SCAMBLESBY CofE PRIMARY SCHOOL: MEDIUM TERM-PLANNING Y1/2 Computing Autumn Year A

Focus: Creating media – Introduction to vector graphics(Y5)

Vocabulary			
session	Learning objective	Learning question and success criteria	Lesson outline
1	To identify that drawing tools can be used to produce different outcomes	-I can discuss how vector drawings are different from paper-based drawings SC: To experiment with the shape and line tools SC: To recognise that vector drawings are made using shapes	
2	-To create a vector drawing by combining shapes	-I can explain that each element added to a vector drawing is an object SC: To identify the shapes used to make a vector drawing SC: To move, resize, and rotate objects I have duplicated	
3	-To use tools to achieve a desired effect	SC: To explain how alignment grids and resize handles can be used to improve consistency SC: To modify objects to create a new image SC: To use the zoom tool to help me add detail to my drawings	
4	-To recognise that vector drawings consist of layers	-I can change the order of layers in a vector drawing	

		SC: To identify that each added object creates a new layer in the drawing SC: To use layering to create an image	
5	-To group objects to make them easier to work with	-I can copy part of a drawing by duplicating several objects SC: To recognise when I need to group and ungroup objects SC: To reuse a group of objects to further develop my vector drawing	
6	To apply what I have learned about vector drawings	-I can compare vector drawings to freehand paint drawings SC: To create a vector drawing for a specific purpose SC: To reflect on the skills, I have used and why I have used them	
Focus: Computing systems and networks - Systems and searching (Y5)			
session	Learning objective	Learning question and success criteria	Lesson outline
1	-To explain that computers can be connected together to form systems	-I can describe that a computer system features inputs, processes, and outputs SC: To explain that computer systems communicate with other devices SC: To explain that systems are built using a number of parts	
2	-To recognise the role of computer systems in our lives	-I can explain the benefits of a given computer system SC: To identify tasks that are managed by computer systems SC: To identify the human elements of a computer system	
3	-To experiment with search engines	-I can compare results from different search engines SC: To make use of a web search to find specific information SC: To refine my web search	

4	-To describe how search engines select results	-I can explain why we need tools to find things online SC: To recognise the role of web crawlers in creating an index SC: To relate a search term to the search engine's index	
5	-To explain how search results are ranked	-I can explain that a search engine follows rules to rank results SC: To give examples of criteria used by search engines to rank results SC: To order a list by rank	
6	-To recognise why the order of results is important, and to whom	-I can describe some of the ways that search results can be influenced SC: To explain how search engines make money SC: To recognise some of the limitations of search engines	

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Focus: Creating media – 3D Modelling (Y6)

Vocabulary			
session	Learning objective	Learning question and success criteria	Lesson outline

1	-To recognise that you can work in three dimensions on a computer	-I can add 3D shapes to a project SC: To move 3D shapes relative to one another SC: To view 3D shapes from different perspectives	
2	-To identify that digital 3D objects can be modified	-I can lift/lower 3D objects SC: To recolour a 3D object SC: To resize an object in three dimensions	
3	-To recognise that objects can be combined in a 3D model	-I can duplicate 3D objects SC: To group 3D objects SC: To rotate objects in three dimensions	
4	To create a 3D model for a given purpose	-I can accurately size 3D objects SC: To combine a number of 3D objects SC: To show that placeholders can create holes in 3D objects	
5	-To plan my own 3D model	-I can analyse a 3D model SC: To choose objects to use in a 3D model SC: To combine objects in a design	
6	-To create my own digital 3D model	-I can construct a 3D model based on a design SC: To explain how my 3D model could be improved SC: To modify my 3D model to improve it	

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Summer Year A

Focus: Data and information – Spreadsheets (Y6)

