

RAK Academy IPK PYP
Computer Science
Grades 2 to 5 Scope and
Sequence

Grade 2

Computer Science

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> • Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behavior of simple programs. 	<p><u>Scratch</u></p> <ol style="list-style-type: none"> 1. Know why we use Scratch 2. Know how to think computationally. 3. To deepen their understanding of how a computer processes instructions 4. To understand the layout and scripts groups 5. To understand that devices or on screen sprites are controlled by sequences of instructions or actions, and that these can be inputted using script blocks or text. 6. To create, edit and refine sequences of instructions. <p><u>Turtle Academy</u></p> <ol style="list-style-type: none"> 7. To control the turtle or equivalent using forwards, backwards, left, right, up, down with support. To draw a square, rectangle and other regular shapes on screen, using commands such as penup, pendown, repeat etc. 8. To look at a sequence of instructions and predict where the turtle might go. 9. To produce an accurate set of instructions that needs little amendment. 	<p><u>Scratch</u></p> <ol style="list-style-type: none"> 1. Sequence instructions for brushing teeth. 2. Discuss control in the world – traffic lights, car park barriers and automatic doors. 3. Using Scratch, allow children to familiarize themselves with the layout and script groups 4. Model how to create an animation using various script blocks 5. Children complete Scratch activities using laminated cards as a starting point. <p><u>Turtle Academy</u></p> <ol style="list-style-type: none"> 1. Model use of Turtle Academy with children 2. Demonstrate how to use pen up and down 3. Children complete all sections – Logo's turtle, controlling the turtle and pen, Turtle World and The turtle answer. 4. https://turtleacademy.com/lessons/en

Information Technology

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none">• Use search technologies effectively, appreciate how results are selected and ranked.• Select, use and combine a variety of software (including internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	<p><u>Paint</u></p> <ol style="list-style-type: none">1. To be able to use the shape tools to draw a variety of objects and pictures.2. To be able to use solid, pattern and gradient fills when dealing with shapes and pictures.3. To be able change the width of brush, spray and lines and use these in combination to create a range of effects.4. To be able to resize graphics and text to make the document fit for purpose. <p><u>PowerPoint (Multimedia)</u></p> <ol style="list-style-type: none">1. To be able use ICT to capture still images for example through a camera, or an IPAD.2. To be able to create a simple presentation of 3-5 slides that contains a title page, text and images. To be able to view the presentation using slide show, by clicking the mouse when appropriate.3. To be able to use images captured from a camera within a presentation for e.g. to support the text within it.	<p><u>Paint</u></p> <ol style="list-style-type: none">1. Introduction to Windows Paint2. Match the traditional brush to the computer counterpart3. Produce simple firework displays using the fill tool and the brush tool4. Representing the work of different artists (Mondrian, Seurat, Kadinsky).5. Using the eraser to edit an image6. Using the eraser to draw a picture (white on black)7. Creating scenes and landscapes based upon original imagery or photographs8. Copying and Pasting Faces and changing their emotions9. Creating custom colours and rainbows10. Opening and colouring, and adapting templates.11. Creating posters to promote school values <p><u>PowerPoint</u></p> <ol style="list-style-type: none">1. Allow children to collect information from around the school grounds using a digital camera, IPAD or other digital device which

	<p>4. To be able to use formatting functions to improve appearance of the presentation.</p> <p>Databases</p> <ol style="list-style-type: none"> 1. Recap on what a database is 2. Children learn how to search and sort information 3. Children to learn what is meant by a 'record' and a 'field' 4. Children to create a paper database 	<p>takes pictures and work with them to upload these to their area (Z Drive) for later independent use.</p> <ol style="list-style-type: none"> 2. Show the children a simple PowerPoint presentation and discuss the features and how this can be improved. 3. Demonstrate how to insert an image or graph into a PowerPoint. 4. Demonstrate how to add text and alter it through use of insert text box and the backspace key. 5. Ask the children to create a simple PowerPoint based upon a topic of their choice. <p>Databases Follow SOW – 6 lessons (Use resources)</p>
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Digital Literacy

