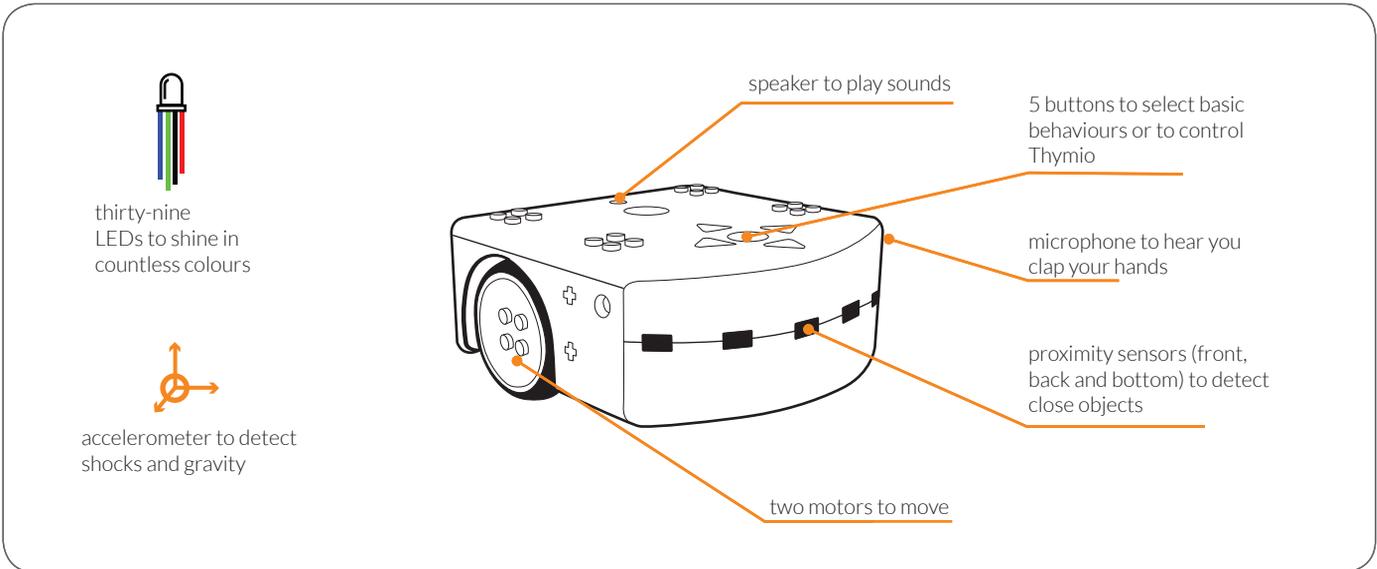Thymio is an open-source, open-hardware robot. Its goal is to introduce users to programming and robotics in a fun way. In order to be accessible to everyone, it comes with basic behaviours and can also be programmed visually or textually.
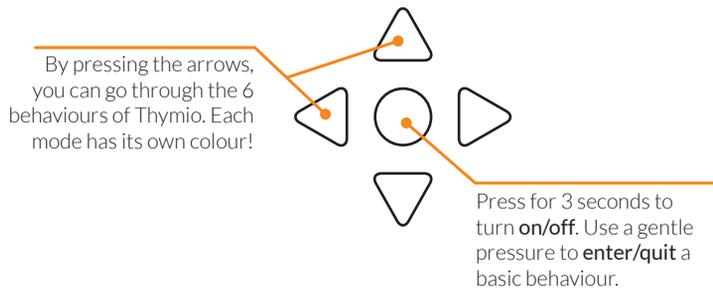
thymio
DISCOVERY KIT

thirty-nine LEDs to shine in countless colours

accelerometer to detect shocks and gravity

speaker to play sounds

5 buttons to select basic behaviours or to control Thymio

microphone to hear you clap your hands

proximity sensors (front, back and bottom) to detect close objects

two motors to move

START

By pressing the arrows, you can go through the 6 behaviours of Thymio. Each mode has its own colour!

Press for 3 seconds to turn **on/off**. Use a gentle pressure to **enter/quit** a basic behaviour.

BASIC BEHAVIOURS

Friendly (●) follows objects/hand
Explorer (●) avoids obstacles
Fearful (●) flees objects or hand, detects shocks
Investigator (●) follows a path/line
Obedient (●) follows commands given by the arrows / remote control
Attentive (●) reacts to claps

