Subject	Grade	Stream	Week Commencing	Week No	Period	Chapter	Page No	Overview	Vocabulary	SLO Codes (with comma)	Assessment Focus
Design Technology	3	General	2nd September	1	1	1	10-15	Introduce the terms robots and robotics to students. Encourage students to share their thoughts on robots. Go through the definition of robotics and briefly explain how it has improved their lives. Complete Activity 1. Move on to Activity 2. It is important that students share any knowledge they have on the subject. They can supplement their explanation with drawings or a mini presentation, if they so choose. After this, go to the Keywords section and define each word with visual aids. Read out the learning outcomes so that students are familiar with their learning targets.	robots, robotics		Activity 1, Activity 2 [1.1 Define robot and robotics.]
Design Technology	3	General	2nd September	1	2	1	16-20	Start off with the proper definition of a robot. Use examples to illustrate how robots are useful to us. Encourage discussion in the classroom. Ask questions like 'do robots look like us?' to introduce new words, such as android and drone. Complete Activity 3. Students might already be familiar with drone cameras. Encourage them to think of more possibilities by asking questions such as 'do you think drones can help with delivery services?' and 'do you think they can help with transportation?'. Complete Activity 4. This introduces some robots that students may be familiar with, but did not know were robots.	android, drone		Activity 3, Activity 4 [1.1 Define robot and robotics.]
Design Technology	3	General	9th September	2	1	1	21-25	In this lesson, students should familiarise themselves with the workings of a robot. Introduce the main parts of a robot. Students should already be familiar with the terms from lesson 1 but quickly reintroduce them to ensure that they are up to speed. Introduce input, output and the concept of sensors. Relate it to the students by comparing them with the human body. Explain the function of the brain as something that creates an output based on the input it receives. Complete Activity 5 and 6. Now that students are familiar with the workings of a robot, explain how to differentiate a robot from a simple machine. Use Activity 7 to illustrate that difference.	input, brain, output, sensors		Activity 5, Activity 6, Activity 7 [1.2 Understand how a robot thinks.] [1.3 Understand the main parts of a robot.]
Design Technology	3	General	9th September	2	2	1	26-29	Are your students familiar with self-driving cars? Inform them about the driverless taxis that are to be introduced in Dubai soon. Encourage discussion about what makes a self-driving car a robot. Lead this discussion on towards household products that might be robots e.g. iRobot's Roomba. Briefly explain why it is not a machine but a robot. Students should be able to complete Activity 8 at this point, based on the knowledge they have accumulated so far. Briefly talk about the Dubai police robot. It should encourage students to think about robots as workers. Complete Acitivity 9. How do we talk to robots? Ask your students and encourage them to share their findings. Explain the concept of programming languages and what it means to program a robot.	machine, programming language, program		Activity 8, Activity 9 [1.4 Identify robots around us and their uses.]
Design Technology	3	General	16th September	3	1	1	30-37	Go through the Unit Summary. Attempt Question 1. Ask students if their pre-conception of what a robot is changed after going through this solve. Briefly demonstrate how to solve a crossword puzzle and attempt Question 2. Answer Questions 3 and 4 using information available in the book. To test their understanding of this unit, use the Pop Quiz available at the end of the textbook. Students and teacher should complete the evaluation at the end of the unit. Teacher should make sure that everything in the unit has been evaluated and give the students appropriate feedback.			End of unit quiz, Pop quiz
Design Technology	3	General	16th September	3	2	2	40-47	Go through the learning objectives and keywords. Use visual aids and practical demonstrations where needed as it is very important that students are comfortable with these terms. Review some of the important terms from the last unit as well to ensure continuity. Introduce Edison. Briefly describe the parts and components of Edison. You may pass around some Edison robots in the classroom so that students can actually see what you are describing. Relating this lesson back to what students learned in the last unit, complete Activity 1 and 2.	Edison		Activity 1, Activity 2 [2.1 List all of Edison's main parts and sensors.]
Design Technology	3	General	23rd September	4	1	2	48-52	The concept of programming Edison is to be introduced in this unit. Quickly go through what Edison is capable of. Briefly introduce the two ways of programming Edison robot. Briefly explain what barcodes are and complete Activity 3. Demonstrate how Edison can be programmed by barcodes using the example given in the textbook. Complete Activity 4. Ensure each student gets a chance to program Edison. Inform students that they are to complete the task sheet in the next lesson. Briefly explain the keywords, such as 'bounce in borders', and go through the checklist to ensure that students understand the marking criteria and the structure of the assessment.	barcodes		Activity 3, Activity 4 [2.2 Understand how to use Edison.] [2.3 Understand what a barcode is.]