Vocabulary			
session	Learning objective	Learning question and success criteria	Lesson outline
1	To create a data set in a spreadsheet	-I can collect data SC: To enter data into a spreadsheet SC: To suggest how to structure my data	
2	-To build a data set in a spreadsheet	-I can apply an appropriate format to a cell SC: To choose an appropriate format for a cell SC: To explain what an item of data is	
3	-To explain that formulas can be used to produce calculated data	-I can construct a formula in a spreadsheet SC: To explain which data types can be used in calculations SC: To identify that changing inputs changes outputs	
4	-To apply formulas to data	I can apply a formula to multiple cells by duplicating it SC: To calculate data using different operations SC: To create a formula which includes a range of cells	
5	-To create a spreadsheet to plan an event	-I can apply a formula to calculate the data I need to answer questions	

		SC: To explain why data should be organised SC: To use a spreadsheet to answer questions	
6	-To choose suitable ways to present data	-I can produce a chart SC: To suggest when to use a table or chart SC: To use a chart to show the answer to questions	
Focus: Programming A/B – Selection in physical computing/quizzes (Y5)			
session	Learning objective	Learning question and success criteria	Lesson outline
1	-To control a simple circuit connected to a computer (Y5)	-I can create a simple circuit and connect it to a microcontroller SC: To explain what an infinite loop does SC: To program a microcontroller to make an LED switch on	
2	-To write a program that includes count-controlled loops	-I can connect more than one output component to a microcontroller SC: To design sequences that use count-controlled loops SC: To use a count-controlled loop to control outputs	
3	-To explain that a loop can stop when a condition is met	-I can design a conditional loop SC: To explain that a condition is either true or false SC: To program a microcontroller to respond to an input	
4	-To explain how selection is used in computer programs	-I can identify conditions in a program SC: To modify a condition in a program SC: To recall how conditions are used in selection	
5	-To relate that a conditional statement connects a condition to an outcome	-I can create a program with different outcomes using selection	

		SC: To identify the condition and outcomes in an 'if... then… else...' statement SC: To use selection in an infinite loop to check a condition	
6	-To explain how selection directs the flow of a program	-I can design the flow of a program which contains 'if… then… else…' SC: To explain that program flow can branch according to a condition SC: To show that a condition can direct program flow in one of two ways	

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Focus: Creating media - Video production (Y5)

Vocabulary			
session	Learning objective	Learning question and success criteria	Lesson outline
1	To explain what makes a video effective	-I can compare features in different videos SC: To explain that video is a visual media format SC: To identify features of videos	
2	-To identify digital devices that can record video	-I can experiment with different camera angles	

		SC: To identify and find features on a digital video recording device SC: To make use of a microphone	
3	-To capture video using a range of techniques	-I can capture video using a range of filming techniques SC: To review how effective my video is SC: To suggest filming techniques for a given purpose	
4	-To create a storyboard	-I can create and save video content SC: To decide which filming techniques, I will use SC: To outline the scenes of my video	
5	-To identify that video can be improved through reshooting and editing	-I can explain how to improve a video by reshooting and editing SC: To select the correct tools to make edits to my video SC: To store, retrieve, and export my recording to a computer	
6	-To consider the impact of the choices made when making and sharing a video	-I can evaluate my video and share my opinions SC: To make edits to my video and improve the final outcome SC: To recognise that my choices when making a video will impact on the quality of the final outcome	
Focus: Computing systems and networks - Communication and collaboration (Y5)			
session	Learning objective	Learning question and success criteria	Lesson outline
1	-To explain the importance of internet addresses	-I can describe how computers use addresses to access websites SC: To explain that internet devices have addresses SC: To recognise that data is transferred using agreed methods	