This poster allows you to explore the different basic behaviours of the robot but also to take your first step in programming. **How?** Begin by doing every "Discovery" challenge.
**You did everything and want to go further?** Install Aseba (www.thymio.org) on your computer and launch « VPL for Thymio ». You just have to choose an event block on the left and an action block on the right! Grab your mouse!
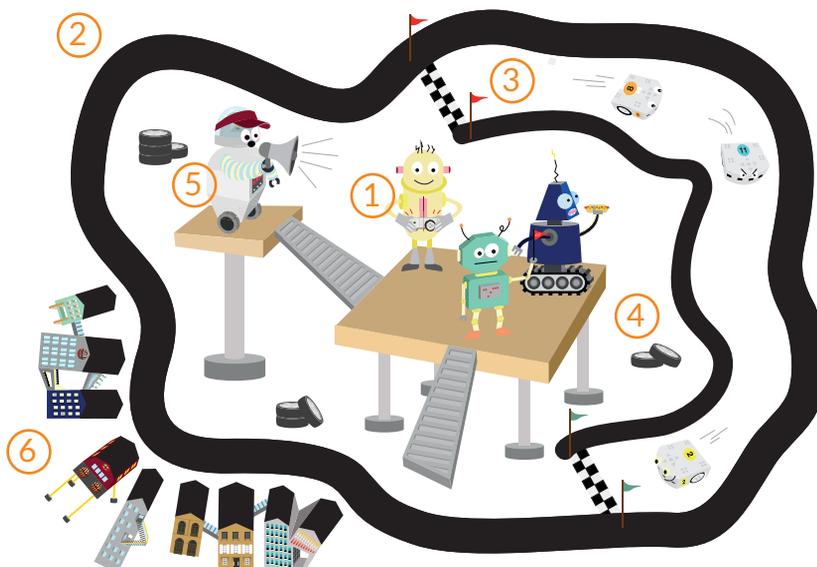
0 Calibration

To ensure that Thymio works well, you might have to calibrate its ground sensors. Start the investigator mode (●). Put the robot on the black line and press simultaneously on the front and back arrow to calibrate the black level. Then, put it on the white paper and press simultaneously on the left and right arrow to calibrate the white level.
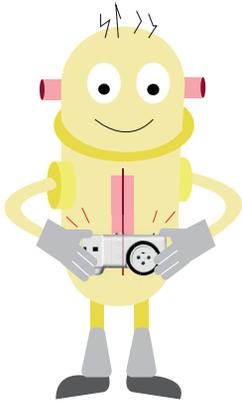
1 Stuck!
Goal: make Thymio scream

Discovery: select the red behaviour on Thymio and put it down on the yellow robot! Place one hand behind and the other in front of Thymio and see its reaction!

Curious?: program the robot so that it plays music when it sees obstacles ahead and behind it.
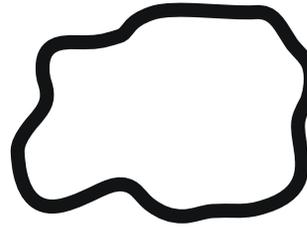
2 I see a track!
Goal: follow the widest black line

Discovery: one of the six basic behaviours allows to do this task, can you find which one it is?

Curious?: try to program the robot so that when it sees black it goes forward and when it sees white, it turns.

3 Thymio has a race
Goal: Go down the raceway in the fastest time

Discovery: in the green behaviour, guide Thymio with your fingers. In the yellow one, Thymio will avoid your hands and finally in the red behaviour, it will flee... Time yourself and get the best time! In the lab, we finished the race in the green behaviour in 10 seconds

Curious?: program Thymio so that it avoids the borders. Stick black tape squares on the raceway and make Thymio accelerate when it rolls over it. Try to stay on the raceway!
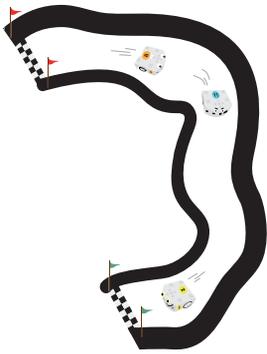
4 Beware of the tires!
Goal: avoid obstacles

Discovery: put small objects on the tires to create obstacles for Thymio. Can you find the behaviour allowing it to avoid them?

Curious?: program the robot so that when it sees an obstacle, it changes direction. Be careful not to let it fall off the table.
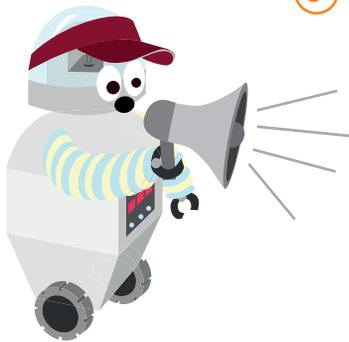
5 On your mark, get set, go!
Goal: make Thymio talk

Preparation: For this activity, you will need a micro SD card.

Curious?: Visit Thymio's website (a link and a QR code are on the bottom of this document) Download the code and follow the instructions.
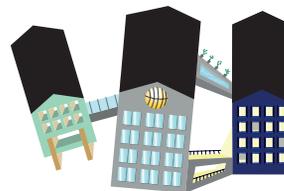
www.thymio.org/en:thymiodiscoverykitmaisondailleurs

6 Robotown
Goal: light effects with Thymio

Curious?: It's dark in Robotown... Program Thymio so that it follows the line with one sensor and lights up when it sees the houses with its other sensor. Turn off the light, Thymio can see in the dark.

GOING FURTHER

If you need help or want to have more details on what you can do with this discovery kit, scan the QR-code here. It will guide you to the wiki page dedicated to this kit. And if you have a problem, do not hesitate to ask a question on Thymio's forum. The whole community is there to answer your questions!

www.thymio.org

Maison d'Ailleurs
www.ailleurs.ch