

The Renaissance

During the 15th and 16th centuries, art and learning flourished in cities and at royal courts in many parts of Europe, but especially in Italy. The works of the exceptional individuals who made this “renaissance” are among the marvels of the world.

The Renaissance was part of an ongoing process that changed the shape of European culture over many centuries. The term “Renaissance” refers to a “rebirth” of interest in the legacy of ancient Greece and Rome, but the texts of pre-Christian writers had in fact been copied and read in Christian Europe at least from the time of Charlemagne (747–814 CE; see pp.188–89). The paintings of artists such as Giotto, and the writings of Dante, Petrarch, and Boccaccio in the 14th century are among many works that prefigured the Renaissance. The period of the Renaissance is, however,

conventionally dated to around 1450–1550, as a time of exceptional curiosity and inventiveness in European art, architecture, ideas, and technology.



Early book
Baldassare Castiglione's *Book of the Courtier* (1528) was a guide to behavior at a Renaissance court.

Wealth and culture

Economic prosperity was the basis for the Renaissance. Art and learning were luxuries that could be afforded through the increasing wealth of a social elite. The major centers of Renaissance cultural activity were the thriving city-states of Italy, such as Florence, Milan, and Venice, prosperous cities in Germany, and the Flemish Netherlands (see pp.208–09, 276–77). Grown rich on the

proceeds of banking, trade, and manufacture, cities spent freely on cultural luxuries out of civic pride or to enhance the prestige of local rulers such as the Medici family in Florence or the Sforzas in Milan. Wealthy kings such as Matthias Corvinus in Hungary and Francis I in France also patronized artists and intellectuals as a way of advertising their own power and status. Renaissance popes such as Alexander VI (pope from 1492 to 1503) and Julius II (1503–13) made Rome another focus of excellence, lavishing money raised from their Christian flock on extravagant artistic and architectural projects such as St. Peter's Basilica.

The Classical world

The Renaissance was still far from the modern world of science and reason—astrology and alchemy (see p.266) were major fields of study, and one



Dante standing before Florence

Domenico di Michelino painted this image of the poet Dante alongside his native city, Florence. Florence was home to many artists, including architect Brunelleschi, who designed the famous cathedral dome, visible on Dante's left.

Humanist group

Painted by Domenico Ghirlandaio around 1490, this detail from a fresco in the church of Santa Maria Novella in Florence shows a group of humanist scholars including Marsilio Ficino, head of the Platonic Academy.

Michelangelo's David

This massive marble statue was made by Michelangelo for the city of Florence in 1504. Its celebration of the nude male form reflects the influence of classical antiquity, but its subject is the biblical hero David.

of the period's most famous books was *Malleus Maleficarum* (1486), a treatise on hunting witches. Renaissance intellectuals and artists were in a sense backward-looking; self-consciously seeking to learn from and emulate the achievements of the ancient world and to reconcile the best of the wisdom of ancient Greece and Rome with their Christian faith. But they



were also inspired by a confident belief in progress through free enquiry and fresh inventions.

Humanism

The loose international network of scholars who spearheaded the Renaissance are known as “humanists,” reflecting the degree to which they placed humankind, rather than God, at the center of their world-view. A typical treatise published by humanist Pico della Mirandola in 1486 was entitled “On the Dignity of Man.” These scholars studied ancient texts more critically than had been done before, reading in Greek as well as in Latin, which had long been the

BEFORE

In medieval times, some artists and thinkers were already breaking with tradition.

THE FIRST RENAISSANCE

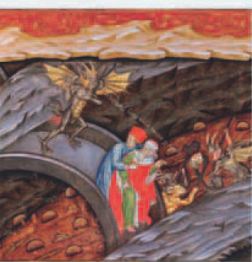
Historians have identified an early “renaissance” in 12th century Europe. **Contact with the Muslim world and the Byzantine Empire** gave access to the works of Islamic and ancient Greek philosophers and scientists << 158–59.

GIOTTO

Florentine artist Giotto di Bondone (c. 1267–1337) initiated a **revolution in European painting** a century before the Renaissance proper. His religious frescoes broke with the conventions of Christian art, showing realistic figures engaged in dramatic scenes.

