
Sports Hall STEM Club

LESSON 1 - LEARN ALL ABOUT ROBOTS

Good Day Scholars!

Today's themes are:

**What is a robot? & What kinds
of robots exist?**

Children Across Guyana are in clubs like yours!

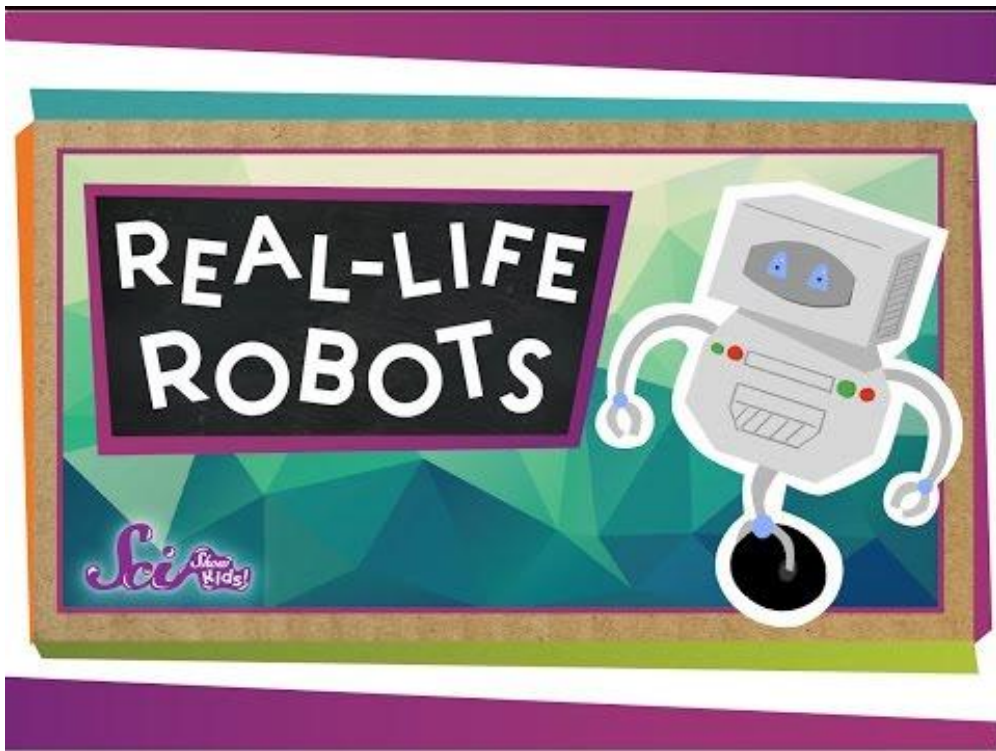
CLUBS ACROSS GUYANA



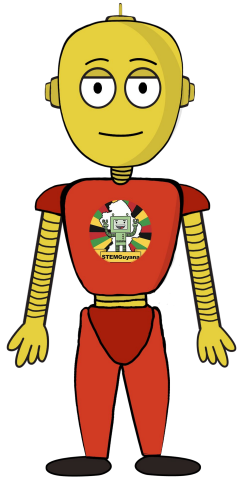
WHAT TO EXPECT!

- Learn a new concept (Science or Engineering)
- Answer questions about it
- Read out loud!
- Break out into groups - Programmers & Engineers
(Scratch coding + Robot building)
- Work on assignment
- Swap teams
- Math Whizzz circle!





**Now Let's
Listen to This
Video About
Robots**



What new things did you learn?

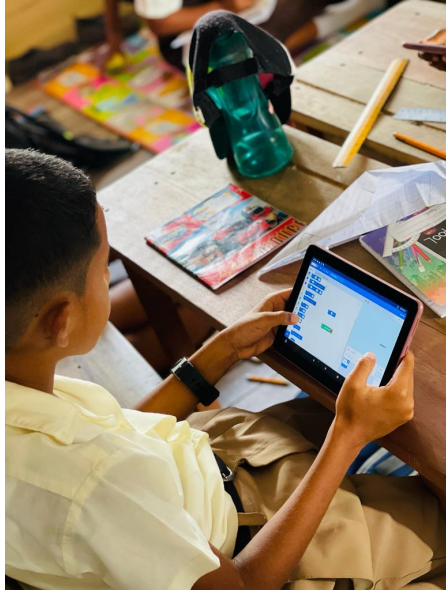
- Do robots have different shapes and sizes?
 - What kind of jobs can robots perform?
 - Do robots get bored?
 - What are some dangerous places that robots work?
 - What are the names of the robots in space?
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Time to Read!



*Read p.24 out loud
with a partner!*

*Read p.14 out loud
with a partner!*



Tell me what you remember from the comics?

