



Phase 1: Level 1 - VEX 123

Lesson 1: What is a Robot and robotics "Let's Meet Our Robot!"

Duration: 60 minutes

Mode: Hands-on Class

Tool used: VEX 123

Focus: Explore 123 Robot -How it works

Lesson Objectives

- Understand **what a robot is**.
 - Recognize and name different parts of the **VEX 123 robot**.
 - Explore and explain various **buttons and their aspects**.
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Learning Outcomes :

By the end of today's adventure, students will:

- Say **what a robot is** in their own words.
 - Identify the **basic parts** of a **VEX123**, such as **buttons, wheels, and lights**.
 - Give simple commands to a robot using **Touch buttons**.
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Icebreaker: "Hello, Robot Friends!"

Ask: "Have you seen a robot before?"

"What do you think a robot does?"

Let them talk for a few minutes - share their own thoughts.

Today, we are going to learn about something super cool and fun — **robots & robotics**.



Real-World Hook: "Where Do We See Robots?"

“Children, have you ever seen a little machine that moves when you press buttons? “

What is a Robot?

A robot is a special machine that can move, listen, and do what you tell it.

It helps people by doing jobs like cleaning, talking, or even playing games with you!

Real-life example: **At home, some robots can help too!**

A robot vacuum cleaner can move around the room and clean the floor all by itself.

What is Robotics?

Robotics is about building robots that can work for us.

Today, we are going to play and learn with our little robot friend

The VEX 123 robot

Core Concept:

The **VEX 123 robot** is a **small, colorful** robot made for **young kids like you** to learn about **robots** in a fun way!

It looks like a round toy, but it's actually a **real robot** that can:

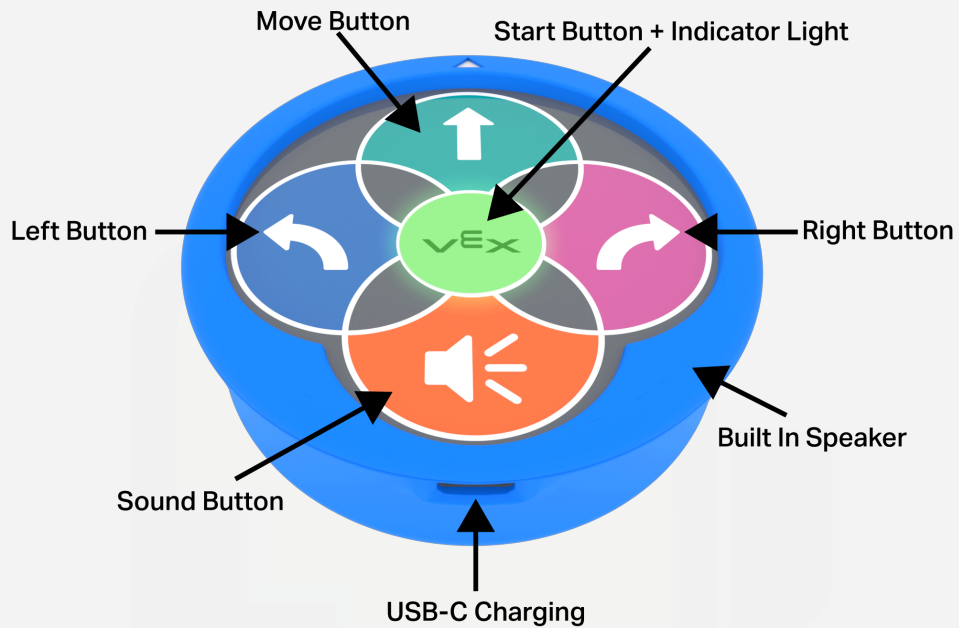
- **Move forward and reverse.**
- **Turn left and right**
- **Make sounds**
- **Detect objects.**

You can **press the touch buttons** on top of the Vex123 robot to make it move!