2	-To recognise how data is transferred across the internet	-I can explain that all data transferred over the internet is in packets SC: To explain that data is transferred over networks in packets SC: To identify and explain the main parts of a data packet	
3	-To explain how sharing information online can help people to work together	-I can explain that the internet allows different media to be shared SC: To recognise how to access shared files stored online SC: To send information over the internet in diverse ways	
4	-To evaluate different ways of working together online	-I can explain how the internet enables effective collaboration SC: To identify different ways of working together online SC: To recognise that working together on the internet can be public or private	
5	-To recognise how we communicate using technology	-I can choose methods of communication to suit purposes SC: To explain the different ways in which people communicate SC: To identify that there are a variety of ways to communicate over the internet	
6	-To evaluate different methods of online communication	-I can compare different methods of communicating on the internet SC: To decide when I should and should not share information online SC: To explain that communication on the internet may not be private	

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Spring Year B

Focus: Creating media – Web page creation

Vocabulary			
session	Learning objective	Learning question and success criteria	Lesson outline
1	-To review an existing website and consider its structure	-I can discuss the different types of media used on websites SC: To explore a website - I know that websites are written in HTML	
2	-To plan the features of a web page	-I can draw a web page layout that suits my purpose SC: To recognise the common features of a web page SC: To suggest media to include on my page	
3	-To consider the ownership and use of images (copyright)	-I can describe what is meant by the term 'fair use' SC: To find copyright-free images SC: To say why I should use copyright-free images	
4	-To recognise the need to preview pages	-I can add content to my own web page SC: To evaluate what my web page looks like on different devices and suggest/make edits SC: To preview what my web page looks like	

5	-To outline the need for a navigation path	-I can describe why navigation paths are useful SC: To explain what a navigation path is SC: To make multiple web pages and link them using hyperlinks	
6	-To recognise the implications of linking to content owned by other people	SC: To create hyperlinks to link to other people's work SC: To evaluate the user experience of a website SC: To explain the implication of linking to content owned by others	

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Focus: Data and information (Y6) Spreadsheet.

Vocabulary			
session	Learning objective	Learning question and success criteria	Lesson outline
1	To create a data set in a spreadsheet	SC: To collect data SC: To enter data into a spreadsheet SC: To suggest how to structure my data	
2	-To build a data set in a spreadsheet	SC: To apply an appropriate format to a cell	

		SC: To choose an appropriate format for a cell SC: To explain what an item of data is	
3	-To explain that formulas can be used to produce calculated data	SC: To construct a formula in a spreadsheet SC: To explain which data types can be used in calculations SC: To identify that changing inputs changes outputs	
4	-To apply formulas to data	SC: To apply a formula to multiple cells by duplicating it SC: To calculate data using different operations SC: To create a formula which includes a range of cells	
5	-To create a spreadsheet to plan an event	SC: To apply a formula to calculate the data I need to answer questions SC: To explain why data should be organised SC: To use a spreadsheet to answer questions	
6	-To choose suitable ways to present data	SC: To produce a chart SC: To suggest when to use a table or chart SC: To use a chart to show the answer to questions	
Focus: Programming B (Y6)			
session	Learning objective	Learning question and success criteria	Lesson outline
1	To create a program to run on a controllable device	SC: To apply my knowledge of programming to a new environment SC: To test my program on an emulator SC: To transfer my program to a controllable device	
2	To explain that selection can control the flow of a program	SC: To determine the flow of a program using selection SC: To identify examples of conditions in the real world	

		SC: To use a variable in an if, then, else statement to select the flow of a program	
3	To update a variable with a user input	SC: Toexperiment with different physical inputs SC: To explain that checking a variable doesn't change its value SC: To use a condition to change a variable	
4	-To use a conditional statement to compare a variable to a value	SC: To explain the importance of the order of conditions in else, if statements SC: To modify a program to achieve a different outcome SC: To use an operand (e.g. <>=) in an if, then statement	
5	-To design a project that uses inputs and outputs on a controllable device	SC: To decide what variables to include in a project SC: To design the algorithm for my project SC: To design the program flow for my project	
6	-To develop a program to use inputs and outputs on a controllable device	SC: To create a program based on my design SC: To test my program against my design SC: To use a range of approaches to find and fix bugs	