



Government of Goa

STATE COUNCIL OF EDUCATIONAL RESEARCH & TRAINING

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No: SCERT/Acad/Revision/Syllabus/892/2021/Part-I/855

Dated: 30/04/2024

To
The Headmaster / In-charge
Government and Government Aided
Upper Primary & Secondary Schools of Goa

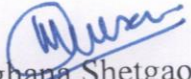
**Sub: Approval of ICT Curriculum – Regular Curriculum (Class VI-VIII) &
Elective Curriculum (Class VI – VII)**

Sir/Madam,

The Syllabus Revision Committee constituted by SCERT and the Project Management Unit (PMU) - Coding and Robotics Education in Schools (CARES) Scheme, Porvorim Goa has approved the ICT Curriculum – Regular Curriculum (Class VI-VIII) & Elective Curriculum (Class VI – VII) enclosed at Annexure-I.

All the In-charge / Heads of all the Govt. and Govt. Aided Upper Primary and Secondary Schools are directed to take the necessary action for implementation of the said curriculum for the A.Y. 2024-2025.

Yours faithfully,


(Meghana Shetgaonkar)
Director SCERT – Goa

Encl: Annexure-I (Approved ICT Curriculum)

Copy to:

- 1) The Director, Directorate of Education, Porvorim
- 2) The Director, Directorate of Technical Education, Porvorim
- 3) Dr. Vijay Borges, Project Director, PMU - CARE, DTE, Porvorim, Goa
- 4) ADEI's of all 12 Talukas to inform the Upper Primary schools in their jurisdictions
- 5) Office file
- 6) Guard file

Revised ICT Curriculum as approved by SCERT Syllabus Committee vide Minutes of Meeting dated 29.02.2024

Class VI Revised ICT Curriculum (Regular)							
Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions		
					Demo Session	Exploration	Total
1	Introduction & Fundamentals	Introduction to Raspberry Pi (RPi) / Linux Operating System	Fun - filled first day at school!	Linux OS	2	4	6
		Introduction to RPi / Linux Operating System (Command Line Tour)	Raj's Mission of creating photo album.				
		REVISION				1	1
2	Programming	Fun with Cat Sprite - Bouncing Cat	Ria's Cat Minu goes virtual!	Scratch	14	30	44
		Fun with Cat Sprite - Controlling the Cat	Raj, Ria and Gracy obsessed with project Minu!				
		Fun with Cat Sprite - Chasing the Mouse	Raj is inspired by Tom & Jerry!				
		Fun with Cat Sprite - Cat Animation	Ved and Pravin Uncle animate Minu on Raspberry Pi!				
		Fun with Cat Sprite - Sound	Virtual orchestra on a rainy day!				
		Worksheet & Exercise	Write a Scratch program to make the cat sprite dance.				
		Shapes /Drawing - Square	Ved and Nidhi enjoy drawing Photo frame				
		Shapes /Drawing - Square Based Pattern	Nila didi 's 'Magic Cards Wheel'.				
		Drawing Polygon of 'n' Sides	Ria and Gracy explores Polygon shapes.				
		Shapes/Drawing - Drawing Circles	Ved gets a Magic Wand!				
		Using blocks to create shapes of various sizes	Drawing rectangles is now so easy for Ria!				
		Worksheet & Exercise	Draw the given faces using the different geometrical shapes studied.				
		Shapes/Drawing - Introduction to Random	Salim's Birthday Gift				
		Shapes/Drawing - Square-based Pattern	Fun with Square Based Patterns				
		Shapes/Drawing - Circle Based Pattern	Ved and Nidhi draws a Virtual Rangoli				
		Shapes/Drawing - Arc Based Pattern	Raj enjoys watching Kaleidoscope at the fair				

