

GEOMETRICIAN'S VIEWS

TOPIC: GARDENS



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Mathematical View



Many maths skills can be discovered and strengthened in the garden. Depending on the age of the students, the topic "Gardens" can be approached differently.

Between 8-12 years old we approach notions of elementary mathematics: Counting plants, flowers, insects, etc.; Measuring, comparing the sizes of plants, fruits, flowers; Use of the words "greater", "smaller", "largest", "smallest". As the students get older (9-12 years old) we can involve them in organizing/ planning the garden. We establish together the surface of a layer, the distance between plants, the surface needed for plant development. We use the elementary operations of multiplication and division in order to make calculations easier. We can also clarify the notion of fraction (10-13 years). For example, we can determine together with the students how much a plant species occupies in the surface of the garden or a layer. We can use the notions of statistics with an emphasis on graphic representations (11-16 years) such as bar graphs, circular diagrams etc. Geometry concepts can be introduced: In designing fences and garden planters because areas need to be measured to get the right amount of materials to use; When we buy fertilizer for plants/ flowers, we have to calculate the volume it occupies in order to know how many bags to buy; Symmetry, a notion that links mathematics to art, is also used in the design of a garden.

Researcher, Florica-Maria NAGHIU



Artistic View



The artist tells us that in the design stage of a garden, including its maintenance, the creativity, imagination and good taste of the author, of those involved, are highlighted.

In nature plants were designed with mathematics in mind. Most plants have natural symmetry. Many flowers have the Fibonacci sequence (where each number is the sum of the previous two numbers. 0,1,1,2,3,5,8,13,21,34 – and so on). Likewise in the garden, the spaces in which we cultivate follow the rules of symmetry, being more visually pleasing.

Having said that, we will follow the proposed material at: <https://gradinamax.ro/articles/proiectul-tau-de-amenajare-a-gradinii-etape-de-implementare> . The ideas above guide our steps in setting up a garden. We address the age segment over 12 years.

We recommend you to watch:

https://www.youtube.com/watch?v=J6oDTn_ENto

The artists, Alexandra-Doria JURJ

Common View



The researcher and the artist confirm that mathematics makes its mark in the arrangement of a garden.

We could get into the topic if we read the ideas sent to the address: <https://acaju.ro/blogs/gradina/totul-despre-amenajarea-gradinii-stiluri-particularitati-mobilier-inspiratie> as well as the proposed materials in the bibliography

In designing a garden we have the opportunity to apply mathematical concepts to everyday life. In this way this creative hobby, gardening, will provide the opportunity for other people to enjoy the natural space created.

artists, researcher, teachers involved in the project

