Cherry Tree Academy Medium Term Computing Cycle A

Autumn 1		
KS1	Computer Systems and Networks	
	Year 1	**Year 2**
	L1: What is IT? L2: What IT do we have in school? L3: What types of IT do we have in the world? L4: What are the benefits of IT? L5: Why is it important to use IT safely and how can we keep ourselves safe when using IT? L6: How can we use IT in different ways?	L1: What is IT? L2: What IT do we have in school? L3: What types of IT do we have in the world? L4: What are the benefits of IT? L5: Why is it important to use IT safely and how can we keep ourselves safe when using IT? L6: How can we use IT in different ways?
Key Concepts to assess	L1: Children can identify examples of computers and identify that a computer is a part of IT. L2: Children can identify examples of IT in school and sort school IT by what it is used for. L3: Children can find examples of IT and sort where it is found. L4: Children can recognise common types of technology. They can say why we use IT. L5: Children can talk about the rules for using IT. They know how rules can help keep them safe. L6: Children can use IT for different types of activities and can explain the need to use IT in different ways.	L1: Children can identify examples of computers, describe some uses of computers and identify that a computer is a part of IT. L2: Children can identify examples of IT in school and sort school IT by what it is used for. They can identify that some IT can be used in more than one way. L3: Children can find examples of IT and sort where it is found. They can talk about uses of IT. L4: Children can recognise common types of technology. They can demonstrate how IT devices work together and say why we use IT. L5: Children can list different uses of IT and can talk about the rules for using IT. They know how rules can help keep them safe. L6: Children can identify the choices that they make when using IT. They can use IT for different types of activities and can explain the need to use IT in different ways.
Vocabulary	Information technology (IT), computer, laptop	Information technology (IT), computer, laptop, barcode, scanner/scan
Experiences		
SMSC		
British Values	Rule of Law – laws and rules around IT use	
School Values	Honest – Importance of following rules around IT use.	

Cherry Tree Academy Medium Term Computing Cycle A

Autumn 2		
KS1	Digital Photography	
	Year 1	**Year 2**
	L1: How do you take a photograph? L2: Can you take a photograph that is landscape and portrait? L3: What makes a good photograph? L4: Why is lighting important when taking a photograph? L5: How can different effects be used to change an image? L6: Are all photographs real?	L1: How do you take a photograph? L2: Can you take a photograph that is landscape and portrait? L3: What makes a good photograph? L4: Why is lighting important when taking a photograph? L5: How can different effects be used to change an image? L6: Are all photographs real?
Key Concepts to assess	L1: Children can recognise what devices can be used to take photographs and they can talk about how to take a photograph. L2: Children can explain the process of taking a good photograph and can take photographs in both landscape and portrait format. L3: Children can discuss how to take a good photograph and can improve a photograph by retaking it. L4: Children can explore the effect that light has on a photo. Children can explain why a picture may be unclear. L5: Children can recognise that images can be changed and can use a tool to achieve a desired effect. L6: Children can capture a photo. Children can recognise which photos have been changed and can which ones are real.	L1: Children can recognise what devices can be used to take photographs and they can talk about how to take a photograph. Children can explain what they did to capture a digital photo. L2: Children can explain the process of taking a good photograph and can take photographs in both landscape and portrait format. Children can explain why a photo looks better in portrait or landscape format. L3: Children can identify what is wrong with a photograph. Children can discuss how to take a good photograph and can improve a photograph by retaking it. L4: Children can explore the effect that light has on a photo and can experiment with different light sources. Children can explain why a picture may be unclear. L5: Children can recognise that images can be changed and can use a tool to achieve a desired effect. Children can explain their choices. L6: Children can apply a range of photography skills to capture a photo. Children can recognise which photos have been changed and can which ones are real.
Vocabulary	camera, photograph, capture, image, digital, landscape, portrait, Framing, subject, flash, focus, background, Editing, filter	Device, camera, photograph, capture, image, digital, landscape, portrait, Framing, subject, compose, Light sources, flash, focus, background, Editing, filter, Format
Experiences		
SMSC	Moral – changing photographs (should we do this?)	
British Values	Mutual respect – when taking photographs of other people.	
School Values	Considerate – when taking photographs of other people.	

