

ALL ABOUT DA VINCI, SHAKESPEARE & THE AGE OF EXPLORATION

THE

# RENAISSANCE



ALL ABOUT  
**HISTORY**

# ALL ABOUT THE RENAISSANCE CONTENTS



Of all the periods in history, the Renaissance has to be one of the most exciting. It saw the emergence of a new breed of art and literature, but the discovery of the New World also gave birth to a battle of conquest between nations. In this digital edition, we reveal the brighter and darker sides of this turbulent time.

**Alicea Francis** Deputy Editor

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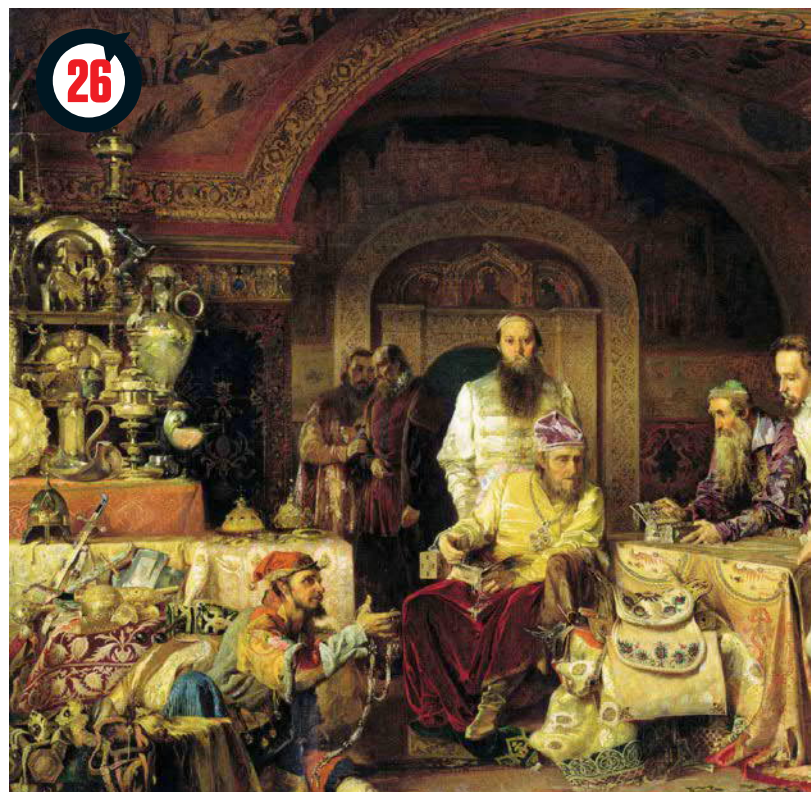
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THE DARK SECRETS OF DA VINCI



“The world of Borgia, driven by war and blood and revenge, even managed to sweep up the gentle Da Vinci”



# THE DARK SECRETS OF DA VINCI

brilliant but unfulfilled. As an illegitimate child, he could not hope to attend university to achieve any respected profession such as a notary, banker or doctor, but his father managed to secure for his son the best apprenticeship available. In 1466, at the age of 14, Da Vinci took up an apprenticeship with the artist Verrocchio in Florence.

Verrocchio's workshop was a centre of learning and excellence and the perfect place for the boy who wanted to discover absolutely everything to continue his education. From metalworking and carpentry to sculpting and painting, Da Vinci was eager to excel at it all. Although his natural talent served him well, it was this boundless curiosity that drove him to dedicate himself fully to any task that was given to him by his master. Soon he was rising above the other apprentices and became Verrocchio's prodigy. It is said that the angel Da Vinci painted in *The Baptism Of Christ* was so

superior that after seeing it, his master refused to touch a paintbrush again.

For a boy who had grown up in a slow, peaceful, pastoral land, the city of Florence must have been astonishing. Florence was in the process of shaking free of the shackles of medieval critical thought and embracing the wonders of classical antiquity. The city served as the birthplace of the Renaissance, an era of great cultural and social change, a time when artists were encouraged to disregard the conformist past and embrace new, inventive ideas. It infected every part of society, from the architecture of the city to people's beliefs toward life and death.

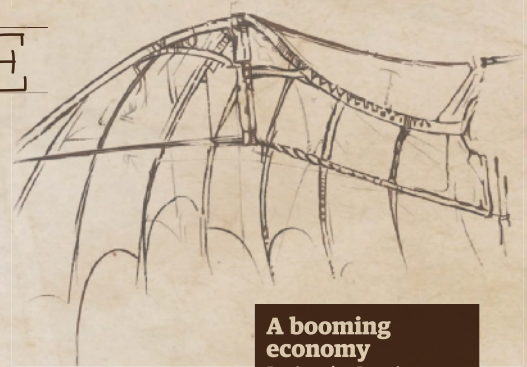
It was the perfect place and time for the curious boy from Vinci to flourish. He had the ambition



and drive to prove himself that existed in all illegitimate sons of wealthy men, but rather than being controlled by ruthless desire, it was wonder and awe that gripped the young Da Vinci. He knew those without power could rise up and claim it - he had watched the Sforza family emerge from rural obscurity to sit as the rulers of Milan, and it was the respect he bore for powerful men that drove him to pursue excellence in his own career. By the age of 20, Da Vinci's obvious skill had led him to become a master, but instead of building on the buzz surrounding his name and beginning his own studio, Da Vinci remained by his master Verrocchio. He was ambitious, yes, but something else was also apparent in the illegitimate son - a fear of failure, inadequacy, and crippling self-doubt.

## RENAISSANCE FLORENCE

As the Renaissance swept through Florence, the city experienced some of the most dramatic changes in its history



**Tribunale della Mercanzia**  
Built in 1359, this courthouse housed a court comprising six lawyers and six foreign citizens' counsellors. They would gather together to judge the causes of Florentine merchants and help to settle disputes between the guilds.

**Piazza della Signoria**  
This L-shaped square was the centre of the political world in Florence throughout the Renaissance. Rules were made, issues debated and people even executed within the closed-off square.

**A booming economy**  
During the Renaissance, Florence enjoyed a healthy and growing economy, becoming the most important city-state in Italy. Merchants transformed a local wool industry into an international business, and even the lower classes felt the benefit.

**The birth of modern cuisine**  
The wealthy residents of Renaissance Florence were inspired by the Medici family to enjoy a variety of new, exciting food. Potatoes and peppers became important ingredients and the fork gained popularity as a utensil.

# THE DARK SECRETS OF DA VINCI

## RENAISSANCE MAN'S To-Do List

Study anatomy. If possible, get hands on a few corpses (work quickly).



Become a master of Frussi – the most popular Renaissance card game.

Join a winning Pallone team – a ball game played with the fists.

Meet Luca Pacioli to learn mathematics. Ask him about this new accounting trend.

Draw Milan.

Try and organise a meeting with the Medici family to offer services.



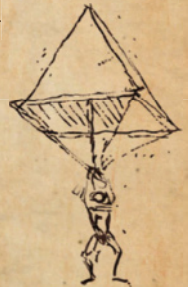
Practice the lute. Failing that try the viol.

Paint religious art. Make sure to include

the Virgin Mary whenever possible.

Approach Petrarch and ask him to teach sonnet composition.

Plan and construct a parachute. Pick a high tower to test it from. (Hire an apprentice for this task.)



Ask the architect Brunelleschi to tell you about how he constructed that dome on top of Florence cathedral.



Attend a court dance; be sure to practise all the latest dances beforehand.

Learn about alchemy. Crack the mystery of how to create gold.

### Palazzo Vecchio

Built in the 12th century, the Palazzo Vecchio was the heart of Florentine culture. It was the official meeting place of the city's 5,000 guild members, where builders, sculptors, lawyers and masons would gather to discuss and vote on matters concerning the city.

### The statue of David

Da Vinci served as a member of a committee to decide where this huge statue should be displayed in the city. In 1504 it was placed next to the entrance of the town hall, Palazzo Vecchio. It took four days to complete this mammoth task.

### Loggia dei Lanzi

Originally built to hold public ceremonies, when the Renaissance swept through Florence this arched building was transformed into an open-air museum, displaying a selection of stunning statues.



## MYSTERIES OF THE MONA LISA

Unlocking the secrets hidden in Da Vinci's masterpieces

### Smile

The most debated and curious part of the painting is the mysterious smile, seen differently by different people. Explanations for this range from the theory that the smile was drawn in low spatial frequencies, so can be seen clearer when focusing on her eyes, and that the smile is affected by random noise in the human visual system.

### Pregnancy?

Because she has crossed arms and seems to have a slightly enlarged stomach, there have been theories that the model was pregnant. In 2006, this theory was confirmed as infrared scans showed that Mona Lisa is wearing a gauzy dress, typically worn by women who were expecting or had just given birth.

### High cholesterol?

In a 2010 study, it was argued that the Mona Lisa shows all the signs of high cholesterol, such as a build up of fatty acids under the skin and a lipoma, or benign tumour, behind her right eye.

### Background

The location of the background has long been in debate. One of the most popular theories is that it is inspired by the Val di Chiana, a valley in Tuscany. However, much more likely is that it is an imaginary landscape devised by Leonardo from a combination of places.

## WHO WAS THE MONA LISA?

Her smile is the most famous in history, but just who was the real Mona Lisa?



### Lisa del Giocondo

The most popular theory, Lisa del Giocondo was the wife of a wealthy Florentine silk merchant. The painting may have been created to celebrate the birth of their second son and their move to a new home.



### Da Vinci himself

After digital analysis showed a similarity between the features of Da Vinci and the Mona Lisa, scholars have theorised that the painting is a disguised self-portrait, perhaps as a hint towards his homosexuality.



### Salai

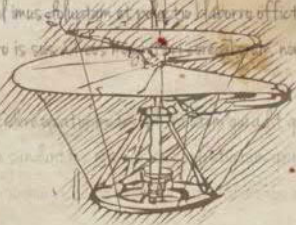
Salai served as Da Vinci's student and remained his servant for his entire life. It is theorised the two were lovers, and Salai was ultimately left the *Mona Lisa* after his master's death, indicating the portrait may have depicted him.



### Another noblewoman

There are many other noblewomen who have been linked to the painting: Caterina from the house of Sforza, Beatrice D'Este who was married to Leonardo's employer Ludovico Sforza, Isabella d'Este - a leading woman of the Renaissance, and a host of others.

# THE DARK SECRETS OF DA VINCI



In 1476, an event was to irrevocably damage Da Vinci's approach to his own career - Da Vinci and three other men were arrested and charged with sodomy. Whether this charge came from the actions of a jealous rival or was a legitimate accusation, Da Vinci was aware of the damage it could do to his career. Although the charge was eventually dropped, the terror that gripped the young man who had given everything to make a name for himself was very real. Da Vinci's standing in the art world does not seem to have been damaged by the accusation, though, as in 1478 he received two independent commissions: to paint an altarpiece in a chapel and paint the *Adoration Of The Magi* for the monks of San Donato a Scopeto. These grand works of art were supposed to be a sparkling debut for the brightest young artist in Florence, but Da Vinci failed to complete either of them.

It is a trend that would continue throughout Da Vinci's career - and although he is celebrated as one of the finest painters in the world, he only finished a comparative handful of works when considering how long his career lasted. Throughout his entire life, Da Vinci simply failed to work to deadlines or

specifications. His patrons became increasingly irritated by his unreliability and the young master was plagued by lawsuit after lawsuit for his string of unfinished projects. When three of Verrocchio's star students were selected to help paint the Sistine Chapel, Da Vinci was not one of them.

Although he had all the drive and talent for success, something was stopping Da Vinci from achieving it. When commenting on his unfinished *Adoration Of The Magi*, Da Vinci scribbled in his

But great men were not willing to pay for imagination alone, and Da Vinci knew that in order to succeed he needed to produce something magnificent - and soon. For the flourishing warlord princes who had gained their land and prestige on the strength of their blades, art was becoming a powerful weapon to prove their legitimacy. Da Vinci was not ignorant to this, and he planned to use it for his own benefit.

In 1482, Da Vinci offered his talents to Ludovico Sforza, the Duke of Milan, who had risen to power after the assassination of his brother. In his letter appealing for employment with Sforza, Da Vinci chose to list his talents in engineering,

while adding as an afterthought: "Likewise in painting, I can do everything possible as well as any other, whosoever he may be." It must have impressed the duke, as Da Vinci moved to Milan the same year.

It was perhaps the experience of being surrounded by powerful men who had achieved greatness that inspired Da Vinci to have a sort-of creative revelation. He began to finish commissions and created some of his greatest works of art: the

## "As an illegitimate son, Da Vinci was only granted a basic, informal education in Latin, geometry and mathematics"

notebook 'to conceive an idea is noble, to execute the work is servile'. For the man who was at heart the curious Vinci boy marvelling at the beauty of nature, it seemed conceiving the idea of these grand works of art was enough. It was, after all, his own mind he strived to satisfy, his own bounding enthusiasm that had led him this far. For a man who lived in the realms of relentless imagination, grounding these lofty thoughts into reality was a dull, laborious and time-consuming process.



The angel on the left of Verrocchio's *The Baptism Of Christ* has been attributed to the hand of the young Da Vinci



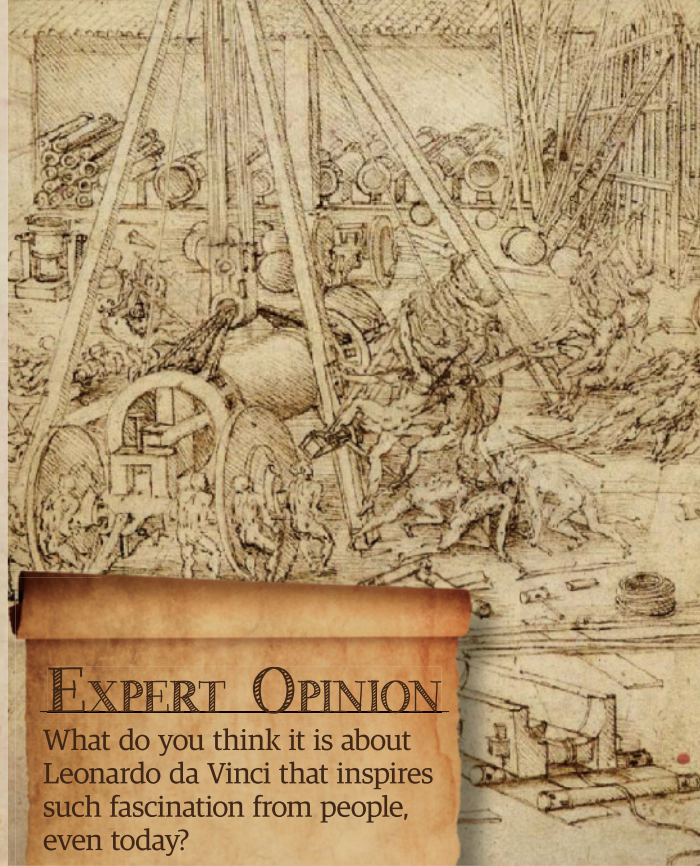
There is a legend that the French king Francis I held Da Vinci's head in his hands as he died



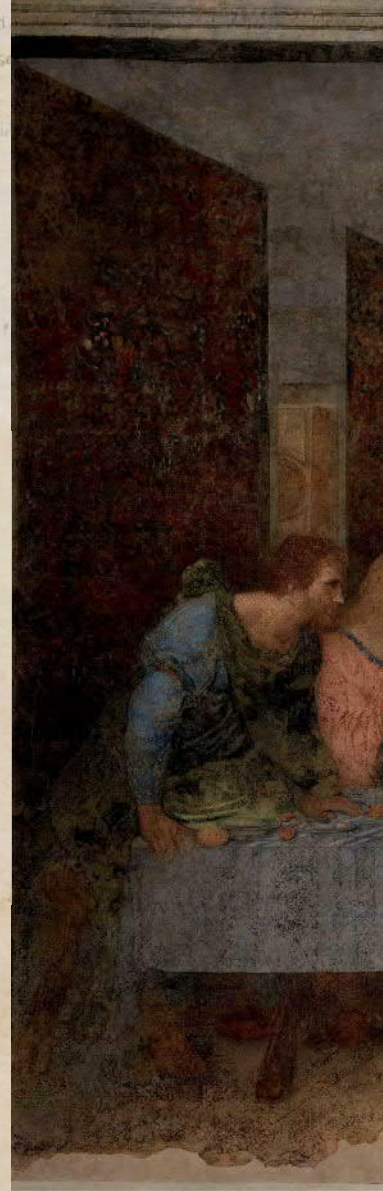
Two of Da Vinci's notebooks were found by chance in 1966

# THE DARK SECRETS OF DA VINCI

Da Vinci was very careful to make sure his designs for weapons did not fall into the wrong hands



This statue of Da Vinci was created based on contemporary descriptions



## EXPERT OPINION

What do you think it is about Leonardo da Vinci that inspires such fascination from people, even today?



**Martin Kemp is Emeritus Research Professor in the History of Art at Oxford University. His book *Art In History* is on sale now.**

Da Vinci had a greater sense of the unity of nature and the cosmos and of our human place in this wider context than anyone in his era, and certainly greater than anyone in our age. He also insisted that we should not abuse nature since we are a part of it. He was, and is, the greatest user of drawing to explore how the world functions, ranging from the human mind to vast changes in the 'body' of the world. In art, he invented a 'brainstorm' method of sketching that resulted in dynamic compositions. He reformed how narratives are told, how Madonnas are characterised, how portraits communicate, how light, shade and colour are handled, and how compositions are invented in drawings. He radically affected the course of art. He made the world's most famous painting and the most famous drawing (the Vitruvian Man).

