1, 2, 3, code ! - Cycle 1 activities - Sequence II: Playing with robots

Introductory note: Robotics for preschoolers and kindergarteners

- Working with robots is extremely beneficial, not only to teach basic computer concepts (algorithms, machines, programs, etc.) and robotics (sensors, actuators, interactions with surroundings, etc.) but to help children develop cognitive and language skills as well. Additionally, manipulating a physical object is a strong motivator for students. However, despite the appeal, not all classes have access to robotics technology due to equipment costs (especially given that several robots are needed for each class).
- There are numerous educational robots, but few can be adapted to suit the needs of preschools, such as options that are affordable, sturdy and easy to use with a range of behaviors and interactions, etc. We have based our sequence on the **Thymio 2** robot (which we simply call Thymio) as it has all these features. Of course, other options are available (more basic, such as Bee-Bot, or more sophisticated and expensive, such as Nao). If robots other than Thymio are used, the sequence will need to be adjusted accordingly. (In 2016, a Thymio 2 robot cost about €150. We suggest working with at least two robots in class (and more if possible). A list of retailers that sell Thymio is available here: https://www.thymio.org/en:thymiobuy)

The following sequence was put together by *La main à la pâte* and Inria, inspiration taken from the project Inirobot (http://www.inirobot.fr). Inirobot is a project from T. Guitard, D. Roy and P-Y. Oudeyer (team Flowers Inria ENSTA ParisTech), Morgane Chevalier (HEP Vaud).

	Lesson	Title	Summary
	Lesson 1	Introduction to the Thymio robot	Students are introduced to the Thymio robot and learn how to manipulate it.
	Lesson 2	Colors and behaviors	Students learn that Thymio has several modes and can behave differently depending on the chosen mode.
	Lesson 3	Thymio in Investigator mode	Students discover Thymio's turquoise mode and prepare a route that Thymio can follow alone.
	Lesson 4	Challenge: Get Thymio through a maze	Students build a maze and must find all possible ways to get Thymio through it.

The class can then go to the Review lesson.

<< Sequence I

Cycle 1 activities