Pargus
20/03/2024

Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions		
					Demo Session	Exploration	Total
		Science - Solar Orbits	Raj and Gracy modelling a Solar System				
		Science - Lunar Orbits	Amazing Blood Moon!				
		Science - Simulating Gravity	Raj and Nidhi's science projec inspired by a Basketball game!				
		Science - Directional Force	Nidhi abd Raj updating their project!				
		Shapes/Drawing - Moon Lander	Ved simulates Chandrayaan 2				
		Worksheet & Exercise	Draw patterns using triangles.				
		REVISION				2	2
3	Internet and ICT Environment	Internet - Searching for information	Nidhi helpgrandmother to fulfil her wish!	Local Network, Open Collaborative Tools	2	5	7
		Internet - Collaboration (Working in collaboaion, Backup and Content sharing)	Gracy, Raj and Ria learns super power online tool				
		Internet - communication (Threaded/ Channel communicaion)	Let 's Get connected!				
		Internet - Data Safety (Do's and Don'ts)	Better Be safe than sorry!				
		REVISION				1	1
4	Graphics	Layer and Blend Modes	Salim learns to create Birthday cards for his friends!	GIMP	2	6	8
		GIMP - Layer and Blend Modes	GIMP - Keying and Masking				
		GIMP - Keying and Masking	Logo of team challengers!				
		GIMP - Creating Scene	Ved surprises his parents with a wall painting!				
		Worksheet and Exercise	Creating Poster/ Greeting Card				
		REVISION				1	1

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Revised ICT Curriculum as approved by SCERT Syllabus Committee vide Minutes of Meeting dated 29.02.2024

Class VII Revised ICT Curriculum (Regular)							
Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions		
					Demo Session	Exploration	Total
1	Programming	Recap of Grade 6 - Scratch Practice	The Super Six Champion series continued.. Recap of Scratch	Kojo	9	27	36
		Introduction to Kojo - Square and triangle with turtle commands	What's Next after scratch? - From block-based coding to text-based coding				
		Polygons - Introduction to recursions to draw a polygon of n side	Having Fun with different shapes!				
		Colours - Filling the shapes with colours.	Rainbow shading to our patterns too!				
		Drawing house with triangle and square	Drawing a house-shaped PiggyBank!				
		Colour Gradients - Using gradient to build sky and ground	Super Six champion's trip to the beach				
		Using radial gradient to build Sun.	Make the real Sun glow in our drawing				
		Flying birds with Arcs	Ved's curiosity to see the flock of birds fly high up				
		Scenery Poster	The Super Six team participates in the State level drawing competition				
		Tangrams of Animals	Super Six enjoys the Tangram Activity				
		Tanagram Houses	Reena's Lego game ignites the idea of house drawing using tangrams to Ria				
		Tangram trees	Nidhi's Mother creates a baby quilt easily using Nidhi's idea of tanagrams				
		Tangram Flowers	Gift of a patchwork design booklet !				
		Scenery with Tangram	Super six creates T-shirt designs of scenery for sale on the Bazaar Day of school !				
		Scenery with Text	Super six designs digital Lago for their team				

Jorge
29/09/2024

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Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions		
					Demo Session	Exploration	Total
		Photo Frame	Designing a photo frame scenery as a gift to the chief guest for the annual Gathering				
		Building Picture objects out of turtle graphics designs.	Gracy wins Best out of waste Prize at Taluke level for her Teddy Bear creation				
		Introduction to Animation..	Fun at Gracy and Glen's Birthday party				
		Worksheet and Exercise	Creating an illusion based pattern - Create a club from the deck of cards				
		To create a Dragonfly using Ellipse	The game of Tennikoit strikes an ellipse drawing idea to Gracy				
		REVISION				3	3
2	Internet and ICT Environment	To convert from Kojo to HTML	Salim learns an innovative way of sharing his file		1	1	2
3	Graphics	Bender: Introduction to 3D ...	Fun with 3D graphics	Blender	7	13	20
		Low Poly Tree	Nidhi and Ria building MineTest Game trees				
		Low Poly House	Ved and Gracy build a sweet 3D home on the computer				
		Low Poly Snowman	Let us learn to build Snowman with Gracy and Ria				
		Low Poly Animal.	Nidhis Visit to her uncle's farmhouse				
		Low Poly Rocket	Let us fly a Rocket				
		Creating a 3D Scene	Ved creating a 3D scene				
		Animation	Super Six team trip to Big Foot				
		Animation and Rendering.	Salim, Raj and Ved creating animation of launching rocket video				
		REVISION				2	2

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Revised ICT Curriculum as approved by SCERT Syllabus Committee vide Minutes of Meeting dated 29.02.2024