## “Da Vinci was, at heart, a pacifist, but he wished to succeed in a world surrounded and dictated by war”

*Virgin Of The Rocks* and the much celebrated *The Last Supper*. His working style was still somewhat unorthodox - spending entire days from dawn until dusk painting without stopping to eat, and then taking breaks of three or four days. However much this irritated his patrons, his magnificent work spoke for itself and he quickly became a firm favourite of the Sforza family. Da Vinci worked on a variety of different projects for the ambitious duke - from designing the dome of Milan's cathedral to creating a model in clay for a huge bronze horse. The confidence Sforza showed in him, and the acclaim his pieces received, finally demonstrated to the daydreamer that putting his grand ideas into the real world could be a very worthwhile pursuit.

However, with the outbreak of the Second Italian War in 1499, Da Vinci's time in Milan came to a brutal end. He was forced to flee to Venice as the bronze designed for his monumental horse statue was melted down and crafted into cannons. Da Vinci was, at heart, a pacifist, but he wished to succeed in a world surrounded and dictated by war. This is why the man who questioned the morality of eating meat and purchased caged birds just to set them free came to work for one of history's most notorious princes of war, Cesare Borgia.

Whether it was the flight of birds or the way the light reflected on a sheet, Da Vinci was absolutely fascinated by the marvels of life. It is no wonder then that he was drawn to Cesare Borgia, half

## THE ROAD TO FAME

15 April 1452  
Da Vinci is born to Caterina 'at the third hour of the night' in the Tuscan village of Vinci.

1467  
Da Vinci moves to Florence to become apprentice to famed painter Verrocchio.

1472  
The Florence Painters' guild accepts the 20-year-old Da Vinci's membership.

1476  
Da Vinci is charged with sodomy on 19 April. The charge is eventually dropped on 16 June.

1481  
Da Vinci starts work on the *Adoration Of The Magi*, still regarded as a masterpiece.

1482  
Ludovico Sforza accepts Da Vinci's offer of his services, and the master moves to Milan.



### Mary Magdalene?

People have speculated that the figure commonly believed to be John the Apostle is actually Mary Magdalene. Although the figure seems feminine to modern eyes, in the Renaissance it was common to depict the youngest apostle as a feminine man.

### A secret score

Discovered by the Italian musician Giovanni Maria Pala, the position of hands and loaves of bread when read right to left (Da Vinci's preferred style) produce a musical composition. Da Vinci himself was an accomplished lyre player, so it's not out of the question that he could have snuck a composition into his piece.

## MYSTERIES OF THE LAST SUPPER

Unlocking the secrets hidden in Da Vinci's masterpieces

### No holy grail

Although there have been speculations about the lack of the holy cup in the painting, Jesus' right hand is pointing to a glass of wine. It is unusual that it is not portrayed as a jewelled chalice, but this is because Da Vinci always preferred to keep his paintings as realistic as possible.

his age but already the most feared person in the known world. Da Vinci was compelled to become a part of Cesare's dynamic world, and in 1502 Da Vinci produced a map that impressed the Duke of Valentino so much that he instantly appointed Da Vinci as his chief military engineer. While in Cesare's employment, Da Vinci produced designs for devastating war machines - a strange action for a man with gentle, pacific tendencies. The world of Borgia, driven by war and blood and revenge, even managed to sweep up the gentle Da Vinci. It is no mystery why - not only was Cesare ambitious, but he was also illegitimate and wholly unconventional for his age, just like Da Vinci.

Perhaps it was keeping the company of such remarkable and driven men that piqued the curiosity of the master toward the most bewildering creatures of all: humans. It was in the advent of his life that Da Vinci, the man who had excelled in thought but struggled in action, became consumed in doing, writing: "I have been impressed

by the urgency of doing - knowing is not enough, we must apply." This was a very different man to the one who had previously dubbed the execution of work as 'servile'. Eager to crack the code of the human body, Da Vinci began to conduct autopsies.

As a successful artist, Da Vinci was able to obtain corpses from various hospitals and cut, probe and explore the cadavers. It was dark, grim work for a man who abhorred violence, but the pursuit of knowledge drove him on. From his dissections Da Vinci produced notebooks full of intricate, anatomical drawings. These sketches were unlike anything the world had ever seen and, had he published them, would have pushed scientific study forward by centuries. But he didn't. Whether it was due to a remnant of that persistent self-doubt, or if they fell victim to his inability to focus on anything for long, Da Vinci's remarkable drawings languished in his notebooks until the end of the 19th century, having

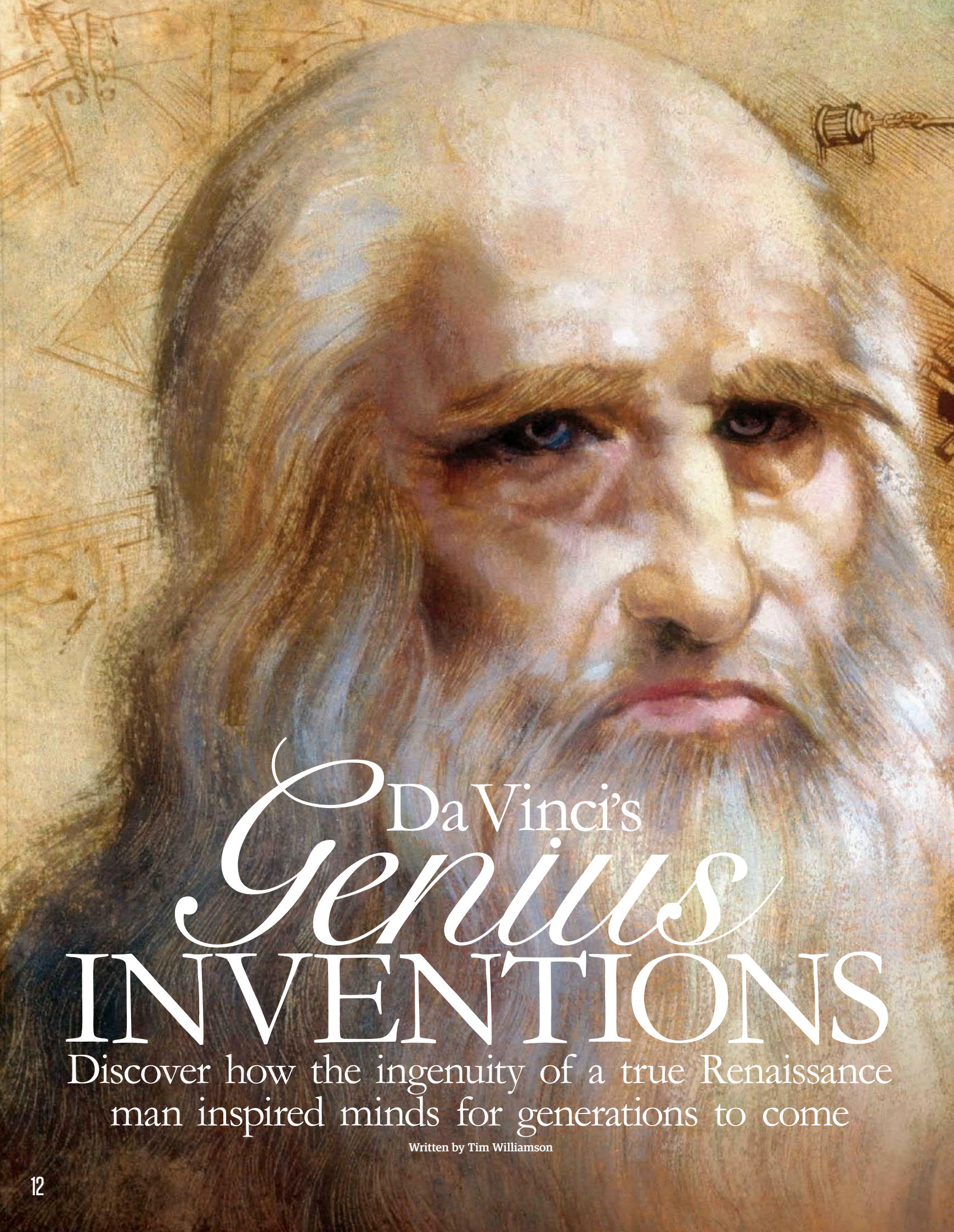


absolutely no impact on science. But would Da Vinci have minded? The answer is almost certainly no. He was a man who lived entirely in the present.

Now in his old age, Da Vinci moved to France after an invitation from King Francis I. He spent little time painting, but rather dedicated his final years to exploring and editing his scientific studies. He had well and truly managed to break free of the shackles of illegitimacy, but he had done so by embracing and overcoming the things that seemed, for so many years, to hold him back: his boundless imagination, indecision, a wandering, erratic mind and even his bouts of pessimism. Da Vinci was a magnificent painter, his inventions were groundbreaking and his scientific mind was unrivaled. But for the curious boy from Vinci, it was not his own talents he wished to highlight, but instead the wonder, beauty and majesty of the world around him.

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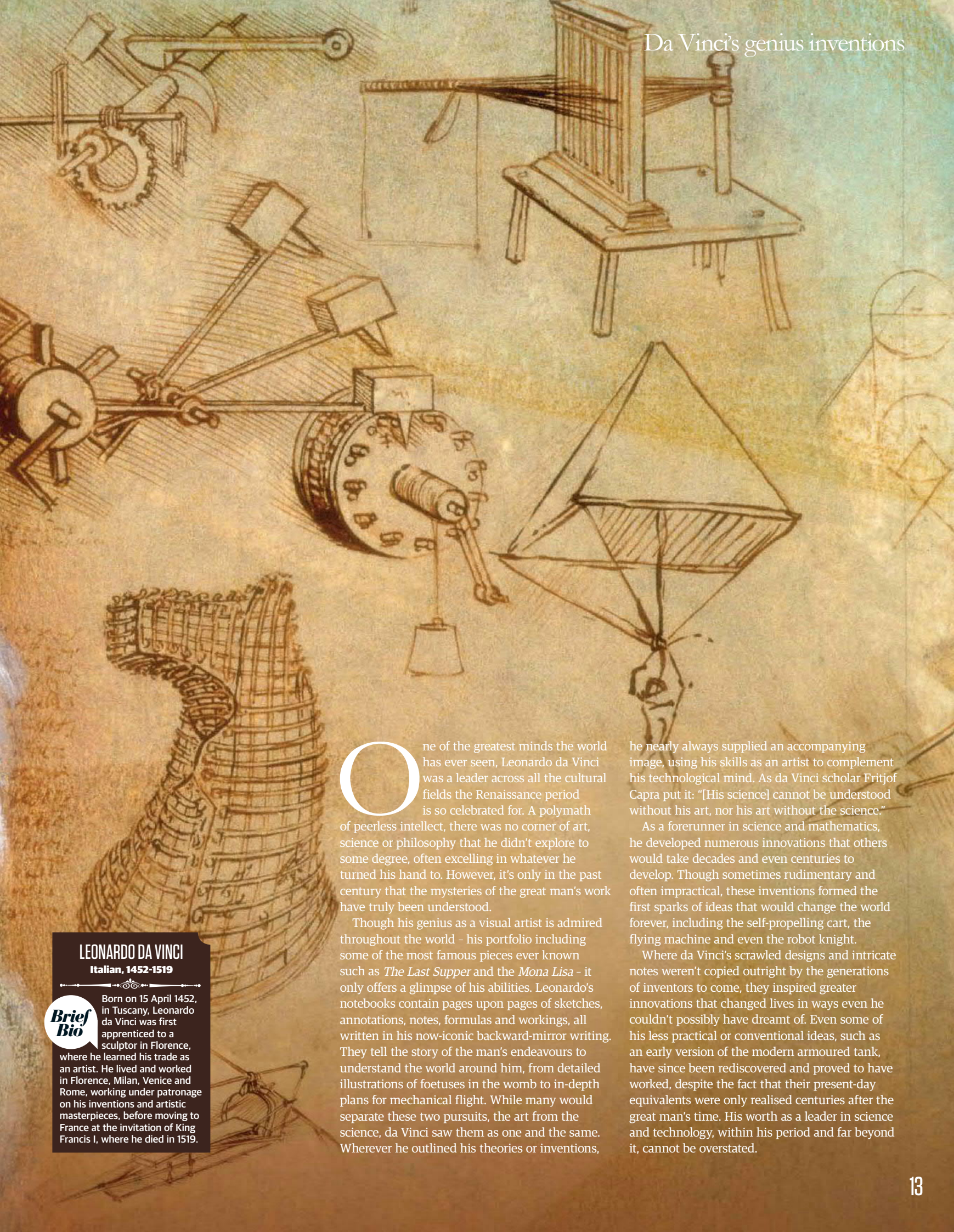
- 1490  
Work on Da Vinci's monumental bronze horse statue for Ludovico Sforza begins.
- 1495  
Work on *The Last Supper* begins. It will finally be completed three years later.
- 1499  
With the Sforza's fall from power, Da Vinci leaves Milan and spends time in Venice.
- 1502  
Da Vinci is employed by the formidable duke Cesare Borgia as senior military architect.
- 1503  
Da Vinci begins work on the *Mona Lisa*. He keeps it with him until his death.
- 1516  
At the request of Francis I, Da Vinci leaves Italy and serves at his court in France.
- 2 May 1519  
Da Vinci dies as Clos Lucé. At his funeral, 60 beggars follow his casket, per his request.



Da Vinci's  
*Genius*  
INVENTIONS

Discover how the ingenuity of a true Renaissance man inspired minds for generations to come

Written by Tim Williamson



One of the greatest minds the world has ever seen, Leonardo da Vinci was a leader across all the cultural fields the Renaissance period is so celebrated for. A polymath of peerless intellect, there was no corner of art, science or philosophy that he didn't explore to some degree, often excelling in whatever he turned his hand to. However, it's only in the past century that the mysteries of the great man's work have truly been understood.

Though his genius as a visual artist is admired throughout the world - his portfolio including some of the most famous pieces ever known such as *The Last Supper* and the *Mona Lisa* - it only offers a glimpse of his abilities. Leonardo's notebooks contain pages upon pages of sketches, annotations, notes, formulas and workings, all written in his now-iconic backward-mirror writing. They tell the story of the man's endeavours to understand the world around him, from detailed illustrations of foetuses in the womb to in-depth plans for mechanical flight. While many would separate these two pursuits, the art from the science, da Vinci saw them as one and the same. Wherever he outlined his theories or inventions,

he nearly always supplied an accompanying image, using his skills as an artist to complement his technological mind. As da Vinci scholar Fritjof Capra put it: "[His science] cannot be understood without his art, nor his art without the science."

As a forerunner in science and mathematics, he developed numerous innovations that others would take decades and even centuries to develop. Though sometimes rudimentary and often impractical, these inventions formed the first sparks of ideas that would change the world forever, including the self-propelling cart, the flying machine and even the robot knight.

Where da Vinci's scrawled designs and intricate notes weren't copied outright by the generations of inventors to come, they inspired greater innovations that changed lives in ways even he couldn't possibly have dreamt of. Even some of his less practical or conventional ideas, such as an early version of the modern armoured tank, have since been rediscovered and proved to have worked, despite the fact that their present-day equivalents were only realised centuries after the great man's time. His worth as a leader in science and technology, within his period and far beyond it, cannot be overstated.

## LEONARDO DA VINCI

Italian, 1452-1519

### Brief Bio

Born on 15 April 1452, in Tuscany, Leonardo da Vinci was first apprenticed to a sculptor in Florence, where he learned his trade as an artist. He lived and worked in Florence, Milan, Venice and Rome, working under patronage on his inventions and artistic masterpieces, before moving to France at the invitation of King Francis I, where he died in 1519.

