

Basic Movements of a Robot, programming

Institution	University of Leon
Disciplina STEAM	Technology
IDD Student Context	Primary/secondary students with ASD Level 1/2/3
Resource used	Code & Go Robot Mouse
Description of the step-by-step activity before the project	
1. Present the activity: Use visual cards with the steps of the activity and the materials. 2. Let them “play” with it: Allow time to explore the robot's movements. 3. Build the maze: The first time, choose between following a simple model (using one of the challenge cards). Later, create your own maze with modular pieces, walls, and tunnels. 4. Place the cheese at the goal. 5. Plan the route with cards: Place the mouse at the starting point. The first time, do it without obstacles and think about the path the robot should take to reach the cheese. The adult can point with their finger or a token and use the sequence cards to visualize the movements before programming. 6. Let them take time to begin with the activity and to process the instructions. 7. Program the robot's movements: Program step by step while observing the result. As the child gains more practice, they can program all the instructions in sequence (forward, backward, turn right, and turn left). 8. Press the mouse and observe: Press the Go button and observe the route. The first few times, ensure there are no errors, so the robot reaches the goal correctly. 9. Support them during the process: offering prompts, modeling, or visual cues. 10. Return to step 4 or 5 if necessary: If mistakes occur or adjustments are needed, go back and refine the route or programming. 11. Finish the activity: conclude the session positively. 12. Evaluate the results: what worked well, what challenges arose, and how the child engaged in the activity. Adjustments can be made for future sessions. 13. Create new challenges: Structure progression levels, plan with a partner, have races between two players, use tunnels and place obstacles, or invent stories with the mouse as the main character.	

Description of the activity step by step (changes in blue)	
1. Classify the IDD into the taxonomy if previously it has been not done. 2. Create the profile for the students based on the student's strengths, challenges, and needs. 3. Look for activities with similar learning objectives focusing on programming, sequencing, and problem-solving. 4. Look for other existing resources. 5. Define the activity in the user model and associate it the IDD student plan: Customize the Code & Go activity to fit the student's needs, ensuring it aligns with their learning plan. 6. Plan new objectives and activities that follow the same programming objectives in other areas once I have a profile: Extend the learning experience by designing new activities that reinforce programming skills in different contexts, such as storytelling, problem-solving, or social interaction. 7. Follow steps 1-12 considering all previous steps: Ensure that future activities and learning experiences consider the student's profile, progress, and previously defined objectives, reinforcing their learning journey through structured programming experiences.	
Extra resources	Extra resources
Similar activities	Similar activities



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.



**Co-funded by
the European Union**

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.