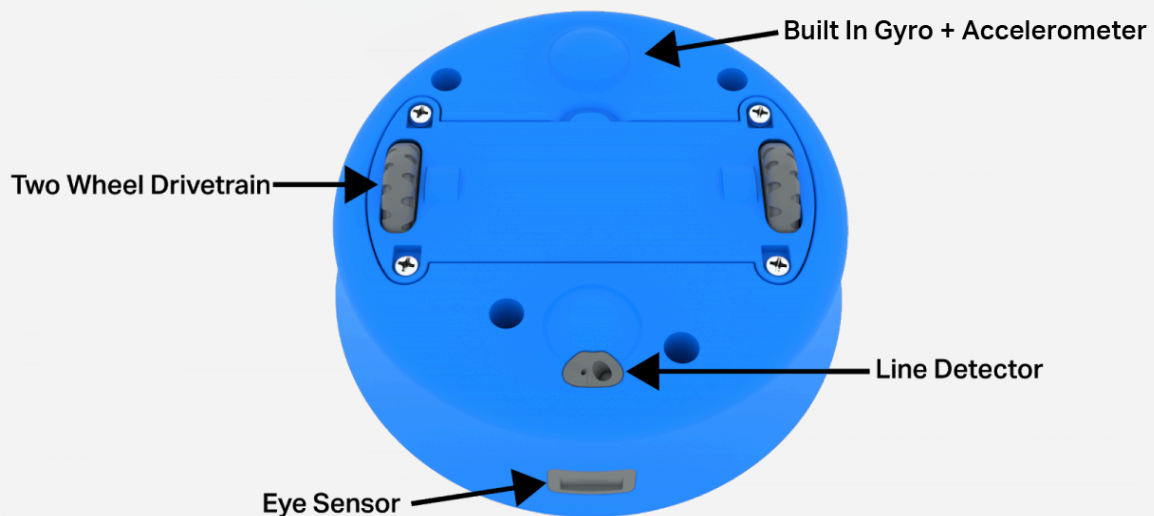
Let's Meet Our VEX 123 Robot:

Teacher's Note: Show the VEX123 robot - **Let children see, touch, and explore the VEX123 robot.**
 Before you start explaining robots.

Front view:



Back view :





Teacher Talk :

Okay, kids, now we are ready to explore our mini robot. Let's start!

Show them:

- **Arrow buttons** (Forward, Left, Right)
 - **Move** (teal blue color button) - Move the robot **one step forward**.
 - **Right** (pink color button) - **Turn** the robot to the **right**.
 - **Left** (blue color button) - **Turn** the robot to the **left**.
- **Sound Button/Orange color button** (Play a honk sound.)
 - **Beep** - A **short sound** the robot makes.

Teacher's note: move according to the commands you talk about (eg, move 1 step forward, turn left or right).

Let's see if our robot's full battery is ready to play—if it's a low battery, we'll charge it up!

Charging the 123 Robot

- Get the USB-C cable.
- Plug it into the robot's charging port.
- Plug the other end into power.
- Wait... then your robot will be full of energy!



When your 123 Robot is **charging**, the light in the middle of the start button will **blink red**.

When it's **fully charged**, the light will **blink green** — that means **it's ready for the next adventure!**

It's time to wake up our robot! Take your VEX 123 robot and gently push it forward on the table or floor - just like this.

See that blinking light? And hear that little beep sound. That means our robot is now awake and ready to go!



Student Activity 1 :

Now it's your turn to wake up your mini robot friend. Are you excited?

Wait for a few minutes - let them try

Teacher talk:

If your robot is still sleeping, don't worry — I'll help you!

How To Start the Robot:

Press the **Start button**(**Center button on the robot**) to wake up your robot. It will **follow your steps** one by one.

When you press it:

- The light turns "**yellow**".
- You hear a "**click sound**".

"Now your robot is ready to go."

Student Activity 2:

Can you help vex123 robot do this?

- Drive **1 step forward**
- Then **turn right**
- Then **turn left**
- And finally, **make a horn sound!**

What buttons will you press on your robot to make this happen?

How To Erase Your Robot's Project:

Teacher talk

Want to reset vex123 robots? Just give your Vex 123 robot a little shake!

It will forget the old steps and be ready for new ones.

Now... everyone, give your robot a shake and try it yourself...



How To Turn Off the Robot:

Okay kids! When our robot is done playing, it needs to take a nap. Here's what we do:

Let's press and hold the green Start button for 3 seconds... Can you count with me?

One... two... three!

Did you hear that little turning off sound? That means the robot is going to turn off.

Then, the light turns off. Now your robot is fast asleep and resting.

Now your turn! Everyone, press and hold the green Start button for 3 seconds...

"And say bye-bye to our mini robot friend! "

Recap Circle:

Gather them around in a circle or just seated at their desks. Ask..

- What is the name of the robot we used today?
- What button do we press to make VEX 123 move forward?
- What button makes the robot turn?
- What did we learn today?

Emphasize vocabulary: Robot, Forward, Turn, Touch Button, Horn Sound.

Cliffhanger for Next Class:

Today, the vex123 robot moved, turned, and made sounds... but there's more magic in the buttons!

In our next class, let's make our robot move for a long period.

Come back to the next class to know more about the touch buttons!

RESOURCES TABLE

Sr. No	Particulars	Link
1.	PPT	<link>
2.	Student Document	<link>
3.	Homework	<link>