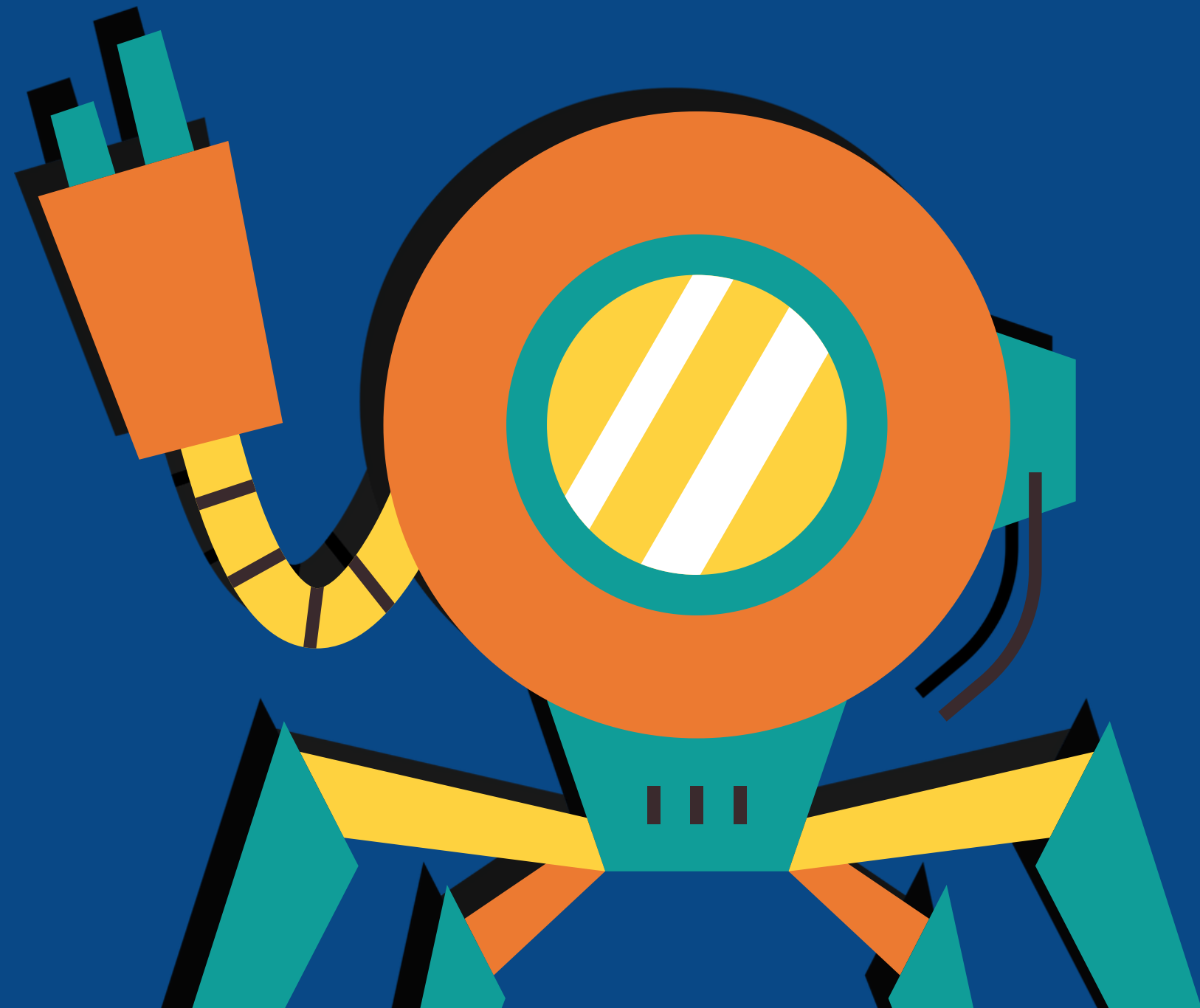# ICT ROBOTICS

an introduction to robotics for graders 5

WHAT IS ROBOTICS?

Robotics is an established method that utilizes robotics kits and coding to assist children in acquiring essential 21st-century skills.

Apart from teaching robotics and coding skills, it also fosters children's curiosity in STEM subjects (Science, Technology, Engineering, and Mathematics).