Design Technology	3	General	23rd September	4	2	2	53-61	Task sheet. Start by creating the track. This may be done as an individual, group or class activity. It is important that a large enough track is drawn as it is central to all the tasks on the task sheet. Ensure it is drawn on a large white piece of paper (preferable A2) and thick black marker is used for the boundary. Afterwards, let the students program Edison using the barcodes available on the task sheet. Ensure that students check off items in the checklist as they progress through the worksheet. At the end of the lesson, give feedback.	bounce, borders, follow, sumo wrestle		Task Sheet [2.4 Program Edison with ready-made barcodes.]
Design Technology	3	General	30th September	5	1	2	62-71	In this lesson, EdBlocks is to be introduced. Explain how using this software increases the possibilities of what is possible with Edison robot. Show them some images of the software interface and introduce words such as Program Bar and Title Bar so that the students are aware of the terminology in the textbook. Take students to the computer (alternatively use laptops if students have access to them) and follow the step-by-step instructions in the textbook to program Edison robot. Ensure everyone understands how it works. Complete Activity 9. Go through the unit summary. Ensure that all work throughout the unit has been evaluated.	EdBlocks		Activity 9 [2.5 Understand EdBlocks, its interface and how to use it.]
Design Technology	3	General	30th September	5	2	3	74-86	Go through the unit overview, learning objectives and keywords to start the lesson. Orally quiz students about some keywords from the last units to ensure they are up to speed. Before programming Edison to drive, students will need to learn about motors. Take them through the 'Motor' section in the textbook and complete Activity 1. Once completed, take students to the lab (alternatively use laptops if students have access to them). Follow the step-by-step instructions to program Edison to drive. Complete Activity 2 by finding out the distance travelled. Introduce the terms 90-degree turn and 180-degree turn and use the step-by-step instructions in the book to program Edison to do these maneuvers. Complete Activities 3 and 4.	motor, 90-degree, 180-degree, U-turn		Activity 1, Activity 2, Activity 3, Activity 4 [3.2 Program Edison to move in any direction.]
Design Technology	3	General	7th Ocotber	6	1	3	87-89	Students need to create a track as shown in the textbook. It can be drawn or outlined by using objects such as textbooks or pencils to mark the track. Complete Activity 5. Access to a computer lab or laptops will be needed to complete this task. For Activity 5, students will need to figure out how many times Edison has to turn, the order of each turn and for how long to make the turn. Students may use the time calculated in Activity 3 for this information. Once students have figured out the direction and time of each turn, they should draw it in their textbooks and program their Edison robots using EdBlocks. Introduce the speed block and demonstrate how to use it. Challenge students to modify their programs to make Edison cross the track in the shortest amount of time possible.	blocks, program, track		Activity 5 [3.2 Program Edison to move in any direction.]
Design Technology	3	General	7th Ocotber	6	2	3	90-97	For this lesson, access to a computer lab or laptops will be needed. Introduce LEDs and explain what they are. Challenge students to find where they are on Edison. Instruct students to go through the step-by-step instructions in the book to program LEDs and complete Activity 6. Introduce the Wait block and explain how it works. To demonstrate its effect, program Edison using the step-by-step instructions in the book. Once they understand, instruct them to program Edison to blink the left LED. Define the term 'blink' to ensure there is no ambiguity. The step-by-step instructions to create the program can be found in the textbook.	LED, blink		Activity 6 [3.1 Program Edison to use LEDs.]
Design Technology	3	General	14th October	7	1	3	98-102	The objective of this lesson is to introduce the Loop function. Access to a computer lab or laptops will be needed. Briefly explain what looping means. Instruct students to follow the step-by-step instructions in the textbook to create their first program with a loop function. Once everyone understands the use of the function, introduce the different types of loop blocks available in EdBlocks. Move on to Activity 7. First, students will need to determine which blocks to use to fulfill the program requirement. Once they have drawn in the blocks, they should program Edison using EdBlocks.	loop, repeat		Activity 7 [3.3 Program Edison to repeat an instruction multiple times.] [3.4 Understand how to use these blocks in combination with other blocks.]
Design Technology	3	General	14th October	7	2	3	102-108	Go through the End of Unit Summary. For Question 1 in the End of Unit Quiz, students will need to fill in the time in the blocks using the instructions provided in the question. Next, they have to order the blocks so that the program is in the correct sequence. Following this, instruct students to complete Question 2 and the Pop quiz. At this point, students and the teacher should complete the evaluation. At the end of the lesson, teacher should ensure that all work has been evaluated and feedback has been given.			End of unit quiz, Pop quiz
Design Technology	3	General	21st October	8	1	4	112-117	Go through the unit overview, learning objectives and keywords with the students. Briefly explain what following a line means and how Edison is capable of doing that. Follow the step-by-step instructions in the textbook to program Edison to follow a line. Complete Activity 1. First, a track has to be created using a black marker on a large piece of white paper. The track created for Unit 2 Task Sheet may be used. Record Edison's time around the track to complete Activity 1.	folow		Activity 1 [4.1 Program Edison to follow a line.]
