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| Session no. 1 | **Duration : 90 min**  **Age of students : 11-14 years old** |
| * **Discovery of the robot functionalities.** * **First programming experience and testing of sensors and actuators** | |
| **Educational goals :**   * Hardware: What is a sensor/actuator? * Functionality of a actuator (LED, screen, motor) * Functionality of a sensor (light, ultrasound) * Software: How to use Microsoft MakeCode? * Structure of Microsoft MakeCode, distinction between blocks * Usage of blocks * Connection between blocks and sensors | **Knowledge required by children to approach the session :**   * nothing |
| **Assessment of children's achievements:**   * Completion of all steps/tasks of this session * Quiz at the end of this session/beginning of the next one |
| **Course of the session (steps, timeline…): 90 min**   * 10 min: Introduction to story and to the material * 15 min: General discovery of the robot – The students check the components as described in the storybook/checklist of the mission * 15 min: Discovery of the Microsoft MakeCode IDE – Structure and components are checked as described in the storybook/checklist of the mission * 5 min: Discovery of the components in the personalize DataBook * 20 min: Programming of the robot to test the LEDs (tutorial in the storybook) * 15 min: Programming of the robot to test the motors (adaptation of former LED test, motor speed regulation) * 10 min: Programming of the robot to test the screen   **Additional** **time**: Test of the buzzer, Test of the ultrasonic sensor, Quiz to test the gained knowledge | |
| **Layout and specific material required:**   * Computer with internet connection and file mainEuBot.ts (DF-Driver) installed * Eu-Bot, batteries (loaded), cables | **Toolkits:**   * Story book * Databook |
| **To go further, other resources :**   * Nothing (Components integrated in the Eu-Bot) | **Facilitator/teacher skills required**   * Knowledge of Eu-Bot hardware (sensors and actuators) * Basic Knowledge of Microsoft MakeCode |