Cherry Tree Academy Medium Term Computing Cycle A

Spring 1		
KS1	Creating Media – Making Music	
	Year 1	**Year 2**
	L1: How does different music make you feel? L2: What are rhythms and patterns in music? L3: How can music be used? L4: What are musical notes and what is tempo? L5: How can we create digital music? L6: How can we review and edit music?	L1: How does different music make you feel? L2: What are rhythms and patterns in music? L3: How can music be used? L4: What are musical notes and what is tempo? L5: How can we create digital music? L6: How can we review and edit music?
Key Concepts to assess	L1: Children can describe music using adjectives. Children can say what they like and dislike about a piece of music. L2: Children can create a rhythm pattern and can play an instrument following a rhythm pattern. L3: Children can connect images with sounds. Children can use a computer to experiment with pitch. L4: Children can identify that music is a sequence of notes. Children can use a computer to refine a musical pattern. L5: Children can create a simple rhythm on the computer which represents an animal they have chosen and can add a sequence of notes to the rhythm. L6: Children can review their work. Children can listen to music and describe how it makes them feel.	L1: Children can identify simple different in pieces of music and can describe music using adjectives. Children can say what they like and dislike about a piece of music. L2: Children can create a rhythm pattern and can play an instrument following a rhythm pattern. Children can explain that music is created and played by humans. L3: Children can connect images with sounds. Children can use a computer to experiment with pitch and can relate an idea to a piece of music. L4: Children can identify that music is a sequence of notes. Children can explain how music can be played in different ways and can use a computer to refine a musical pattern. L5: Children can create a rhythm on the computer which represents an animal they have chosen and can add a sequence of notes to the rhythm. L6: Children can review their work and explain how they have changed it. Children can listen to music and describe how it makes them feel.
Vocabulary	Music, quiet, loud, feelings, rhythm, pulse, pitch, tempo, notes, instrument, Create, Open, select, tool	Music, quiet, loud, feelings, emotions, Pattern, rhythm, pulse, pitch, tempo, notes, instrument, Create, Open, edit, select, tool
Experiences		
SMSC	Spiritual – music and the affect it has on different people	
British Values		
School Values	Honest – when evaluating work Resilient – things go wrong in computing and we have to find ways to fix the problems without getting upset.	

Cherry Tree Academy Medium Term Computing Cycle A

Spring 2		
KS1	Programming - BeeBots	
	Year 1	**Year 2**
	L1: Can you follow and give instructions? L2: How does the order of a set of instructions affect the outcome? L3: Can you predict the outcome of a program? L4: How can we make a mat for the floor robot? L5: Can you design an algorithm? L6: Can you create and debug a program?	L1: Can you follow and give instructions? L2: How does the order of a set of instructions affect the outcome? L3: Can you predict the outcome of a program? L4: How can we make a mat for the floor robot? L5: Can you design an algorithm? L6: Can you create and debug a program?
Key Concepts to assess	L1: Children can follow instructions and with some support give instructions. L2: Children can use an algorithm to program a sequence of a floor robot and can show the difference in outcomes between two sequences that consist of the same instructions. L3: Children can follow a sequence and can predict the outcome of a sequence. L4: Children can identify different routes around their mat and can test their mat to make sure it is usable. L5: Children can create an algorithm to meet their goal and can use their algorithm to create a program. L6: Children can test and debug each part of the program. Children can plan algorithms for different parts of a task.	L1: Children can follow instructions given by someone else and can give clear instructions. L2: Children can use the same instructions to create different algorithms. Children can use an algorithm to program a sequence of a floor robot and can show the difference in outcomes between two sequences that consist of the same instructions. L3: Children can follow a sequence and can predict the outcome of a sequence. Children can compare their prediction to the program outcome. L4: Children can explain the choices they have made for their mat designs. Children can identify different routes around their mat and can test their mat to make sure it is usable. L5: Children can explain what their algorithm should achieve. Children can create an algorithm to meet their goal and can use their algorithm to create a program. L6: Children can test and debug each part of the program. Children can plan algorithms for different parts of a task and can put together the different parts of the program.
Vocabulary	Instruction, sequence, clear, algorithm, program order, prediction, design, route, mat, Debugging	Instruction, sequence, clear, unambiguous, algorithm, program order, prediction, Artwork, design, route, mat, Debugging, decomposition
Experiences		
SMSC		
British Values		
School Values	Honest – when making predictions and comparing to outcomes.	