# THE ORNITHOPTER

The first-ever attempt at a flying machine

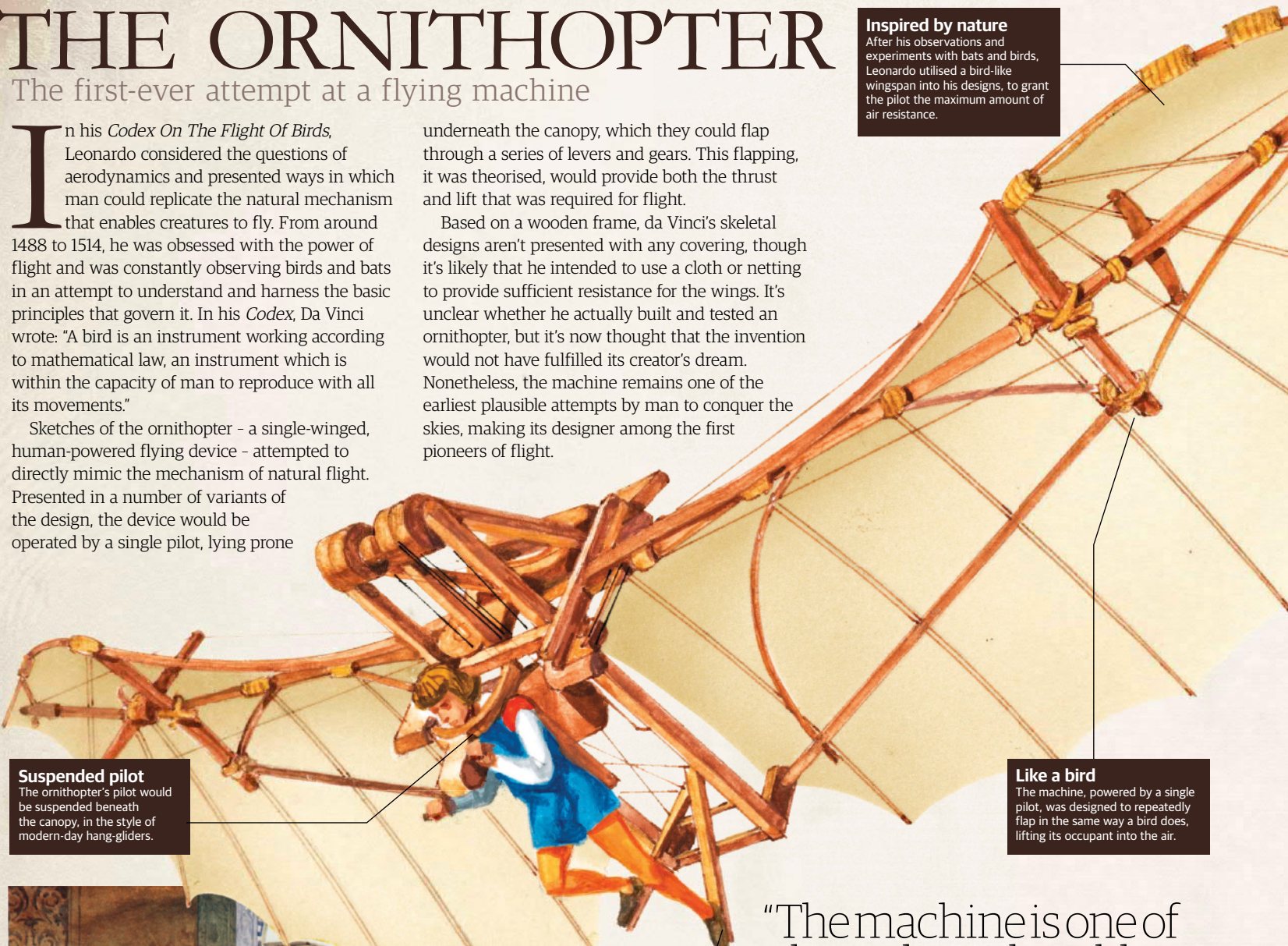
In his *Codex On The Flight Of Birds*, Leonardo considered the questions of aerodynamics and presented ways in which man could replicate the natural mechanism that enables creatures to fly. From around 1488 to 1514, he was obsessed with the power of flight and was constantly observing birds and bats in an attempt to understand and harness the basic principles that govern it. In his *Codex*, Da Vinci wrote: "A bird is an instrument working according to mathematical law, an instrument which is within the capacity of man to reproduce with all its movements."

Sketches of the ornithopter - a single-winged, human-powered flying device - attempted to directly mimic the mechanism of natural flight. Presented in a number of variants of the design, the device would be operated by a single pilot, lying prone

underneath the canopy, which they could flap through a series of levers and gears. This flapping, it was theorised, would provide both the thrust and lift that was required for flight.

Based on a wooden frame, da Vinci's skeletal designs aren't presented with any covering, though it's likely that he intended to use a cloth or netting to provide sufficient resistance for the wings. It's unclear whether he actually built and tested an ornithopter, but it's now thought that the invention would not have fulfilled its creator's dream. Nonetheless, the machine remains one of the earliest plausible attempts by man to conquer the skies, making its designer among the first pioneers of flight.

**Inspired by nature**  
After his observations and experiments with bats and birds, Leonardo utilised a bird-like wingspan into his designs, to grant the pilot the maximum amount of air resistance.



**Suspended pilot**  
The ornithopter's pilot would be suspended beneath the canopy, in the style of modern-day hang-gliders.

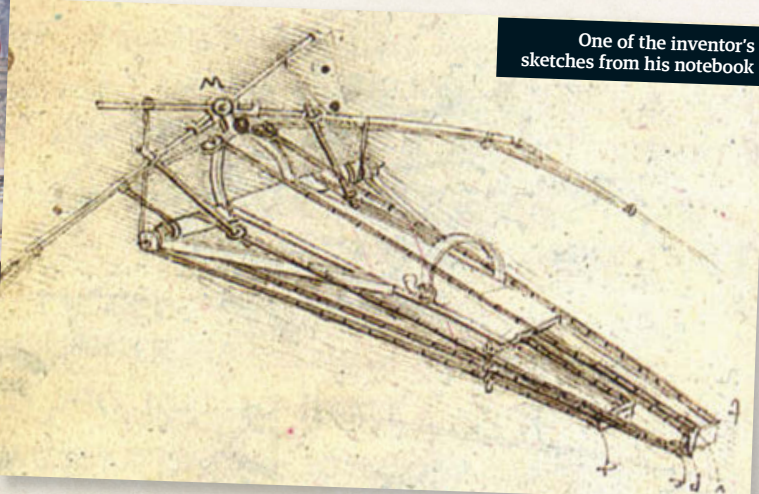
**Like a bird**  
The machine, powered by a single pilot, was designed to repeatedly flap in the same way a bird does, lifting its occupant into the air.

**Pedal power**  
Da Vinci understood that a person would not be able to provide enough power for flight with their arms alone, so incorporated foot pedals into his designs to provide extra force.

"The machine is one of the earliest plausible attempts by man to conquer the skies"



Though this attempt to master flight remains remarkable for its time, it is unlikely to have worked



One of the inventor's sketches from his notebook

**Verdict**  
Ultimately a failure in terms of practicality. Da Vinci isn't likely to have ever seen his ornithopter successfully fly, and today experts have realised that based on his sketches, it almost certainly would have failed. However, the machine is the first step on the runway towards human flight, several centuries later. His understanding and incorporation of the natural world, as well as his sturdy grasp of physics, gave an edge to his designs that hadn't previously been seen.

# THE SELF-PROPELLED CART

The world's first self-propelled vehicle

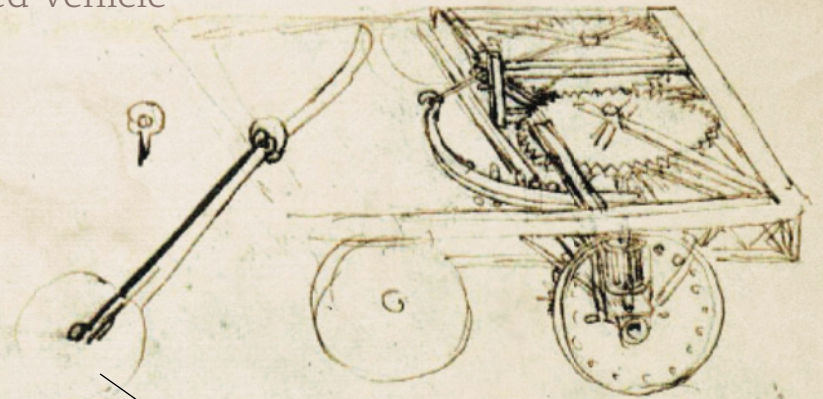
**D**espite predating combustion and steam technology by some centuries, Leonardo was able to design a fully working vehicle in around 1478 that could carry itself along without human assistance - possibly the earliest precursor to the modern automobile.

Based on a wind-up spring, much like a child's clockwork toy, the wheels of the cart had to be moved in reverse repeatedly, priming the strong springs before releasing the device. The cart was even intended to be programmable - by placing wooden blocks between the vehicle's gears the operator could determine when it would turn at a certain angle, making it appear to any onlookers as though it were choosing the direction itself.

It's thought that da Vinci only envisioned the cart to be used as a spectacle, for the amusement of crowds rather than any other practical purpose. The fact the frame features no seat for a driver or passenger suggests he hadn't considered its use as a means of transportation.

The cart was never built during his lifetime and has only recently been re-created. Given the correct resources and time, there's no knowing how far he could have taken his cart, but by thinking outside of his own time he was pre-empting a vision of modern life beyond anything he could imagine.

A modern re-creation of the self-propelled cart



### Wind-up mechanics

The spring mechanism powering the cart would be primed by turning the wheels in reverse, just like a child's clockwork toy.

### Plotting a path

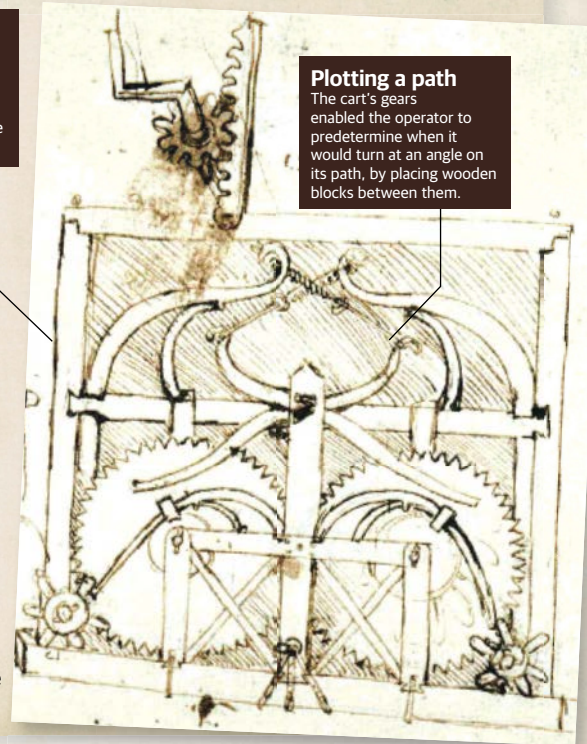
The cart's gears enabled the operator to predetermine when it would turn at an angle on its path, by placing wooden blocks between them.

### Short journey

The cart would have been able to travel for around 40m (130ft) before eventually running out of energy and curiously only able to turn right.

### Verdict

If it was realised just what an innovation had been conceived, it's possible Leonardo would have given his cart a grander stage than frivolous carnivals. Though his cart was unrefined and still many miles away from a modern-day motor vehicle, the mechanics that gave it life were revolutionary.



# THE BALL BEARING

The tiny invention that makes a big impact

Though they seem innocuous, ball bearings are essential components in a whole range of machines. When considering how best to reduce friction between two moving surfaces, in order to increase the speed at which they could rotate, da Vinci sketched out several uses of tiny balls within a mechanism.

He intended to apply this concept to his helicopter, using the limited friction of the balls to increase the propeller's rotation speed.

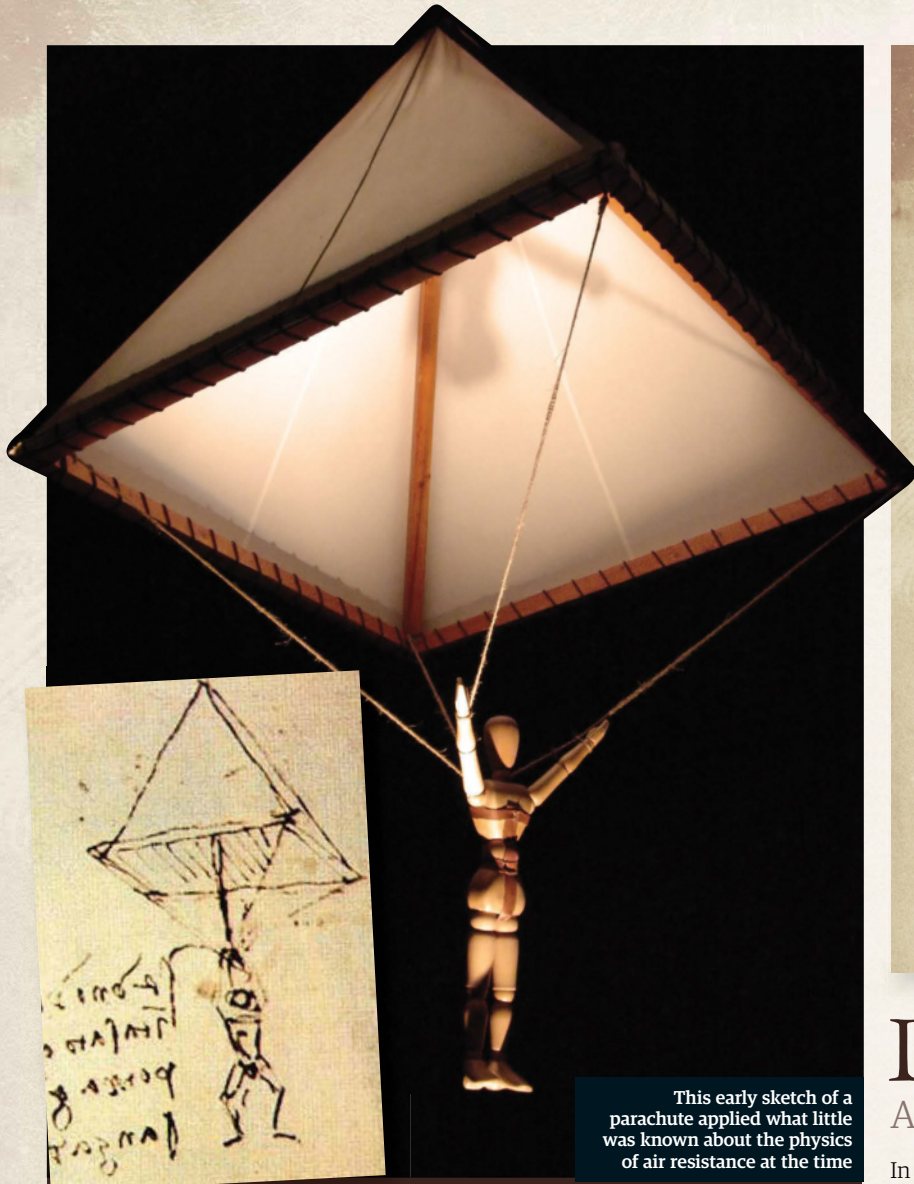
Ball bearings are widely used today in practically any device with parts that require a high-speed rotation.

### Verdict

The fact that the ball bearing is still being used more or less exactly as its creator envisioned is testament enough to both the man and his invention. Though the small component wasn't quite enough to save its creator's flying ambitions, it stands as one of his most important inventions.

Da Vinci sketched several solutions for reducing the friction between two moving parts, concluding that the ball shape was the most practical





This early sketch of a parachute applied what little was known about the physics of air resistance at the time

## THE PARACHUTE

An early attempt to fall to Earth safely

In a margin of his notes, da Vinci sketched a small figure grasping a triangle-shaped construction. He commented that with enough linen cloth arranged across the frame, a man could "jump from any great height whatsoever without injury."

Though his design was later studied and adapted by several inventors, the modern-day ripcord parachute, developed in the early-20th century, bears little resemblance to his sketch. However, his clear understanding of the principles that would enable a person to fall safely back to Earth, applying his knowledge of aerodynamics and air resistance, stood the test of time as an example to those who would follow him. Some 500 years later his device was actually built and was proved to work, though the weight of the frame would certainly have caused problems when landing.

### Verdict

It's the theory and thought behind the invention of the parachute, rather than the device itself, that deserves the accolades. A successful modern-day test of the inventor's concept only confirmed his genius.

## CLOCKS

Genius time-keeping ideas

Though he can't be credited with the invention of the clock, the Renaissance man contributed great advancements towards ever-more accurate and reliable mechanisms. During the 15th century, clockmakers started to use springs rather than weights as a measuring device and in around 1490, da Vinci adopted this concept to introduce two separate mechanisms, one each for hours and minutes.

He is credited with being among the first inventors to include a fusee in his clock designs, a conical pulley that serves to balance out the pull of the main chain as it winds down. This resulted in far more accurate timekeeping. He also developed a rudimentary alarm clock, based on the flow of water from one container to another, with a series of pulleys raising the inventor's legs at the stroke of a clock.



Da Vinci contributed many clockwork improvements

### Verdict

This more-accurate and innovative design contributed much to time-keeping. A fundamental understanding of clockworks, also applied to many of his other different inventions, meant Leonardo had given the world another advancement that in part keeps us all on time today.

## DIVING SUIT

A tool to explore new worlds

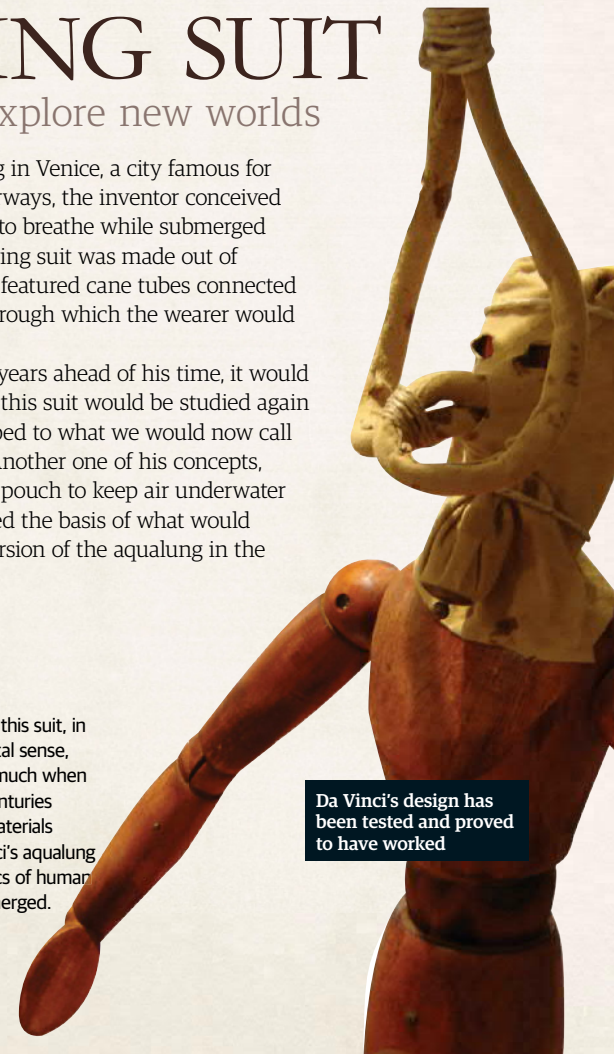
In 1499, while living in Venice, a city famous for its network of waterways, the inventor conceived a way for a human to breathe while submerged underwater. His diving suit was made out of pigskin leather and featured cane tubes connected to a floating bell, through which the wearer would be able to breathe.

