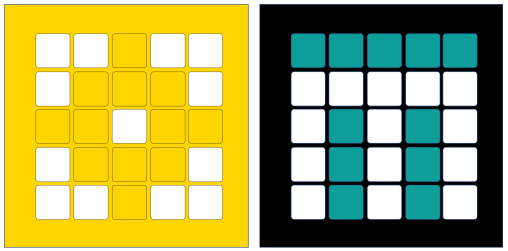
PRIME LESSONS

By the Makers of EV3Lessons

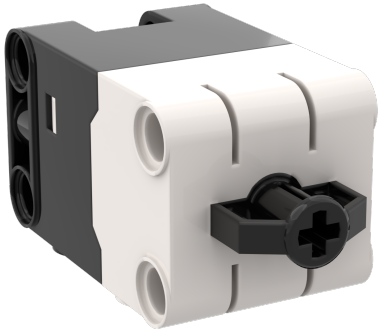


INTRODUCTION TO FORCE SENSOR

BY SANJAY AND ARVIND SESHAN

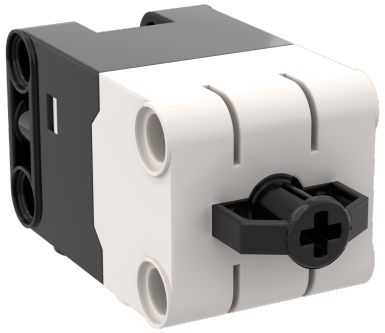
LESSON OBJECTIVES

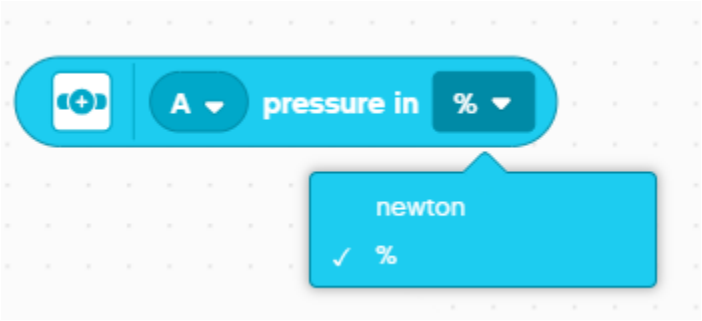
- Learn how to use the Force Sensor
- Learn how to use the Wait Until Block
- Note: The Force Sensor is not available in Robot Inventor



WHAT IS A FORCE SENSOR?

- The Force Sensor does two main types of sensing:
  - Touch sensing
  - Force sensing
- You can measure the Force in percent or Newtons



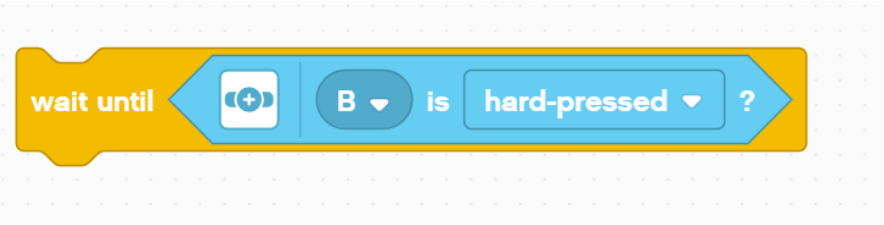


HOW DO YOU PROGRAM WITH A FORCE SENSOR

- The three modes are
  - Pressed – even a gentle tap is detected
  - Hard-pressed – pressing the sensor about 60% in
  - Released – hold the sensor in and release it any amount

CHALLENGE 1: MOVE UNTIL PRESSED

- Program your robot to move straight until you press the sensor with your hand
- Try using the sensor in Pressed and Hard-Pressed Modes
- You will use the wait until block for this challenge



- Basic steps**:**
  - Set the **movement motors** for your robot (A and E for Droid Bot IV and ADB robot)
  - Set the **% speed** for your robot
  - Start **moving straight**
  - Use the **wait until** block to detect when the Force Sensor is pressed
  - **Stop moving**

CHALLENGE 1: SOLUTION

In previous lessons, you learnt how to configure your robot. The first set of blocks sets the movement motors. (See Configuring Your Robot Lesson)

Configure robot

Start moving

Wait until the Force Sensor is pressed

CREDITS

- This lesson was created by Sanjay Seshan and Arvind Seshan for SPIKE Prime Lessons
- More lessons are available at www.primelessons.org