Sapphire Year 2 – Computing Medium Term Planning

Differentiation by input **see the weekly planning sheet**/

-Key vocab for each learning objective is in red font /

*-Resources -***see the weekly planning** /

-Minimum Assessment for Learning strategies for all topics = Peer Talk; targeted questioning; mini white boards; and self and peer marking

- Long term memory development strategies= Recapping pervious learning at the start of each new topic / Long term memory strategy linked to the objectives on this sheet for each week

-Computing Cultural Capital = To become familiar with different IT/technological devices and using these with developing precision and accuracy

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn first half **Computing Systems and Networks –** **IT around us**	**What is IT?** **Learning Objective** - To recognise the uses and features of information technology **Success Criteria** - I can describe some uses of computers - I can identify examples of computers - I can identify that a computer is a part of IT	**IT in school** **Learning Objective** - To identify the uses of information technology in the school **Success Criteria** - I can identify examples of IT - I can sort school IT by what it's used for - I can identify that some IT can be used in more than one way	**IT in the world** **Learning Objective** - To identify information technology beyond school **Success Criteria** - I can find examples of information technology - I can sort IT by where it is found - I can talk about uses of information technology	**The benefits of IT** **Learning Objective** - To explain how information technology benefits us **Success Criteria** - I can recognise common types of technology - I can demonstrate how IT devices work together - I can say why we use IT	**Using IT safely** **Learning Objective** - To explain how to use information technology safely **Success Criteria** - I can list different uses of information technology - I can talk about different rules for using IT - I can say how rules can help keep me safe	**Using IT in different ways** **Learning Objective** - To recognise that choices are made when using information technology **Success Criteria** - I can identify the choices that I make when using IT - I can use IT for different types of activities - I can explain the need to use IT in different ways	Assessment, Consolidation and Review
Key Vocabulary	**Information technology (IT), computer**	**Information technology (IT)**	**Information technology (IT), computer**	**Information technology (IT), computer, barcode, scanner/scan**	**Information technology (IT), rules, safe**	**Information technology (IT), choices**	
KS1 Computing NC Links	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	
Computing Strand	CS, NW, SS	CS, IT, NW	CS, IT, NW	CS, IT, NW	CS, NW, SS	CS, IT, NW, SS	
Education for a Connected World	- Health, well-being and lifestyle	- Health, well-being and lifestyle	Health, well-being and lifestyle	Health, well-being and lifestyle	Health, well-being and lifestyle	Health, well-being and lifestyle	

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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn second half **Creating Media – Digital Photography**	**Taking Photographs** **Learning Objective** - To use a digital device to take a photograph **Success Criteria** - I can recognise what devices can be used to take photographs - I can talk about how to take a photograph - I can explain what I did to capture a digital photo	**Landscape or Portrait?** **Learning Objective** - To make choices when taking a photograph **Success Criteria** - I can explain the process of taking a good photograph - I can take photos in both landscape and portrait format - I can explain why a photo looks better in portrait or landscape format	**What makes a good photograph?** **Learning Objective** - To describe what makes a good photograph **Success Criteria** - I can discuss how to take a good photograph - I can identify what is wrong with a photograph - I can improve a photograph by retaking it	**Lighting** **Learning Objective** - To decide how photographs can be improved **Success Criteria** - I can experiment with different light sources - I can explore the effect that light has on a photo - I can explain why a picture may be unclear	**Effects** **Learning Objective** - To use tools to change an image **Success Criteria** - I can explain my choices - I can recognise that images can be changed - I can use a tool to achieve a desired effect	**Is it real?** **Learning Objective** - To recognise that images can be changed **Success Criteria** - I can apply a range of photography skills to capture a photo - I can identify which photos are real and which have been changed - I can recognise which photos have been changed	Assessment, Consolidation and Review
Key Vocabulary	Device, camera/iPad, photograph, capture, image, digital	Landscape, portrait, photograph	Framing, subject, compose, photograph	Light sources, flash, focus, background, unclear, photograph, experiment	Editing/changed, filter, photograph/image, tool, explain	Format, framing, lighting, focus, filter, photograph	
KS1 Computing NC Links	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	1.4, 1.5, 1.6	
Computing Strand	CM, CS	CM, CS, ET	CM, DD	CM, DD, ET	CM, ET	CM, ET	
Education for a Connected World	- Self-image and identity	- Self-image and identity	- Self-image and identity	- Self-image and identity	- Self-image and identity	- Self-image and identity	