DIVINE COMEDY

In his epic *Divine Comedy*, describing a journey through Hell and Purgatory to Paradise, Florentine poet Dante Alighieri (1265–1321) combined the classical past with a medieval Christian view of the universe.



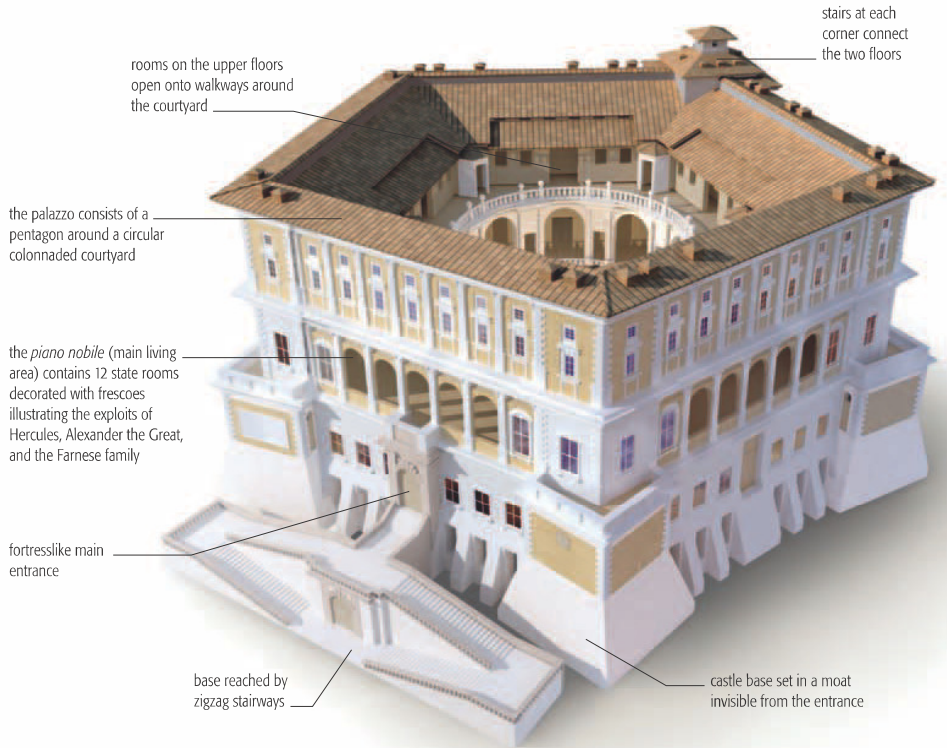
DANTE'S INFERNO



language of the educated in Europe. They also strove to establish an accurate text for the Bible—the famous humanist Erasmus regarded his Greek version of the New Testament as his major achievement. Humanists were often employed as tutors for the children of the rich and powerful, and they devised influential systems of education, focusing on subjects such as Latin, history, grammar, and rhetoric.

Feats in architecture

Architecture was an area in which the emulation of antiquity was most fruitful. One of the first great achievements of the Renaissance was the dome built for the cathedral in Florence by Filippo Brunelleschi. Brunelleschi had studied the ancient ruins in Rome, including the domed Pantheon (see pp.110–13), before embarking on the work. Completed in 1436, it was the largest dome ever built, a nearly miraculous feat of engineering as well as an aesthetic masterpiece. Domes were established as a crowning feature of the most ambitious Renaissance buildings, including St. Peter's Basilica in Rome,



while antique-style columns, arches, and statues (see pp.116–17) abounded in palaces, villas, and churches.

Villa Farnese
Commissioned by the wealthy Farnese family, the Villa Farnese in Caprarola is considered a masterpiece of late Renaissance architecture. Architect Giacomo Barozzi de Vignola worked on the building from 1559–73.

