

## 1, 2, 3, code ! - Cycle 1 activities - Lesson 2.1. Introduction to the Thymio robot

Summary	Students are introduced to the Thymio robot and learn how to manipulate it.
Key ideas (see <a href="#">Conceptual scenario</a> )	"Robot" <ul style="list-style-type: none"> <li>A robot can perform actions: move, make a sound, produce light, etc.</li> </ul>
Inquiry-based methods	Observation, experimentation
Equipment	For each group: <ul style="list-style-type: none"> <li>A Thymio robot, with its batteries charged</li> </ul> For each student: <ul style="list-style-type: none"> <li>2 sheets of A4 paper</li> </ul> For the teacher: <ul style="list-style-type: none"> <li><a href="#">Handout 8</a></li> <li>A2 size poster or flip chart</li> </ul>
Glossary	Thymio
Duration	Two 30 minute time slots

### Starting the activity

The teacher asks the entire class to explain what a "robot" is. To help them verbalize an answer, the teacher hands out a sheet of A4 paper to each student and tells them to draw a robot. After 15 minutes, students hang the drawings on the board and discuss them. The teacher also prepares the poster that will be used to summarize the robot characteristics.

The first observation is the general robot shape. The robots students imagine are nearly always humanoid and angular with lots of lights and buttons. They are often huge, move around on legs, wheels or track rollers, and can be grouped into two categories:

- Warrior robots: Armed with blades, guns, canons, crossbows and lasers, they destroy everything in their path.
- Utility robots: They clean, travel, dance, repair cars, cook, etc.

The teacher gradually fills in the poster: robot uses, means of locomotion, shapes, sizes, tools, etc. The poster will be used again at the end of the sequence to better define what a robot is.



Kindergarten class, Anna Halatchev (Paris)

### Experiment: discovering Thymio (in groups)

This second part of the lesson can be done right after the previous one or saved for another day depending on students' concentration levels.

The teacher splits the class into several groups and has them stand or sit around large flat surfaces (on the classroom floor or large tables, etc.). They give each group a robot (turned off). The teacher presents the Thymio robot and asks the students to explore it.

The teacher gives them a few minutes to familiarize themselves with the robot on their own. They will quickly figure out that it must be turned on to work (if they do not, ask them to press the middle button for three seconds) and that it can move around, make music and change color.

### Group discussion

At the end of this activity, the students explain how they turned Thymio on. They also explain how, using the arrows on the top of the cover, they could make it change color and play music. They describe how they were able to turn it off.

#### Teaching notes:

- [Handout 8](#) is for the teacher: It explains the commands, sensors and actuators for Thymio and the different operating modes.

### Conclusion and lesson recap activity

The class summarizes together what they learned in this lesson:

- Thymio turns on using the middle button
- Thymio can change color
- Thymio can make sounds

On a sheet of A4 paper, the students draw their Thymio.



On the left: Kindergarten class, Caroline Fayard, (Paris); on the right: Kindergarten class, Anna Halatchev (Paris)

**Teaching notes:**The drawing of Thymio may be the first observational drawing students have ever done. Some may find it difficult to decide which angle to start drawing from, while others may start drawing right away. Some of the drawings may be very detailed. Drawing helps students learn to observe things carefully: *How are the buttons positioned? How can the shape be described in words?* and so on. This exercise has students use a number of skills.

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[Sequence II](#)

[Lesson 2.2 >>](#)

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