



Cosmic Education

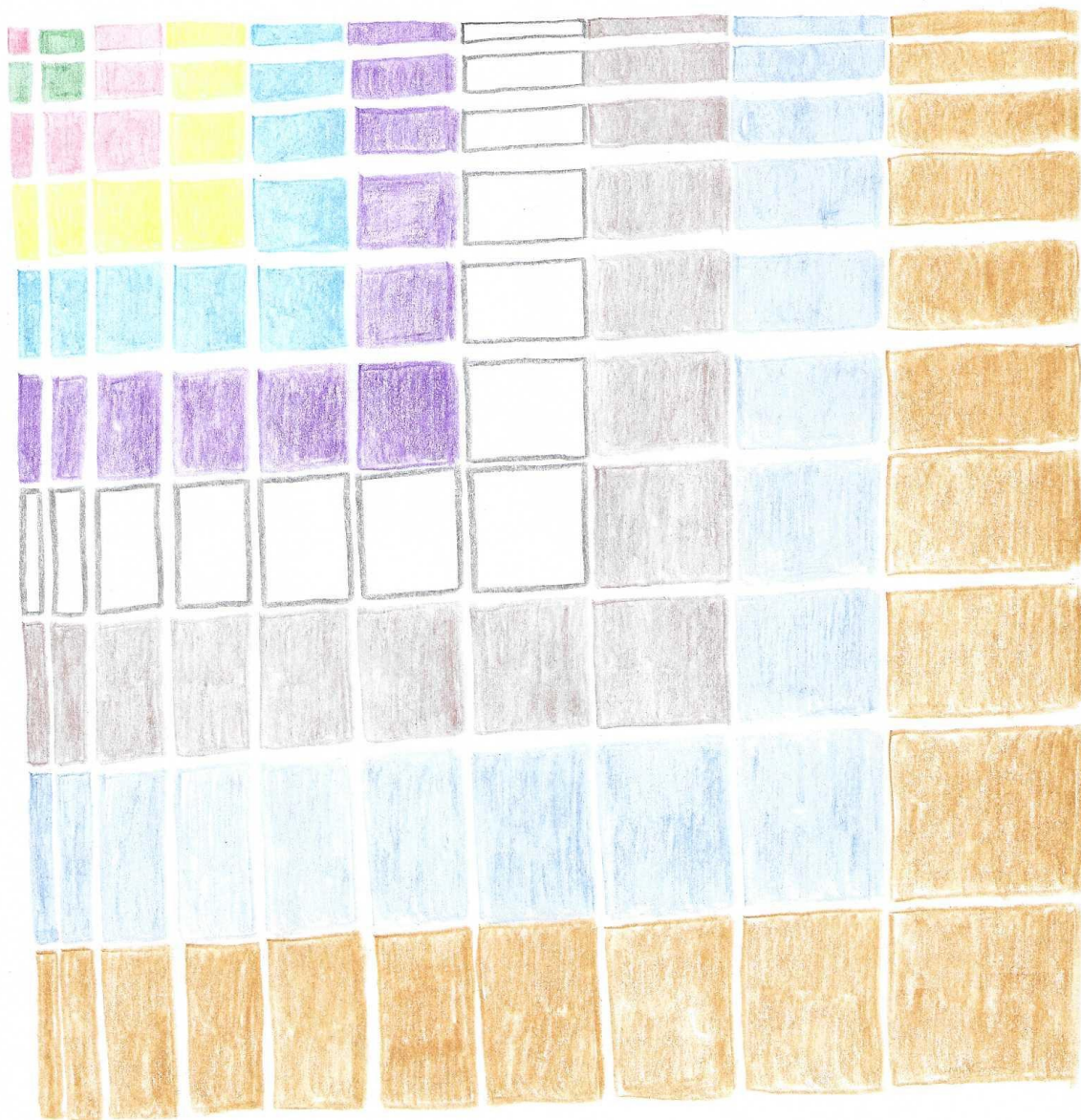
according to

Maria Montessori

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Sample:



Square of Pythagoras

1.) Work with one child or a group of children on a mat. Have the box with all the colored strips ready. "Today we will build the square of Pythagoras. Can you say square of Pythagoras?"

2.) Look into the box and point to the small compartment with one red square in it. "How many red ones do we have? Only one, that's right." Take that red square and place it in the upper left corner of the mat.

3.) Look into the compartment with all the green pieces. "How many green pieces do we have?" Take them all out and the children count. "Yes, 3 green pieces!" Fit the two rectangles to the right and underneath the red square and the green square then fits right into the gap to form another whole square.

4.) Take out all the pink pieces and have the children count. "Yes, five pink pieces." The smallest ones fit first, then the thicker rectangles, and last the pink square.

5.) Continue with every color in the very same way:

- 7 yellow pieces
- 9 light blue pieces
- 11 purple pieces

- 13 white pieces
- 15 brown pieces
- 17 dark blue pieces
- 19 golden pieces.

6.) "This is the square of Pythagoras. Now it is your turn to build it." Take the pieces one at a time and put them back into the right spot in the box. Let the child build the square.

Extension:

After the square is built take the golden square and say: "This is a square!" Put it to the top edge of another mat. "Let's see how many more golden squares we can build." Take one at a time: one largest and one smallest rectangle. Put them together and place them underneath the first square. "Is it a square?" "Yes!" Superimpose the square on top of this one to double check. Continue with all golden pieces and then with the other colors.

Control of error: Visual in the material

Direct aim: To build a square

Indirect aim: Mathematics

Age: 4.5 years and up