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UNDERSTANDING THE POLES OF A MAGNET WITH THE HELP OF MICROCONTROLLERS, CODES, AND INTELLIGENCE GAMES

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The use of technology and intelligence games in the education of middle and high school students is a good approach to increase student participation and make learning more permanent. These interactive learning methods are particularly effective for students in younger age groups. In our study, validated scales were used to gather the opinions of teachers from various branches working in BILSEM regarding the use of technology and intelligence games in lessons. These opinions have been guiding in the development of lesson materials and the determination of implementation strategies. The circuits we prepared with electronic components such as microcontrollers, Hall Effect sensors, LCD screens, RGB LEDs, and buzzers aim to increase students' success in science and physics classes. These components are designed to help students learn about magnetic fields and the poles of magnets. Lesson materials were prepared using different types of puzzles and intelligence games. These games provide a fun learning environment while improving students' problem-solving skills. In summary, technology and game-based learning methods will positively contribute to students' academic success, correct misconceptions about magnetic fields, and increase their success in science and physics classes while making the learning process more motivating.