

## BotSTEM – Erasms+ KA2 Project

2017-1-ES01-KA201-038204


### Good practice template

<b>1. Title of the activity / practice</b>	<b>Geometry with MIND robot</b>
<b>2. Origin of the activity</b>	Clementoni SPA
<b>3. Age of the students</b>	6-7 years
<b>4. Target group (type of the learners, size of the group)</b>	
<b>5. School subjects + topics concerned</b>	Geometry Drawing and characteristic of basic geometrical figures: square, rectangle, circumferences
<b>6. Educational goals of the practice</b>	Verification of the knowledge of simple flat geometric figures (square, rectangle and circumferences) and introduction to the calculation of the perimeter.
<b>7. Duration</b>	90 minutes, but it depends on the number of children
<b>8. Place</b>	Classroom Move the table and use the floor or group the desks in order to have the space to move the robot
<b>9. Short description of the activity</b>	Use a white squared board (with 15 cm square on each side)  The teacher can arrange several activities to verify the knowledge of the basic figures:  A) Program the robot to run a closed path. Comment on the difference between an open linear path and a closed path. Solution: in the closed paths you return to the starting position  B) Program the robot to form a square.  C) Program the robot to form a rectangle. Comment the difference between the rectangle and the first square.

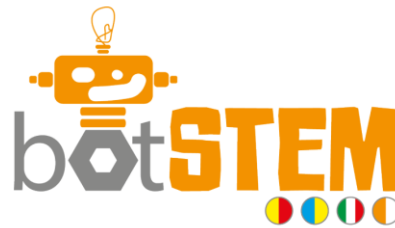


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	<p>D) Orient MIND so that it moves along the diagonal of the grid (obliquely). Program MIND to form a square. Comment that the geometric shape is a square even if MIND moves obliquely with respect to the grid (the number of forward keys executed is the same).</p> <p>E) Count the number of squares crossed by the robot (number of forward keys pressed) in the case of the square and the rectangle (starting with the concept of the perimeter of a geometric figure).</p> <p>F) Discover the hidden geometric shape. The teacher decides a sequence of instructions and illustrates it to the pupils (for example, on the blackboard). The pupils (individually or in groups) must guess the geometric shape that will be drawn following the instructions. Validate the response by executing the sequence to MIND.</p> 
<p><b>10. Evaluation</b></p>	<p>The children are more involved in the activity by practising geometry in a hands on way, moving directly the robot and seeing the results appear in front of them.</p>
<p><b>11. Materials / Resources / technical requirements</b></p>	<p>Clementoni MIND robot Paper, colours, ruler to build the squared table</p>

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**12. Tips for  
educators /  
theoretical  
background  
(if applicable)  
or curriculum  
context**

MIND robot is more indicated for older pupils since it has more complex functions (e.g. angles) but in this case is used because it can show easily to the children the drawn figure. This activity can be implemented also with Clementini DOC robot

Play this activity in groups will help the children to improve social skill and patience.