Artists and art

In painting and sculpture, the influence of ancient Greece and Rome was evident, for example, in the interest in an ideal version of the naked human body, seen especially in the painting and sculpture of Michelangelo Buonarroti. Artists also added classical pagan mythology to their subject matter (see pp.142–43), although usually for the private enjoyment of wealthy connoisseurs. Christian and biblical themes predominated in art for public display. As well as a desire to match the art of antiquity, however, there was a novel drive to represent the visual world with illusionistic precision. Flemish artists such as Jan van Eyck led the way with oil paintings that represented human features and the surfaces of objects with astounding accuracy of detail. In the second half of the 15th-century, Italian artists such as Piero della Francesca and Andrea Mantegna pioneered the use of linear perspective, intended to create a perfect illusion of three-dimensional space on a flat

CLASSICAL SCHOLAR (1466–1536)

ERASMUS

Dutch humanist Gerhard Gerhards, better known by his pen-name Erasmus, was ordained as a priest but lived as an independent scholar. In works such as *In Praise of Folly* (1509), he criticized the corruption of the Church, advocating a life governed by firm moral and religious principles. Erasmus's writings were among the first printed books to achieve a wide readership and they helped prepare the way for the Protestant Reformation (see pp.256–57).



The Birth of Venus
Painted around 1483, Sandro Botticelli's famous painting is unusual in having an overtly pagan (non-Christian) theme drawn from classical mythology. This was possible because it was produced for Lorenzo de Medici's private villa, not for public display.

Sistine ceiling
Commissioned by Pope Julius II in 1508, the ceiling of the Sistine Chapel in the Vatican is one of the masterworks of Florentine genius Michelangelo Buonarroti. Depicting scenes from the Old Testament, the frescoes took four years to complete.



“Our century, like a **golden age** has restored... the liberal arts.”

MARSILIO FICINO, FLORENTINE PHILOSOPHER, 1492

» surface. Associated with geometry and optics, painting was part of the mainstream of intellectual development in the Renaissance.

Overtaking the ancients

The striving for an exact depiction of the world in art was related to a wider trend toward the close observation of nature, rather than reliance on received wisdom. This produced clear advances on the knowledge inherited from the ancients. For instance, the dissection of corpses by the Brussels-born anatomist Andreas Vesalius at the University of Padua allowed the long-accepted views of Galen, the revered medical authority of antiquity, to be superseded. The geographical notions of the ancient Greek Ptolemy were corrected thanks to the efforts of European explorers and mapmakers. Nicolaus Copernicus challenged the current Christian view of the universe by asserting that the Sun, not Earth, was at the center of the solar system (see p.266).

Craftsmanship

Underpinning the achievements of the celebrated geniuses of the Renaissance was a widespread culture of practical ingenuity and skilled craftsmanship. Fine craft objects, such as the elaborate suits of armor made by the metalworkers of Nuremberg and Augsburg, or the products of Venetian or Florentine goldsmiths, were collected as avidly as any painting or sculpture. More practically, it was during this time that gunpowder weapons came into general use in European warfare

Timepiece

The first clocks marked with minutes appeared in the 1570s (see below), but truly accurate timekeeping was not possible until pendulum clocks were introduced in the 17th century.



A dagger carries an abbreviated Latin inscription, AET. SVAE 29. This gives the age of the subject, France's ambassador to England Jean de Dinteville, as 29.

Jean de Dinteville is depicted with his friend, French envoy Georges de Selve. The objects between them suggest their wealth and learning.

The celestial globe, showing the constellations, was the latest model, made by German astronomer Johannes Schöner. Its presence echoes the terrestrial globe below.

The scientific instruments are devices for navigation and time measurement. They are resting on a valuable Turkish rug, imported from the Ottoman Empire.



The Ambassadors

Painted by German artist Hans Holbein at the court of English king Henry VIII in 1533, this painting shows the Renaissance's fascination with scientific instruments as well as its taste for hidden meanings and visual tricks.

In the foreground is a distorted representation of a skull, an obvious symbol of mortality. The skull appears correctly if viewed from a precise low point to the side of the painting.

The open book is a Lutheran hymnal, open at the hymns "Come Holy Ghost" and "Man Wilt Thou Live Blessedly." It probably hints at the religious conflicts of the Reformation.

(see pp.272–73). Mechanical clocks, which had first started to appear in the towers of Italian cities in the 14th century, became more widespread. Navigational instruments such as magnetic compasses were essential tools of expanding seaborne trade.

The printed word

By far the most influential product of European enterprise, however, was the printing press. Fresh thinking became readily available through the relative speed with which

new printed books could be produced and distributed. Literature in the vernacular—everyday languages such as English, Italian, and French, rather than scholarly Latin—received an enormous boost. Humanist scholars were able to circulate accurate, standardized versions of major texts. The most important of these was the Bible. Providing people with direct access to what was regarded as the word of God was a prime cause of the great religious upheaval of the Reformation (see pp.256–57).

