

# DA VINCI: SHAPING THE FUTURE

ORIGINAL MASTERPIECES FOR THE FIRST  
TIME IN SOUTHEAST ASIA



## EXHIBITION GUIDE



ArtScience  
Museum  
MARINA BAY SANDS

Open 10am to 7pm daily | [www.MarinaBaySands.com/ArtScienceMuseum](http://www.MarinaBaySands.com/ArtScienceMuseum)

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## THE EXHIBITION

Original masterpieces from one of the world's most celebrated geniuses, Leonardo da Vinci, are shown in Southeast Asia for the first time in this landmark exhibition at ArtScience Museum™.

*Da Vinci: Shaping the Future* focuses on the intersection of art, science, and technology in da Vinci's largest notebook, the *Codex Atlanticus*. Combining original pages from his notebook and paintings from his School with innovative design, interactive exhibits, audio-visual technologies, and contemporary art, the exhibition explores da Vinci's works and their legacy in five key areas: mathematics, natural sciences, architecture, technology, and music.

Da Vinci's mastery in such a diverse range of subjects was far from typical. Unlike his contemporaries, he applied the principles of one subject to each of the others, breaking disciplinary boundaries to invent new and innovative solutions. Through the lens of each exhibition theme, the infinite web of interdisciplinary connections present in his work can be discovered. Da Vinci's approach to interweave connections among different disciplines marks him out as a figure centuries ahead of his time.

Although he was born more than 500 years ago, da Vinci's genius, creativity, and unique approach have inspired artists and scientists for centuries. This is seen in the paintings of his School. His followers adopted his painting techniques and continued his artistic legacy.



Also on show are five contemporary art installations which are interwoven through the exhibition journey. Drawing inspiration from da Vinci's work, these contemporary art installations provide new insights into da Vinci's ideas and processes, revealing how strikingly current his thinking is today.

As Asia's only museum exploring the intersection between art, science and technology, there is no more fitting venue for Southeast Asia's first exhibition of original masterpieces by history's most canonical artist and scientist.

## DA VINCI



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Leonardo da Vinci (15 April 1452 – 2 May 1519) was an Italian Renaissance artist, architect, scientist, engineer, mathematician, designer, and musician whose contribution to human knowledge is vastly significant. Fundamental to his life and works was a deep respect for nature and a strong preference for direct observation. He considered experience to be the only means of obtaining truth and knowledge. This approach, combined with his innovative holistic perspective, was the root of his technological ingenuity and his artistic genius, which continue to teach and inspire practitioners in both the arts and sciences today.

## THE SCHOOL OF DA VINCI



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Leonardo da Vinci is undoubtedly one of the most celebrated and well-known painters of all time. Grounded in traditional practice, he was able to transform his methods and materials to express unprecedented intellectual and artistic concerns. His mastery of painting ensured he had a strong following of pupils who continued his artistic legacy. They became known as the School of da Vinci.

Because of their mastery of da Vinci's techniques, these painters developed formidable reputations in their own right. Some of their works so closely resemble the work of da Vinci, that their attributions are continuously contested by leading scholars.

Original paintings by the School of da Vinci are presented in this exhibition for the first time in Southeast Asia, giving visitors the opportunity to observe the direct relationship between da Vinci and his followers, and highlighting da Vinci as an influential mentor.

A video-mapping of *The Last Supper* also enables visitors to understand first-hand da Vinci's techniques and reveals the preparatory drawings that contributed to one of his most famous masterpieces.



Photography is strictly prohibited in this gallery.

# THE CODEX ATLANTICUS

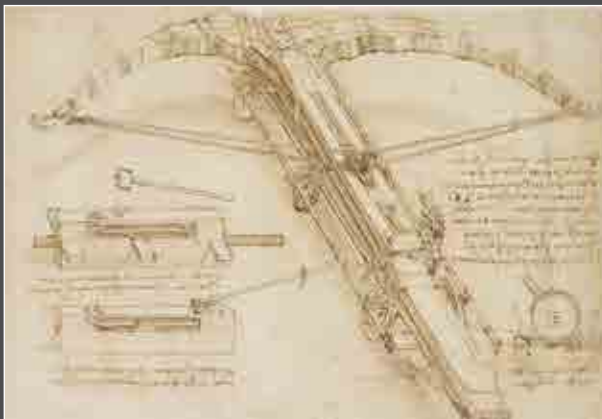
The *Codex Atlanticus* is the world's largest collection of writings and drawings by Leonardo da Vinci, which explores a variety of subjects, from mathematics to natural sciences, architecture, technology and music. They were originally loose pieces of paper which da Vinci carried around in his belt, on which he continuously jotted down his ideas and observations. This is why his notes and drawings were often in quick, short strokes. Da Vinci wrote in his native tongue of Italian using 'mirror-writing', meaning that he wrote from right to left. This may have been because he was left-handed and writing from right to left would prevent his sleeves from being stained by ink. Some scholars also believe da Vinci used mirror-writing as a form of copyright in order to keep people from reading his work.