Once again light years ahead of his time, it would be centuries before this suit would be studied again and further developed to what we would now call scuba equipment. Another one of his concepts, the use of a leather pouch to keep air underwater for breathing, formed the basis of what would become an early version of the aqualung in the 19th century.

### Verdict

The early design of this suit, in its most fundamental sense, would not change much when it was replicated centuries later. Though his materials were crude, da Vinci's aqualung harnessed the basics of human survival while submerged.

Da Vinci's design has been tested and proved to have worked



**Spring-powered**

It would take four men to prime the central spring with enough energy that, when released, could spin the helical blade at a very high speed.

**Rapid lift**

The large helical blade would rotate at great speed to compress the air and provide enough force to lift the machine.

**Untested**

Though he mentions testing his concept in smaller model-sized prototypes, it's unclear whether da Vinci ever fully tested his helicopter.

**Sturdy but light**

In his notes the inventor mentions that the aerial screw should be made out of a strengthened linen and wire to provide enough air resistance.

# THE HELICOPTER

A precursor to the modern-day vehicle

It may seem unconventional to our modern eyes, but this design is the earliest known plan for a human-powered helicopter.

Utilising a screw-shaped propeller, the machine featured a powerful loaded spring to harness and release enough energy to spin the winding blade and lift it into the air.

The aerial screw, as it is more commonly known, would have required four men to fully prime the powerful spring, though it's unclear whether they would have remained on the device as it was propelled into the air. As the spring was released, it would turn the blades of the screw at high speed, compressing the air below it to provide sufficient lift from the ground - a method similar to today's

vehicles. It's thought that da Vinci had tested the concept for the device on smaller models, possibly children's toys, but a full-scale prototype, purportedly to be made of linen and iron wire, was likely never built. Like his other proposals, the aerial screw would have been far too heavy to fly.

Once again, da Vinci applied his knowledge of aerodynamics and air resistance in his quest for achieving practical flight - he even invented the ball bearing in his attempt to overcome the problem of the friction his device would encounter. When his notes were finally published nearly three centuries later, his observations and designs inspired a new generation of aerial pioneers, though the modern-day helicopter would not be built until the 20th century.

"His designs inspired a new generation of aerial pioneers"

## Verdict

Much like the ornithopter, the helicopter was a doomed design, but with a brilliant method. Utilising some of the principles developed by his fellow polymath Archimedes some centuries earlier, the Italian's combination of the spring and screw applies his intimate understanding of lift, drag and aerodynamics.

# THE MACHINE GUN

A rapid-fire weapon designed to cause carnage on the battlefield

**G**unpowder weapons gained greater prominence on battlefields throughout the Renaissance period, gradually becoming more accurate as models were refined and improved. Da Vinci conceived many of his now-famous weapons of war while under the patronage of Ludovico Sforza, the Duke of Milan, who sought to gain the upper hand over his enemies in battle. Italy in this period wasn't the unified country we know today, but rather a series of individual city states in bitter rivalry with one another. These cities were also at constant threat from nation states, meaning that conflict and war were never far from people's minds, so new weapons were in constant development.

He saw the long period of time it took to prepare and reload a cannon as a major

flaw in its effectiveness in battle, so drew up designs of guns featuring several barrels that could be reloaded quickly. He designed and produced a range of gun prototypes featuring breach-loading barrels, meaning the operator wouldn't have to walk around the front of the gun to load it, which was dangerous and time-consuming.

One of his designs features three separate, rotating rows of 11 barrels that could be fired, loaded and cooled in quick succession, dramatically speeding up the rate of fire. Another sketch features a fan-like layout, spreading several barrels in an arc that could devastate enemy ranks if fired at once or in rapid succession, something unseen in the world up until that point.

While these innovations aren't machine guns in our modern understanding, they signalled the beginning of a new age of warfare. Though a pacifist at heart, da Vinci had codified a killing machine that would change the face of war.

## Verdict

Though a pacifist at heart, this terrible invention signals da Vinci's capitulation to pursuing one of humanity's grimmer aspirations: more effective and terrible means for murder. Identifying all the problems that made cannons so impractical, such as slow reloading and overheating, the inventor had advanced a device decades into the future.

### Breach-loading

By using a breach-loading design, da Vinci had almost halved the time it took to reload and fire the cannon.

### Fan fire

This fan design was intended to spread the gun's arc of fire as wide as possible, resulting in a rapid and widespread burst of missiles.

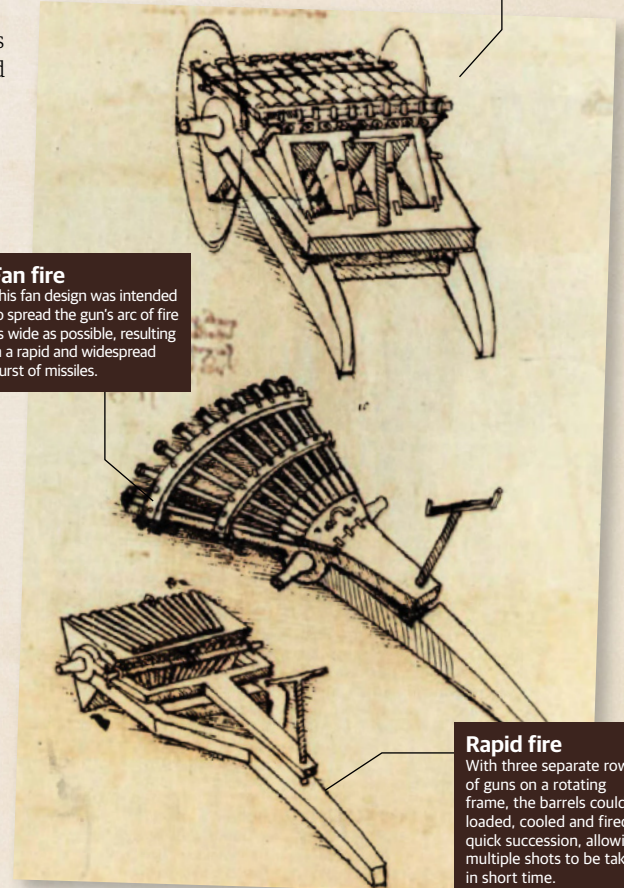
### Rapid fire

With three separate rows of guns on a rotating frame, the barrels could be loaded, cooled and fired in quick succession, allowing multiple shots to be taken in short time.

"Da Vinci had codified a killing machine that would change the face of war"



This early machine gun would have caused major damage to its targets



# THE ROBOT KNIGHT

An intricate contraption to delight and astound

Today, we may be developing robots with ever-increasing levels of artificial intelligence and flexibility, but these are only the latest incarnations of the automaton, invented by Leonardo some 500 years ago. It is believed he first thought of his invention in 1495.

This robot, with the external appearance of a Germanic knight, contained two separate operating systems of gears and pulleys, each capable of several degrees of

movement. The knight was able to sit, stand and even raise its visor. Da Vinci's thorough understanding of human anatomy certainly helped him produce such a lifelike creation.

The notes on the automaton were so cryptic it's only relatively recently that engineers, most notably robotics expert Mark Rosheim, have been able to decipher and follow his plan, which have in fact directly influenced modern-day robot designs for NASA.

## Verdict

There is perhaps no better example of the polymath's mastery, of both the fields of art and science, than the automaton. Again only used as an amusing trifle for his peers, it's a shame that the great inventor would certainly never have guessed what brilliant machines his design would inspire.



Not only was da Vinci's robot design lifelike, it could also move about entirely independently

# THE TANK

An early example of a modern-day weapon of war

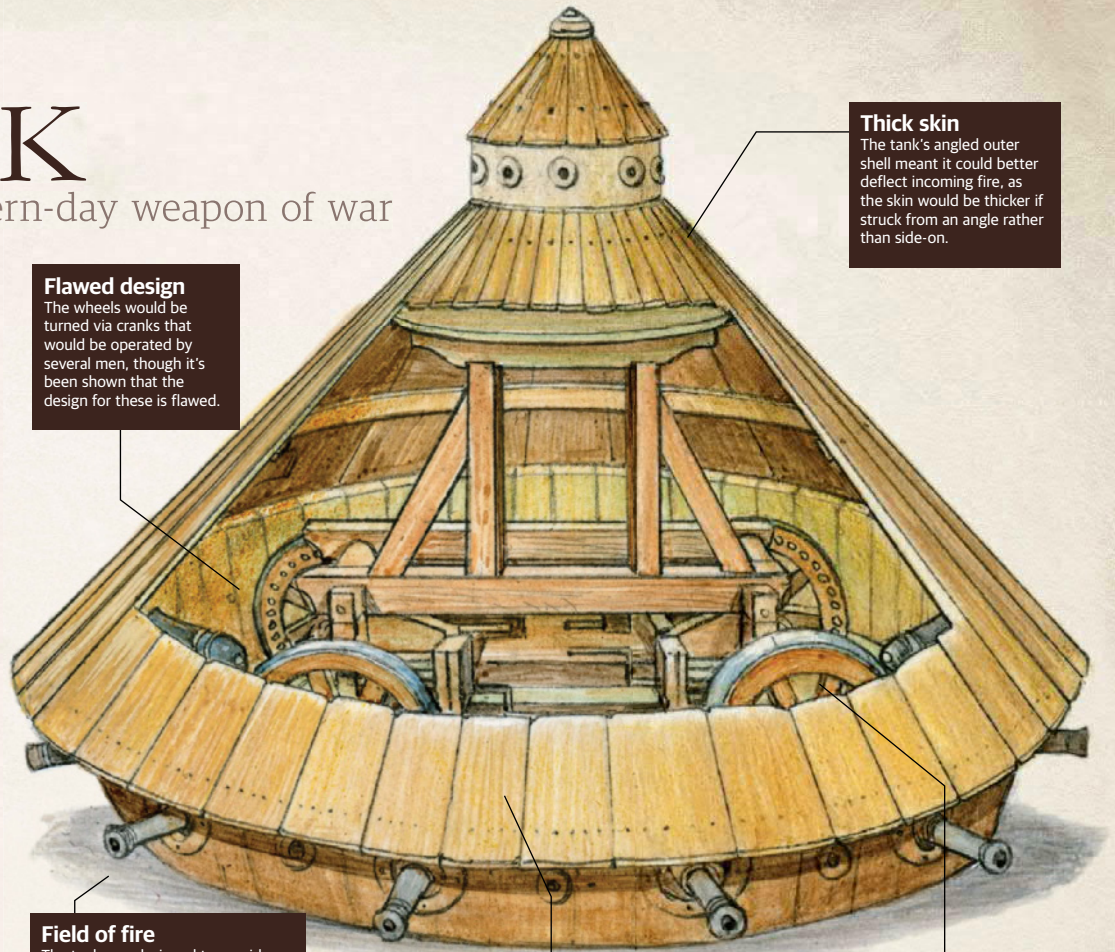
**I**t may look like a work of fantasy, but this is perhaps the earliest example of an armoured vehicle. During the Renaissance, warfare was changing rapidly, as states were striving to gain the upper hand in battle.

This early sketch of a reinforced, armed vehicle is just one of Leonardo's many designs produced to change how battles were fought. It features an angular outer shell, encasing a set of four wheels and several cannons pointing out of the machine, which would be driven by several men turning the cranks of the wheels, positioning the vehicle toward the enemy before opening fire.

This early tank has caused controversy in that it features a very basic flaw in its design. The cranks used to turn the wheels, if built to the exact specifications in da Vinci's sketches, would act against each other, making the machine impossible to move. It's been suggested that such a simple flaw would not have gone unnoticed by such a perfectionist and that he deliberately included the mistake so his deadly vision could never be used. Still, this design shows how his artistic vision was operating far beyond his own time, realised hundreds of years later when metal tanks would rumble across the muddy battlefields of WWI and change the face of modern warfare.

**Flawed design**  
The wheels would be turned via cranks that would be operated by several men, though it's been shown that the design for these is flawed.

**Thick skin**  
The tank's angled outer shell meant it could better deflect incoming fire, as the skin would be thicker if struck from an angle rather than side-on.



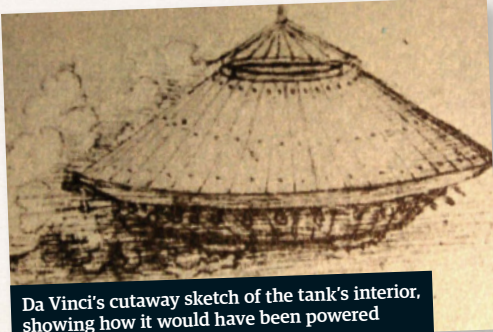
**Field of fire**  
The tank was designed to provide a 360-degree field of fire, causing mass destruction among the enemy ranks, while also risking friendly fire.

**Fearsome enemy**  
The tank would have been able to move in any direction, providing an intimidating, if slow and cumbersome, opponent on the battlefield.

**Man-powered**  
Though he considered using horses to power the machine, the inventor felt they might become too unpredictable when confined within the tank, so opted for man-power.

**Verdict**  
With modern eyes this contraption seems nothing like the tanks that roam today's battlefields so effectively, and its total lack of practical application compounds its failure. However, working with the tools available to him, da Vinci's vision is a truly terrifying vision of man's desire for destruction.

“Despite its deadly potential as a formidable weapon of war, this early tank has caused controversy”



Da Vinci's cutaway sketch of the tank's interior, showing how it would have been powered

## LEONARDO'S INFLUENCES

The peers and patrons of the great inventor

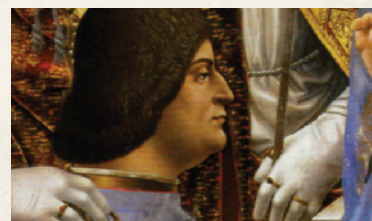
**DEL VERROCCHIO**  
Among the finest Florentine artists of the 15th century, del Verrocchio tutored the young da Vinci. Leonardo is even thought to have made significant additions and changes to some of his master's works, including the famous *Baptism of Christ*.



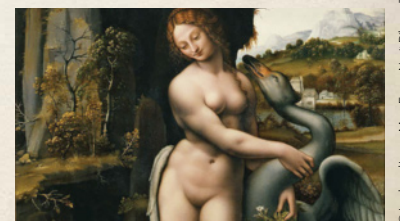
**MICHELANGELO**  
Michelangelo's contribution to Renaissance art, most famously the ceiling of the Sistine Chapel in the Vatican, cannot be overstated. The two crossed paths while living and working in Florence at the beginning of the 16th century.



**LUDOVICO SFORZA**  
During the 1490s, after his ascension to the dukedom of Milan, Sforza continued to patronise da Vinci, who had been living and working in the city for several years. The duke commissioned many of da Vinci's military designs to aid him in his wars.



**FRANCESCO MELZI**  
Melzi was among da Vinci's most accomplished students and accompanied him in France during his final years. As well as the executor of da Vinci's will and his principal heir, Melzi is credited with one of the most famous portrait sketches of da Vinci as an elderly man.



