ARAB UNITY SCHOOL

CURRICULUM OVERVIEW

COMPUTING

YEAR 7

2019 – 2020

A guide for Parents and Students

Overview of the year:

The national curriculum for Computing aims to ensure that all pupils:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation

- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems

- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems

- are responsible, competent, confident and creative users of information and communication technology.

Topic	Objective	Activities / Assessments	Skills (SECRET)
TERM ONE Programming and development Hardware and processing	• **More tools in flash** – 1. Understand various tools used in flash 2. Analyze real life usage of these tools 3. Identify the flash tools used in real life websites 4. Publish a flash program using the tools learnt. • **Animation in flash** – 1. It helps to understand how a movie is broken into frames. 2. Understand how to add motion to a text. 3. It helps to apply animation using a motion guide 4. It helps to apply filters which are built-in visual effects that can be applied to objects. • **Hardware** –	1. Animate the butterfly and bird so that when butterfly fly from one side changes into a bird while reaching to another end and Also Create an animation in Adobe Flash which moves an object on a spiral path. **2.** Investigate on the advantages of modern ways of communication. How the modern way of communication has played an important role in the development of social networking that we are using today. Identify real time scenarios where communication is used. Explain 3 online safety precautions while using social networking	**Creative thinker – Students create the ability to devise new ways to carry out tasks, solve problems, and meet challenges** **Reflective learning involves**

Digital literacy	1. Identifies the difference between data and information.
	2. Explains different types of computers.
	3. Describes the importance of laptop and desktop.
	4. Identifies the different types of keyboards.
	• **Communication on internet**
	  1. Learning about the modern ways of communication
	  2. Understand the scenarios in which various types of communication are used.
	  3. Pros and Cons of modern communication
	Learn online safety precautions while using social network
			students thinking about what they have read, done, or learned, relating the lesson at hand to their own lives and making meaning out of the material.

TERM TWO
 	
Programming and development
 	
Digital literacy
 	
Programming and development
	• **Formulas in Ms Excel** and creating charts–
	  1. Identifies cell references, range of cells
	  2. Identifies the functions used in MS Excel.
	  3. Identifies the elements of Microsoft Excel.
	  4. Defines the basic terms used in MS Excel.
	  5. Creating different types of charts
	• **Computer virus-**
	  1. Explains what is a computer virus
	  2. Understand how a computer virus spreads
	  3. Understand types of virus
	  4. Learn to prevent a virus attack
	
	• **Qbasic** –
	  1. Explains different types of DO..LOOP.
		1.Research on the different parts of a computer for three different brands. Draw a table to show how the data will be displayed in excel for 5 parts of a computer and their prices across three brands. Write the formulas to calculate the total cost of computer for each brand and the average price of the computer across the three brands. Also, find write the formulas to identify the maximum and minimum price of each part across the brands.
		
		2 Investigate the advantages of programming development and how QBASIC was helpful in real
			Self manager- Students create skills in managing and looking at problems or situations from a fresh perspective.
			
			Enquirers- Students perform systematic

	2. Explains the importance of WHILE..WEND. 3. Explains how to program using loop statements. 4. Identifies what is Q Basic.	time. How have programming languages played an important role in the development of software that we are using today. Identify real time scenarios in which we use following Q Basic looping statements.	**investigation and study of materials and sources in order to establish facts and reach new conclusions about programming languages.**
TERM THREE Programming and development	• **Introduction to HTML and basic HTML commands** – 1. Explain about the structure of a website 2. Learn about the structure of a HTML document 3. Recognize the website structure used in daily life. 4. Helps in understanding in creating webpages	1.Create a web page for school giving details about the various sports facilities available in the school. Set the background color as green, and text color as yellow **.**	**Creative thinker – Students use their imagination or original ideas to create web pages.**
Programming and development Programming and development	• **Algorithm and flowchart** – 1. Understanding the properties of algorithm 2. Understanding symbols used in flowcharts 3. Algorithm helps in understanding the logic of a program 4. A flowchart helps in understanding the steps of a program • **Introduction to VB** 1. Understands about event driven programming with an integrated development environment 2. Used to create a basic for creating windows application 3. Develop an interactive application 4. VB helps in creating simple applications like calculator.	**2.**Research on the different symbols used in a flow chart. Draw a flowchart to log into email account. Write the algorithm on how to enter into email account. Also, write the algorithm if an error occurs to open an account. .	**Self organisers- Students organize their thoughts and ideas for preparing email account .**