Most pages of the *Codex Atlanticus* are two-sided, with notes on both the front and back. Da Vinci often reused folio pages throughout his lifetime. For this reason, it is very difficult to date each folio page as each may include dozens of notes from different time periods in da Vinci's life. This is also why each folio page contains notes and drawings on a variety of subjects.

For the first time in Southeast Asia, 13 original pages from da Vinci's *Codex Atlanticus* are presented in this exhibition.



Photography is strictly prohibited in this gallery.



# EXHIBITION THEMES

## MATHEMATICS



For da Vinci, mathematics was the ultimate key to understanding nature and could be used in both art and science. He applied the results of his wide exploration of mathematics, in particular the key principles of

geometry and proportions, to all other disciplines of his practice.

## NATURAL SCIENCE



Da Vinci harboured a deep respect for nature and was fascinated by its components on both a macro and micro level. Some of the topics he studied include the movements of water and air, the geological forms of the

earth, and the mechanics of the human body.

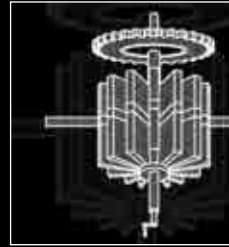
## ARCHITECTURE



During his lifetime, da Vinci was known for both his mastery of painting and his architectural skills. He undertook radical designs for the reorganisation of cities, churches, and military fortifications. In his approach

to architecture, da Vinci was interested in the intersection between natural and man-made phenomena.

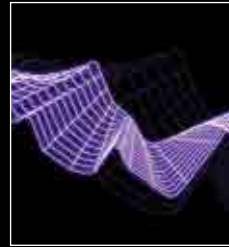
## TECHNOLOGY



Technology was a vital part of da Vinci's professional practice. Acting as a civic and mechanical engineer at the court of Milan, he created studies for dozens of mechanical tools, derived from his observations of

construction sites or battlefields.

## MUSIC



Da Vinci studied the principles of sound and its application in musical instruments. Although music was viewed as having a spiritual role during the Renaissance, he was interested in its tangible components. In his

theoretical drawings and instrumental designs, he visualised music in an accessible and simple way.

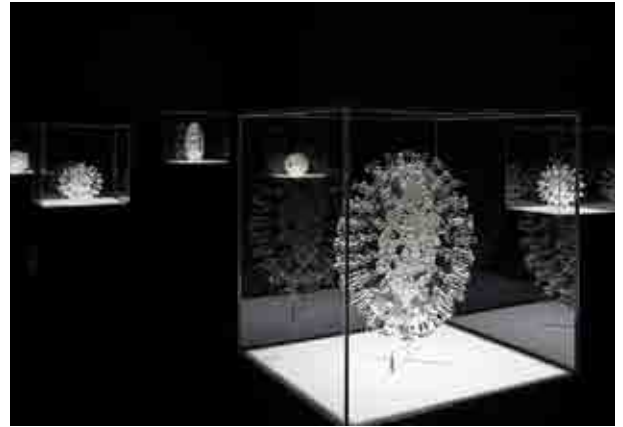
## SHAPING THE FUTURE

*Da Vinci: Shaping the Future* takes a bold and contemporary approach to the genius of Leonardo da Vinci. A key component of this approach is five contemporary art installations, including three new commissions, by five international and local artists. Integrated into the exhibition route, the installations draw inspiration from da Vinci's works in each exhibition theme, showcasing their relevance today.

The contemporary art installations are:

### *Through the Looking Glass, WY-TO (Singapore)*

Responding to da Vinci's legacy in mathematics, this installation represents fractals, a natural phenomenon, or a mathematical set, that exhibits a repeating pattern. Present in nature, yet easily created by human means, they blur the boundaries of what is 'natural' and 'man-made'.



Swine Flu



EV 71- Hand, Foot, and Mouth



Untitled Future Mutation



Human Papillomavirus

### *Glass Microbiology, Luke Jerram (United Kingdom)*

Responding to da Vinci's legacy in natural sciences, the glass artworks are three-dimensional diagrams of microbiology. They were designed using scientific diagrams of viruses and protozoa, together with imagery made using an electron microscope.