Design Technology	3	General	21st October	8	2	4	118-126	Briefly explain what detecting an obstacle means and how Edison uses infrared light to detect obstacles. Complete Activity 2. Afterwards, instruct students to follow the step-by-step instructions in the textbook to create a program for obstacle detection. Challenge students to complete Activity 3 by adding more blocks to that program. To ensure the program works, students must program Edison using EdBlocks. Inform students that they are to complete the task sheet in the next lesson. Ensure that the students understand the marking criteria and the structure of the assessment.	detect, obstacles, infrared		Activity 2, Activity 3 [4.2 Define infrared light and sensors.] [4.3 Understand how obstacle detection works.]
Design Technology	3	General	28th October	9	1	4	127-131	Task Sheet. Access to laptops or a computer lab is required. Go through the Objective and introduce the task. The teacher may quickly review the previous lesson where students used obstacle detection for the first time. Instruct students to go through the checklist one step at a time, and check off any completed steps. Once the required program has been created on EdBlocks, students need to demonstrate that it works by programming Edison. To be successful, students need to trap Edison on a table top. At the end of the lesson, provide appropriate feedback to the students.			Task Sheet [4.4 Program Edison to avoid obstacles.]
Design Technology	3	General	28th October	9	2	4	132-138	Quickly review students' knowledge of IR technology from the previous lessons. Explain how Edison robots can send messages to each other. Complete Activities 5, 6, 7 and 8 as students progress through the unit. These activities will serve as a demonstration of how Edison robots can communicate with each other. Wrap up the unit by going through the End of unit summary. Afterwards, complete the End of unit quiz. At this point, the teacher must ensure that all students work has been evaluated and appropriate feedback has been given.			Activity 5, Activity 6, Activity 7, Activity 8 [4.5 Program Edison to communicate with other Edisons.]
Design Technology	3	General	4th November	10	1	5	140-147	Unit 5 contains the end of year project. Students are to assemble EdTanks and use them in a relay race. Start off by introducing the learning objectives and keywords. Ensure students are made aware of the marking criteria. Briefly explain to students what a tank is. Introduce the concept of a relay race and explain what the project is about. Ensure students are aware of the Project Brief by instructing them to complete Activity 1. Evaluate student work up to this point.	relay race, EdTank		Activity 1.
Design Technology	3	Sreneral	4th November	10	2	5	148-163	Before starting assembly, divide students into groups and assign them appropriate rules as per the textbook. Start the assembly. Make sure students follow the step-by-step instructions as shown in the textbook. You may find it helpful to show students a video of the assembly. Teacher should inspect the assembled EdTanks and evaluate each students work.	supplier, leader, engineer		[5.1 Assemble EdTank]
Design Technology	3	General	11th November	11	1	5	164-166	Remind students of the three stages of the race. Each stage requires EdTank to be programmed in a certain way. Before starting the programming section, orally quiz students about the blocks they will need to complete each stage. Afterwards, take students through stage 1 and instruct them to complete Activity 2.	stage		Activity 2. [5.2 Program EdTank to do different tasks.]

Subject			Date	Week	Lesson		Pages	Description		Outcomes
Design Technology	3	General	11th November	11	2	5	166-170	Finish the programming section by taking students through stages 2 and 3. Ensure Activities 3 and 4 are completed.		Activity 3, Activity 4. [5.2 Program EdTank to do different tasks.]
Design Technology	3	General	18th November	12	1	5	170-171	Instruct students to create programs on EdBlocks using the blocks they selected in the programming section. It is vital that students drag and drop the blocks in the correct order. Once students have created the three programs, let each student (or each group of students) take 3 EdTanks and program them. Test the programs against the criteria in the textbook.	testing	[5.2 Program EdTank to do different tasks.]
Design Technology	3	General	18th November	12	2	5	172-176	Finish any testing left over from the previous lesson. Instruct students to complete self-evaluation. Peer-evaluation also needs to be completed. Students may choose the person sitting next to them or any friend. Finally, teacher should give appropriate feedback.	evaluation, review	[5.3 Self-evaluate own work.] [5.4 Give feedback on peer projects.]
Design Technology	3	General	25th November	13	1			Contingency time		
Design Technology	3	General	25th November	13	2			Contingency time		
Design Technology	3	General	2nd December	14	1			Contingency time		
Design Technology	3	General	2nd December	14	2			Contingency time		