

Year 2 Scheme of Learning: Computing

Year 2 - Making Music

Lesson 1	
Learning Objective	To be introduced to making music digitally using 2Sequence.
Declarative Knowledge	- To know what 2Sequence is. - To know how 2Sequence is. - To know how to use different sounds within 2Sequence to create a tune.
Procedural Knowledge	Tinkering - Investigate new software.
Key Vocabulary	2Sequence, sounds, tune, create.

Lesson 2	
Learning Objective	To explore, edit and combine sounds using 2Sequence.
Declarative Knowledge	- To know how to speed up and slow down tunes. - To know what happens to the tune when sounds are moved.
Procedural Knowledge	Tinkering - Investigate new software. Creating - Decomposing a complex process into several planned phases.
Key Vocabulary	Tune, compose, note, speed, beat, volume.

Lesson 3	
Learning Objective	To add sounds to a tune they have already created to change it.
Declarative Knowledge	- To know how to add sounds to a tune they have already created to change it. - To know how music can be used to express feelings.
Procedural Knowledge	Creating - Critique their own work and work of others – constructive criticism. - Decomposing a complex process into several planned phases.
Key Vocabulary	Tune, sound, feelings, tempo.

Lesson 4	
Learning Objective	To change the volume of the background sounds.
Declarative Knowledge	- To know how to change the volume of the background sounds. - To know how to create two tunes which depict two feelings.
Procedural Knowledge	
Key Vocabulary	Tempo, sound effect, repeat, bars.

Lesson 5	
Learning Objective	To create, upload and use a recorded sound.
Declarative Knowledge	- To know how to upload and use their own sound chosen from a bank of sounds. - To know how to create, upload and use their own recorded sound.
Procedural Knowledge	Tinkering - Reflect and refine.
Key Vocabulary	Create, upload, record, bank of sounds.

Lesson 6	
Learning Objective	To create your own tune using some of the chosen sounds.
Declarative Knowledge	- To know how to use the sounds section. - To know how to create their own tune using some of the chosen sounds.
Procedural Knowledge	Tinkering – reflect and refine. Creativity – apply creativity to a range of outcomes, art, music, photography, games, virtual environments.
Key Vocabulary	Soundtrack, tune, sounds, create, tune.

Year 2 - Coding

Lesson 1	
Learning Objective	To understand what an algorithm is.
Declarative Knowledge	• To create a computer program using an algorithm. • To know that an algorithm is a set of instructions. • To know that for the computer to make something happen, it needs to follow clear instructions.
Procedural Knowledge	Tinkering - Investigate new software.
Key Vocabulary	Instructions, algorithm, event, object, action, command, background, scene, properties, scale, click events.

Lesson 2	
Learning Objective	To create a programme using a given design and use collision detection.
Declarative Knowledge	• To know how to plan an algorithm that includes collision detection. • To know how to create a program using collision detection. • To know how to read blocks of code and predict what will happen when it is run.
Procedural Knowledge	Tinkering – investigate new software.
Key Vocabulary	Event, object, collision detection, action, command, output, interaction, image, implement.

Lesson 3	
Learning Objective	To design an algorithm that follows a timed sequence.
Declarative Knowledge	• To know that algorithms follow a sequence. • To know how to create a program. • To know how to use a timer- after command.
Procedural Knowledge	Tinkering – investigate new software. Debugging - Develop resilience when searching for bugs.
Key Vocabulary	Action, command, output, algorithm, timer, interval, sequence.

Lesson 4	
Learning Objective	To understand what different events do in code.
Declarative Knowledge	• To know how to create a computer program that includes different object types. • To know how to modify the properties of an object. • To know how to use different events in their program to make objects move.
Procedural Knowledge	
Key Vocabulary	Background, scene, object, event, command, action, when key event, when swiped event, turtle object.

Lesson 5	
Learning Objective	To create a programme and understand the function of buttons in a program.
Declarative Knowledge	• To know how to create a computer program that includes a button object. • To know what a button does in their program. • To know how to modify the properties of a button to fit their program design.
Procedural Knowledge	Creating - Decomposing a complex process into several planned phases. Debugging - Develop resilience when searching for bugs.
Key Vocabulary	Button, text, object name, background, properties, action, when clicked.

Lesson 6	
Learning Objective	To know what debugging means and to debug simple programs.
Declarative Knowledge	• To know what debugging is. • To know how to debug simple programs.
Procedural Knowledge	Debugging - Refining the process of evaluation to check for bugs – more systematic (one line at a time) - Honing in on a precise location of a bug – using the “wolf-fencing algorithm”
Key Vocabulary	Run, execute, bug, debug, debugging, test.

Year 2 - Presenting ideas

Lesson 1	
Learning Objective	To explore how a story can be presented in different ways.
Declarative Knowledge	- To know a traditional tale when presented as a mind map, as a quiz, as an e-book and as a fact-file. - To know that digital content can be represented in many forms.
Procedural Knowledge	Tinkering - Investigate new software.
Key Vocabulary	E-book, mind map, node.

Lesson 2	
Learning Objective	To explore how a story can be presented in different ways.
Declarative Knowledge	- To know a traditional tale when presented as a mind map, as a quiz, as an e-book and as a fact-file. - To know that digital content can be represented in many forms.
Procedural Knowledge	Tinkering - Investigate new software.
Key Vocabulary	E-book, mind map, node.

Lesson 3	
Learning Objective	To make a quiz about a story or class topic.
Declarative Knowledge	- To know how to make a quiz about a story using 2Quiz. - To know how to make improvements on their work.
Procedural Knowledge	Tinkering - Investigate new software. Creating - Critique their own work and work of others – constructive criticism.
Key Vocabulary	Quiz, multiple-choice.

Lesson 4	
Learning Objective	To begin to make a fact file on a non-fiction topic.
Declarative Knowledge	- To know how to make a publisher fact file on a non-fiction topic. - To know how to add clipart. - To know how to add a photo.
Procedural Knowledge	Tinkering – investigate new software. Creating – apply creativity to a range of outcomes.
Key Vocabulary	Mind map, node, fiction, non-fiction, fact file.

Lesson 5	
Learning Objective	To continue to make a fact file on a non-fiction topic.
Declarative Knowledge	To know that data can be structured in tables to make it useful.
Procedural Knowledge	Tinkering – investigate new software. Creating – apply creativity to a range of outcomes.
Key Vocabulary	Mind map, node, fiction, non-fiction, fact file.

Lesson 6	
Learning Objective	To make a presentation to the class.
Declarative Knowledge	- To know how to use a variety of software to manipulate and present digital content and information. - To know how to collect, organise and present data and information in digital content.
Procedural Knowledge	Creating – apply creativity to a range of outcomes.
Key Vocabulary	Mind map, quiz, fact file, presentation.