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# How to INVENT A FLYING MACHINE

SOAR THROUGH THE SKIES IN YOUR OWN INVENTION, 16TH CENTURY

## DA VINCI'S FLYING MACHINE

### Catch the breeze

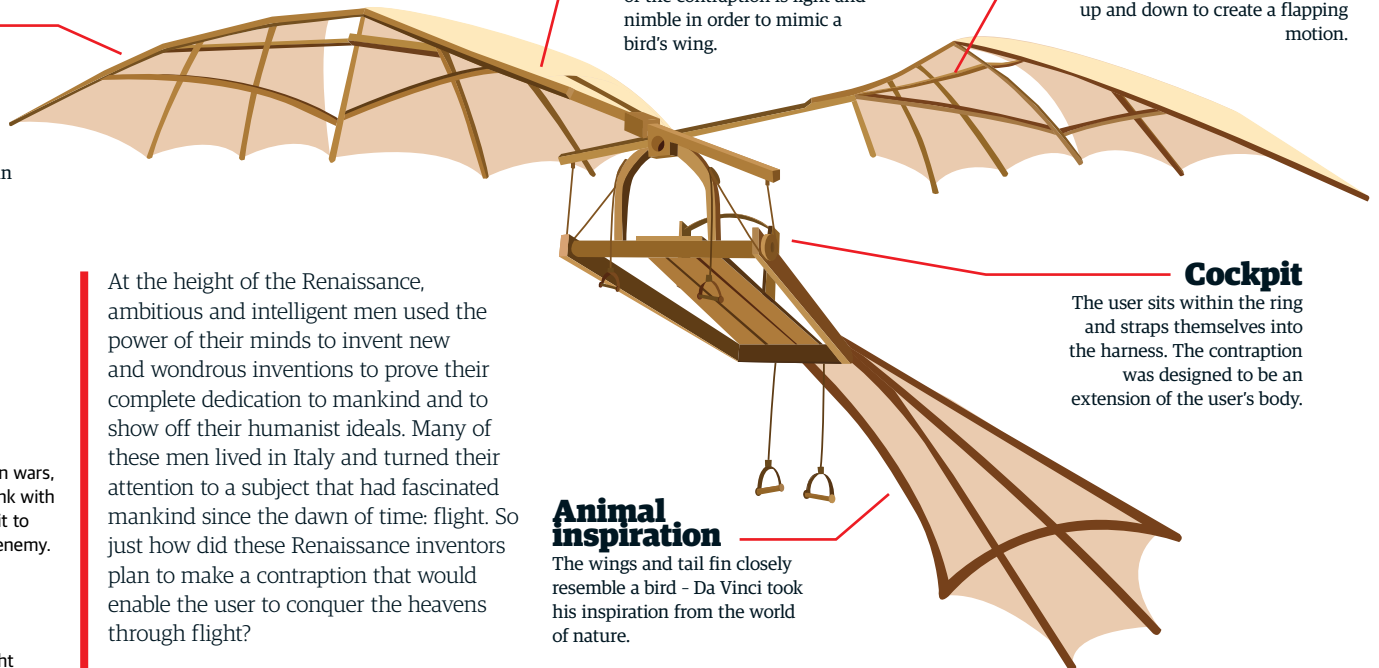
Canvas-like material was used to catch the wind and propel the user forward through the air in order to maintain flight.

### Wood structure

It is essential that the skeleton of the contraption is light and nimble in order to mimic a bird's wing.

### Strong arms required

The user operates the wings by using the handles, pulling them up and down to create a flapping motion.



### Cockpit

The user sits within the ring and straps themselves into the harness. The contraption was designed to be an extension of the user's body.

### Animal inspiration

The wings and tail fin closely resemble a bird - Da Vinci took his inspiration from the world of nature.

## DA VINCI'S INVENTIONS

### DA VINCI TANK

1494-99

Designed as a device to win wars, eight men operated the tank with a cannon on every side of it to 'thin out the ranks' of the enemy.

### ORNITHOPTER

1505

Designed to mimic the flight of birds, the Ornithopter was a precursor to the completed design of his flying machine.

### AERIAL SCREW

1493

Da Vinci's inspiration for his helicopter-like device came from falling maple leaf seeds. Like most of his flying sketches, it was impractical for flight.

### CANNON

1499

Designed to be built on a crank system that allowed different trajectories for firing, the cannon offered unmatched fire power with its large barrel.

### PARACHUTE

1483

Da Vinci sketched the first modern parachute, which was successfully tested in 2000. The tester noted it had a smoother ride than present-day parachutes.

At the height of the Renaissance, ambitious and intelligent men used the power of their minds to invent new and wondrous inventions to prove their complete dedication to mankind and to show off their humanist ideals. Many of these men lived in Italy and turned their attention to a subject that had fascinated mankind since the dawn of time: flight. So just how did these Renaissance inventors plan to make a contraption that would enable the user to conquer the heavens through flight?



## 01 Get inspired

Gain inspiration from your surroundings to get the creative juices flowing. Many of the inventors during this period took inspiration from nature and the creatures around them, seeing them as god's creatures and thus perfect in their construction. Take extra note of birds and other flying creatures and study their movements in the air.

## 02 Wealthy patron required

All the best inventors of the 16th century had a patron to pay for their materials and workshop. These could be learned men from universities or rich members of the nobility. Since your invention will require a lot of money, it is best to find an open-minded person who is rich enough to pay for your time and materials.

## How not to invent a flying machine

The unfortunate case of Franz Reichelt has gone down in history as a lesson in how not to test a flying invention. Reichelt's idea of constructing a suit that would allow the wearer to glide through the air led him to experiment with various forms of cloth to create a parachute. He decided to test his parachute by leaping off the Eiffel Tower in order to prove to the world that his invention could safely glide him down to earth. It was an ambitious bid for immortality.

He had invited the press to attend, including one of the world's first film crews who captured what happened next. As he jumped off the tower the cloth folded around him, bundling him up, and he plummeted head first to the ground. Parisian newspapers later reported that after he hit the ground his legs were crushed, his skull and spine were broken and his eyes were wide open in terror. His overconfidence had proved fatal.

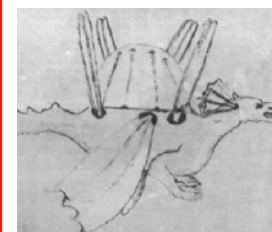


## TYPES OF GLIDER

### BURATTINI DRAGON

1647 - AGORDO ITALY

Designed with four fixed glider wings, inventor Tito Livio Burattini's dragon was alleged to have lifted a cat into the air.



### SAQQARA BIRD

2000 BCE - EGYPT

Widely seen as the earliest example of a glider, the Saqqara Bird is said to have dated back to the time of the pharaohs.



### CHINESE WAR KITE

550 CE - CHINA

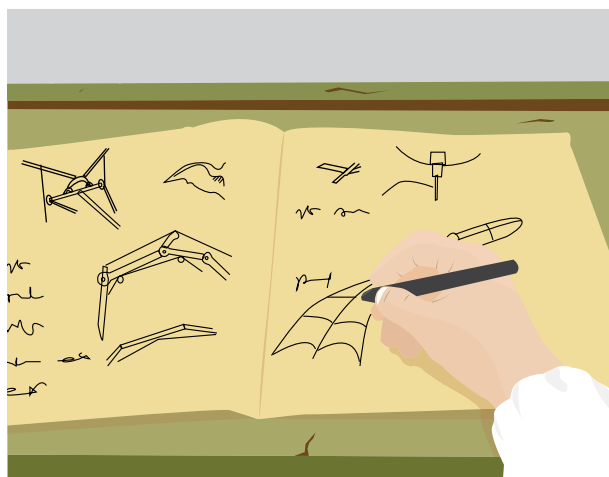
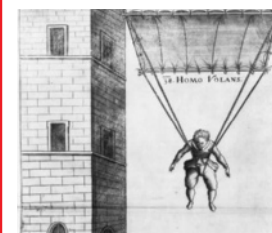
Designed with a flat base, the Chinese kite was one of the earliest examples of a man-made flying object. Some were even large enough to carry people.



### FAUSTO VERANZIO

1617

Known as the 'flying man', Veranzio's Homo Volan is popularly thought to have tested his creation by jumping off St Mark's Campanile in Venice.



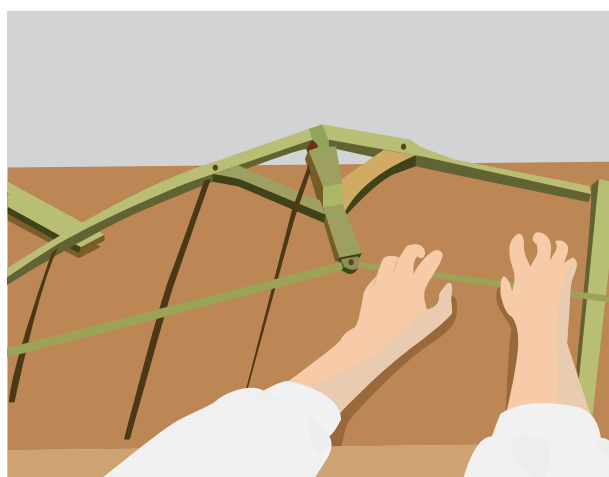
## 03 Design your masterpiece

Make sketches of your masterpiece before beginning to build. Men like Galileo and da Vinci made sketches, which they could come back to if they needed inspiration for later designs. Guard them closely, however - there is much competition among maestros and your ideas may be stolen.



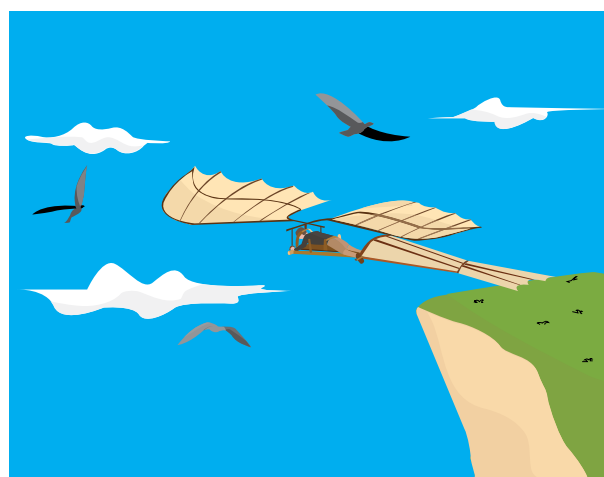
## 04 Go shopping

Travel into the famed open markets of Florence, Venice and Milan to get the materials you need to build your flying machine. You are lucky that you live in Italy: the Italian kingdoms boast some of the greatest trading ports in the world, so rare materials can be obtained easily.



## 05 Begin building

Retire to your workshop with your material and spend hours and hours building your invention. Forgo sleep, food and any semblance of a personal life to get your vision off the ground and into the sky. It is said that da Vinci locked himself in his workshop for days on end constructing his designs - this is the standard you must aspire to.



## 06 Fly like a bird

After months of painstaking work the time has come. Wheel out your marvellous flying machine from your workshop and allow the townspeople to gaze at it in wonder. This is your moment and soon you will conquer the skies. Wave goodbye to your relatives and take a walk off a tall cliff to test your flying machine. What could possibly go wrong?

# INSIDE HISTORY

## DA VINCI'S WORKSHOP

BACK ONCE AGAIN FOR THE RENAISSANCE MASTER, 1478-1482, ITALY

The Renaissance was a time powered by innovation, rational thought and a return to classical art and learning. At its heart was the city of Florence, and in this city lived one of the greatest artists the world has ever known: Leonardo da Vinci. His *Mona Lisa* is the single most visited piece of museum art on record, and *The Last Supper* has inspired countless stories and films alike, but so much about this genius of the 15th century remains a mystery. Many of his designs for inventions, such as his flying machine, went unrealised, and despite making several important scientific discoveries, he never published them. No one knows exactly what his workshop looked like, but we can get a good idea based on what he said and did.

“Artists, philosophers, scientists and writers flocked to Florence to enjoy a political system that was dedicated to the welfare of the city”

### Bookshelf

Da Vinci had a very limited education, but taught himself Latin and advanced mathematics in his adult life. Like many intellectuals of the Renaissance period, he studied the work of the ancient philosophers, and would have read Cennino Cennini's *Treatise On Painting*.

### Unfinished painting

*The Adoration Of The Magi* was never completed, but it gives us a good insight into how da Vinci created his masterpieces. He would have started by inking the outlines before colouring them in with yellow ochre.

### Armoured car

Da Vinci has been credited with inventing the first tank - an armoured vehicle that could move in any direction and was loaded with cannons. It had a protective cover resembling a turtle's shell, and had a sighting turret on top.



### Flying machine

Though fully functioning helicopters weren't built until 1936, da Vinci had drawn a design for one over 400 years previously. His 'aerial screw' measured just over 4 metres (15 feet) in diameter and was made of reed, linen and wire.

### Robotic knight

In the 1950s, sketchbooks were discovered containing design notes for a humanoid robot. The robot could stand, sit, raise its visor and independently manoeuvre its arms using a system of pulleys and cables.

### Florence

Many of the changes we associate with the Renaissance had their origin in the Italian city of Florence. Artists, philosophers, scientists and writers flocked here to enjoy the booming economy and a political system that was dedicated to the welfare of the city.

### Dissection table

Many Renaissance artists studied the human body to improve their artwork, but da Vinci's fascination with anatomy went further. He performed countless dissections and made some significant discoveries about the workings of the human body.

### Art materials

Artists of the time made their own materials by mixing ground pigments with water and egg yolks or oil. Da Vinci also made several sketches using metalpoints - a kind of pencil made from silver, gold, copper or lead - as graphite pencils were not invented until the 16th century.

# What was it like?

# FLORENCE 1475

## Education

Having a good education depended almost entirely on wealth, as there were no public schools and private tutors provided the schooling. These tutors would provide education in all manner of matters from science, maths and classics to arts and etiquette.

## Religion

Florentines' religion was Catholic. The building of fantastic churches and cathedrals by 'great men' was a way to gain prestige. This strong Catholic faith was occasionally complicated by the actions of the Papal States, which sometimes aligned themselves against Florence.

## Finance

The Medicis initially made their money as traders before becoming one of Europe's largest banks. Lorenzo had to juggle his role as primary citizen with his position as head of the family's bank and these two interests often clashed. The de Medicis bankrolled much of Florentine government.

A panoramic view showing the Basilica di Santa Maria del Fiore



The Republic of Florence was a leading centre for art and literature during the Renaissance and home to some of the world's most prestigious artists

One of the five main Italian city states at the time - alongside Milan, Naples, Venice and the Papal States - Florence was an exciting and vibrant city and the driving force behind the Renaissance. Nominally a Republic, where power rested with a ruling class and the government institutions they populated, the city was dominated by the Medici family.

The family first came to prominence through Cosimo de' Medici and, just like a kingship, his power passed onto his son Piero and in 1469 to Cosimo's grandson, Lorenzo. During this period the head of the family was theoretically a mere citizen of the Republic, although in reality he was much more than this and was effectively head of state. By

1475 Lorenzo (later to be titled 'The Magnificent') had consolidated his position and ensured Florence remained a haven for artists seeking patronage. Realising that the city could not compete with some of its larger rivals in terms of military strength, Lorenzo continued his family's policy of establishing it as an artist's haven.

Although the city was a vibrant place to be it was also a dangerous one; as Italy was not a united country the balance of power was almost constantly in flux and treaties and alliances were quickly made and rescinded. Aligned to this was the fact that the threat of foreign intervention from Spain and France, the major world powerhouses at the time, was never far away.



Banking was one of Florence's main industries

### Military

Florence had no standing army and was thus dangerously reliant on mercenary armies. These armies would often extort vast amounts of money and then do their best to avoid combat. This meant Italy was vulnerable to foreign powers and those skilled in diplomacy were vital.



A famous painting by Paolo Uccello depicting the Battle of San Romano between Florence and Sienna

### Industry

The main industrial pillars of Florence were banking, art and the manufacture and trade of cloth, particularly wool. Different trades were represented by guilds that lobbied government and the textile guild was one of the most powerful.



Coat of arms of the House of de' Medici

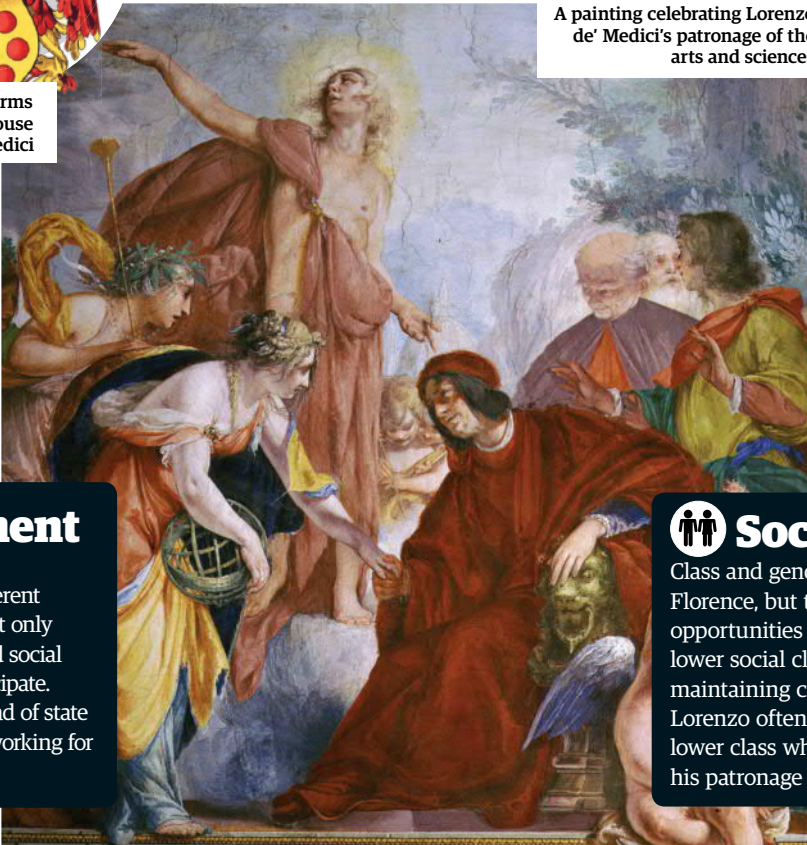
### Art

Florence was at the heart of the Renaissance and its leading men used art as a means of promoting their city. Brunelleschi, Michelangelo and Da Vinci all worked in the city during the Renaissance and the city had the first public library since Antiquity.