A major advantage of this approach is that children find it more enjoyable compared to traditional classroom methods, making Robotics for Kids popular among both children and adults, including teachers and parents.
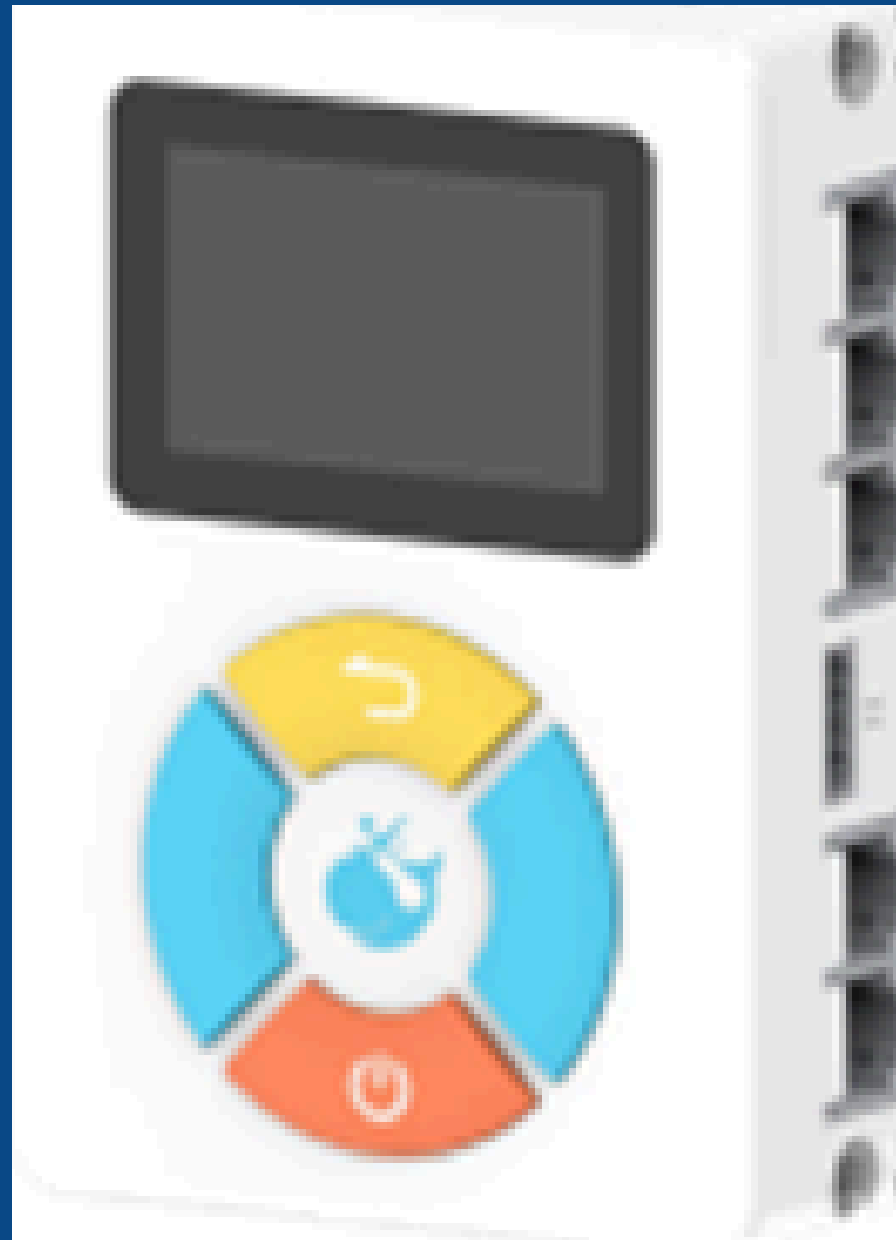