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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Spring first half **Programming A – Robot Algorithms**	**Giving Instructions** **Learning Objective** - To describe a series of instructions as a sequence **Success Criteria** - I can choose a series of words that can be enacted as a sequence - I can follow instructions given by someone else - I can give clear and unambiguous instructions	**Same but different** **Learning Objective** - To explain what happens when we change the order of instructions **Success Criteria** - I can create different algorithms for a range of sequences (using the same commands) - I can show the difference in outcomes between two sequences that consist of the same commands - I can use an algorithm to program a sequence on a floor robot	**Making predictions** **Learning Objective** - To use logical reasoning to predict the outcome of a program (series of commands) **Success Criteria** - I can compare my prediction to the program outcome - I can follow a sequence - I can predict the outcome of a sequence	**Mats and Routes** **Learning Objective** - To explain that programming projects can have code and artwork **Success Criteria** - I can explain the choices I made for my mat design - I can identify different routes around my mat - I can test my mat to make sure that it is usable	**Algorithm Design** **Learning Objective** - To design an algorithm **Success Criteria** - I can create an algorithm to meet my goal - I can explain what my algorithm should achieve - I can use my algorithm to create a program	**Debugging** **Learning Objective** - To create and debug a program that I have written **Success Criteria** - I can plan algorithms for different parts of a task - I can put together the different parts of my program - I can test and debug each part of the program	Assessment, Consolidation and Review
Key Vocabulary	Instruction, sequence, clear, unambiguous, algorithm, program	Sequence, order, algorithm, commands	Sequence, prediction, program	Artwork, design, route, mat, suitable	Algorithm	Debugging, algorithm, program	
KS1 Computing NC Links	1.1, 1.2, 1.3, 1.4	1.1, 1.2, 1.3, 1.4	1.1, 1.2, 1.3, 1.4	1.1, 1.2, 1.3, 1.4	1.1, 1.2, 1.3, 1.4	1.1, 1.2, 1.3, 1.4	
Computing Strand	AL	AL	AL, PG	AL, DD, PG	AL, DD	AL, DD, PG	
Education for a Connected World	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	

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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Spring second half **Data and Information –** **Pictograms**	**Counting and Comparing** **Learning Objective** - To recognise that we can count and compare objects using tally charts **Success Criteria** - I can compare totals in a tally chart - I can record data in a tally chart - I can represent a tally count as a total	**Enter the Data** **Learning Objective** - To recognise that objects can be represented as pictures **Success Criteria** - I can enter data onto a computer - I can use a computer to view data in a different format - I can use pictograms to answer simple questions about objects	**Creating Pictograms** **Learning Objective** - To create a pictogram **Success Criteria** - I can explain what the pictogram shows - I can organise data in a tally chart - I can use a tally chart to create a pictogram	**What is an attribute?** **Learning Objective** - To select objects by attribute and make comparisons **Success Criteria** - I can answer 'more than'/'less than' and 'most/least' questions about an attribute - I can create a pictogram to arrange objects by an attribute - I can tally objects using a common attribute	**Comparing People** **Learning Objective** - To recognise that people can be described by attributes **Success Criteria** - I can choose a suitable attribute to compare people - I can collect the data I need - I can create a pictogram and draw conclusions from it	**Presenting Information** **Learning Objective** - To explain that we can present information using a computer **Success Criteria** - I can give simple examples of why information should not be shared - I can share what I have found out using a computer - I can use a computer program to present information in different ways	Assessment, Consolidation and Review
Key Vocabulary	More than, less than, most, least, organise, data, object, tally chart, votes, total	Pictogram, enter, data, tally chart, compare, more than, less than, objects, count	Tally chart, data, pictogram, explain, more, less, most, least, more common, least common	Attribute, group, same, different, object, more than/less than, most/least	Attribute, compare, tally chart, pictogram, more than, less than, most popular, least popular, conclusion	Tally chart, pictogram, block diagram, most, least, common, sharing, data	
KS1 Computing NC Links	1.4, 1.6	1.4, 1.6	1.4, 1.6	1.4, 1.6	1.4, 1.6	1.4, 1.6	
Computing Strand	DI	DI, ET	DI, ET	DI, ET	DI, ET	DI, ET, SS	
Education for a Connected World	- Privacy and security	- Privacy and security	- Privacy and security	- Privacy and security	- Privacy and security	- Privacy and security	