Political turmoil

The cultural developments of the Renaissance took place within a context of acute political and religious conflicts. The Italian city-states that were such dynamos of creativity were also the site of vicious power struggles. In Florence the dominant Medici family was twice driven into exile by popular uprisings, in 1494 and 1527, and twice restored to power. Civil conflicts were complicated by the intervention of the armies of the kings of France and the Habsburg emperors,

who fought one another in Italy in a series of wars from the 1490s to the 1550s. Rome was laid waste by an imperial army in 1527. Observing these conflicts at close hand inspired

Florentine Niccolò Machiavelli to write his cynical political handbook *The Prince* in 1513 (published in 1532), advising the wise ruler to use any methods, however immoral, to stay in power. Whether or not this was good advice, it certainly described the normal practice of Renaissance political leaders. Machiavelli's model for *The Prince* was the ruthless Cesare Borgia (1476–1507), the illegitimate son of Pope Alexander VI, who was suspected of many murders, including that of his elder brother.



Niccolò Machiavelli
Author of *The Prince*, Machiavelli based his pragmatic political philosophy upon his experiences as a diplomat in the service of Florence.

15th century. Much of the thrust of Renaissance humanism, especially in the works of Erasmus, consisted of an attack on the ignorance and corruption of the clergy, including successive popes, and calls for a return to a purer form of faith. On the other hand, Renaissance artists, as purveyors of luxury goods sometimes with pagan connotations, found their works under attack from religious reformers.

Religious revival

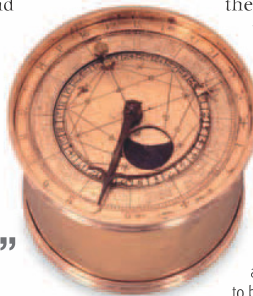
Between 1494 and 1498, a radical monk, Girolamo Savonarola, won control of Florence and led an orgy of book-burning and destruction of works of art in his campaign against wealth and corruption. One of the main provocations for the Reformation that challenged papal authority from 1517 was outrage at the money being spent on commissioning men such as Raphael and Michelangelo to beautify Rome. The atmosphere



Mercator map

Representing the latest knowledge of geography, this map was created by Flemish cartographer Gerardus Mercator in 1587. Mercator's projection, his famous method for representing the globe on a flat surface, was still in widespread use four centuries later.

of religious revival in the Reformation and the Counter-Reformation (see pp.258–59) was broadly hostile to the spirit of free inquiry and invention that animated the Renaissance. In the second half of the 16th century, both zealous Protestants and Catholics cracked down on the “free-thinking” that undermined their religious orthodoxies. But in the longer term, there was to be no turning back from the development of scientific and philosophical inquiry, the dissemination of knowledge and culture in printed books, and innovation in the arts.



Renaissance clock
The introduction of spring-powered timepieces at the start of the 16th century allowed smaller portable clocks such as this to be made for domestic use.

Challenge to the Church

Religious disputes grew out of a discontent with the state of the Church that was simmering throughout the

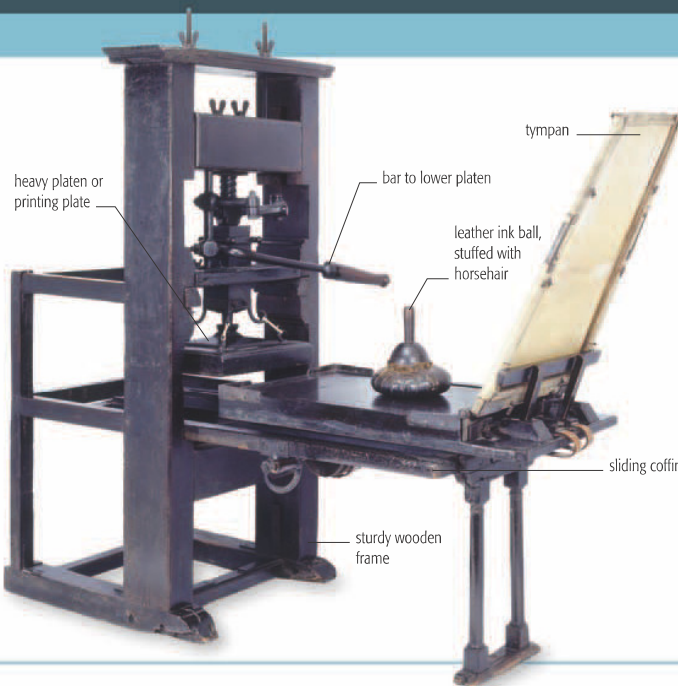
“It is much safer for a prince to be **feared than loved** if he is to fail in one of the two.”

