Lesson objective: To help students understand STEMBOT Robot. Duration: 45-50 minutes Kit used: STEMBOT Kit: Students (1 to 4) Warm-up Questions (10 minutes):

What do you know about robots?
How do robots look?
How do robots work?
How many types of robots do we have at home?
Do you want to work on robot projects? What is STEMBOT? STEMBOT is a programmable STEM-robotics educational kit that can be programmed graphically and textually. It is compatible with Micro:bit V2. The robot is easy to use and plug-and-play, allowing children to learn hardware and robotics concepts quickly through graphic programming, nurturing their interest in robotics. It includes various onboard sensors like IR (Infrared Sensor), Ultrasonic Sensor, Light Sensor, Accelerometer, and Magnetometer, making learning easy and fruitful. MakeCode is a free online platform for coding and learning advanced coding concepts. Micro:bit The BBC micro:bit is a small computer that teaches how software and hardware work together. It features an LED light display, buttons, sensors, and various input/output features that, when programmed, interact with the user and the environment. Activity: Introduction to STEMBOT
Microsoft Make block Microsoft MakeCode is a block-based coding language designed to introduce people to coding. MakeCode simplifies algorithm design without worrying about syntax or data type. You can program in blocks or in JavaScript in the programming workspace. The simulator shows how the program will execute. Blocks Palette Download program to micro:bit Name of the project Activity: Introduction to STEMBOT

Connecting Micro: bit Connect the micro:bit to its cable and the USB port of a computer/laptop. The micro:bit device will appear on your computer. Go to the downloads option, click on three dots, and then click on connect device. A pop-up screen will appear; click "next" to connect the micro:bit. Then, a permission window will appear; select "BBC micro:bit" and click on connect. After complete connection, the option will change to "disconnect." If not connecting, remove the micro:bit from STEMBOT and try again. Activity: Introduction to STEMBOT

Download code to Micro: bit Write your code in the workspace by dragging blocks from the block palette. Click on the "Download" button to send the file to the micro:bit board. Embedded Components on STEMBOT