Leonardo Da Vinci's youth was spent in Florence

A painting celebrating Lorenzo de' Medici's patronage of the arts and sciences



Lorenzo de' Medici returns having made peace with Naples

### Government

Florence was a Republican democracy with many different councils of government, but only citizens of a certain age and social class were allowed to participate. Lorenzo was effectively head of state but positioned himself as working for the city and government.

### Society

Class and gender lines divided Florence, but there were opportunities for those from a lower social class. As a means of maintaining checks and balances Lorenzo often promoted men of a lower class who were dependent on his patronage for their power.

TUDOR EMPIRE

"The risks were high, but the profits, if successful, were even greater"





HOW ELIZABETH'S PIRATES STOLE THE

# TUDOR EMPIRE

In the age of exploration, the fate of nations and the fortunes of men were created, sunk and stolen on the open seas

→ Written by **Frances White** ←

In the years before Elizabeth ascended the throne, England was plagued by internal conflicts. Her father Henry VIII's split from the church had caused England to fall out of favour with Rome, and then the early death of his heir Edward VI prompted a succession crisis.

The country had switched from Protestant to Catholic with the rise of Mary I, and those who dared to challenge her were burned in the streets without mercy. While other countries were prospering, England was struggling to maintain order within its own borders. What the country needed was a stable, temperate ruler, one whose reign would allow the nation to flourish; that is what it found in Elizabeth.

A Protestant, but without the extreme beliefs of her father, Elizabeth was tolerant, moderate and wise enough to listen to her counsellors. Finally, with the country somewhat stable, its population was able to look outwards. They discovered that the world had very much moved on without them. Spanish, Italian and Portuguese explorers ruled the waves. Using their sophisticated navigation tools, they had set up powerful and profitable trading roots, and if it didn't act soon, England would find itself isolated and vulnerable.

Armed with new navigation tools, English sailors were finally bold enough to sail beyond the sight of land and into the open sea. The spirit of exploration gripped the nation, which was eager to best the competition, spread Christianity and, most importantly, claim riches. Figures such as Walter Raleigh and Francis Drake, a virtual unknown, became household names after completing valiant voyages for the English crown. As riches began to pour in, more and more ambitious seamen took to the waves eager for a taste of glory, wealth and adventure. The risks were high, but the profits, if successful, were even greater.

It became obvious that true wealth lay in trade and an abundance of chartered companies began to pop up around the country. Making perilous journeys to plant their flags in far-off exotic lands, traders brought a stream of valuable eastern spices, pepper, nutmeg, wine, precious stones, dyes and even slaves pouring into England.

It was an era of exploration, an era of change; a time when a lowly sailor with an adventurous spirit could make his fortune if he was daring enough to take it. There was a new world to explore, and it seemed like the entire world order could change as quickly as the wind.





# The pirate knight

Writer, courtier, spy, Walter Raleigh used his favour with the queen to wipe out his Spanish rivals

**T**he life story of Sir Walter Raleigh is one of glittering highs and devastating lows. It perfectly encapsulates how, in the age of exploration, one's fate could be changed, for better or worse, in an instant.

Born into moderate influence, Raleigh was the youngest son of a highly Protestant family. Educated at Oxford University, it seemed he was set for an academic life, but when the French religious civil wars broke out, he left the country to serve with the Huguenots against King Charles IX

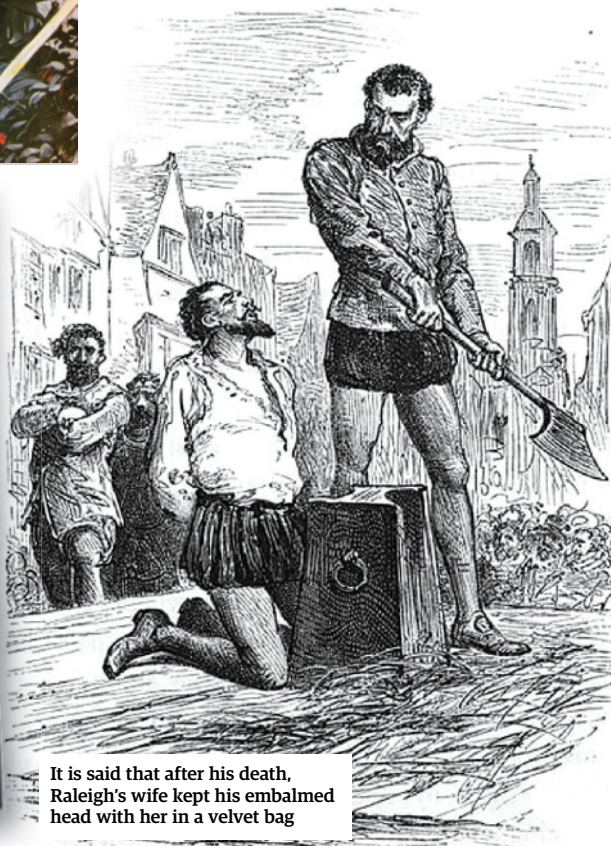
of France. However, it was his participation in the Desmond Rebellions in Ireland that would forever alter his life.

When uprisings broke out in Munster, Raleigh fought in the queen's army to suppress the rebels. His ruthlessness in punishing the rebels at the Siege of Smerwick in 1580 and his subsequent seizure of lands saw him become a powerful landowner and, most importantly, it caught the attention of the queen. Oozing natural charm and wit, Raleigh became a frequent visitor to the Royal Court and he soon became a firm favourite of Elizabeth. She bestowed her beloved courtier with large estates and even a knighthood. Her deep trust in Raleigh was demonstrated in 1587, when she made him Captain of the Queen's Guard.

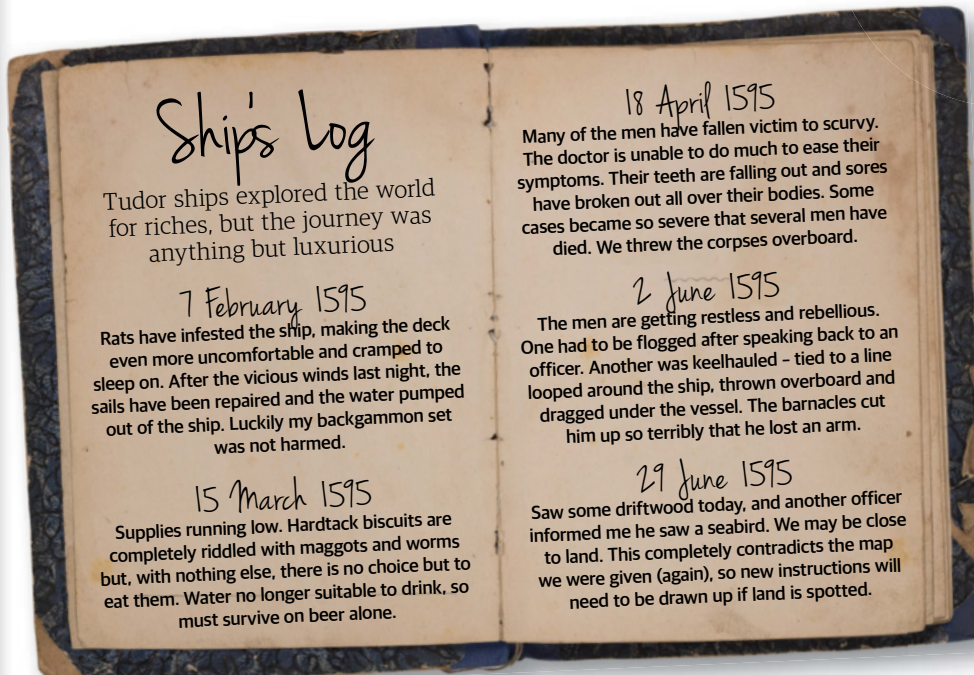
It is no surprise then that when Raleigh suggested colonising America, it was supported whole heartedly by the queen, who granted him trade privileges to do just that. From 1584 to 1589, Raleigh led several voyages to the New World; he explored from North Carolina to Florida and bestowed it with the name 'Virginia' in honour of the virgin queen. His attempts to establish



Raleigh and his men attacking a Spanish fort



It is said that after his death, Raleigh's wife kept his embalmed head with her in a velvet bag



## Ship's Log

Tudor ships explored the world for riches, but the journey was anything but luxurious

7 February 1595

Rats have infested the ship, making the deck even more uncomfortable and cramped to sleep on. After the vicious winds last night, the sails have been repaired and the water pumped out of the ship. Luckily my backgammon set was not harmed.

15 March 1595

Supplies running low. Hardtack biscuits are completely riddled with maggots and worms but, with nothing else, there is no choice but to eat them. Water no longer suitable to drink, so must survive on beer alone.

18 April 1595

Many of the men have fallen victim to scurvy. The doctor is unable to do much to ease their symptoms. Their teeth are falling out and sores have broken out all over their bodies. Some cases became so severe that several men have died. We threw the corpses overboard.

2 June 1595

The men are getting restless and rebellious. One had to be flogged after speaking back to an officer. Another was keelhauled - tied to a line looped around the ship, thrown overboard and dragged under the vessel. The barnacles cut him up so terribly that he lost an arm.

29 June 1595

Saw some driftwood today, and another officer informed me he saw a seabird. We may be close to land. This completely contradicts the map we were given (again), so new instructions will need to be drawn up if land is spotted.



English ships and the Spanish Armada in August 1588

colonies, however, ended in failure. His settlement at Roanoke Island especially was a disaster, as the entire colony mysteriously disappeared, their fate unknown to this day.

The Roanoke colony was not the only one to experience a disastrous end - Raleigh's relationship with the queen was destroyed when she discovered his secret marriage to one of her own ladies in waiting. Not only was she 11 years younger than him, but she was also pregnant. Furious that he had failed to obtain her permission, and likely a little jealous, Elizabeth had Raleigh imprisoned and his wife cast out of court.

Upon his release, Raleigh was eager to reclaim favour with the monarch so led a mission to search for the legendary city of gold - El Dorado. Although his accounts would claim otherwise, he did not find the city of legend, but instead explored modern-day Guyana and Venezuela. His attack on the powerful Spanish Port of Cadiz and attempts to destroy the newly formed Spanish Armada helped to gradually win back favour with Elizabeth.

When Elizabeth died and James I came to the throne in 1603, Raleigh must have realised his time was up. His ruthless spirit and charm had won him a soft spot in the English queen's heart, but the Scottish king took an immediate dislike to him. Raleigh was arrested and imprisoned in the Tower of London less than a year after James's ascension. He was found guilty of treason, but was spared from his death sentence and committed to life imprisonment. In 1616 he was released by the money-hungry king to, yet again, search for the fabled city of gold, which his own accounts had helped make into a legend.

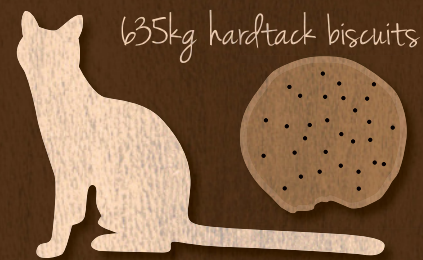
During the expedition, he disobeyed James's orders and attacked a Spanish outpost. Spain was furious, and in order to appease them, James had no choice but to punish the rebellious adventurer. Raleigh was re-arrested and his sentence was finally carried out. Bold and cunning to the end, Raleigh reportedly said to his executioner: "This is sharp medicine, but it is a cure for all diseases. What dost thou fear? Strike, man, strike."

## RALEIGH'S VOYAGES



## What Was On Board?

A ship of 200 men setting sail for a week would be loaded with...



635kg hardtack biscuits

1 cat (black or white)



68kg fish



72kg salted beef or pork



1 set of clothes per man



200 rats

54kg cheese



34kg butter

20 animals (including goats, chickens, pigs and lambs)



1,400 gallons of beer



**A shaky start**  
**1** On 15 November 1577, Drake sets off from Plymouth, but his voyage is immediately halted by bad weather. They are forced to return to Plymouth to repair their already battered ships. On 13 December, he sets sail again on the Pelican. He is accompanied by four other ships manned by 164 men, and he soon adds a sixth ship to his fleet.

**The Mystery Landing**  
**4** Drake sails north and lands on the coast of California on 1 June 1579. While there he befriends the natives and dubs the land Nova Albion, or 'New Britain'. The location of this port remains a mystery to this day, as all maps were altered to keep it a secret from the Spanish. The officially recognised location is now Drakes Bay, California.

**A grim landing**  
**2** After being forced to sink two ships, Drake lands on the bay of San Julian, where he burns another rotting ship. There, Drake tries Thomas Doughty, who is accused of treachery and incitement to mutiny. He is sentenced to death and executed alongside the decaying skeletons swinging in the Spanish gibbets.

**The lone flagship**  
**3** With just three ships remaining, Drake reaches the Pacific Ocean. However, sudden violent storms destroy one and force another to return home. The flagship Pelican is pushed south and they discover an island, which Drake names Elizabeth Island. He then changes the name of his lone ship to the Golden Hind.



**F**or many, Sir Francis Drake is a physical embodiment of the glories of Tudor England. But Drake himself was an entirely untypical hero. His birth was viewed so unremarkable that no one is sure exactly when it was. He came from a very ordinary family; he was the eldest of 12 sons, and his father was a farmer. When the Catholic Mary began to persecute Protestants, the family fled from Devonshire to Kent, where his father became a preacher. It seemed fate itself wished to place Drake on a ship, as he was apprenticed to their neighbour, and when the old, childless sailor died, he left his ship to his favourite pupil.

By the 1560s, the young Drake was making frequent trips to Africa. There, he would capture slaves and sell them in New Spain. This was against Spanish law and in 1568 his fleet was trapped by Spaniards in the Mexican port of San Juan de Ulua. Although Drake managed to escape, many of his men were killed. This incident instilled a deep hatred in Drake towards the Spanish crown that would last throughout his entire life.

In 1572 he received a privateer's commission from Elizabeth and set his sights on plundering any Spanish ship that crossed his path. He targeted wealthy Spanish-owned port towns and settlements, attacking them and claiming as much gold and silver as he could load on to his ships. It

# Dragon of the seas

The Spanish had circumnavigated the globe decades before, but English explorer Francis Drake threatened to destroy their success

## The Hind lives on

**5** Drake reaches a group of islands in the southwest Pacific known as the Moluccas. After a close shave in which the Golden Hind is almost lost after being caught on a reef, Drake befriends the sultan king of the islands.

## The valiant return

**6** On 26 September 1580, the Golden Hind finally returns to Plymouth with Drake and the 59 remaining crewmembers onboard. The queen receives half of the treasures and spices loaded onto the ship. In return, Elizabeth gives Drake a jewel with her miniature portrait, now known as the 'Drake Jewel'.

## TUDOR NAVIGATION

Although Tudor sailors liked to paint themselves as masters of the seas, their navigation tools were rather primitive and a lot of guesswork was involved. Maps did exist, but they were often incorrect, as much land was undiscovered. Compasses were used for direction and an instrument called a nocturnal was used to determine the alignment of the stars, which helped to calculate tides. The term 'knots' came from a Tudor method to calculate the speed of a ship - a piece of wood attached to a rope with knots in it was cast out and the knots counted as they passed through a sailor's fingers. Another sailor used a sandglass to determine how many knots were travelled in a period of time.

was Drake who, when discovering that he had too much gold to carry, decided to bury it and reclaim it later. This was not the only comparison made between Drake and pirates. Although in England his success had seen him become a wealthy and respected explorer, this was not the case in Spain. To the Spaniards whose ships he had plundered, Drake became a bloodthirsty figure to be feared; they even gave him the terrifying nickname 'El Draque' - the Dragon.

Dragon or not, the daring and bountiful voyages of the English adventurer had impressed Queen Elizabeth I. He perfectly epitomised the kind of pioneering English spirit that she felt her country needed to ensure it became a major world power.

In 1577, she sent Drake on an expedition against the Spanish along the Pacific coast of South America. He raided the Spanish settlements in his usual ruthless style and, after plundering Spanish ships along the coasts of Chile and Peru, he landed in California and claimed it for his queen. His journey continued through the Indian Ocean and when he finally returned to England on 26 September 1580, he became the first Englishman to circumnavigate the world. This delighted the queen, but what pleased her even more were the pretty jewels he bestowed her with. In a move that insulted the king of Spain, she dined onboard the explorer's ship, bestowed him with a jewel of her own and gave him a knighthood.

Drake's formidable success at the expense of Spain did not end there. In 1588 he was made vice admiral of the Navy, and when 130 Spanish Armada ships entered the English Channel, he fought them back with relish. Now, he wasn't only a wealthy explorer and royal favourite, he was also a war hero. However, in 1596 his luck finally ran out. The queen requested him to engage his old enemy Spain one last time and in a mission to capture the Spanish treasure in Panama, Drake contracted dysentery and died. His body was placed in a lead coffin and cast out to sea. His enduring legacy remains, and to this day divers continue to search for the coffin of the man who led Elizabethan England to glory.