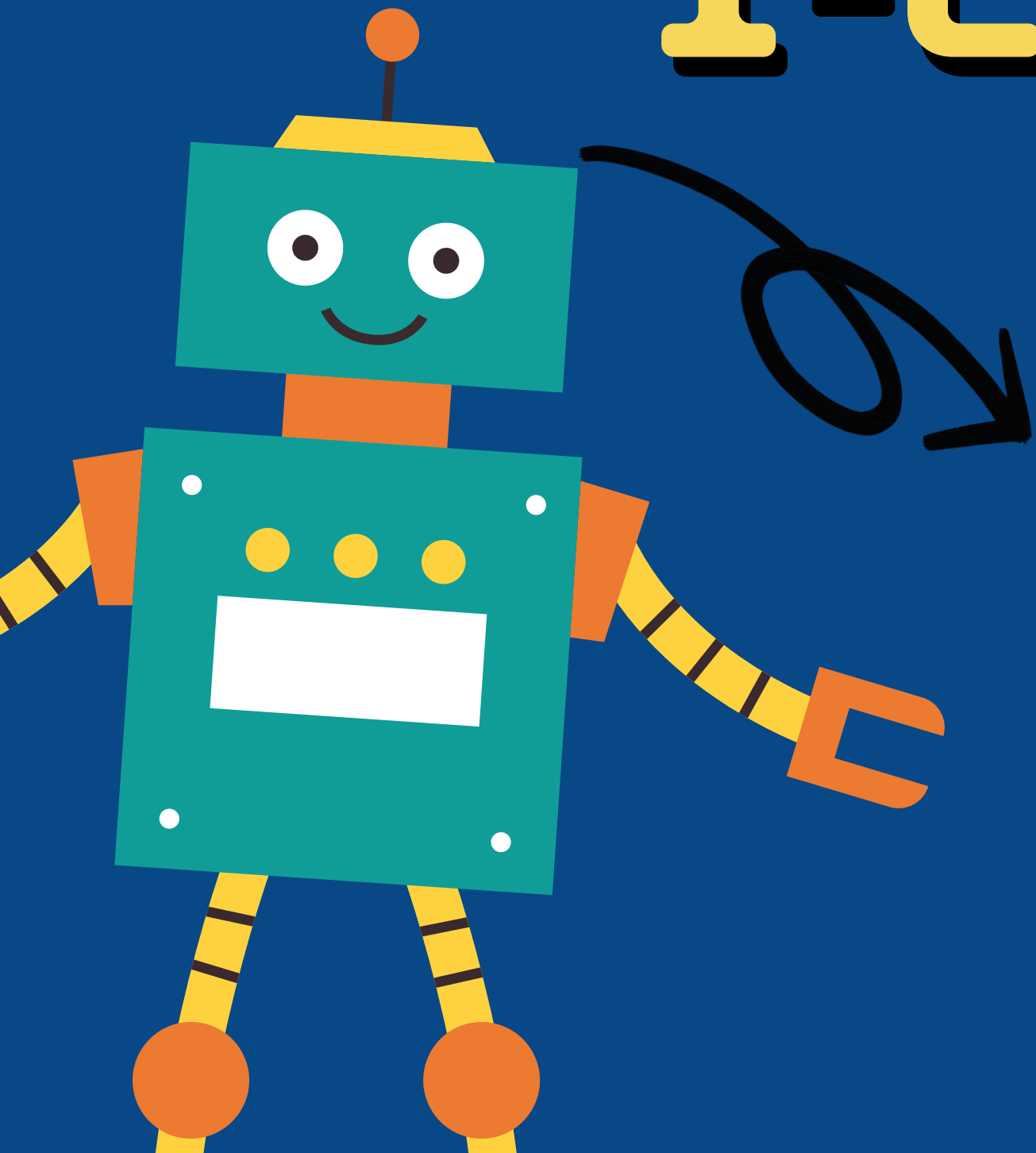
IMPORTANCE OF ROBOTICS
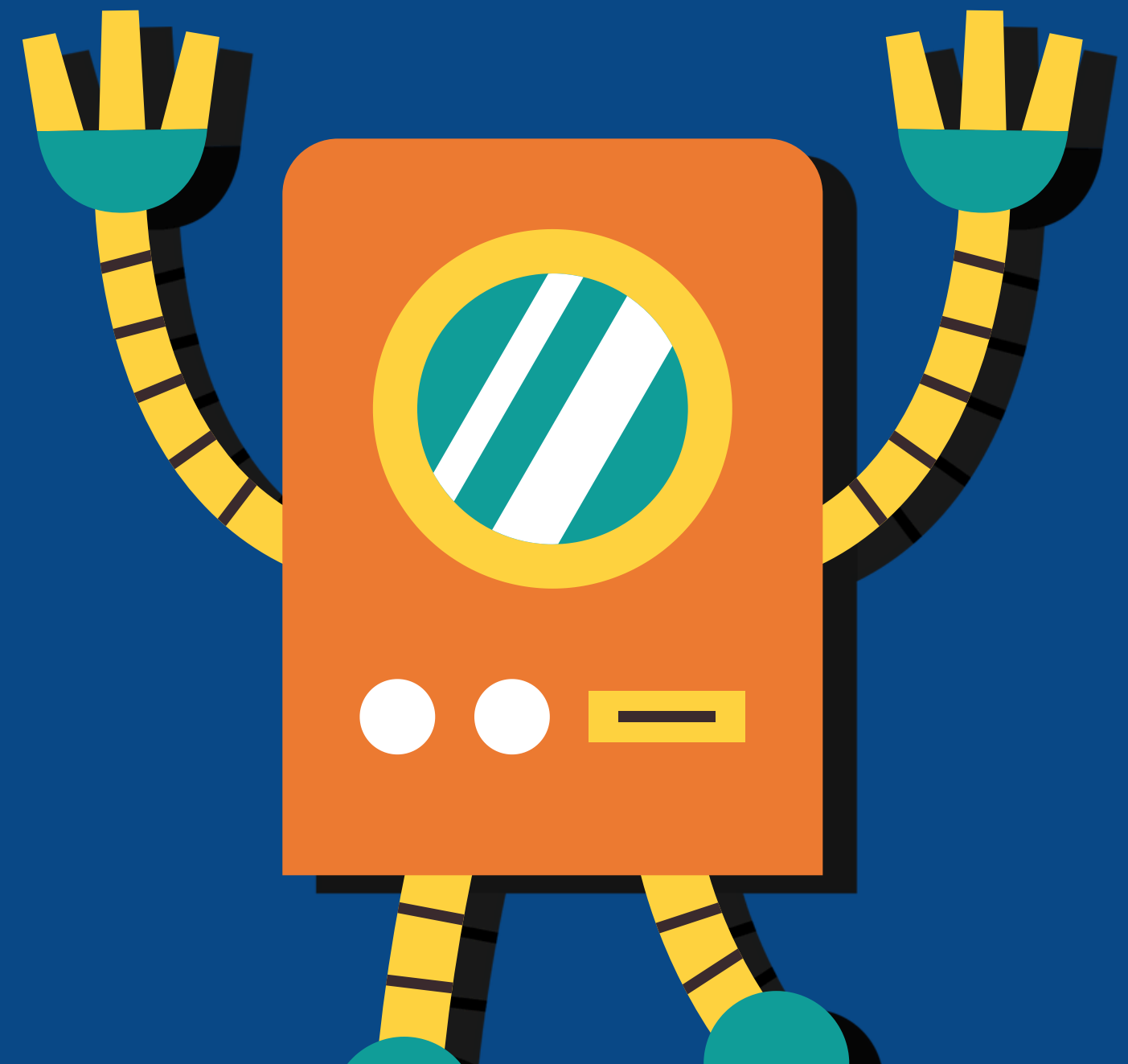
INTRODUCTION