NICCOLO MACHIAVELLI, FROM “THE PRINCE,” 1532

INVENTION

THE PRINTING PRESS

The first effective press for printing books using movable metal type and oil-based ink emerged in 15th century Europe. Its invention is attributed to Johannes Gutenberg, a German artisan and entrepreneur. The Bible that he published in 1455 was the first book printed in this way. The new technique spread, with presses established in Paris in 1470 and London in 1476. The most prestigious early printer, Aldus Manutius, set up the Aldine Press in Venice in 1494. By 1500 some 35,000 different books were in print. Much cheaper than hand-written works, printed books revolutionized the diffusion of knowledge.



“A spring of truth shall flow from it..”

GUTENBERG, 15TH CENTURY

AFTER

Renaissance thinkers came in conflict with the Church, but their achievements lived on.

RELIGIOUS REACTION

In 1542 the Catholic Church established the Congregation for the Doctrine of the Faith in Rome as a body to **suppress ideas contrary to the Church's teaching**. In 1564 Pope Pius IV established an **Index of Proscribed [banned] Books**, which included the works of Erasmus and Copernicus. Giordano Bruno, a wide-ranging thinker in the Renaissance tradition, was **burned at the stake** in Rome after the Congregation found him guilty of heresy in 1600.

ART AND ARCHITECTURE

Through the 16th century, European painting, sculpture, and architecture developed in a less naturalistic direction, **valuing expression above harmony and true proportion**. This more artificial style has been labeled “Mannerism” by art historians. Mannerism evolved into the exuberant Baroque style dominant in the 17th century.

GALILEO

Working in Italian cities including Pisa, Padua, and Florence, Galileo Galilei (1564–1642) built on the **Renaissance spirit of inquiry and observation** to lay the foundations of the Scientific Revolution **266–67** >>>

LATE RENAISSANCE

In some countries the Renaissance is generally agreed to have flowered at a later date. In both England and Spain, the height of the Renaissance did not occur until the second half of the 16th century and early 17th century, when writers, musicians and artists such as Thomas Tallis, Edmund Spenser, William Shakespeare, El Greco, and Miguel Cervantes all flourished.

ARTIST AND INVENTOR Born 1452 Died 1519

Leonardo da Vinci

“All our **knowledge** has its origins in our perceptions.”

LEONARDO DA VINCI

One of the great geniuses of the Italian Renaissance (see pp.250–53), Leonardo was the illegitimate son of a peasant woman; his father married a Florentine heiress eight months after his birth. Raised in the countryside outside Florence, he received little formal education, and only learned Latin, the basic accomplishment of an educated man of his day, in adulthood. Instead, he studied the animals and landscapes around him. It was characteristic of Leonardo that, at a time when artists and philosophers were fixated on learning from the classical past, he concentrated on direct observation of the human and natural world.

It is possible to present Leonardo's career as that of an ambitious artisan and entrepreneur, a poor boy making

good use of opportunities for profit and advancement. He had the good fortune to be born near Florence, home to the finest concentration of painters, sculptors, and architects in 15th-century Europe. At about age 14, he was apprenticed to Andrea del Verrocchio, a leading sculptor whose studio had recently branched out into painting. Leonardo's outstanding talent, especially in the relatively new medium of oil painting, was unmistakable, and in his mid-20s he was able to set up a studio of his own.

Leonardo's paintings are now his most famous achievement, but in the 15th century, even with his own studio, an artist was only a craftsman touting for commissions.