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> • Recognise common uses of information technology beyond school • 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. 	<p>Websites</p> <ol style="list-style-type: none"> 1. Look at websites with the teacher and discuss what is seen. 2. Understand that the arrow changes on a link or hot spot. 3. Be able to click on links on a website. 4. To be able to use the back button on a website. 5. Conduct a search on a website 	<p>Websites</p> <ol style="list-style-type: none"> 1. Look at websites cbbc and cbeebies website and discuss them 2. Explain the needs for a website 3. Move the mouse over the screen and discuss what might be happening when you hover over a link of hot spot 4. Give the children a set of questions to research the answers on the internet

Emails and Messages

1. Look at email with the children – discuss what messages are.
2. Discuss the benefits of sending mail electronically
3. Understanding there are different ways of sending a message.
4. Recognise what an email may look like.
5. Help send a class email message.

E-Safety

Online Research

1. Be aware that taking lots of text from websites is stealing other people's work.
2. Understand the internet contains fact, fiction and opinion

Online communication and collaboration

1. Understand that passwords should be kept private
2. Know that online communication is not always confidential and that it can be monitored – digital; footprint

Online publishing

1. Learn to respect the work of others which is stored on a shared drive of a network or presented online.

Emails and Messages

1. Children can list different ways to communicate
2. Children highlight strengths and weaknesses of each method
3. Open an email and respond to it
4. Compose a new email and send to their peer

E-Safety

Online Research

1. Open the 'Tomato Spider Spoo Website
2. Highlight the fact that the information is not accurate and the fact that the website is not secure

Online communication and collaboration

1. Discuss the importance of passwords
2. Explain what an effective password is – mixed numbers, letters and characters.
3. Follow the digital trail video and complete worksheets

Online Publishing

1. Brief discussion about respecting other children's work. If the computer is still logged on by the previous person then do not make changes to their work and log off from their account.

	<p><u>Digital Technology</u></p> <p>1. To identify a range of digital objects used in our day to day lives.</p>		<p><u>Digital Technology</u></p> <p>1. Discuss digital technology at home – alarm clock, microwave, digital TV, iPad, SATNAV, etc.</p>		
<u>Unit of Inquiry</u>					
Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Basic ICT skills	Integrated – Sharing the planet (Scratch)	Programming – Beebots and Turtle Academy	E – Safety/ Digital Technology	Integrated – Where are we in place and time	Databases

Grade 3

Computer Science

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs with support. • Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. 	<p><u>Flowol</u></p> <ol style="list-style-type: none"> 1. To introduce children to Flowol and how to produce a simple flowchart – Zebra crossing 2. To use simple procedures to control output devices, by building a sequence of events, to solve a problem. <p><u>Scratch</u></p> <ol style="list-style-type: none"> 1. To continue to develop their understanding of how a computer processes instructions 2. To continue to control on screen sprites by using a set of sequenced instructions that can be inputted using script blocks or text. 3. To create, edit and refine sequences of instructions using loops and variables. 4. To be familiar with the term 'debug' and be able to debug program accordingly. 	<p><u>Flowol</u></p> <ol style="list-style-type: none"> 1. Demonstrate how to set up a procedure to flash a light 2. Whole class – Create a flowchart to control a zebra crossing 3. Complete worksheet <p><u>Scratch</u> Nicola Wilkin SOW – 6 lessons</p>

Information Technology

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none">• Use search technologies effectively, appreciate how results are selected and ranked.• Select, use and combine a variety of software (including internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	<p>Word</p> <ol style="list-style-type: none">1. To be able to change the font, format and size of any text making it appropriate for the text type.2. To be able to delete, insert and replace text to improve clarity and create mood depending on the audience.3. To be able to use a spell checker at all times to edit spellings within the text.4. To be able to highlight text to copy and paste.5. To be able to use control c/v to copy and paste any words from a document or a range of sources.6. To be able to create a text box and position it into a suitable place on the page.7. To be able to align my text using the left, right and center tools within the word package independently.8. To be able to change the page layout to portrait or landscape independently.9. To be able to confidently format all text to suit the purpose of my document for e.g. letter or instruction text.10. To be able to use the bullets and numbering tools confidently.11. To be able to 'save as' function to keep drafts and the CTL + S function to save any new updates whilst working on task.	<p>Word</p> <ol style="list-style-type: none">1. Model to the children using word package to show how to change font size and how to use bold to emphasize important text.2. Model how cut and paste can be used to reorder a piece of text (letter/ poem)3. Demonstrate the use of the spell check in how it can be effective tool to support correct spelling use but not replace spelling knowledge.4. Use suitable program to polish/edit a piece of text e.g. letter, instruction or list.5. To ensure that a range of writing is produced to meet the needs of an audience.