THIS USER GUIDE DESCRIBES HOW TO USE THE MC902 CONTROLLER AND THE CORRESPONDING SOFTWARE, AND PROVIDES SOME SIMPLE PROGRAMMING EXAMPLES TO HELP USERS LEARN TO USE THE CONTROLLER AND SOFTWARE BETTER AND FASTER.

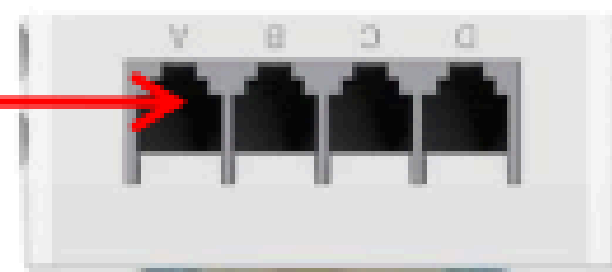PLEASE READ THIS MANUAL CAREFULLY BEFORE YOU USE THE PRODUCT.
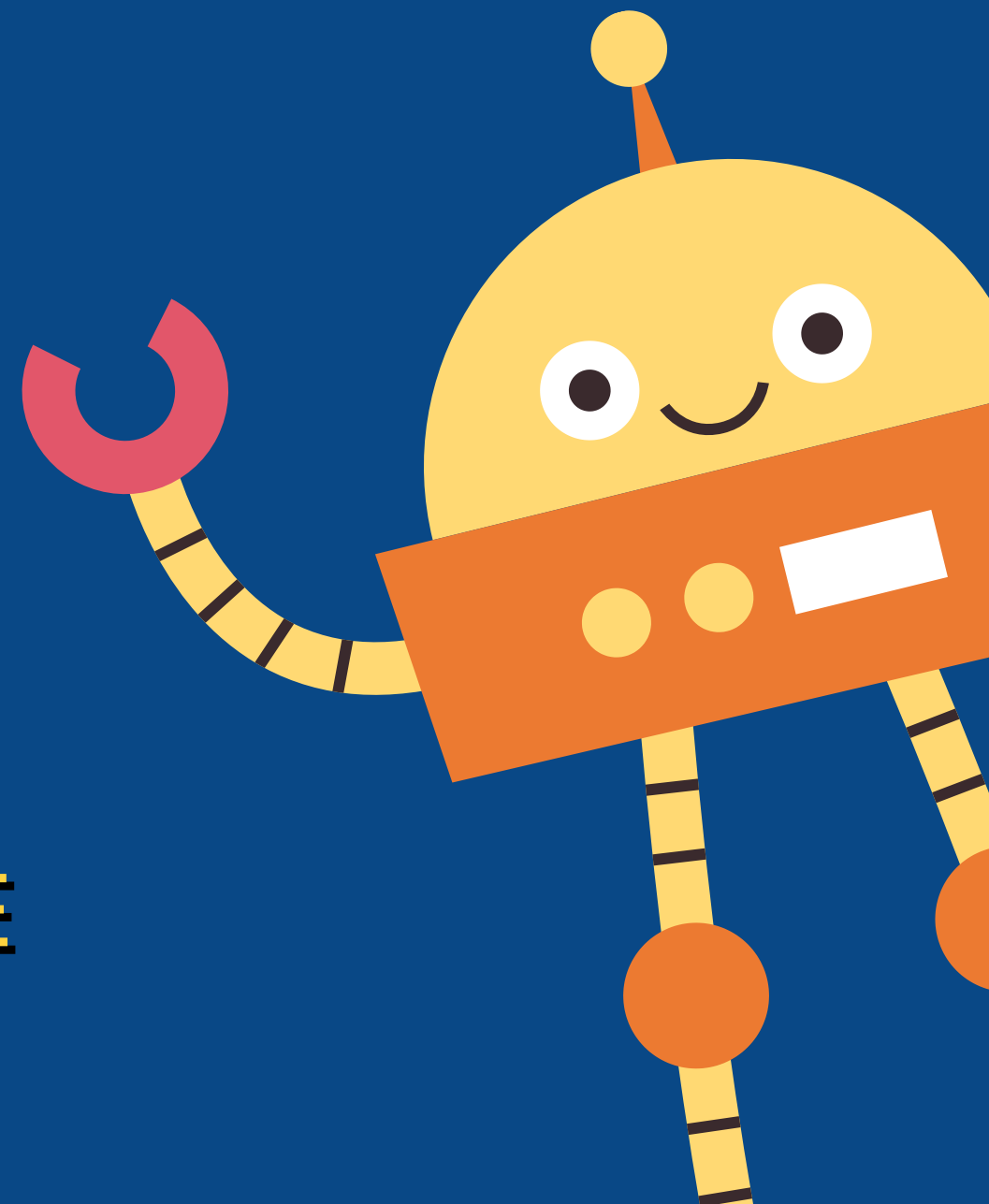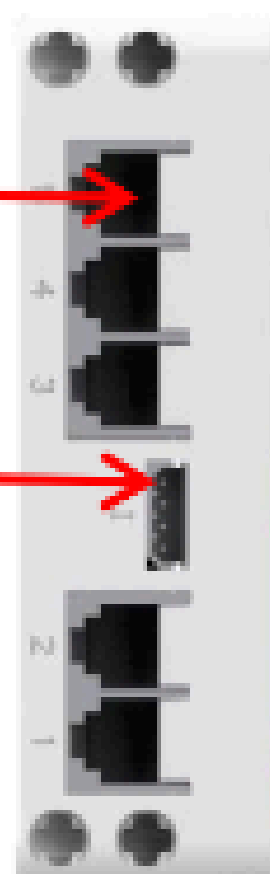
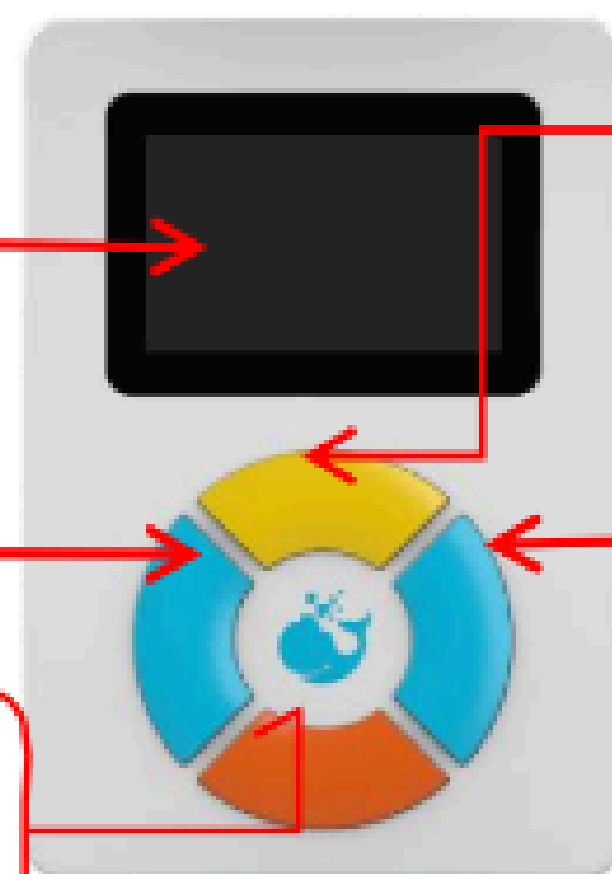# MAIN PARTS OF ROBOTICS