The next step up was to be taken on by a prince as a member of his household. Thus, in about 1482,

Leonardo proposed his services to Ludovico Sforza, the ruler of

Ducal commission

This document from Cesare Borgia, lord of the Romagna, dates to 1502, commissioned “architect and engineer” Leonardo to survey palaces and fortresses.



Florence Cathedral

During his apprenticeship in Florence, Leonardo helped place the orb and cross on top of the city's famous cathedral dome.

ioi Leonardo da Vinci

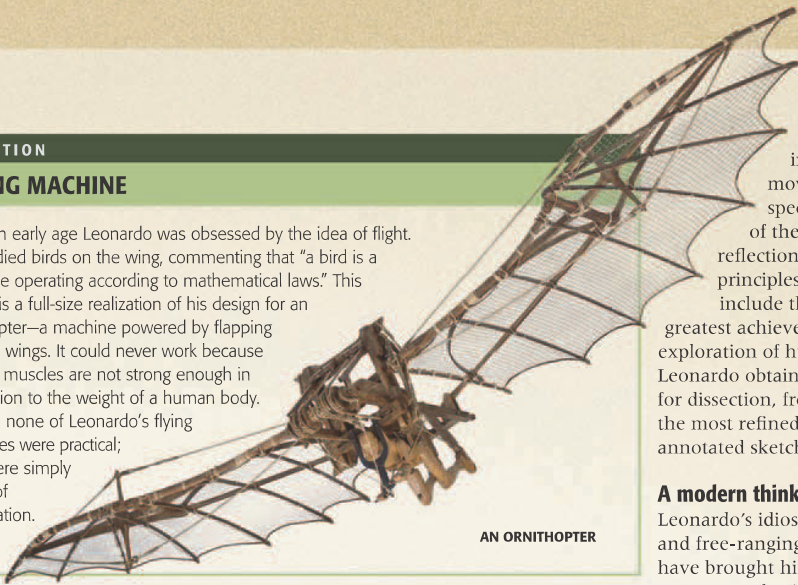
Self-portrait

Leonardo drew this haunting self-portrait when he was in his mid-60s, three or four years before his death. The long hair and beard give him the air of a traditional sage or seer.

INVENTION

FLYING MACHINE

From an early age Leonardo was obsessed by the idea of flight. He studied birds on the wing, commenting that “a bird is a machine operating according to mathematical laws.” This model is a full-size realization of his design for an ornithopter—a machine powered by flapping artificial wings. It could never work because human muscles are not strong enough in proportion to the weight of a human body. Indeed, none of Leonardo’s flying machines were practical; they were simply flights of imagination.



AN ORNITHOPTER

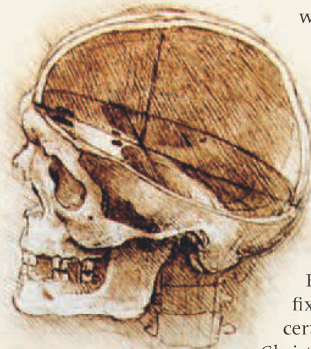
Milan. Judging that the warlike Milanese ruler might have more need of a military engineer than of an artist, Leonardo listed at length the “infinite variety of machines for attack and defense” that he could create, including armored cars, portable bridges, and cannons, before mentioning as an afterthought his skill at painting and sculpture.

A man of talent

Leonardo’s all-around skills, including his ingenuity at designing machines, were exactly what Renaissance princes were looking for, and he rarely lacked employment for the rest of his life. Even at the end of his career, he was engaged by the French monarchy as firstly “engineer” and then “painter and architect.” Leonardo’s boundless imagination and experimentation led to many failures and disappointments. For Ludovico Sforza he designed one of the largest equestrian statues ever conceived, but it is unlikely that it could have been cast and only a clay model was built. His *Last Supper*, considered one of the ultimate masterpieces of Western art, was painted using an innovative technique that meant it started decaying almost as soon as it was finished. In the service of the ruler of Florence from 1503, he produced a

Anatomical drawing

Leonardo’s sketch of a cross section of a human skull showed impressive anatomical details, which are due to the autopsies he preformed.



grandiose project for a canal linking the city to the sea, which was never built, and he also undertook to paint the Anghiari fresco for the Palazzo Vecchio, which was never completed. The machines he dreamed of were ingenious and forward-thinking but mostly impractical.

