

EXHIBITION COSTS

The fee includes:

- Around 40 tiles, prints and a textile from the collections of the Ashmolean Museum.
- Transport from and return to Oxford, within a 120 mile radius
- Object labels and interpretation panels
- Object preparation and condition reporting
- Tour co-ordination by the Ashmolean Museum Registrar's Department
- A selection of 5 images for use in the venue's marketing and press

Three VR interactives and a video for projection are also included. The hiring venue will need to have a staff member present to assist visitors with the VR. The exhibition can be modified to remove the VR element if required.

The following items and costs will be covered by the venue, as they arise:

- 'Nail to Nail' insurance
- Crating, as required
- Transport from and return to Oxford, outside a 120 mile radius
- Courier expenses



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If you would like further information about this exhibition please contact touring.exhibitions@ashmus.ox.ac.uk

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DIMENSIONS

THE MATHEMATICS OF SYMMETRY AND SPACE



Developed in collaboration with Oxford University's world-renowned Mathematical Institute, *Dimensions: The Mathematics of Symmetry and Space* invites visitors to explore what it means to move in one, two, three and more dimensions. Using stunning Islamic ceramics, Neolithic carvings, Renaissance prints and contemporary woodcuts alongside virtual reality technology, visitors will embark upon a journey of discovery from ancient cultures into cutting-edge science.

The exhibition is the result of a ground-breaking collaboration between the Ashmolean Museum and Oxford University's Mathematical Institute which involved graduate students and post-doctoral researchers contributing to the exhibition concept, co-writing the texts and labels and, most importantly, providing a sound mathematical basis to the exhibition.



▲ A set of five tiles in the shape of stars and a cross, Kashan, 1262

Beginning with a look at the dimensions we may think familiar — one, two and three — an embroidered textile frieze, with its infinitely repeating pattern, beautifully illustrates the first dimension. A selection of spectacular Islamic tiles demonstrate two dimensional space and introduce various types of two dimensional symmetry, as well as the geometry of tessellation.

▼ Embroidered Textile, Greece, 19th century



▲ Albrecht Dürer, The Draftsman with the Vase, woodcut, c. 1525

The third dimension is explored through a selection of extraordinary neolithic stones carved with geometric patterns over 5000 years ago. Their purpose is unclear but it is certain their makers were familiar with the intriguing geometry of the sphere. Also included are a selection of woodcuts by Albrecht Dürer (1471–1528). His fascinating prints of draftsmen illustrate the techniques and devices he created by studying the classical geometry of Euclid to bring a startling illusion of depth to the architectural settings in his woodcuts illustrating *The Life of the Virgin*.

The exhibition culminates with the challenge of conceptualising and visualising further dimensions. Using contemporary woodcuts by Christiane Baumgartner (1967–), the concept of time as the fourth dimension is challenged, and virtual

reality headsets allow the visitor to enter the world of multiple physical dimensions by stepping into a parallel reality. The VR interactive introduces visitors to the inhabitants of Flatland, a two-dimensional universe, and allows them to play with a hypercube, a four-dimensional object which cannot exist in our world.

▼ Carved Stone Ball, Scotland, Late Neolithic

