laptops, children use Scratch to make a simple animation that tells a story. * *Scratch allows children to programme interactive stories, games and animations* • Use Scratch to create multi-level games with scores, lives, variables, etc.

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Create Music	• Create, record and edit music	• Use Garage Band on iPads • Children create and record multiple tracks of sound to give the effect of a band playing a song. Ex. First child records themselves clapping a rhythm. Next they play back the recorded rhythm while simultaneously humming a melody to go along with it. Finally, they play back the recorded rhythm and humming and record themselves singing along. They can go on to do this with more tracks, record themselves or others playing instruments and creating tracks of electronic sounds provided in Garage Band.
Learn about html **Hypertext Markup Language (html) are the commands that affect the font, colour, graphic, and hyperlink effects on web pages.*	• To become aware of and actually view the commands that affect the appearances of words, colours, graphics and the effects of hyperlinks on the web. • To alter the appearance of these	• Go to a chosen website (for example, BBC News) and use X-Ray Goggles to change the website's writing. This could be really good for report writing (instead of writing a newspaper front page, write a website front page)
Blogging	• Create a blog to communicate with others. • Make other people aware of their blog **A blog is a website where a writer can share their writing as well as provide hyper links to other work they have created.*	• Children create a blog on J2E (J2Bloggy) on LGFL website. • Their blog can be something they have written in another area of the curriculum (i.e. a piece of writing from English). • Create a link within their blog to another piece work they have created (i.e. an accompanying piece of art) • Children e-mail a link to their blog to their parents and teachers.
Data Handling	• Create a data representation (i.e. bar chart, pie chart, line graph, etc) of findings children have made.	• Children report data using Microsoft Excel
Create an Animation	• Create an animation.	• Use animation programme on iPad or Laptop (I Can Animate, Stop Motion) along with iPad camera or webcam to create an animation to show a story, play, instructional video, etc.

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Create a Short film	• Use iPad to create a film showing a story, play, instructional video, etc. • Use iMovie on iPad to edit and add text and soundtrack.	• Children film each other using iPad. • Children save the video onto iMovie App. • Children use the app to cut out unwanted parts, add text (i.e. titles, credits) and additional sound (music, sound effects, narration, etc.)

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Year 6 Medium Term Planning

Topic	Curriculum Objectives	Lesson
Digital Literacy	• Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private • Identify where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.	• These should be embedded throughout all lessons.
Online Research	• Search online affectively to locate websites and navigate within them to find information they are looking for.	• Set children a research task (i.e. find out four facts about Tutankhamen). • Preselect one or more websites where the info can be found. • Children learn how to get to the website and search within it to find the information.
Using a computer to Create a Piece of Work	• Turn on and shut down • Log on and log off • Use mouse to open and close programmes • Create a piece of work that contains text and images. • Affect the appearance of text and photos. • Add hyperlinks, actions and sounds • Save a piece of work	• This should be taught as a whole class lesson. Children work independently or in pairs. • Use PowerPoint to make a slide presentation with images, titles and bullet points, hyperlinks, sounds and actions. • Children copy and paste a photo into their document (could be from a folder or from Google images, but if using Google, be sure to supervise) and then change the appearance of the photo. • Change the font, colour and size of text. • Save presentation onto a folder on the system (in Data ideally).
Algorithms (*a set of step-by-step instructions*) - On Computer	• Use code to design and write a programme that accomplishes a specific goal. • Explain how the algorithms they create work. • If the algorithm doesn't accomplish the goal, to be able to find and fix the error.	• On laptops, children use Scratch to make a simple animation that tells a story. * *Scratch allows children to programme interactive stories, games and animations* • Use Scratch to create multi-level games with scores, lives, variables, etc. •

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Create Music	• Create, record and edit music	• Use Garage Band on iPads • Children create and record multiple tracks of sound to give the effect of a band playing a song. Ex. First child records themselves clapping a rhythm. Next they play back the recorded rhythm while simultaneously humming a melody to go along with it. Finally, they play back the recorded rhythm and humming and record themselves singing along. They can go on to do this with more tracks, record themselves or others playing instruments and creating tracks of electronic sounds provided in Garage Band.
Learn about html **Hypertext Markup Language (html) are the commands that affect the font, colour, graphic, and hyperlink effects on web pages.*	• To become aware of and actually view the commands that affect the appearances of words, colours, graphics and the effects of hyperlinks on the web. • To alter the appearance of these	• Go to a chosen website (for example, BBC News) and use X-Ray Goggles to change the website's writing. This could be really good for report writing (instead of writing a newspaper front page, write a website front page)
Blogging	• Create a blog to communicate with others. • Make other people aware of their blog **A blog is a website where a writer can share their writing as well as provide hyper links to other work they have created.*	• Children create a blog on J2E (J2Bloggy) on LGFL website. • Their blog can be something they have written in another area of the curriculum (i.e. a piece of writing from English). • Create a link within their blog to another piece work they have created (i.e. an accompanying piece of art) • Children e-mail a link to their blog to their parents and teachers.
Data Handling	• Create a data representation (i.e. bar chart, pie chart, line graph, etc) of findings children have made.	• Children report data using Microsoft Excel
Create an Animation	• Create an animation.	• Use animation programme on iPad or Laptop (I Can Animate, Stop Motion) along with iPad camera or webcam to create an animation to show a story, play, instructional video, etc.

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Create a Short film	• Use iPad to create a film showing a story, play, instructional video, etc. • Use iMovie on iPad to edit and add text and soundtrack.	• Children film each other using iPad. • Children save the video onto iMovie App. • Children use the app to cut out unwanted parts, add text (i.e. titles, credits) and additional sound (music, sound effects, narration, etc.)