In fact, much of Leonardo’s most remarkable work consisted of writings and sketches in his private notebooks, material that remained unpublished until long after his death. It was in these notebooks that Leonardo’s fertile, inquiring, adventurous mind and eye found full expression. The pages are packed with an astonishing number of ideas, observations, projects, and

experiments. They include studies of the movement of water and speculations on the nature of the cosmos, as well as reflections on fossils, and on the principles of flight. They also include the record of one of his greatest achievements, the systematic exploration of human anatomy. Leonardo obtained about 30 corpses for dissection, from which he produced the most refined, accurate, and annotated sketches.

A modern thinker

Leonardo’s idiosyncratic personality and free-ranging mind could easily have brought him into conflict with the authorities. His homosexuality was both a sin and a crime in the society he inhabited, even if it was not generally disapproved of in sophisticated circles. Dissecting corpses was of dubious legality and almost got him into trouble in Rome in about 1515. He seems to have had no fixed religious beliefs and certainly did not allow

Christian doctrine to set limits to his thinking. In his declining years, Leonardo was respected, even revered. Around 1515 he appears to have suffered a stroke. Unable to undertake major works, he found a sympathetic patron in the French King Francis I, who appreciated the prestige of having such a renowned figure in his employ. It is reported that Francis said he could never believe there was another man born in this world who knew as much as Leonardo. Few of Leonardo’s paintings have survived, but their scarcity has if anything enhanced his legendary status.

“Art is **never finished**, only abandoned.”

LEONARDO DA VINCI

TIMELINE

- **April 15, 1452** Born near Vinci, a small town outside Florence, the illegitimate son of a peasant woman and a local lawyer.
- **1466** Apprenticed to Andrea del Verrocchio.
- **April 1476** Accused of homosexual activity, an offense that could carry the death penalty.
- **1477** Sets up his own studio in Florence.
- **1481** Commissioned to paint the *Adoration of the Magi* for the monastery of San Donato.
- **1482** Enters the service of Ludovico Sforza, known as Ludovico il Moro, the ruler of Milan.
- **April 25, 1483** Commissioned to paint an altarpiece for the church of San Francesco in Milan, now known as the *Virgin of the Rocks*.
- **1487** Starts to write a notebook, which he fills with sketches and his imaginative thoughts.
- **1490** Engages Giacomo Caprotti, known as Salai, as a young assistant who almost certainly becomes his long-term lover.
- **1491** Paints a portrait of Ludovico’s mistress, now known as *The Lady with the Ermine*.
- **1492** Produces the famous drawing of the Vitruvian Man, showing the idealized proportions of the human body.
- **1498** Completes fresco of *The Last Supper*.
- **1502** Enters the service of the lord of the Romagna, Cesare Borgia, as a military architect and engineer.
- **1503–04** Returns to Florence and paints the *Mona Lisa*, probably a portrait of the wife of silk merchant Francesco del Giocondo. Works on a failed project for a canal to give Florence direct access to the sea.
- **1504** Starts work on a fresco, the *Battle of Anghiari*, for the Council Hall in the Palazzo Vecchio, Florence. It is never completed.
- **July 1504** His father dies. Family intrigue denies Leonardo a share of the inheritance.
- **1506** Returns to Milan and enters the pay of Louis XII of France.
- **1508** Produces obsessive images in his notebooks of whirlwinds and swirling rainstorms.
- **1509** The mathematician Pacioli’s *De Divina Proportione* is published with geometrical illustrations by Leonardo.
- **1510** Completes *The Virgin and Child with St. Anne*.
- **1513** Moves to Rome, entering the service of Giuliano de’ Medici; settles in the Villa Belvedere, lent to him by Giuliano’s brother, Pope Leo X.
- **1515** Suffers an illness, possibly a stroke, that leaves him paralyzed down one side.
- **1516** Appointed Premier Engineer, Painter, and Architect to Francis I of France. Lives in Clos Luce near the royal chateau at Amboise.
- **May 2, 1519** Dies at Amboise.



LA GIOCONDA

The Last Supper
Leonardo painted *The Last Supper* in the refectory of the church of Saint Maria delle Grazie in Milan, using a mix of tempera and oil, rather than a traditional fresco technique. As a result, the paint soon began to flake off.

