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# Module 7. The first approach to the use of Educational robotics, group organization, modalities



Robotics vs  
Bullying

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Polo Europeo della Conoscenza

## European online training course



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# Tips for practical organization of the class



a. The classroom organization is a message to the students: space should help to focus the attention, as it can affect feelings





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- b. Robotics at school is a group commitment. Groups usually consist of 3/4/5 students working together
- c. The roles should be assigned to give everyone the opportunity to join the group and become aware of his own abilities.



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# Tips for practical organization of the class



d. While selecting the students in the groups, the teacher has to keep attention to pair those who have more difficulties with the ones with more confidence, or to create balanced groups where all can participate actively.





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e. The rules must be clearly stated in advance: who starts, what are the task of each one, how to talk to each other and to the teacher, etc. During the activity the teacher observe the behaviour and gives rewards or penalties.



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f. From one exercise to the other, difficulty and commitment should gradually increase.

g. The equipment must be adapted to the number of groups/ students and robots used can be of different types depending on the age and level of the target group.



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# Group management for a robotic activity Practical Example



The proposed approach focuses on two main pillars:

1. child cooperation in order to develop healthy competition and eliminate bullying and mockery towards less able children;
2. teaching through robotics and not teaching about robotics.



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# Group management for a robotic activity

## Practical Example



### GENERAL OBJECTIVES:

- Organize heterogeneous groups of children in a functional way;
- involve all the children without too much waiting;
- involve children with engaging and diverse activities;
- enhance the respect of the turns;
- help peers;
- respect the rules;





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# Group management for a robotic activity

## Practical Example



TIME: 2 hours

MATERIALS:

- 6 robots DOC or MIND
- Robot boards;
- empty grids;
- tables marked with colors;
- dice;
- coloured cards (to enable pairing in the group);
- markers.





# Group management for a robotic activity

## Practical Example



### GENERAL INDICATIONS

1. 6 tables with different activities where the children can switch so as to try all activities;
2. assign a color to each table: yellow, red, green, blue, purple and orange and the title of the activity
3. Assign randomly the children to the different tables. This first pre-organized grouping allows everyone to know exactly what to do and lets the shiest children avoid difficult choices.
4. On each table there should be the rules to be respected and 4 cards of 2 colour (for example black and white)

### DECALOGUE OF THE GOOD PROGRAMMER:

1. THE ROBOT CAN BE PROGRAMMED BY ONLY ONE CHILD AT A TIME
2. IF YOU WANT TO HELP YOU CAN ONLY DO IT WITH WORDS
3. DO NOT TAKE THE ROBOT IF IT'S BEEN USED
4. YOU MUST NOT TOUCH THE ROBOT WHILE IT'S MOVING ON THE BOARD, WAIT UNTIL IT HAS COMPLETED ITS PATH
5. WAIT FOR YOUR TURN
6. GIVE SUGGESTIONS
7. CONGRATULATE THE GOOD ONES
8. ASK FOR HELP IF YOU NEED IT
9. WATCH HOW YOUR CLASSMATES PROGRAM
10. ENJOY YOURSELF