

FRAME 01

Leonardo - The gentle genius

Exhibit to commemorate the 500th anniversary of the death of Leonardo da Vinci
(1452-1519)

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FRAME 02

Leonardo - Early life

BOX 1.

Leonardo was born out of wedlock, from a notary and a peasant woman, on the 15th April 1452 outside the town of Vinci, near Florence. He spent his early childhood in the countryside, before moving to his father's homestead. There, he had access to a library, albeit he never actually received a proper formal education.

BOX 2.

Leonardo worked, for five years during his teens, as an apprentice to the famous sculptor and painter Andrea del Verrocchio, in the artist's Florence studio. In his early thirties he began working - as an architect, engineer, sculptor and painter - for the Governor of Milan, duke Ludovico Sforza also known as Ludovico il Moro. He lived in Milan until 1499, when the Sforzas were forced to flee due to the occupation of the duchy by French troops.

QUOTE

'A life well spent is long'

CAPTIONS

1. - Self portrait, 1515, Sanguine on paper, Royal Library, Turin;
2. - Vitruvian man, 1490, Ink on paper, Gallerie dell'Accademia, Venice;
3. - Annunciation, 1472 – 1475, Oil and tempera panel painting, Galleria degli Uffizi, Florence.

FRAME 03

Leonardo – Later life

BOX 1.

Leonardo wandered between Venice and Mantua, Florence, Milan and Rome working on paintings, military installations, engineering works and novel scientific studies. Among the latter were the famous studies on the flight of birds. In 1516, following the death of his then patron Giuliano de' Medici, Leonardo accepted a move to the court of king Francis I of France. He died on the 2nd of May 1519, aged 67, near the town of Amboise.

BOX 2.

Charming and exuding charisma, as reported by his contemporaries, he was kind and generous: well-liked by all. Being naturally sharp-witted, he captivated Ludovico il Moro by means of his brilliant conversation skills. This Duke himself described him as a surprisingly handsome man, as well as a man of strong constitution. He loved to wear simple clothes with unusual, but elegant, colour combinations.

QUOTE

“...showed withal how he had offended God and mankind in not having laboured at his art, as he ought to have done.” (Giorgio Vasari)

CAPTIONS

1. - Madonna Litta, 1490, Tempera panel painting, Hermitage Museum, Saint Petersburg;
2. - Bacchus, 1510-1515, oil panel painting transferred to canvas, Louvre Museum, Paris;
3. - The Virgin and Child with St. Anne, 1510-1513, oil on canvas, Louvre Museum, Paris;
4. - Portrait of Leonardo, attributed to Francesco Melzi, 1518, Sanguine on paper, Royal Library, Windsor.

FRAME 04

Leonardo and Painting

Box 1.

Leonardo is famous above all for his paintings, masterpieces such as Mona Lisa and the Last Supper, which have influenced artists of all generations. He considered painting as a “science” capable of representing nature in the simplest and most truthful manner, as well as a tool to represent his scientific discoveries. For example, “sfumato” and “chiaroscuro” originate from his studies of optics and anatomical dissections.

Box 2.

Leonardo would often delay delivering his paintings because he was a perfectionist, but also due to his experimenting with new techniques and his numerous intellectual interests. It took him over three years to complete the Last Supper and more than five for the Mona Lisa. Leonardo’s prioritising of quality over quantity is confirmed by the small number of masterpieces he left behind.

QUOTE

“A painting is poetry that can be seen and can’t be heard, poetry is a painting that can be heard but can’t be seen. Therefore these two poems, or you may say paintings, have exchanged the senses that would allow them to penetrate the intellect”

Captions

1. - The Last Supper (Cenacolo), 1495-1498, oil tempera emulsion, lacquer and oils on plaster, Santa Maria delle Grazie, Milan;
2. - Mona Lisa (La Gioconda or Monna Lisa), 1503-1504, oil on poplar panel, Louvre Museum, Paris;
3. - Lady with an Ermine, 1488-1490, oil on panel, Cracow National Museum, Cracow.

FRAME 05

Leonardo and Sculpture

Box 1.

Leonardo applied himself to sculpting from a young age, as proven by his own statements, as well as other sources. With great commitment and enthusiasm, he designed the huge, bronze equestrian statue of Francesco Sforza (1489 - 1494) and the monument to Marshal Trivulzio (1506-11). Unfortunately, these two great projects of his were never realised: at the time the bronze was needed to make weapons.

Box 2.

Numerous sketches, annotations, texts and drawings from the Madrid Codices (I and II), demonstrate the extreme care he put into anatomical details and depiction of motion, as well as the audacity of his ideas. His profound expertise in the bronze fusion techniques, allowed him to formulate innovative solutions to achieving the melting as a single piece, of the bronze horse.

QUOTE:

I do not find differences, between painting and sculpture, other than the sculptor carries out his endeavours through greater body exertion than the painter, and the painter carries out his endeavours through greater mental exertion.