Paint

1. To be able to use stamps and the cut copy tool to create multiple repeating patterns independently. To be able to copy graphics from a range of sources such as 'google images' and paste it into a desktop publishing program.
2. To be able to alter the size of the brush tool to create a number of interesting effects.
3. To be able to use CTRL C to copy and CTRL V to paste as shortcut keys independently.
4. To be able to select appropriate areas of a document, copy and resize them to fit the document.
5. To be able to use a range of visual effects, such as reflection and symmetry within a graphics piece.
6. To be able to resize graphics and text to suit the document I am making for my audience.
7. To be able to make an information poster applying the graphic skills to good effect.

Multimedia

1. To be able to use ICT such as cameras and IPADS to capture still images independently.
2. To be able to create a presentation of 3 - 5 slides that is fit for purpose including text and images.
3. To be able to ensure that my presentation moves on with the click of a mouse.

Paint

1. Explain that some of the same ICT features, such as cut and paste, can be used to develop pictures
2. Collect some wrapping paper that uses repeated patterns, discuss how the patterns repeat and talk about the background colours used within these.
3. Compare how the stamp function can replicate this.
4. Demonstrate how to alter the size and pattern of the brush tool.
5. Demonstrate how different areas of the screen can be selected, copied and resized.
6. Children could create a fish tank by drawing a single fish, then making multiple copies of different sizes.

Multimedia

1. Model the necessary skills required.
2. Examine multimedia presentations and evaluate the effectiveness of the presentations
3. Create a presentation that includes all new skills learnt and that is linked to the unit.

	<ol style="list-style-type: none"> 4. To be able to put some animation with support into my presentation. 5. To be able to make multimedia presentations which contain basic transition animation between slides and buttons (click of the mouse) to navigate with some support. <p>Databases</p> <ol style="list-style-type: none"> 5. Recap on what a database is 6. Children learn how to search and sort information 7. Children to learn what is meant by a 'record' and a 'field' 8. Children to create a paper database 	<p>Databases Follow SOW – 6 lessons</p>
Digital Literacy		
Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> • Understand the opportunities [networks] offer for communication and collaboration. • Be discerning in evaluating digital content • Use technology safely, respectfully and responsibly; recognize acceptable/unacceptable behavior; identify a range of ways to report concerns about content and contact. 	<p>Websites</p> <ol style="list-style-type: none"> 1. Visit two websites and understand the purpose of each website – Informing, educating, selling or entertaining. 2. To be able to critically evaluate two contrasting websites. <p>Network</p> <ol style="list-style-type: none"> 1. Remind children how to access the pupil shared network 2. Know what a network is 3. Add files to a relevant folder on the shared network 	<p>Websites</p> <ol style="list-style-type: none"> 1. Whole class – Analyse a website and highlight the main features. 2. Highlight the fact that when hover over a link the mouse pointer changes. 3. Complete the website evaluation – cbeebies and souq. <p>Network</p> <ol style="list-style-type: none"> 1. Display the pupil shared network. 2. Explain the difference between the 'S' and the 'Z' drive. 3. Explain what a network is and that the internet is also a network.

