

INTRODUCING EDUCATIONAL ACTIVITIES TO THE PUERTO RICAN SCHOOLS BY USING ROBOTS AND INTERACTIVE PRESENTATIONS

By Eletrak Inc.

A fantastic classroom session of mathematics, with robots, captivated a group of 3rd grade young learners, attracting entirely their attention to the activity instructions, supporting visual presentation, and exercises. The kids were surprised with the unexpected visit of tiny robots, early in the morning, when they just entered to the classroom. The teacher in charge of the class prepared an educational activity to reinforce the mathematical concepts about hundreds, tens, and units.



She prepared a set of colored numbers and designed the activity guidelines in order to integrate the recognition capabilities of robots, for the identification of a specific colored digit, through the sensing of a whole number. The robots were initially pre-programmed with the support of a group of engineers, in order to obtain the desired movements and rotations. After that, the activity was tested by the experienced teacher to comply with the educational guidelines and expected outcomes. Finally, the teacher developed a visual presentation, programmed in Scratch, which is a programming environment for visual and interactive animations, very useful to introduce the robots to the students and

explain the steps and exercises involved in the activity.



“The session was very motivating, educational, and funny for all of my students...” said the teacher. *“The kids were very receptive and open to the activity, from the beginning to the end.”*



“Every boy and girl of my classroom performed well during the activity, recognizing the hundreds, tens, and units, and challenging the robots for the proper recognition of the required colored digits...”



In addition, the kids opened their minds to the imagination and creativity, through the discussion of new challenges and movements for the robots. "Could the robot fly?" said a student. "Why is a robot quicker than others?" expressed a little girl. "What happen if we change the order of the digits?" asked other students.



At the end of the activity, the kids summarized the steps performed during the activity and described the movements and actions of the robots observed during the session, as result of the recognition of the tested digits. In conclusion, the session opened the doors for further activities, where the students can be totally involved in the learning process, through the direct experimentation and discussion of relevant curriculum topics with their teachers. Additionally, the teachers could enrich the traditional class activities with robotics and graphical programming tools for the motivation and active participation of their students, with positive results.



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