The Muscovy Company's demands to close Russian trade to other European powers were met with anger by Ivan IV



## Trade invoice

Slaves - Africa

Oriental spices: cinnamon, cloves, peppers - China and India

Currants: dried wine grapes - Eastern Mediterranean

Wine - Eastern Mediterranean



Cotton - Eastern Mediterranean

Silk - Eastern Mediterranean



Cordage - Russia

Hemp - Russia

Furs - Russia

Carpets - Turkey

Silk - Persia

Fruit - Mediterranean

Sugar - North Africa



# Treasures of the empire

A world full of riches awaited to make England a wealthy and powerful nation once again

**W**hen it came to trade, England had some catching up to do. For a long time, Italian spice and dye traders dominated the seas, but the Italian monopoly that had existed on trade was finally broken by Spain and Portugal. In their efforts to loosen the Italian hold on trade, these traders discovered sea routes to the Indies and the hugely valuable spices that lay beyond. England looked on greedily as Spain grew wealthier and wealthier and became determined to share in the riches that were on offer in the New World. If England failed to get a foothold in the exploration of the New World, its European rivals would leave it behind and the nation would be left vulnerable. Trade didn't just mean riches anymore - it meant survival.

After an English spy gained a copy of *Breve Compendio De La Sphera*, a secret Spanish textbook that held the secrets to success at sea, craftsmen began designing new instruments and English explorers were finally ready to take to the waves. Queen Elizabeth supported the voyages of these intrepid explorers and expressed that she would not disapprove if they were to take advantage of richly laden Spanish ships while doing so. Soon, English adventurers gained a reputation for piracy, although the raids were conducted not by pirates but by 'privateers'. Spanish ships in the Caribbean trembled in terror upon the sight of an English galleon on the horizon. A new world was dawning, and using their cunning, daring and ruthlessness, English traders would come to rule it.

# THE EAST INDIA COMPANY

The tiny English company that came to control half of all the world's trade

When Queen Elizabeth granted a Royal Charter to the traders that would become the East India Trading Company, it's doubtful she could foresee the impact it would have upon the world. The 15-year charter permitted the fledgling company a monopoly on trade with countries east of the Cape of Good Hope and west of the Straits of Magellan, but they were motivated by one thing - spices. But the Dutch East India Company had the monopoly and the small English company had to work from the bottom up, slowly gaining income and respect. Eventually the company's trade in spices, cotton and silk saw profits pour in. Just 47 years after its creation, the little business morphed into a giant. For many, the pioneering nature of the company was symbolic of the spirit of exploration, tearing down the barriers of the world. But as the company became more powerful, its ambitions grew in kind. The initial focus on trade morphed into dangerous colonial aspirations that would lead to the company's eventual downfall.



Elizabethan privateer James Lancaster commanded the first East India Co. voyage

## EXPANDING EAST

The East India Company weren't the only English traders to rule the seas

Although the East India Trading Company was a major player in the arena of English trade, many other companies were making waves worldwide. The first major chartered joint stock company was the Muscovy Company, focusing on trade between England and Muscovy, modern-day Russia. Trading with this mysterious state in the frozen tundra involved perilous journeys that left one crew frozen, but when Richard Chancellor finally made it to Moscow he found a market eager to trade. English wool was exchanged for Russian fur and an array of valuable goods. The Muscovy Company even led to a marriage proposal from Ivan the Terrible to Elizabeth.

Another major English chartered company was the Levant, or Turkey, Company, drawn to the Ottoman empire by the lure of exotic spices. The Levant Company amassed a small fortune trading in silk and valuable currants. What set the Levant Company apart was that the leaders never appeared to have colonial ambitions, instead working closely with the sultan. This allowed for a relationship of mutual benefit.



A 1593 map of Muscovy

## Forgotten Tudor Explorers

The men whose voyages carved the world for England

### Humphrey Gilbert

1539-1583

Half brother of Sir Walter Raleigh, Gilbert's voyages established St John's Newfoundland, the most eastern province of Canada, in 1583. An early pioneer of the English colonial empire in North America, Gilbert initially sailed to find a sea route through North America to Asia.



### John Hawkins

1532-1595

Cousin of Francis Drake, Hawkins was not only chief architect of the Navy but also conducted several voyages to West Africa and South America. Hawkins was a trade pioneer and made a huge profit from the slave trade.



### Richard Grenville

1542-1591

An English war hero, Grenville was a major part of early attempts to settle in the New World. He attempted to set up colonies in Roanoke Island and his daring death aboard his ship *Revenge* is immortalised in Tennyson's poem *The Revenge*.



### Martin Frobisher

1535/1539-1594

Frobisher was determined to find a north-west passage as a trade route to India and China, and made three voyages in an effort to do so. The privateer collected what he believed was 1,550 tons of gold, but actually turned out to be worthless iron pyrite.



### Richard Hawkins

1562-1622

Son of John Hawkins, he set sail to prey on the possessions of the Spanish crown in South America. Although his plundering of Spanish towns strongly suggest otherwise, he maintained that the purpose of the expedition was geographical discovery.



## Day in the life

# A TUDOR MUSICIAN

## PURVEYORS OF MUSIC AND BEAUTY IN THE RENAISSANCE, ENGLAND, 1485-1603

The Tudor dynasty introduced a period of great cultural and artistic change in England, known as the English Renaissance. Henry VIII and his daughter Elizabeth I were both huge supporters of arts and music, transforming their courts into centres of artistic innovation. As the monarchy's interest in music increased, the country quickly followed suit and all young men of nobility were expected to be able to play an instrument. Skilled musicians were sought after throughout the country and from the royal courts to small village fetes, the everyday life of a Tudor musician was busy, varied and fulfilling.

### PROVIDE MUSIC FOR MORNING EXERCISE

Dancing was a popular form of exercise in Tudor England, enjoyed by the royal family. Every morning, court musicians would provide the soundtrack to the morning dance, and the new kinds of music played by the musicians led to the creation of many new court dances. Queen Elizabeth I especially enjoyed dancing and employed 70 musicians to play for her.



Dancing was regarded as exercise to refine both the body and mind

### PLAY IN CHURCH

Religion was hugely important - and volatile - during the Tudor era, as Henry VIII broke away from the Catholic Church and formed the Church of England, which threw the country into turmoil, with frequent shifts between Catholic and Protestant leaders. Many jobs opened for musicians within the church as choirmasters, singers and to play instruments during masses. Almost 80 musicians served Henry VIII in the Chapel Royal and accompanied him around the country.

### TEACH CLASSES

The skill to play an instrument was highly valued in the court of the Tudor monarchs, so noble families were eager for their children to be taught the art. It was common for musicians to spend time teaching in schools and universities and members of the royal family often received one-on-one tutoring with music teachers.

### How do we know this?

The book *Patrons And Musicians Of The English Renaissance* provides a study of the emergence of a music profession as well as the social environment that helped to nurture it. It also explores the relationship between patrons and their musicians. Also helpful was the text *Music And Society In Early Modern England*, a comprehensive study of the multiple roles of musicians which utilises sources such as ballads, court records, diaries and wills from the era.



The first English string quartet, the English consort, emerged in the Tudor era and featured a violin, flute, lute and viol

“Many jobs opened for musicians within the church as choirmasters, singers and to play instruments”

## PROVIDE ENTERTAINMENT AT A PUBLIC GATHERING

Music was enjoyed by the rich and poor alike and each town had a band of musicians known as waites. A wait would play their own original music at public occasions, welcome royal visitors by playing at the town gates and even wake townsfolk on dark winter mornings by playing beneath their windows. Street musicians or travelling minstrels, however, were looked down upon.

## LEARN A NEW INSTRUMENT

Many new instruments emerged in the Tudor period and it was essential that musicians kept up with the current trends. These new instruments included the hautboy - an early form of the oboe and the viol - an early violin. New versions of the ever-popular lute also emerged, such as the chitarrone lute, which was 183 centimetres (six feet) tall.

New instruments, such as the spinet, rose in popularity across Europe

## COMPOSE A SYMPHONY

The introduction of new instruments helped to create a new, refined sound, and these instruments were used in combination to produce unique music, an immediate precursor to the modern orchestra. This led to the emergence of talented Tudor composers such as William Byrd and Thomas Tallis, who received fame and popularity for their work.

## GET WORK PRINTED

The Tudor period introduced the publishing of music to a market of amateur, would-be musicians. A musician who wished to publish their work would first have to receive special permission from the monarch. Music and song lyrics were both printed, however they would be sold separately, which proved to be a lucrative practice as John Dowland's *First Booke Of Songes Of Ayres* quickly became a best-seller.

## PLAY FOR THE ROYAL COURT

The Tudor monarchs were great supporters of the arts and music. Queen Elizabeth I was a patron of all the arts and actively encouraged artists, actors and musicians, while Henry VIII was a talented musician himself, able to play a multitude of instruments. The court transformed into a celebration of musical culture, drawing the best musicians from England and other parts of the world, to play for the aristocracy.

Henry VIII was an accomplished musician, composer and dancer



## Architecture

After the dreadful fire of 1541, many areas of Malá Strana and Hradčany, as well as parts of Prague Castle, had been destroyed, and the new ruler quickly set to work to rebuild most of these areas in the Renaissance style that Prague is so famous for today.

# What was it like? PRAGUE, 1576



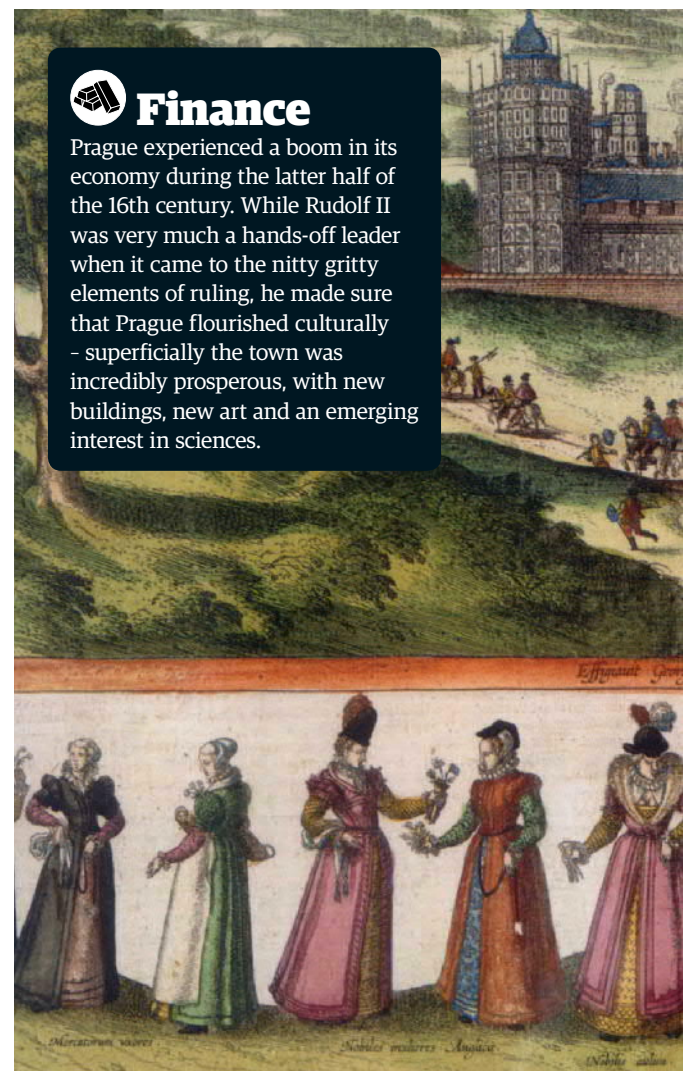
With an illustrious history tainted by war, Prague in 1576 was a cultural hub, attracting the most famous artists and scientists

From being the largest town for trading in Europe to a stint as the capital of the Holy Roman Empire, Prague's history has certainly been an illustrious one - but by no means has it always been peaceful. Brutally murdered in 1306, King Wenceslaus II had no male heir, and the throne was passed onto the House of Luxembourg, eventually reaching Charles IV - who also became the Holy Roman Emperor in 1355. Charles IV ushered in the golden age of Prague, founding the oldest Central European university (Charles University), ordering the creation of a cathedral, and building up the town in a high-Gothic style.

Upon the death of Charles IV, however, Prague began to crumble. The throne was passed from royal to royal while the Hussite wars plagued the town. After more than a century of strife, the Kingdom of Bohemia was absorbed by the Habsburg dynasty in 1526, and in 1576 Rudolf II was made king. An ardent lover of art who suffered from bouts of insanity, Rudolf sated his desire for beauty by rebuilding much of Prague into the emerging Renaissance style. It was this liberal attitude that re-established Prague as a cultural hub once more, and by 1576 the town was affectionately known as Magic Prague.

## Finance

Prague experienced a boom in its economy during the latter half of the 16th century. While Rudolf II was very much a hands-off leader when it came to the nitty gritty elements of ruling, he made sure that Prague flourished culturally - superficially the town was incredibly prosperous, with new buildings, new art and an emerging interest in sciences.





## Education

With Rudolf II taking the crown in 1575, sciences flourished in Prague. In particular, alchemy and astronomy became synonymous with the town, and famous names visited him in court, such as Johannes Kepler. It's rumoured that Rudolf II sought eternal youth, but when alchemist Edward Kelly failed to change a base metal into gold, he was thrown into jail.



## Government

After the Habsburg dynasty took over the Bohemian throne in 1525, inhabitants of Prague began to revolt. Brutally suppressing these revolutions, King Charles IV (and later Rudolf II) revoked many citizens' political privileges. By 1576 it was an oppressive regime, and the Defenestration of Prague in 1618 sparked the Thirty Years' War.

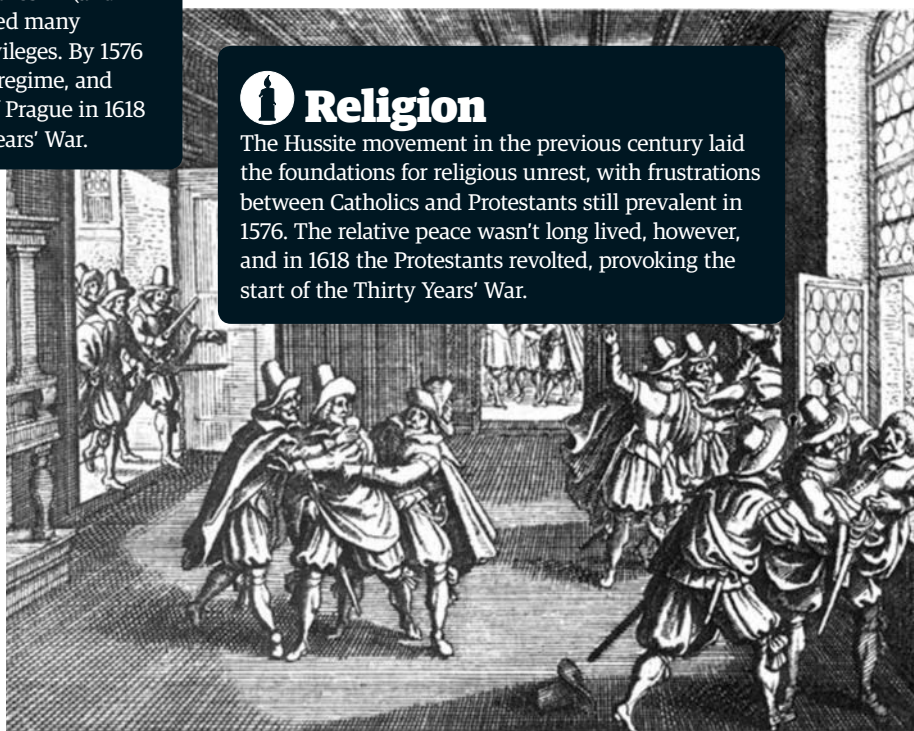


## Art

Art thrived during the reign of Rudolf II. A great lover of all things beautiful, Rudolf happily invited dozens of artists and scholars to visit him at court. He also brought with him the introduction of Mannerism to Prague, ending masterpieces in this style to the galleries across the town.

## Religion

The Hussite movement in the previous century laid the foundations for religious unrest, with frustrations between Catholics and Protestants still prevalent in 1576. The relative peace wasn't long lived, however, and in 1618 the Protestants revolted, provoking the start of the Thirty Years' War.





“He secured the patronage of the Spanish monarchs Ferdinand II of Aragon and Isabella I of Castile who agreed to fund his plans to explore the New World”



# COLUMBUS

EXPLORER · ICON · MURDERER

*Christopher Columbus was instrumental in defining the New World, but did he rule his new-found lands with a brutal and bloody iron fist?*

Written by Dom Reseigh-Lincoln



The son of middle-class Genoan wool weavers, Christopher Columbus is not your usual child. Driven and incessantly inquisitive, the young boy is fascinated with the maps and charts the traders and seafarers bring to his coastal home in Italy. Something about those empty spaces on the intricately marked canvas calls to him, a fantastical need to fill those gaps and claim the glory such discoveries would surely bring. The unknown doesn't unsettle him, like it does many people of the time - in fact, it does the opposite: it captivates him. Seeing a rare tenacity in his eldest son, his father spends what money a wool weaver can spare and secures a place for Columbus at the University of Pavia. There he studies grammar, geography, geometry, astronomy, navigation and Latin - but for all his studies, the young Genoan finds his mind drifting to those blank voids on the map. This hunger would define his life forever.

In 1470, Columbus gains an apprenticeship working as a business agent for three influential Genoan families. His learned background and

tenacity in the face of adversity makes him a ferocious businessman and he's soon captaining ships that carve the ocean like blades. His work takes him far and wide across the civilised world: Lisbon, Bristol, Galway, West Africa and even settlements in Iceland become common ports of call. While deeply pious, Columbus steadily builds a reputation for ruthless determination. But for all his years of trade and commerce in these establishment lands, Columbus would always find his mind drifting to those incomplete maps he pored over as a child. The only thing standing between him and those fabled lands of untold riches was money. It was time to find a patron - an incredibly wealthy patron.