1-CONTROLLER

Motor Port

I/O Port

Servo Port

Screen

Left

Power on/ Confirm

Back

Right

I/O Port

Servo Port
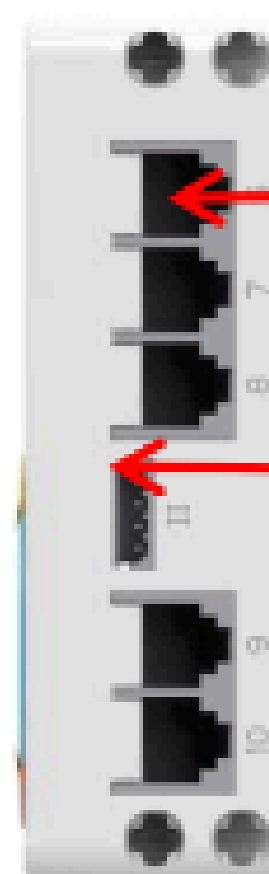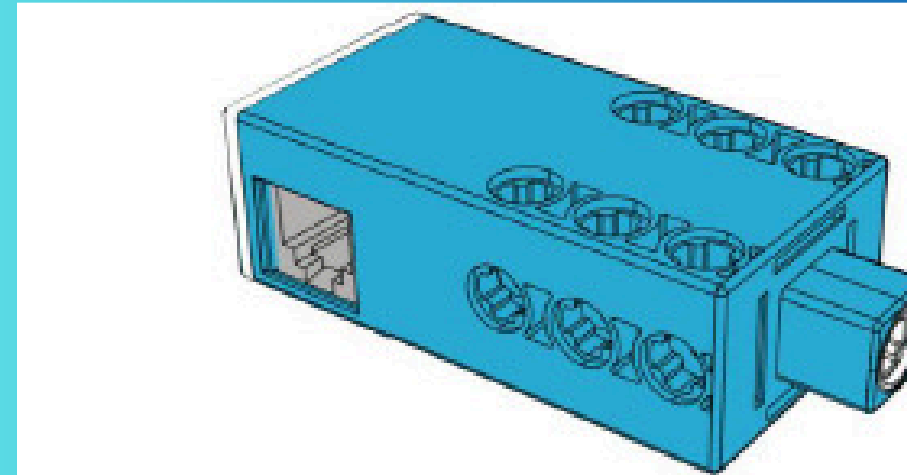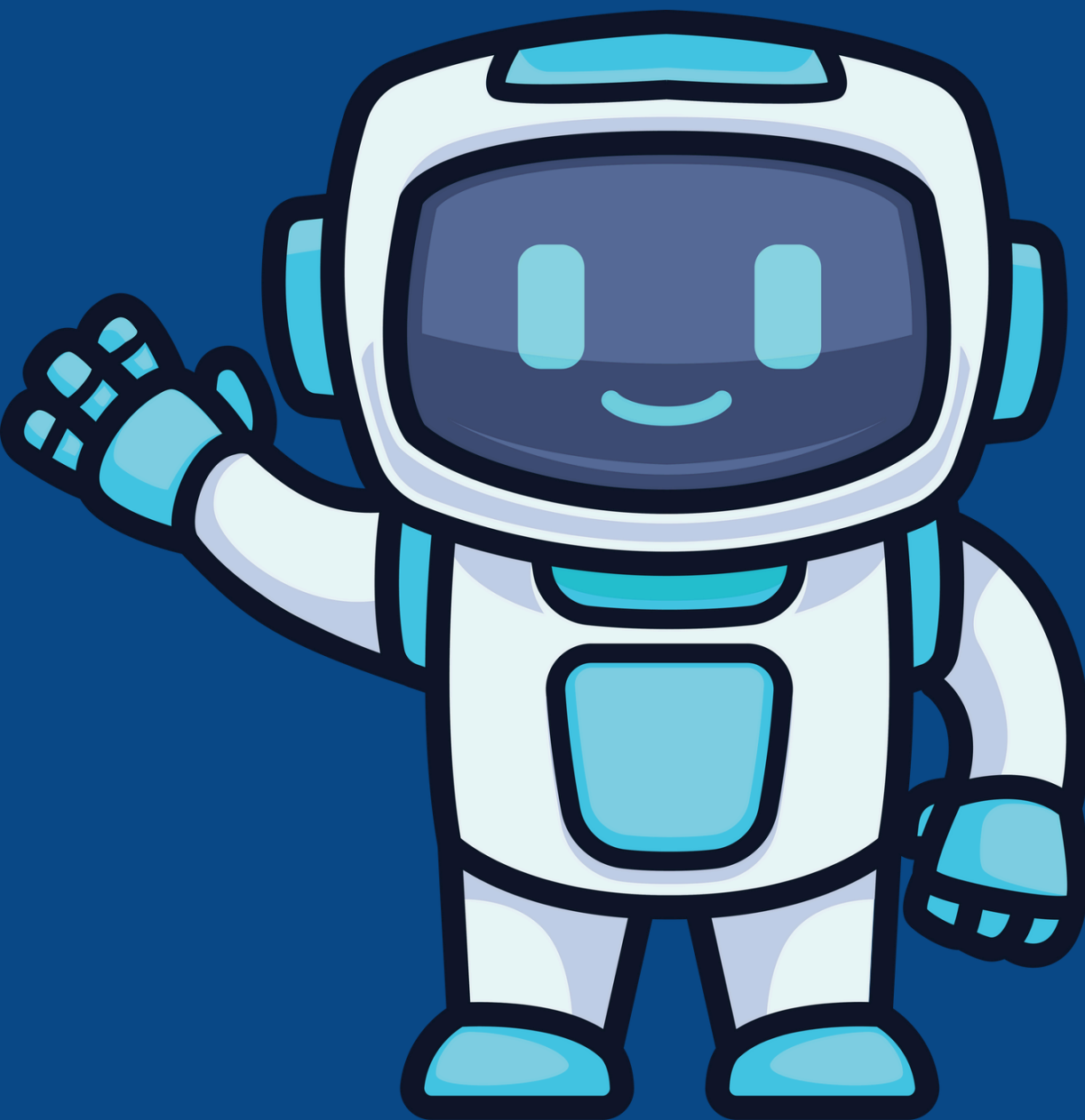
Charging Port

