

Tombs of the Kings

Respective blueprint	Tombs of the Kings Blueprint
Description	Discover one of the most important archaeological sites of Cyprus, Tombs of the Kings, and learn how to calculate the circumference of the different openings
Learning Objectives	<p>After this lesson, students should be able to:</p> <ul style="list-style-type: none"> • Know some historical facts about the Tombs of the Kings • Discover the volume of a cylinder and a rectangular parallelepiped. • Subtract the areas in order to find how much rock was needed to build the tombs.
Related curricular subject(s)	History, Mathematics
Prerequisites / preparatory actions for teachers	Make an introduction about volumes and their meaning in different constructions.

Prerequisites / preparatory actions for students	None.
Age of students	12 – 14 years old (depending on the maths established curricula)
Duration	45 min
Level of difficulty	Low

Step by step description of the tasks

Step 1: What do you know about Tombs of the Kings?

The famous 'Tombs of the Kings' form part of the Archaeological Park of Kato Paphos - one of the most important archaeological sites of Cyprus that has been included in the UNESCO World Heritage Sites list since 1980.

The Tombs of the Kings was the cemetery to the elite, including prominent figures and high-ranking officials. It continued to be used throughout the Hellenistic and Roman periods up to the fourth century, possibly even by early Christians. However, as with many sites of this kind, the Tomb of the Kings was subject to looting and used to quarry materials. Furthermore, in mediaeval times, the Tombs of the Kings were damaged by squatters, some of whom apparently made changes to the tombs.



Source: VisitCyprus

Step 2: When were the Tombs of the Kings discovered?

The existence of the site was already known from the end of the 19th century by Cesnola, who severely looted the tombs. In 1915-16 the then curator of the Cyprus Museum, Markides, excavated some shaft tombs, while the honorary curator of Paphos Museum Loizos Philippou started clearance work in a few other tombs in 1937. **But it was in 1977 that systematic excavations were undertaken by the Department of Antiquities, which brought to light eight large tomb complexes.**

Step 3: Build “Tombs of the Kings”

Students should build in teams the “Tombs of the Kings” blueprint, following the given instructions.

Based on the blueprint, students could calculate the volume of the rocks used for the columns (assuming that each column consists of 4 cubes).

Exercise:

Let's assume that each cube's length is 1.2 m.

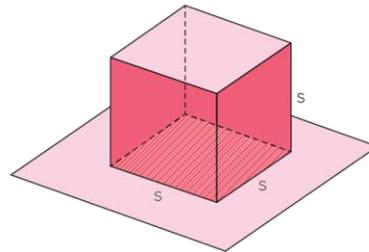


Knowing that every edge of the cube is the same length:

$$V = s^3,$$

where s is the cube's length.

Volume of Cube Formula



Volume of cube with side lengths s

$$V = s \times s \times s = s^3$$

Source: <https://www.cuemath.com/measurement/volume-of-cube/>

$$V = 1.2^3 = 1.728 \text{ m}^3$$

As each column has 4 cubes:

$$V_{\text{column}} = 1.728 * 4 = 6.912 \text{ m}^3$$

However, the Tombs of the Kings site consists of 9 columns. Consequently, the total volume of all columns is:

$$V_{\text{all columns}} = 6.912 * 9 = 62.208 \text{ m}^3$$

Discuss with your students the meaning of volume and why is it important in architecture: i.e. to calculate the needed materials for building it or to make your construction more stable

<p>Assessment activities</p>	<p>1. Assessment Activity</p> <p>Ask students to present their constructions in class and calculate the volume of the cubes they used (depending on the size of each building cube they used).</p> <p>2. Assessment Activity</p> <p>Ask students to research information about the historic site of the Tombs of the Kings and create a PowerPoint presentation about tombs in different ancient cultures (Ancient China, Greece, Egypt).</p>
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References

1. Department of Antiquities, Archaeological Sites, Available at:
<http://www.mcw.gov.cy/mcw/da/da.nsf/All/238DE8D409BF6077C225719B0039F785?OpenDocument>
2. Visit Cyprus, Tombs of the Kings, Available at:
<https://www.visitcyprus.com/index.php/en/discovercyprus/culture/sites-monuments/253-tombs-of-the-kings>