	<p><u>Emails and Messages</u></p> <ol style="list-style-type: none"> 1. Recap composing a new email and include a subject title. 2. Demonstrate how to attach a file to the email. <p><u>E-Safety</u></p> <p>Online Research</p> <ol style="list-style-type: none"> 1. Understand copyright issues – what images / videos/ sounds are legal and safe to use. Plagiarism. 2. Be aware that web sites are not always accurate and that information should be evaluated and checked before it is used. <p>Online communication and collaboration</p> <ol style="list-style-type: none"> 1. Contribute to classroom discussion forum <p>Online publishing</p> <ol style="list-style-type: none"> 1. Know that they need to check information before uploading. 2. Know that certain areas of the school website can only be viewed by people connected to the school. 	<ol style="list-style-type: none"> 4. Model how to save work to a specific location and allow children to transfer files from one folder to another. <p><u>Emails and Messages</u></p> <ol style="list-style-type: none"> 1. Review what an email is 2. Complete worksheet 3. Review how to send an email to one person and multiple people 4. Demonstrate how to attach a document. <p><u>E-Safety</u></p> <p>Online Research</p> <ol style="list-style-type: none"> 1. Know IT all Activity 2 (The SMART Adventure); - https://www.childnet.com/resources/the-adventures-of-kara-winston-and-the-smart-crew 2. Watch videos and complete varied activities. <p>Online communication and collaboration</p> <ol style="list-style-type: none"> 1. Children contribute to the discussion forum reflecting on what they have learned about the importance of staying safe. <p>Online Publishing</p> <ol style="list-style-type: none"> 1. Differentiate between good information and bad information and explain how it can affect them if not checked before uploaded.
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	<p><u>Digital Technology</u></p> <ol style="list-style-type: none"> 1. To understand the uses of digital objects used in our day to day lives. 2. Understanding how digital technology can track and deliver information through smart systems. 3. Understand digital technology can be used for leisure. 	<ol style="list-style-type: none"> 2. Show children Moodle and explain highlight the areas that can be accessed by teachers/ parents/ children. <p><u>Digital Technology</u></p> <ol style="list-style-type: none"> 1. Discuss digital technology at home - alarm clock, microwave, digital TV, iPad and SATNAV. 2. Discuss online food ordering for supermarket and take-aways. 3. Discuss digital technology at school – Register (iSams) and IPADS. Ask children what else they can think of. 4. Discuss how parents used digital technology 5. Discuss digital technology whilst shopping - parent may have scanned food at the supermarket, whose supply chain is controlled by smart systems. 6. Discuss digital technology as entertainments - Wii or Kinect, smartphones or laptops, tablets and e-book reader.
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Unit of Inquiry

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Basic ICT skills	Flowol/ Scratch	Integrated – Who we are (E Safety)	Integrated – Where are we in place and time	Databases	Websites/ Digital Technology

Grade 4

Computer Science

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs independently. • Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. 	<p><u>Flowol</u></p> <ol style="list-style-type: none"> 1. To use help sheets to write commands with assistance 2. To control output devices, by building a sequence of events, to solve a problem. Create more than one sequence <p><u>Scratch</u></p> <ol style="list-style-type: none"> 1. To continue to develop their understanding of how a computer processes instructions 2. To understand that devices or on screen sprites are controlled by sequences of instructions or actions, and that these can be inputted using script blocks or text. 3. To create, edit and refine sequences of instructions. 4. To be familiar with the term 'debug' and be able to debug program accordingly. 5. To be familiar with the term 'variable' and use them when creating a program. 	<p><u>Flowol</u></p> <ol style="list-style-type: none"> 1. Ask the children to identify devices that operate on instructions and discuss whether they rely on a single instruction or on a sequence (a barrier in a car park, traffic lights) 2. Recap the procedure to flash a light. Demonstrate repeat commands and name the procedure 3. Discuss a simple traffic light set up; discuss the sequence of the lights. Children write own procedure for the lights 4. Children attempt bridge lights – 2 flowcharts <p><u>Scratch</u> Scratch workbooks.</p>

Information Technology

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none">• Use search technologies effectively, appreciate how results are selected and ranked.• Select, use and combine a variety of software (including internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	<p><u>Multimedia - Powtoon</u></p> <ol style="list-style-type: none">1. To be able to create a multimedia Powtoon presentation that is fit for purpose including text and images.2. To include animation independently into the presentation.3. To include sound and transition effects for each slide <p><u>Spreadsheets - Excel</u></p> <ol style="list-style-type: none">1. To be able to enter labels and numbers into a spreadsheet.2. To become familiar with the key terms used – cells, formula, etc3. To be able to enter basic formula into a spreadsheet with assistance	<p><u>Multimedia - Powtoon</u></p> <ol style="list-style-type: none">1. Model the necessary skills required.2. Demonstrate how to include sound and voiceovers.3. Showcase previous completed Powtoons and evaluate the effectiveness of the presentation.4. Create a powtoon presentation that includes all new skills learnt and that is linked to the topic. <p><u>Spreadsheets - Excel</u></p> <ol style="list-style-type: none">1. Remind children why we use spreadsheets and highlight the main tools used within spreadsheet – formula bar, cell, column, row2. Demonstrate how to enter data into a spreadsheet and how to complete a formula – use equals first3. Children access information from the pupils shared area (shopping list for a birthday party) and allow them to enter the data into the spreadsheet and carry out formula with assistance.