Type-C Port

Speaker
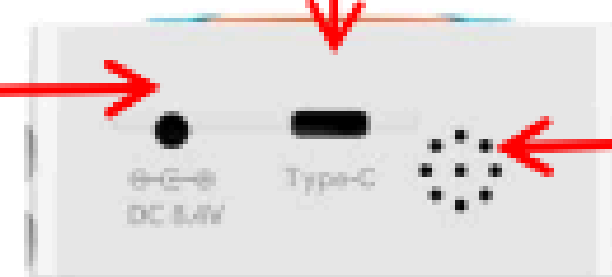
2- CLOSED-LOOP MOTOR

Motor

The new generation of Closed-loop motor: small size, high rotation speed and large torque. It has two working modes, open-loop and closed-loop modes, which allows to accurately control rotation speed and rotating cycles ultimately driving the robot to complete various tasks.

Your paragraph text

3- SENSORS

RGB LED sensor specially designed to detect changes in hand movement and posture, which can detect a variety of gestures such as up, down, left, and right.

Infrared ranging sensor is a kind of analog sensor, which can detect the infrared light reflected from solid objects.
Ranging range: 10-50cm

Color sensor that can detect the color of the surface of an object, can detect 9 colors: red, orange, yellow ,green ,blue, white ,purple and black

x1

Infrared Sensor

x1

RGB LED

x1

Color Sensor

MODULE PART LIST

AI Module 5 Part List

Electronic Components

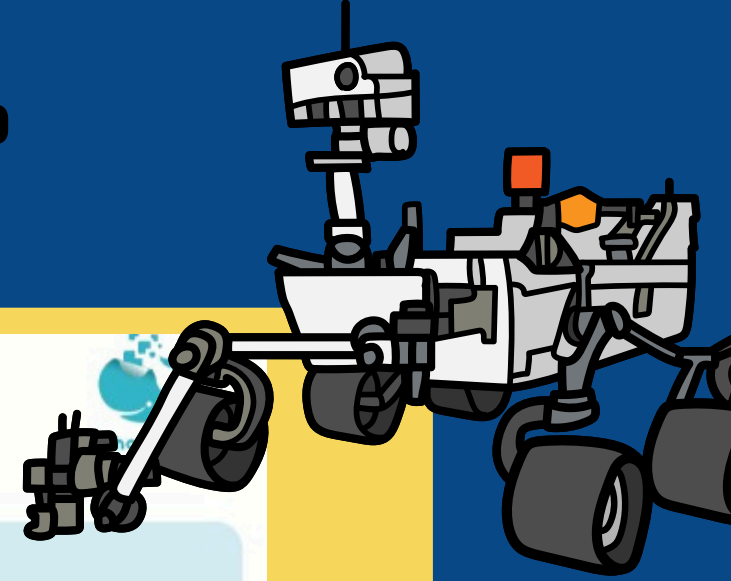|									
x1	x1	x1	x1	x5	x3	x1	x6	x1	x1
MC902 Controller	Infrared Sensor	RGB LED	Color Sensor	Single Grayscale Sensor	Closed-loop Motor	Battery	6PIN Connection Wire	Type-C Data Cable	Adaptor

Structural Components

x15	x20	x20	x20	x20	x10	x10	x2	x2	x4
20 Beam	30 Beam	50 Beam	70 Beam	110 Beam	126° 4×6 Beam	90° 3×5 Beam	Square Beam	U-shaped Beam	1 Square Cotter

20	30	40	50	60	80				
x5	x5	x5	x5	x4	x4	x20	x55	x30	x20
20 Axle	30 Axle	40 Axle	50 Axle	60 Axle	80 Axle	1.5 Cotter	2 Cotter	3 Cotter	0.5 Pulley Axle Sleeve

x10	x4	x4	x2	x2	x2	x2	x2	x2	x2
Axle Sleeve	20 Coupler	90° Coupler	112.5° Coupler	157.5° Coupler	12 Half High Bevel Gear	12 Cone Gear	20 Half High Bevel Gear	8 Straight Tooth	16 Straight Tooth

x2	x1	x2	x1	x1	x2	x2
24 Straight Tooth	Worm	Rack (Hole Beam)	General Chassis	Universal Wheel	6018 Tyre	Motor Transfer Bracket

THANK YOU