Class VIII Revised ICT Curriculum (Regular)							
Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions		
					Demo Session	Exploration	Total
1	Programming	Create Simple Sequential Music	Learning coding by creating music	Sonic Pi	8	20	28
		Create Orchestra using threads					
		Using variables to make code readable					
		Using loops to reduce the code					
		Using loops to have continuous music					
		Using functions to give meaning to musical notes and use it out of order.					
2	Graphics	Adding effects to video through keying	Video Composting & Editing	Appropriate composting tools like Blender	4	10	14
		Adding effects through blend modes					
		Editing and sequencing the footage to tell the whole story					
3	Internet	Using CSS to style the document	Styling and graphics with CSS	Text Editors	8	15	23
		Using CSS to layout the document					
		Using CSS to achieve animations					
		Using CSS to achieve graphic effects					
4	Heckathon	Project Planning	Project	Required tools	0	5	5
		Project Execution					
		Presentation					

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Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions		
					Demo Session	Exploration	Total
4	Data Processing	Data Organization	Easy way to store and retrieve data	Spreadsheet	2	4	6
		Visualizing Data	Nidhi's Curiosity in the examination hall				
		REVISION				1	1

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Revised ICT Curriculum as approved by SCERT Syllabus Committee vide Minutes of Meeting dated 29.02.2024

Class VI Revised ICT Curriculum (Elective)					
Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions
1	Orientation & Fundamentals	Introduction to the course.	Introduction to design thinking and project-based learning using an unplugged approach	Design Journal	12
		Build spatial awareness.		Unplugged approach -	
		Visualize fractions & angles.			
		Translate coordinates into codes for movement.			
		Visualize and apply transformations and dimensions.			
		Understand and identify the basic building block of an algorithm.			
		Understand and use the concept of recursion.			
		Understand, visualize and use the concept of selection.			
		Plan and carry out investigations.			
		Obtain, evaluate and communicate information.			
2	Programming	Describe characteristics of games.	Problem solving using game-based approach	Design Journal	6
		Identify key game components.		Block based coding - Scratch	
		Understand rules of educational games and controls.			
		Apply problem solving and coding principles using mechanics.			
		Transfer game ideas into block-based coding environments.			
		Design and construct a game using appropriate code blocks.			
		Data handling and reading			

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Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions
		Analyze and interpret data.			
		Conduct peer reviews and presentations.			
3	Introduction to Basic Electronics	Introduction to Simulation Software.	Problem solving by designing systems using Simulations and kit	Design Journal	8
		Design basic electrical circuits.		Simulation Software - Tinkercad/ Fritzing	
		Design and troubleshoot simulation models.		Hardware Kit	
		Understand principles of motor operation.			
		Understand and use kit components.			
4	Mega & Grand Challenges	Project Planning	03 Mini Projects	Design Journal	6
		Project Execution		Unplugged Programming	
		Project Presentation	01 Mega Project	Simulation Software	
				Hardware Kit	

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Class VII Revised ICT Curriculum (Elective)					
Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions
1	Orientation & Fundamentals	Introduction to the course.	Designing circuits using basic electronic concepts	Design Journal	5
		Explore the simulation software interface.		Simulation Software - Tinkercad/ Fritzing	
		Use basic electronic components.			
		Understand open and closed circuits.			
		Experience effects of voltage and current.			
		Understand the working of a microcontroller.			
		Simulate circuits with LED and DC motors.			
2	Robotics & Programming	Build a toy robot car.	Interfacing, programming and assembling a robot car	Design Journal	9
		Use DC Motors.			
		Understand the IDE.			
		Upload code to the microcontroller.			
		Program the robot.		Hardware Kit	
		Control the direction & speed.			
		Data handling and reading.			
		Obstacle detection and avoidance.		IDE	
		Read data from a sensor.			
3	Sensors & Actuators	Interface different types of sensors.			
		Read and interpret data from the sensor.		Design Journal	

Pragya 20/03/2024

Sr. No.	Themes	Objective	Title	Suggested Tools	Sessions
		Interfacing actuators.	Problem solving by designing systems using sensors and actuators	Hardware Kit	12
		Use servo motors.			
		Use buzzers.			
		Design sound-controlled systems.		IDE	
		Design light-controlled systems.			
4	Mega & Grand Challenges	Project Planning	03 Mini Projects	Design Journal	6
		Project Execution		Hardware Kit	
		Project Presentation	01 Mega Project		

George J. 10/03/2024