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| Session no. 1 | Duration: 90 minutes |
| **Age of students: 11-14 years old** |
| Title  *Summary:*  *Presentation of the topic*  *Robot functionalities*  *Sensors and actuators test* | |
| Educational goals  Presentation of the topic  Sensors and actuators: explanation, features and programming  *OpenRoberta*: how it works  Robot Configuration in *OpenRoberta*: Connecting sensors and actuators  Programming blocks presentation | **Knowledge required by children to approach the session**  None |
| **Elements of assessment of children's achievements**  Programming development  Accomplishment of the session's objectives |
| Course of the session (steps, timeline…) – 90 minutes  10 min - Presentation of the topic: Use of the *PowerPoint* presentation to introduce the topic and the scenario  20 min – Functions of each actuator and sensor: presentation of the sensors and actuators that are essential for the goals of the theme  30 min – The functioning of *OpenRoberta*: Robot configuration. Connections of sensors and actuators. Block programming of sensors and actuators.  30 min - Development of code by blocks: robot movements (forward, backward, left, right) | |
| Layout and specific material required  Computer + Internet | **Toolkits: resources** |
| To go further, other resources | **Facilitator/teacher skills required**  Programming by blocks skills  Basic skills in arduino |