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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Summer first half **Creating Media – Making Music**	**How music makes us feel** **Learning Objective** - To say how music can make us feel **Success Criteria** - I can describe how music makes me feel, e.g. happy or sad - I can identify simple differences in pieces of music - I can listen with concentration to a range of music	**Rhythms and Patterns** **Learning Objective** - To identify that there are patterns in music **Success Criteria** - I can create a rhythm pattern - I can explain that music is created and played by humans - I can play an instrument following a rhythm pattern	**How music can be used** **Learning Objective** - To describe how music can be used in different ways **Success Criteria** - I can connect images with sounds - I can relate an idea to a piece of music - I can use a computer to experiment with pitch and duration	**Notes and Tempo** **Learning Objective** - To show how music is made from a series of notes **Success Criteria** - I can identify that music is a sequence of notes - I can refine my musical pattern on a computer - I can use a computer to create a musical pattern using three notes	**Creating Digital Music** **Learning Objective** - To create music for a purpose **Success Criteria** - I can describe an animal using sounds - I can explain my choices - I can save my work	**Reviewing and Editing Music** **Learning Objective** - To review and refine our computer work **Success Criteria** - I can explain how I made my work better - I can listen to music and describe how it makes me feel - I can reopen my work	Assessment, Consolidation and Review
Key Vocabulary	Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions	Pattern, rhythm, pulse	Neptune, pitch, tempo, rhythm, notes, duration	Pattern, notes, instrument, tempo	Create, emotion, pitch, pulse/beat, tempo, instrument, rhythm, notes	Open, edit	
KS1 Computing NC Links	1.4	1.4	1.4	1.4	1.4	1.4	
Computing Strand	CM	CM	CM, DI	CM, DI	CM, DD, ET	CM, ET	
Education for a Connected World	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	- Copyright and ownership	

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	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Summer second half **Programming B – Introduction to Quizzes**	**ScratchJr Recap** **Learning Objective** - To explain that a sequence of commands has a start **Success Criteria** - I can identify that a program needs to be started - I can identify the start of a sequence - I can show how to run my program	**Outcomes** **Learning Objective** - To explain that a sequence of commands has an outcome **Success Criteria** - I can change the outcome of a sequence of commands - I can match two sequences with the same outcome - I can predict the outcome of a sequence of commands	**Using a Design** **Learning Objective** - To create a program using a given design **Success Criteria** - I can build the sequences of blocks I need - I can decide which blocks to use to meet the design - I can work out the actions of a sprite in an algorithm	**Changing a Design** **Learning Objective** - To change a given design **Success Criteria** - I can choose backgrounds for the design - I can choose characters for the design - I can create a program based on the new design	**Designing and Creating a Program** **Learning Objective** - To create a program using my own design **Success Criteria** - I can build sequences of blocks to match my design - I can choose the images for my own design - I can create an algorithm	**Evaluating** **Learning Objective** - To decide how my project can be improved **Success Criteria** - I can compare my project to my design - I can debug my program - I can improve my project by adding features	Assessment, Consolidation and Review
Key Vocabulary	Sequence, command, program, run, start	Sequence, command, outcome, predict, program, blocks	Sprite, algorithm, blocks, design, sequence, predict	Actions, sprite, project, blocks, design, sequence, modify, change	Design, algorithm, build, sequence, blocks, match	Compare, design, debug, program, features, evaluate	
KS1 NC Links	1.1, 1.2, 1.3	1.1, 1.2, 1.3	1.1, 1.2, 1.3	1.1, 1.2, 1.3	1.1, 1.2, 1.3	1.1, 1.2, 1.3	
Computing Strand	PG	PG	DD, PG	DD, PG	DD, PG	DD, PG	
Education for a Connected World							