Digital Literacy

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> • Be discerning in evaluating digital content • Use technology safely, respectfully and responsibly; recognize acceptable/unacceptable behavior; identify a range of ways to report concerns about content and contact. 	<p><u>E-Safety</u></p> <p>Online Research</p> <ol style="list-style-type: none"> 1. Search sensibly for images and videos online and aware that school has filters in place to block certain content. 2. Children critically evaluate the information they use and understand the potential dangers of not doing so. <p>Online publishing</p> <ol style="list-style-type: none"> 1. Understanding severity of the Impact on an individual of sending or uploading unkind or inappropriate content particularly when a wider audience views the content. 2. Understand that you should not publish other peoples' pictures or tag them on the Internet without their permission. 3. Understand malicious adults use the internet to make contact and groom" young children" and how to report any suspicions. 	<p><u>E-Safety</u></p> <p>Online Research</p> <ol style="list-style-type: none"> 1. Demonstrate that some websites are blocked because of the filters that are in place. 2. Discuss reliability of information used from the internet – Wikipedia (unreliable) 3. Watch video 4. Discuss the copyright and plagiarism. 5. Complete the worksheet <p>Online Publishing</p> <ol style="list-style-type: none"> 1. Show children videos and discuss. 2. Go through PowerPoint and discuss key points 3. Complete the worksheet – The power of words

Unit of Inquiry

Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Basic ICT skills	Flowol/ Scratch	Integrated – Where are we in place and time (E Safety)	Spreadsheets	Integrated – How the world works	Multimedia

Grade 5

Computer Science

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • Use sequence, selection and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs with support. • Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. 	<p><u>Microbit</u></p> <ol style="list-style-type: none"> 1. To continue to develop their understanding of how a computer processes instructions 2. To understand that devices are controlled by sequences of instructions or actions, and that these can be inputted using script blocks or text. 3. To create, edit and refine sequences of instructions. 4. To be familiar with the term 'debug' and be able to debug program accordingly. 5. To illustrate the use of repeat code and show a number on the LED screen 6. To demonstrate code that uses an input button and the use of a variable that can store data 7. To demonstrate code that can turn on a LED light on the LED screen 	<p><u>Microbit</u></p> <ol style="list-style-type: none"> 1. Explain to children that a microbit is a small computer – explain parts using PowerPoint (Intro to microbit) 2. Intro to microbit resource 3. Complete challenges resource

Information Technology

Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none">• Use search technologies effectively, appreciate how results are selected and ranked.• Select, use and combine a variety of software (including internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	<p>Word</p> <ol style="list-style-type: none">1. To be able to change the font , format and size of my text.2. To be able to delete, insert and replace text.3. To be able to use a spell checker to edit my spellings.4. To be able to highlight text to copy and paste.5. To be able to use control c/v to copy and paste. To be able to create a text box and position it.6. To be able to align my text using the left, right and centre tools.7. To be able to change the page layout (Landscape/portrait) independently.8. To be able to confidently format all text to suit the purpose of my document.9. To be able to use the bullets and numbering tools confidently for e.g. when writing instruction text.10. To be able to use the word count tool to check the length of my document.11. To be able to use 'save as' to keep drafts so that they can be used at a later time.12. To be able to confidently choose the correct page setup option when creating my document.13. To be able to choose a layout, that is thoughtful and readable.	<p>Word</p> <ol style="list-style-type: none">6. Recap how to use the word package to show how to change font size and how to use bold to emphasize important text.7. Model how cut/ copy and paste can be used to reorder a piece of text (letter/ poem).8. Demonstrate the use of the spell check in how it can be effective tool to support correct spelling use but not replace spelling knowledge.9. Demonstrate how to insert a n image and use the text wrapping tool.10. To create a report based on a given theme using text, images and formatting skills.11. Report must be fit for purpose.

14. To be able to confidently use text-formatting tools, including heading and body text.
15. To be able to incorporate graphics where appropriate, using the most effective text wrapping formats.
16. To be able to use the word count tool to check the length of my document.

