

**REPOSITORY OF INNOVATIVE PRODUCTS (RIP)
FOR INSPIRATION IN EDUCATION DESIGN
[CATEGORY: PRIMARY SCHOOL]**

NUMERICA

Innovators

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Highlights:

Place value is one of the foundations of math, so when pupils don't understand it at a conceptual level, they will struggle when learning new concepts. Once pupils catch on, they'll be ready and eager to use their new skills and learn about more complicated math concepts. Introduce Numerica as a 'teaching tool' able to help pupils conceptually understand place value with color-coding.

Key words: Place Values; Magnetic Chips; color-coding; visual representation; mathematical thinking.

Product Description

Using different-colored magnetic chips to visually demonstrate place value to construct an understanding of the concept. First, introduce pupils that the yellow chips stand for the "ones" place, the blue chips stand for the "tens," and the red chips stand for the "hundreds". Then, show the students how to use colored magnetic chips according to the place value to represent numbers. For instance, 532. Place down two yellow chips to represent the 2 (in the "ones" place) three blue chips to represent the 3 (in the "tens" place) and five red chips to represent the 5 (in the "hundreds" place). Color-coding can support mathematical thinking in that it can help students organize their thinking, make their thinking visible to others, and make connections. It can also strengthen visual representation to aid students in internalizing their learning.

Learning theory applied in this innovation is Problem solving method by Polya. By following the steps of Understanding, Plan strategy, Solving problem and Revise, students would be able to understand the concept of place value and improve their understanding on the topic.

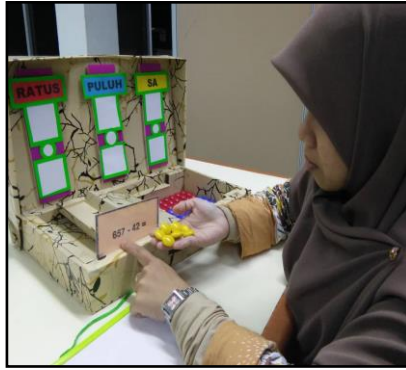


Figure 1: Numerica as teaching tool

Product Benefit

Numerica **is an advantage** for pupils needs in enhancing their understanding of place values. By using Numerica the users will know more about the concept of place value which they can relate to the topic of teaching especially when they are dealing with the addition and subtraction. Teachers will get more benefits by using this product to enhance students' understanding on the concept of place value more effectively. Moreover, we can promote Numerica to parents because we are sure that they want to enhance their children's understanding of place values. Besides, it can help pupils' performance level for place values. So, teacher can teach students by using Numerica and teach them to solve more complex operations and helps to perform well in Mathematics.

Chart 1 : Findings obtained from pilot study.