- What new things did you learn?
 - Definition of robot?
 - What is a humanoid robot?
 - What are some kinds of robots?
 - Anything else?
-

SENSORS

SENSORS

- You can think of Sensors similar to your “sensors” :
 - You take in scent via your **nose sensor**
 - You take in flavor via your **taste bud sensors**
 - You take in your surroundings via your **eye sensors**
 - You take in sounds via your **ear sensors**
- **INPUT**
 - Taking “IN” information from your sensors



Touch Sensor (2)



IR Sensor (3)



R/C Receiver (1)



Mic Sensor (1)



CDS Sensor Board(1)

MOTORS

MOTORS

- You can think of Motors similar to your “body” :
 - Your brain sends signals to your leg motors to make you walk
 - Your brain sends signals to your mouth motor to help you to chew food
 - Your brain sends signals to your finger motors to help you to grab things
 - **Similarly, the brain of the robot (MCU) sends signals to its motors. These motors allow the robot to move, make sounds, and respond to info it collects from the sensors**



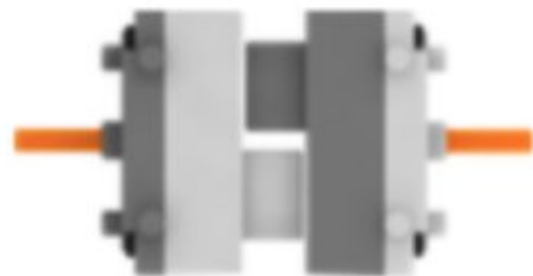
Servo Motor (1)



Speaker Board(1)



Buzzer Sensor (1)

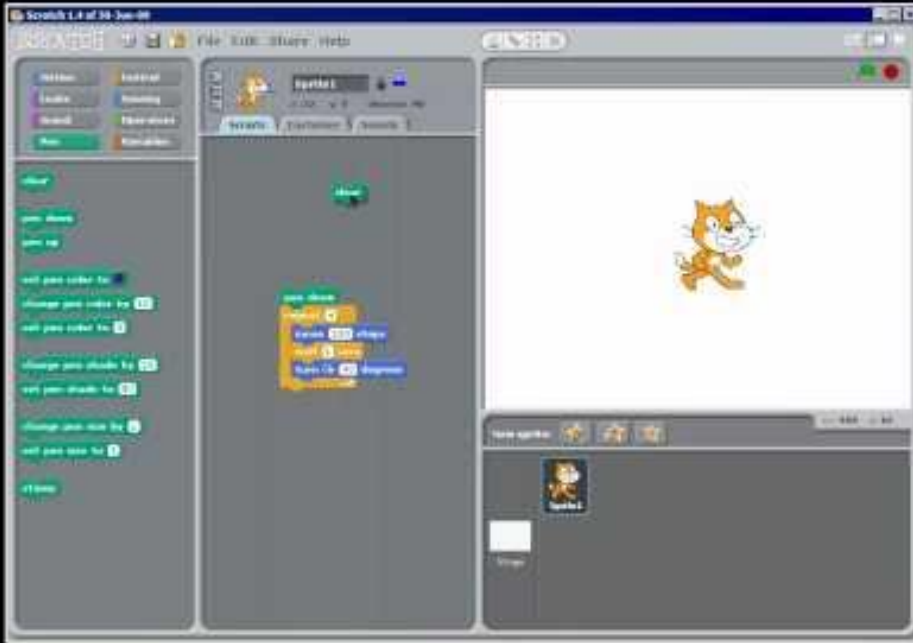


DC Motor (2)



LED Sensor Board(2)

Intro Scratch



- Create a Scratch Animation of your own! Make sure you at least add sprites, make them move and change costumes!
 - **USE YOUR CREATIVITY**
- Ask anyone on the STEM Team if you need help!

LET'S GET TO WORK!

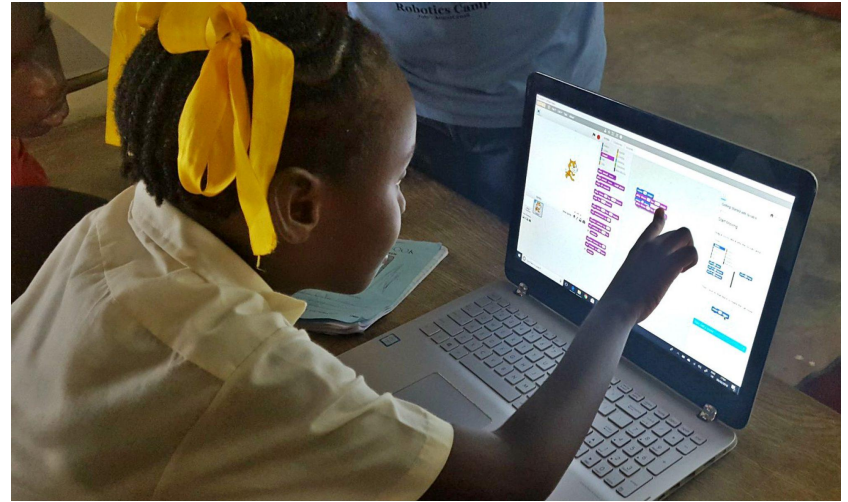
2 Groups -- everyone will get to do everything today!

- Scratch Programming Team
- Robotics Team



Scratch Programming Team -- Scratch Challenge!

- Create a Scratch Animation!
- Ask anyone on the STEM Team if you need help!



Robotics Team -- Build any robot from MRT3-1!

Build any robot from the orange MRT3-1 book and tell us how you think it would be used in the real world. What type of robot would it be?

SWAP

Now it's time to swap teams everyone! Break down your robots and clear your Scratch programs!

MATH Whizzzz CIRCLE!

Log into k12ed.live

Username:

Password:

Show your teacher that you've completed the lesson!