*The Forest Speaks Back (III)*, Donna Ong (Singapore)

Responding to da Vinci's legacy in architecture, this installation uses nature as an inspiration for the cityscape. It directly echoes da Vinci's own approach to architecture, whilst also commenting on Singapore's particular approach to city planning.



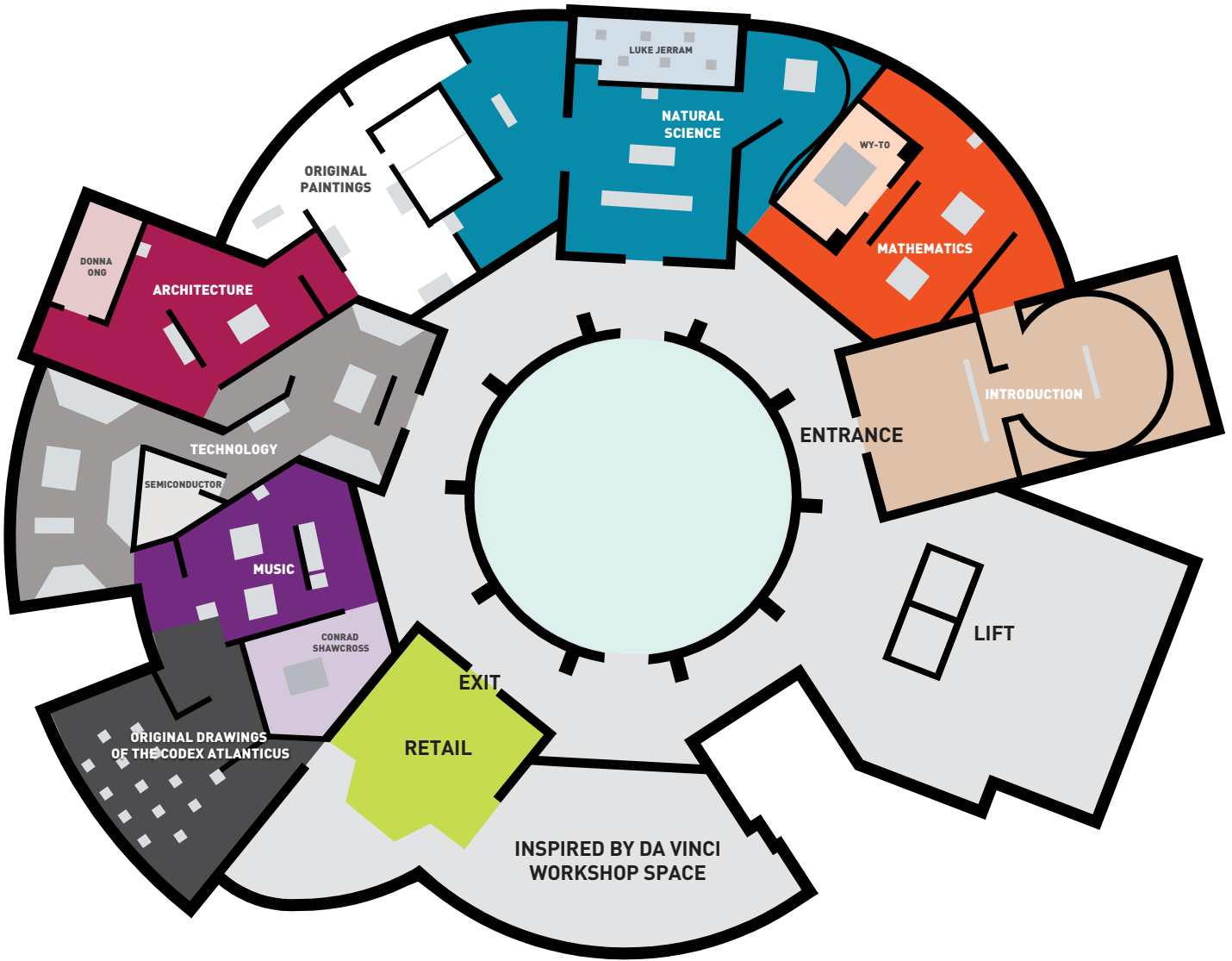
*Catching the Light*, Semiconductor (United Kingdom)

Responding to da Vinci's legacy in technology, this moving image installation is created using visual data collected by space telescopes. The six-metre-wide projection is made up of thousands of images which have been assembled to create time-lapse sequences of the night sky.

