Cheadle Primary – the school at the heart of the village, free to flourish, ready to learn and succeed. **Progression of Skills and Knowledge: COMPUTING Year 2**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	**Bright Lights Big City**	**Festivals**	**Frozen**	**Australia**	**Growth**	**The Great Outdoors**
National Curriculum Learning Intentions	1 Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions 2 Create and debug simple programs 3 Use logical reasoning to predict the behaviour of simple programs 4 Use technology purposefully to create, organise, store, manipulate and retrieve digital content 5 Recognise common uses of information technology beyond school 6 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					
NC LINKS	**4,5,6**	**4,5**	**1,2,3**	**4,6**	**4**	**1,2,3,4**
Computing Units	Computing systems and networks	Creating media	Programming A	Data and information	Creating media	Programming B
Computing Topics	Information technology around us	Digital photography	Robot algorithms	Pictograms	Making music	Programming quizzes
Key Knowledge	Identifying IT and how its responsible use improves our world in school and beyond.	Capturing and changing digital photographs for different purposes.	Creating and debugging programs, and using logical reasoning to make predictions.	Collecting data in tally charts and using attributes to organise and present data on a computer.	Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz
Key Skills	describe some uses of computers identify that some IT can be used in more than one way talk about uses of information technology" recognise common types of technology how rules can help keep me safe	explain what I did to capture a digital photo talk about how to take a photograph discuss how to take a good photograph experiment with different light sources	follow instructions given by someone else give clear and unambiguous instructions" use an algorithm to program a sequence on a floor robot compare my prediction to the program outcome follow a sequence create an algorithm to meet my goal explain what my algorithm should achieve test and debug each part of the program"	MATHS CURRICULUM LINKS compare totals in a tally chart record data in a tally chart represent a tally count as a total enter data onto a computer use pictograms to answer simple questions about objects collect the data I need create a pictogram and draw conclusions from it give simple examples of why information should not be shared share what I have found out using a computer computer program to present information in different ways	MUSIC CURRICULUM LINKS create a rhythm pattern play an instrument following a rhythm pattern use a computer to create a musical pattern using three notes explain my choices save my work reopen my work	identify that a program needs to be started identify the start of a sequence show how to run my program build the sequences of blocks I need create a program based on the new design" build sequences of blocks to match my design create an algorithm compare my project to my design debug my program improve my project by adding features"
Learning Intentions	To recognise the uses and features of information technology To identify the uses of information technology in the school To identify information technology beyond school To explain how information technology helps us To explain how to use information technology safely To recognise that choices are made when using information technology	To use a digital device to take a photograph To make choices when taking a photograph To describe what makes a good photograph To decide how photographs can be improved To use tools to change an image To recognise that photos can be changed	To describe a series of instructions as a sequence To explain what happens when we change the order of instructions To use logical reasoning to predict the outcome of a program (series of commands) To explain that programming projects can have code and artwork To design an algorithm To create and debug a program that I have written	To recognise that we can count and compare objects using tally charts To recognise that objects can be represented as pictures To create a pictogram To select objects by attribute and make comparisons To recognise that people can be described by attributes To explain that we can present information using a computer	To say how music can make us feel To identify that there are patterns in music To show how music is made from a series of notes To show how music is made from a series of notes To create music for a purpose To review and refine our computer work	To explain that a sequence of commands has a start To explain that a sequence of commands has an outcome To create a program using a given design To change a given design To create a program using my own design To decide how my project can be improved
Resources	Google Slides	Digital camera	Bee-Bot, Blue-Bot, or other fixed-movement floor robot	j2data Pictogram	Chrome Music Lab	ScratchJr
Cross Curricular Links	**Education for a Connected World links**	Art **Education for a Connected World links**		Maths **Education for a Connected World links**	Music **Education for a Connected World links**	
Progression	This unit progresses students' knowledge and understanding of computing systems and online collaborative working.	This unit begins the learners' understanding of how photos are captured and can be manipulated for different purposes. Following this unit, learners will develop their photo editing skills in Year 4.	This unit progresses students' knowledge and understanding of algorithms and how they are implemented as programs on digital devices. Pupils will spend time looking at how the order of commands affects outcomes. Pupils will use this knowledge and logical reasoning to trace programs and predict outcomes.	This unit progresses students' knowledge and understanding of grouping data. It builds on the Year 1 Data and Information unit where learners labelled objects and grouped them based on different properties. In Year 3 learners develop their understanding of attributes (properties) using branching databases to structure data according to different object attributes.	This unit progresses students' knowledge through listening to music and considering how music can affect how we think and feel. Learners will then purposefully create rhythm patterns and music.	This unit progresses learners' knowledge and understanding of instructions in sequences and the use of logical reasoning to predict outcomes.