Cherry Tree Academy Medium Term Computing Cycle A

Summer 1		
KS1	Data and Information - Pictograms	
	Year 1	**Year 2**
	L1: How can we count and compare using a tally chart? L2: How can data be entered onto a pictogram using a computer? L3: How can we use the computer to create a pictogram? L4: What is an attribute? L5: How can people be describe using attributes? L6: How can we present information in different ways?	L1: How can we count and compare using a tally chart? L2: How can data be entered onto a pictogram using a computer? L3: How can we use the computer to create a pictogram? L4: What is an attribute? L5: How can people be describe using attributes? L6: How can we present information in different ways?
Key Concepts to assess	L1: Children can record data in a tally chart and can represent a tally count as a total. With support children can compare totals in a tally chart. L2: Children can enter data onto a computer. Children can use pictograms to answer simple questions about objects. L3: Children can organize data in a tally chart. Children can use a tally chart to create a pictogram. L4: Children can tally objects using a common attribute. Children can create a pictogram to arrange objects by an attribute. L5: With support children can choose a suitable attribute to compare people. Children can collect the date they need and use it to create a pictogram. L6: Children can use a computer program to present information in different ways. -	L1: Children can record data in a tally chart and can represent a tally count as a total. Children can compare totals in a tally chart. L2: Children can enter data onto a computer and can use a computer to view data in a different format. Children can use pictograms to answer simple questions about objects. L3: Children can organise data in a tally chart. Children can use a tally chart to create a pictogram and explain what the pictogram shows. L4: Children can tally objects using a common attribute. Children can create a pictogram to arrange objects by an attribute and can answer comparison questions about an attribute. L5: Children can choose a suitable attribute to compare people. Children can collect the date they need and use it to create a pictogram which they can draw conclusions from. L6: Children can use a computer program to present information in different ways. Children can share what they have found out using a computer and give examples of why information should not be shared.
Vocabulary	More than, less than, most, least, organise, data, object, tally chart, total , Pictogram, enter, data, Attribute, group, same, different, conclusion, block diagram, common, sharing, data	More than, less than, most, least, organise, data, object, tally chart, votes, total , Pictogram, enter, data, compare, Attribute, group, same, different, most popular, least popular, conclusion, block diagram, common, sharing, data
Experiences		
SMSC		
British Values	Rule of Law – laws around information sharing Democracy – when voting as part of tally chart work	
School Values	Honest	

Cherry Tree Academy Medium Term Computing Cycle A

Summer 2		
KS1	Programming – Scratch Jnr	
	Year 1	**Year 2**
	L1: How can we start and run a sequence in Scratch Jnr? L2: What is an outcome? L3: What is design and how can we use design in our program? L4: How can we change a design? L5: How can we design and create a program? L6: How can we make our design better?	L1: How can we start and run a sequence in Scratch Jnr? L2: What is an outcome? L3: What is design and how can we use design in our program? L4: How can we change a design? L5: How can we design and create a program? L6: How can we make our design better?
Key Concepts to assess	L1: Children can identify the start of a sequence. Children can show how to run their program. L2: Children can predict the outcome of a sequence of commands. Children can match two sequences with the same outcome. L3: Children can decide which blocks to use to meet the design and can build the sequences of blocked needed. L4: Children can choose backgrounds and characters for the design. L5: Children can choose the images for their own design. Children can create an algorithm. With support children can build sequences of blocks to match their design. L6: With support children can compare their project to their design. Children can improve their project by adding new features.	L1: Children can identify the start of a sequence and identify that a program needs to be started. Children can show how to run their program. L2: Children can predict the outcome of a sequence of commands. Children can match two sequences with the same outcome. Children can change the outcome of a sequence of commands. L3: Children can work out the actions of a sprite in an algorithm. Children can decide which blocks to use to meet the design and can build the sequences of blocked needed. L4: Children can choose backgrounds and characters for the design. Children can create a program based on the new design. L5: Children can choose the images for their own design. Children can create an algorithm. Children can build sequences of blocks to match their design. L6: Children can compare their project to their design. Children can improve their project by adding new features. Children can debug their program.
Vocabulary	Sequence, command, program, run, start, predict, program, blocks, Sprite, algorithm, design, sequence, change, build, match, Compare, features	Sequence, command, program, run, start, outcome, predict, program, blocks, Sprite, algorithm, design, sequence, Actions, project, modify, change, build, match, Compare, debug, features, evaluate
Experiences		
SMSC		
British Values		
School Values		