CAPTIONS

1. - Monument of Francesco Sforza, Study of the horse, c. 1490, Royal Library, Windsor;
2. - Monument to Francesco Sforza, Study on creating the horse head, 1482-1493, Biblioteca Nacional, Madrid;
3. - Study on creating the equestrian monument to Marshal Trivulzio, Royal Library, Windsor.

FRAME 06

Leonardo and Architecture

Box 1.

Leonardo da Vinci's art, inventions and engineering are synthesized in his architectural designs. He designed buildings, bridges and even cities. Besides depicting the external appearance of a building, his designs also represent its function.

His sketches also include details of key architectural elements such as, doors, windows and causeways. In certain cases, he also proposes unusual and innovative solutions ahead of his times such as, a four-way staircase and a spiral staircase.

Box 2.

Leonardo developed for Ludovico il Moro, plans for the "ideal city". This idea arose following the devastation brought onto Milan by a plague epidemic which exterminated almost a third of the city population. He planned a city built on several storeys, with wider streets and health services, in order to prevent the spread of diseases. He also planned for a network of canals to be used for both, commercial purposes and as a sewerage system.

QUOTE:

"The arch is nothing but strength caused by two weaknesses, because the arch of a building is made of two parts of a circle each one of which, weakest by itself, craves to fall, and opposing each other ruination, the two weaknesses are converted into one strength"

CAPTIONS

1. - Plans for a multi-level city, Institut de France, Paris;
2. - Plans for a church with dome, Institut de France, Paris;
3. - Prospective Study for the Adoration of the Magi, c. 1481, Department of Prints and Drawings of the Uffizi, Florence.

FRAME 07

Leonardo and Engineering (flight)

Box 1.

Leonardo's fascination with flight yielded several studies, including the Codex on the flight of birds of about 1505 birds, nowadays kept at the Royal Library in Turin. He designed several mechanical flight devices, including the parachute, the aerial screw and, in 1488, the man-powered "Ornithopter". The latter was probably the first human attempt at designing a heavier-than-air flying object.

Box 2.

The parachute and the aerial screw are two of Leonardo's ingenious intuitions which are described in the Atlantic Codex. Only the pyramidal shape with square base discriminates Leonardo's parachute from the modern ones. Its fabrication, with starched linen canvass, ensures its firmness and impermeability. The "aerial screw" is a wooden device with rope and starched canvass, conceived to provide aerial lift by means of a screw: a true precursor of the helicopter.

QUOTE:

"Once you have known flight, you shall walk the earth looking up at the sky, because there you have been and there you shall wish to return"

CAPTIONS

1. - Codex on the Flight of Birds, Royal Library, Turin;
2. - Study on the parachute, Atlantic Codex, Pinacoteca Ambrosiana, Milan;
3. - Study on the aerial screw, Atlantic Codex, Pinacoteca Ambrosiana, Milan;
4. - Sketches of the Ornithopter, 1488, Royal Library, Turin.

FRAME 08

Leonardo and Engineering (war)

BOX 1.

Although Leonardo wrote of his aversion for the horrors of war, military engineering was one of his greatest passions. The many designs of lethal weaponry parallel his studies of bridges and fortifications.

By the year 1487 he had anticipated the armed tank by some centuries by designing an armoured vehicle: a metal wagon, placed on a revolving platform and capable of moving in any direction.

BOX 2.

Leonardo designed the first machine gun, called “organ with 33 pipes”. It involved three rows of 11 muskets, each musket pointing to alternate directions. He also invented an enormous, 24 metre-wide, crossbow designed to shoot rocks or bombs, instead of bolts. Finally, he also designed a robotic knight, activated by gears and cables, thus combining his scientific passion with his military interests.

QUOTE:

“Practice must always be founded on sound theory”

CAPTIONS

1. - Plan for an armoured vehicle, 1485, Arundel Codex, British Library, London;
2. - Plan for the “organ with 33 pipes”, 1488-1489, Atlantic Codex, Biblioteca Ambrosiana, Milan;
3. - Design of giant crossbow (Leonardo’s crossbow), 1488-1489, Atlantic Codex, Biblioteca Ambrosiana, Milan;

FRAME 09

Leonardo and Anatomy

Box 1.

Leonardo studied the human body in a meticulous and innovative manner. He represented these studies in over 800 anatomical drawings, depicting human muscles, tendons and skeleta. He acquired a detailed knowledge from the dissection of 30 male and female cadavers of various ages. The artist created detailed drawing of various parts of the body including, heart, arms and internal organs and described their functions.

Box 2.

As he observed that the structure of the heart was made of muscle, he was first in identifying the heart four chambers. By means of his anatomical studies, he was able to describe the combined and antagonistic action of muscles. Leonardo discovered the existence of capillary vessels 150 years before Harvey did so. He also extended his studies to the anatomy of animals. He died before he could compile the complete results of his studies, which were eventually published in 1680 in "A Treatise on Painting".

QUOTE:

Man spends the first half of his life wrecking his own health and the second half looking for a cure.

CAPTIONS

1. - Bones, muscles and tendons of the hand, 1510-1511, Royal Library, Windsor;
2. - Throat, muscles of the leg and muscles of the neck, Royal Collection, London;
3. - Studies of the foetus in uterus, Royal Library, Windsor.