Multimedia - Moviemaker

6. To be able to create a movie that consists of 3 -5 frames and is based on a given topic.
7. The movie must be fit for purpose and include text and images.
8. To ensure that the correct use of transition is used throughout - consistency
9. To be able to put some animation with support into my presentation.
10. To be able to make multimedia presentations which contain basic transition animation between slides and buttons (click of the mouse) to navigate with some support.
11. To include suitable music

Spreadsheets

1. To be able to enter labels and numbers into a spreadsheet.
2. To be able to enter formulae into a spreadsheet independently.
3. To be able to use 'SUM' function to calculate the total of a set of numbers in a range of cells.
4. To be able to use formulae to make adjustments to the spreadsheet as would

Multimedia - Moviemaker

1. Introduce Moviemaker and explain its main purpose
2. Highlight the main tools used – add pictures/ videos, transition, animation, add sound
3. Remind children that all images and music that needs to be in the movie should be saved in the one folder.
4. Children create a new project.
5. Show pupils how to import photos, add music and video clips
6. Demonstrate how to edit video by setting the start and end points of the clip.
7. Show how to change the duration of still images.
8. Add a title, a caption and credits.
9. Allow time for the children to experiment with these tools, to create a video.
10. Remind pupils to save their work.

Spreadsheets

1. Recap the reason we use spreadsheet – to organize data and perform calculations.

	<p>be in real life e.g. household budget and bills.</p> <ol style="list-style-type: none"> To be able to identify formulae and enter them into a spreadsheet with confidence. To be able to use a spreadsheet to draw a graph. To be able to use ICT to create pie charts, line graphs and to explain them. 	<ol style="list-style-type: none"> Recap on how to enter a formula and remind children that we need to '=' before the formula. Demonstrate how and why we use the 'SUM' function. Demonstrate how to insert a pie chart and be able to explain what they see. Ask a 'What if' question.
Digital Literacy		
Statutory requirements	Ras Al Khaimah's Key Knowledge and Skills	Suggested Outcome/ Activity
<ul style="list-style-type: none"> Understand the opportunities [networks] offer for communication and collaboration. Be discerning in evaluating digital content Use technology safely, respectfully and responsibly; recognize acceptable/unacceptable behavior; identify a range of ways to report concerns about content and contact. 	<p><u>E Safety</u> Strong Passwords</p> <ol style="list-style-type: none"> Pupils learn how to create secure passwords in order to protect their private information and accounts online. <p>Digital Citizenship</p> <ol style="list-style-type: none"> Digital Citizenship Pledge Pupils work together to outline common expectations in order to build a strong digital citizenship community. 	<p><u>E Safety</u> Strong passwords</p> <ol style="list-style-type: none"> Common sense – Discuss key points and complete worksheet. https://www.commonsense.org/education/lesson/strong-passwords-3-5 <p>Digital Citizenship</p> <ol style="list-style-type: none"> Discuss the importance of digital citizenship and the importance of it. Discuss have a negative and positive digital footprint Each member of the class signs a We the Digital Citizens Pledge. https://www.commonsense.org/education/digital-citizenship/lesson/our-digital-citizenship-pledge

	<p>Email Scams</p> <ol style="list-style-type: none"> 1. Children learn what spam is, the forms it takes, and then identify strategies for dealing with it. 2. Children learn the term 'phishing' 3. To be able to identify a fraudulent email 4. To know that some emails contain viruses. <p>Privacy Rules</p> <ol style="list-style-type: none"> 1. Children learn that children's websites must protect their private information. 	<p>Email Scams</p> <ol style="list-style-type: none"> 1. Discuss the main issues of 'Email Scams' and what to look out for 2. Read lesson plan and complete activities 3. https://www.commonsense.org/education/lesson/scams-and-schemes-6-8 <p>Privacy Rules</p> <ol style="list-style-type: none"> 1. Go through PowerPoint on Privacy and complete challenges. 2. https://www.commonsense.org/education/lesson/privacy-rules-3-5
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Unit of Inquiry					
Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Basic ICT skills	Integrated – How we organise ourselves (Spreadsheets)	E-Safety	Integrated – How we express ourselves	Integrated - Exhibition	Microbits