*Projections of the Perfect Third*, Conrad Shawcross (United Kingdom)

Responding to da Vinci's legacy in music, this installation is a series of artworks that visualise musical chords. The three works are a light work called *Limit of Everything (5:4)*, a sculpture called *Harmonic Manifold 1 (5:4)*, and a set of drawings called *Perfect Third (5:4) 1-5*. The works centre around a 'perfect third' – a particular type of musical chord – and are inspired by the harmonograph, a machine for visualising music.







# PROGRAMMES

## PUBLIC GUIDED TOURS

**English: Saturdays, 11:30am & 5pm**  
**Sundays, 11:30am**  
**Thursday, 19 February | 1pm**

**Family-friendly tour: Fridays, 3:30pm**

**Mandarin: Saturdays & Sundays, 2pm & 4pm**

Discover da Vinci's multiple interests and expansive way of viewing the world through a guided tour, which highlights mathematics, natural science, architecture, technology, music, paintings, and the *Codex Atlanticus* notebook.

Complimentary to ticket holders for *Da Vinci: Shaping the Future*.  
Up to 25 visitors, on a first-come, first-served basis.  
Register 5 minutes before start of tour.

## WORKSHOPS

**Sundays, 4:30pm – 5:30pm**  
**19 & 20 February, 4:30pm**

**Family Fridays: 4:30pm – 5:30pm**

Learn, explore, experiment and create your own masterpiece in our Da Vinci Challenge workshops, where you can craft your own invention or artwork to take home.

Developed in partnership with **WondersWork**.

Complimentary to ticket holders for *Da Vinci: Shaping the Future*.  
Up to 20 visitors, on a first-come, first-served basis.  
Recommended for visitors aged 5 and above. Register 15 minutes before start of session.

## INNOVATION NOW DEMONSTRATIONS

**Saturdays, 4:30pm – 5:15pm**

Discover how tertiary institutions are applying da Vinci's principles to their projects today through the innovative work on display in the 'Inspired by da Vinci' activity space.

Complimentary to ticket holders for *Da Vinci: Shaping the Future*.

## INSPIRED BY DA VINCI WORKSHOP SPACE

**10am – 6:45pm daily**

Join our take-home activities and learn paper craft, parachute-making and more, and enjoy the fascinating showcase of tertiary projects in the 'Innovation Now' display.

Complimentary to ticket holders for *Da Vinci: Shaping the Future*.

All information is correct at the time of print and is subject to change.

## FAMILY-FRIENDLY ACTIVITIES

There's a great range of child-friendly activities in *Da Vinci: Shaping the Future* which can keep children and parents occupied for hours! From interactive exhibits, which have been integrated into each exhibition theme, to engaging iPad games, take-home activities and creative hands-on workshops, there is something to suit all ages and learning styles.

The 'Inspired by da Vinci' activity space at the end of the exhibition is a gallery dedicated to hands-on learning. Make your own platonic shape and mini-parachute to take home, use novel construction materials to design and build your own structure, and enjoy the fascinating showcase of tertiary projects in the 'Innovation Now' display.

All family-friendly activities are complimentary to ticket-holders for *Da Vinci: Shaping the Future*.



## CONSERVATION OF ARTIFACTS



You may have noticed art handlers wearing plastic gloves. That is because the oil on our hands causes a chemical reaction with almost anything we touch. For artifacts, this can have a deteriorating effect.



Most museums practice the 'NO FLASH' photography rule. The ultra violet component in flash generates heat and light, both of which are damaging to artifacts. This is why low light levels are prevalent in the display of fragile artifacts, such as drawings.



Although taking photographs is now seen as normal practice, it is still prohibited in certain areas of the museum, such as the galleries that display original paintings of the School of da Vinci and pages from the *Codex Atlanticus*.

As you walk through our galleries, you will realise that some of them are especially cool. Artifacts must be kept at certain temperatures and relative humidity to protect them from deterioration.

Want to know more about collection conservation guidelines? Please visit <http://icom.museum/professional-standards/standards-guidelines/>

# VENERANDA BIBLIOTECA AMBROSIANA

Founded in 1607 by Cardinal Federico Borromeo in Milan, the Veneranda Biblioteca Ambrosiana is one of the most ancient and prestigious cultural institutions in Europe.

# THE FOUNDATION CARDINALE FEDERICO BORROMEO

Established in 2008, the Foundation supports and promotes the Veneranda Biblioteca Ambrosiana and its rich heritage to a global audience, allowing for greater art and cultural exchanges through the exhibition of works at renowned museums around the world.

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