FRAME 10

Leonardo and Botany

Box 1.

Vasari reports on Leonardo's accurate studies of flowers, plants and animals. These are documented by drawings and the copious notes detailing his scientific observations. These can be observed mostly in works such as the Virgin of the Rocks and the Annunciation. We don't know if a hypothetical treatise on plants was ever compiled or if it was lost but, what was never lost was his love and respect for the works of nature.

Box 2.

Leonardo was a pioneer of botany as linked to mathematics, he observed the geometrical arrangement of leaves on branches so that overlapping is minimized and light exposure is maximized. By applying the empirical method, he discovered the correlation between the number of rings in the trunk and the age of the tree. Science confirmed his hypotheses a century later.

QUOTE:

"More difficult it is to interpret the works of nature than the book of a poet"

CAPTIONS

1. - Virgin of the Rocks, 1486, Louvres Museum, Paris;
2. - Geometric forms and botanical design, c. 1490, Institut de France, Paris;
3. - Study of *Ornithogalum umbellatum* (garden star-of-Bethlehem), 1505, Royal Library, Windsor;
4. - Fruit, vegetables and other studies, 1487 - 1489, Institut de France, Paris.

FRAME 11

Leonardo and music

Box 1.

Leonardo nurtured music with the same intensity he devoted to his artistic and scientific interests. As reported by Vasari, he invented instruments, composed musical pieces and sang and played them delightfully. Leonardo even won musical contests at the court of Ludovico il Moro, with the accompaniment of a silver lyre he had constructed. Unfortunately these compositions were not handed down.

Box 2.

An excellent musician and maestro, he studied acoustics before constructing the various musical instruments he invented. Among these are the glissando flute, an instrument with a single continuous slit designed to produce infinite tonal intervals, an accordion and the famous viola organista, an instrument whose string were activated by means of a friction belt to make the sounds of an ensemble of bowed instruments.

QUOTE:

“Music is the representation of invisible things”

CAPTIONS

1. - Riddle with music notations, late 1480;
2. - Drawing of a bell, late XV - early XVI, Foster II Codex, Victoria Albert Museum, London;
3. - Drawing of a mechanical drum, Atlantic Codex, Biblioteca Ambrosiana, Milan;
4. - Drawing of a viola organista, 1488-1489, Institut de France, Paris;

FRAME 12

The lesser-known Leonardo

BOX 1.

Because of the times when they were conceived, many of Leonardo's projects appear unlikely, although they relate to ideas and objects that today are in common use. As a matter of fact, Leonardo invented the first usable versions of scissors, temporary bridges and diving suits. Further, he constructed the first odometers, to measure distances travelled, and wind gauges.

BOX 2.

He used grotesque sketches to represent his acute observations of facial features. Vasari narrates of Leonardo's fascination with human heads of extraordinary shapes and faces with strange features. His researches in aesthetics were not limited to what was considered beautiful or harmonious, thus finding beauty even in the strangest and extravagant depictions.

QUOTE:

"Acquire in your youth that which will restore the ravages of your old age. And if you understand that knowledge is the food of old age, strive to gain it in youth, so that old age will not be denied nourishment."

CAPTIONS

1. - Sketch of wind gauge, Atlantic Codex, Biblioteca Ambrosiana, Milan;
2. - Study for a diving suit, Atlantic Codex, Biblioteca Ambrosiana, Milan;
3. - Eight caricatures, c. 1490, Royal collection, Windsor;
4. - Two grotesque images, Galleria degli Uffizi, Florence;

FRAME 13

Leonardo's writings (the Codices)

BOX 1.

Throughout his life Leonardo studied the world around him, annotating his observations in some 13,000 pages of drawings and observations, all on notebooks. They can only be read easily by placing the sheets in front of a mirror, because he wrote from right to left in a reverse script. These documents were distributed amongst his acquaintances after his death and only then they were published, but separately.

BOX 2.

Some of his Codices, i.e. collections of the most important documents, are in Italy. Milan holds both, the "Atlantic Codex" - the largest body of Leonardo's writings and drawings - at the Biblioteca Ambrosiana and the Trivulziano Codex, at the same institution. The Codex on the Flight of Birds is kept in Turin, at the Royal Library. Windsor, Paris, London and Madrid store other relevant collections.

QUOTE:

"The Almighty sells all goods to us for the price of labour."

CAPTIONS

1. - Page from the Leicester Codex (also known as the Hammer Codex), 1506-1510, Bill Gates Private Collection.
2. - Page from the Atlantic Codex (Codex Atlanticus), 1478-1518, Biblioteca Ambrosiana, Milan;
3. - Page from the Trivulziano Codex (Codex Trivultianus), 1478-1493, Castello Sforzesco, Milan.

FRAME 14

Leonardo and Philately

BOX

Philately or stamp collecting is one of the most common and authoritative forms used to express appreciation for the stature and the works of a celebrity. Leonardo's stature is so important and emblematic that it crosses all borders: Leonardo is often represented on various countries stamps. This selection is one of many ways to show the world-wide fame still attached to Leonardo and his works.