For many years, Europe held a distant yet lucrative trade relationship with the East. While under the rule of the once-rampant Mongol Empire, European traders travelled a relatively safe route of passage to China known as the Silk Road, but now that Constantinople had fallen to the Turks, the route was rife with piracy. The East was now too dangerous a path to take, even for the most

hardened of captains. Columbus was searching for a new route to India and the riches of Asia and to achieve this his plan was simple: sail west across the Ocean Sea (the 15th and 16th-century name for the Atlantic Ocean).

Sailing west wasn't just a case of turning your ships about and sailing away from the Orient, though. Since a portion of the map remained undefined on Western charts, the view of scholars, geographers and seafarers was a skewed one. Theories that the Earth was a flat disc persisted among some, but it was more the misinterpretations and speculation involving the distances between Europe and Asia, as well as the actual size of the mysterious continents and islands that were rumoured to lie beyond the storm-ridden oceans. Even Columbus' own theories were wildly inaccurate, but his intensity and sheer persistence made him stand out from his peers. He eventually secured the patronage of the Spanish monarchs Ferdinand II of Aragon and Isabella I of Castile, who agree to fund his plans to explore the New World and claim it the name of a unified, Catholic Spain.

# THE VOYAGES OF COLUMBUS

**KEY**  
**FIRST VOYAGE 1492-1493**  
**SECOND VOYAGE 1493-1496**  
**THIRD VOYAGE 1498-1500**  
**FOURTH VOYAGE 1502-1504**

## 2. DISCOVERING THE AMERICAS 12 OCTOBER 1492

After a five-week journey across the Atlantic, land was sighted. Aiming to land in Japan, Columbus had stumbled upon the Bahamas. He named the island San Salvador. Columbus' ships struggled to make anchor off the coast, so many of the natives dove into the water to assist them - they would be rewarded by enslavement.

## 6. EXPLORING SOUTH AMERICA 30 JULY 1502

Despite being stripped of his titles and his health failing, Columbus was still determined to explore the coasts of northern South America. After surviving a tropical hurricane, he and his crew landed in Honduras. He spent two months exploring the region, along with Nicaragua, Costa Rica and Panama.

## 4. PUNISHING THE NATIVES 22 NOVEMBER 1493

During his second voyage, Columbus paid a visit to his recent settlement of La Navidad. What he found was burning ruins, savaged by the native Taino people. In retaliation he demanded a tribute be made to him, or he'd cut the hands off every member of the tribe. He later sailed north and founded another settlement, La Isabela, but it failed to take root and fell apart in his absence.

## 3. ARRIVING IN HISPANIOLA 5 DECEMBER 1492

After a brief expedition into Cuba, Columbus arrived at Hispaniola. Due to bad weather, the Santa Maria ran aground on 25 December, but Columbus used the wreck as cannon-target practice. Columbus founded the settlement of La Navidad during this time, before continuing along the northern coast of Hispaniola in search of further discoveries.

## 5. SAILING THE ORINOCO 4-12 AUGUST 1498

While many of Columbus' personal calculations and assumptions turned out to be considerably wide of the mark, his study of the Gulf of Paria (between Trinidad and Venezuela) and the Orinoco River correctly led him to the conclusion that a considerable landmass was within reach. Upon reaching the coast, he marked that this bountiful land could well be the site of the biblical Garden of Eden.

*Breaking down his four expeditions that changed the world*

## I. THE VOYAGES BEGIN 3 AUGUST 1492

After soliciting considerable patronage from the Spanish monarchs, Columbus sets off with an initial fleet of six ships from Palos de la Frontera, a principality in the Spanish province of Huelva. Columbus and his fleet arrive at the Castille-controlled Canary Islands, the starting point on his planned journey to Asia.



On the morning of 3 August 1492, with a contingent of three ships and two smaller caravels, Columbus sets sail from Palos de la Frontera. The swells are relatively calm and the ships carve a path toward the Canary Islands in a few days, before restocking supplies and setting sail for Japan. The three ships sail deeper into the unknown. Violent winds and angry swells buffet them across the waves, their intended course ripped apart by tropical storms these westbound seafarers have little experience with. By 12 October, morale on the ships is at a dangerously low - men have drowned in storms, masts have been broken by vicious gales and even a small mutiny breaks out. Columbus, sat within the confines of his cabin, stares at the maps before him. He knows their course has been broken, but it's the time at sea that troubles him the most. They should have set foot on new lands long before now. Time is running out.

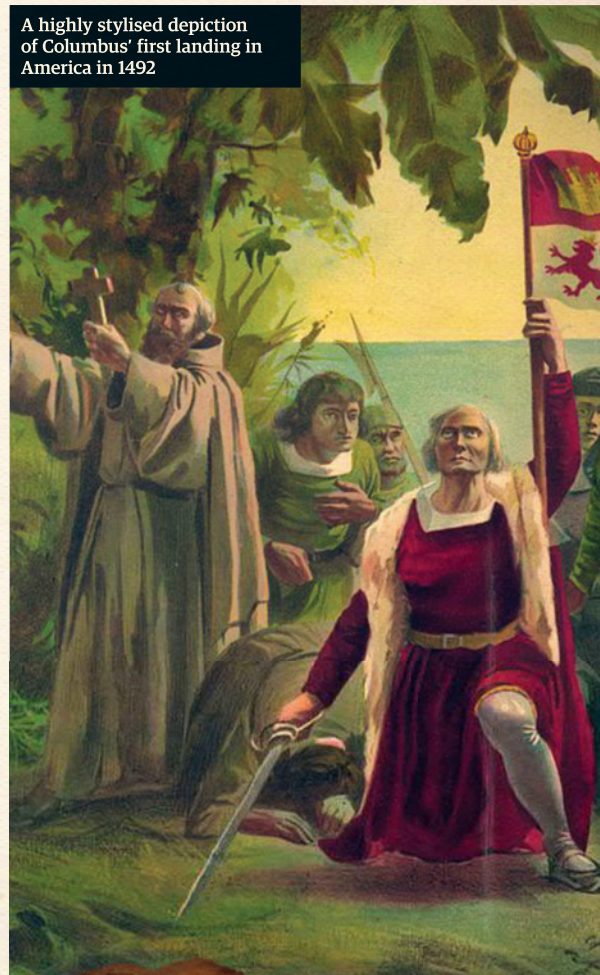
Suddenly, out of nowhere, one of sailors above screams at the top of his voice: "Land! Land ahoy!" Columbus rushes from his desk, candles, papers and wine flying in his wake. The spray of the swaying oceans stings him in the face after so many hours in a stuffy cabin, but he's soon scrambling onto the poop deck, the prospect of land driving him forward. He squints and takes his first glimpse of a brand new world. Lush greenery and a pale-coloured beach can be seen in the distance, birds of a peculiar colour circling

above the canopy. It's then that he sees them: dark-skinned men and women, most of them barely dressed at all, spears and bows clutched in their hands.

A few hours later, all three ships are anchored at a safe distance and the three crews are now safely on land. Columbus is standing upon Watling Island (which would later form part of the Bahamas). He names it San Salvador and claims it for the glory of Spain. Over the next few days, Columbus meets with the three main tribes of the island - the Taino, the Arawak and the Lucayan - and begins building a relationship that tells him a great deal about this new Eden. Only one other tribe, based on a distant island, is aggressive toward them, occasionally landing raiding parties to take slaves. In one of his journal entries, Columbus remarks: "I could conquer the whole of them with 50 men, and govern them as I please." Columbus views them less as people and more as another acquisition with which he can return to Spain. While this attitude may seem callous, it is a common one that will eventually drive and maintain the slave trade for hundreds of years to come. After a week or more on San Salvador, he begins searching the surrounding waters, eventually arriving on the northern coast of Cuba, before landing on the coast of Hispaniola on 5 December 1492.

Hispaniola is a much larger land mass than the first island he embarked on, and with a calm

A highly stylised depiction of Columbus' first landing in America in 1492



sea behind him and stories of a realm rich with gold and other treasures, Columbus is confident he's found the beginning of his own legacy. In a matter of weeks he establishes a settlement on the island, La Navidad, and on 25 December orders a specially chosen crew of his most trusted seafarers to take the Santa Maria and sail north and conduct more reconnaissance.

Unfortunately, Columbus is drunk at the time he gives the orders, as is the crew he appoints. In a matter of a few hours, half the crew fall asleep and the boat crashes into the rocks.

On 13 January 1493, Columbus meets with the carique (the head chieftain of the Taino peoples) of Hispaniola, Guacanagari, who agrees to the explorer's request to leave 39 of his crew behind to populate the settlement. He leaves on the last exploratory part of his first voyage and arrives some days later on the Samana Peninsula, where he encounters the far less friendly Ciguayos tribe. The carique on the island refuses to grant Columbus leave to establish a settlement; battle soon ensues and two of the tribe's people are killed. As punishment, Columbus captures 30 of their people and sets sail for Spain - only seven of the captives survive the long trip back to Europe.

“La Navidad has been razed to the ground, burned to a cinder by the Taino people that had been so accommodating the year before”

Upon returning to the court of the Spanish monarchs, Columbus becomes the talk of Europe with his journals, maps, fruits, spices, gold and native captives. His irrefutable proof of a new land between Europe and Asia now laid before them, Isabella and Ferdinand happily award Columbus the titles previously agreed, and he becomes the Admiral of the Open Sea and viceroy and governor of all the lands he discovers. In order to ensure the expansion of Hispaniola, Columbus sends his brother Bartolomeo along with a consignment of sailors, soldiers and tradesmen soon after.

On 24 September, Columbus sets out on his second major voyage. It's an expedition that takes a far more southerly route, taking in the other islands in the Bahamas, as well as a stopover in Jamaica. On 22 November, Columbus and his fleet of 17 ships turn their bows toward Hispaniola, the Genoan governor ready to see the plans he gave his brother back in Cadiz come to life. What he finds is a burning ruin. La Navidad has been razed, burned to a cinder by the Taino people that had been so accommodating the year before. He had brought civility to their darkened corner of the Earth. He had given them stability. He had given them the power of Christ.

LIFE ON THE WAVES

*What was the reality of sailing the oceans in the 15th century?*



**Ship's surgeon**

Life aboard a 150-tonne ship was fraught with dangers. Cannons could misfire, limbs could be broken by broken masts and flailing rigging, as well as the various diseases and ailments that could affect the crew. At the heart of all this was the ship's surgeon, whose role was to ensure a crew remained fit enough to fulfil their duties, however gruesome the treatment.



**Boatswain**

The boatswain was one of the most important members of a ship, and with that responsibility came its fair share of danger. A boatswain, usually the third or fourth mate, was in charge of maintaining the ship's deck and ensuring the sails and rigging remained in the best condition. In moments of emergency, such as a raging fire (a common occurrence due to power kegs overheating in hot, dry temperatures) and storms, a boatswain would be first on the scene.



**Ordinary seaman**

For all the master gunners and quartermasters, there was always need for seamen willing to do the hard graft that life at sea demanded. Known rather less affectionately to their fellow crew as 'swabbers', ordinary seamen found themselves doing the Santa Maria's worst jobs. Pumping and removing bilge (the stagnant water that collects in the lowest compartment of a ship), untangling knotted rigging and swabbing the decks clean were just some of their chores.



The Santa Maria was the largest ship in Columbus' small fleet, with its 17.7m (58ft)-long deck



## CUTTHROAT COLUMBUS

*Three of the legendary explorer's most brutal actions*

### Public humiliation

Columbus and his like-minded brothers, Bartolomeo and Diego, were known for their psychological as well as physical torture. "Columbus' government was characterised by a form of tyranny", says Spanish historian Consuelo Varela. One such case involved a woman who dared to suggest Columbus was of lowly birth. Columbus' brother Bartolomeo had her stripped naked and paraded through the colony on the back of a mule. "Bartolomeo ordered that her tongue be cut out", adds Ms Varela. "Christopher congratulated him for defending the family."



### Worked into the ground

When Columbus arrived in the Bahamas in 1492, he discovered a number of peaceful native peoples, most notably the Taino tribe. Columbus himself remarked on how friendly these dark-skinned natives were - they carried few weapons either, since their society bred few if any criminals. He also discovered rich deposits of gold, so he claimed the land in the name of the Spanish Crown and enslaved that very tribe. Within two years, 125,000 - half the population - had died from working in Columbus' mines.



### Slavery and mutilation

Columbus was a troubled man, paranoid and deeply suspicious, especially in his later years. According to one report, a man caught stealing corn had his ears and nose cut off at Columbus' request, before being sold into slavery. Enforced servitude became a common course of action for Columbus and his law-enforcing brothers. Columbus himself personally oversaw a sickening trade in sexual slavery, selling young Indian girls and women into a life of brutal prostitution.



The American natives the explorers encountered were initially very friendly and welcoming



## COLUMBUS' LEGACY

### How the conquistador changed the world

Columbus wasn't the first European to reach North America, but his mark on the world is clear. To quote historian Martin Dugard: "Columbus' claim to fame isn't that he got there first - it's that he stayed." Unlike the small settlements the Vikings created 500 years earlier, Columbus claimed the lands he found in the name of Spain and created significant communities that continued to expand from the coast.





Columbus has a national day in America but the explorer was guilty of some brutal crimes

They had repaid him with a ruined settlement and countless butchered Spaniards.

In Columbus' absence, but very much following his direct orders, Hispaniola had quickly become a far-different place than the one they arrived at. The abundant and peaceful tribes of the island were happy to share the locations of the gold-rich valleys with their foreign guests, but they were less prepared for what came next.

Bartolomeo Columbus forced thousands of the natives into slavery, making them dig mines into the mountains, scouring it for precious metals. Hundreds of Europeans brought with them a great number of Western diseases, and such viruses spread through the unprepared natives like wildfire. Such conditions had led the Taino people to lead a rebellion against the foreign invaders, but their actions only galvanised Columbus' own desire for order and retribution.

With his brothers at his side and his Spanish patrons none the wiser, Columbus carved untold riches from the heart of the land. Such riches kept the Spanish monarchs happy, but rumours of brutality would soon spill out across the waves, with reports that Columbus' governorship had sent him mad with power. While reports of his brutality were true, they were seized upon with gusto by the many enemies he had made at the Spanish court, who were jealous of the riches he was making. It is likely his Spanish patrons did indeed have some idea to the lengths Columbus was willing to go to seek his fortune in the New World. However brutal he might have been, his efforts were still filling the coffers of the Spanish crown at a time where war had drunk them dry.

Columbus would conduct a third voyage before Ferdinand and Isabella were forced to send an emissary to investigate the claims that hung thickly over the Spanish court. After receiving the report, they stripped Columbus of his titles and sent the administrator Francisco de Bobadilla to further investigate and govern in his stead. When Bobadilla arrived in August 1500, the land he found was certainly a startling one. Columbus' seven-

year rule of the island had enslaved a majority of the island's native inhabitants, which had reduced a population of a few million free people to around 60,000 by 1500. He hears reports of Columbus selling young girls into sexual slavery and complaints that Columbus and his brothers would mutilate and humiliate anyone who stood in their way. The man who now has his own national holiday in the United States was

eventually sent back to Spain in disgrace, but the Spanish monarchs did not imprison or hang him; stripping him of their patronage and his titles had nearly broken an already sick and ailing man.

Columbus' legacy is defined by his passion for discovery, but some modern accounts are perhaps quick to forget he was a conquistador by name and by nature. Driven by a desire to chart and define the New World, Columbus had not only discovered new lands, he had helped establish a Western footing that would continue to expand for hundreds of years. In his later years he wrote: "By prevailing over all obstacles and distractions, one may unfailingly arrive at his chosen goal or destination." While his actions will always have a shadow over them, his life-long desire to banish the unknown will ensure his name lives on forever.

**“Columbus’ seven-year rule had enslaved a majority of the island’s native inhabitants, which had reduced a population of a few million to around 60,000 by 1500”**

THE VOYAGES IN NUMBERS

*The shocking stats behind Columbus' conquistador career*

**3,700KM**

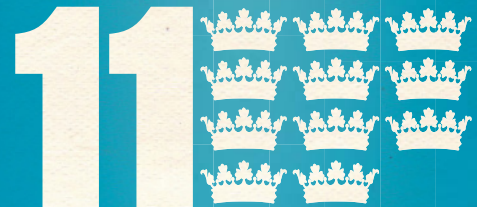
The distance between the Canary Islands and Japan, according to Columbus' calculations



**17** The number of ships, made up mostly of durable, long-distance-ready carrack-style vessels, Columbus used in his second voyage in 1493

**19,600KM**

The actual distance between the Canary Islands and Japan. Despite the advice of cartographers and geographers, Columbus would not be swayed on his own estimates



Number of combined years Columbus spent exploring, with his four main voyages for the mighty Spanish Crown

**1,500**

The total number of colonists (mainly Spanish, Portuguese and Italian) that Columbus drafted for his first-ever voyage across the Atlantic Ocean

**29** During his third voyage in 1502, Columbus lost 29 of the 30 ships he set sail with, after getting caught in a violent storm off the coast of Santo Domingo

# 10 EXPLORERS WHO HELPED DISCOVER THE AMERICAS

## John Cabot

ITALIAN 1450-1499

Exploring the New World in the name of the Tudors



**Explored:** Newfoundland  
**Also:** Nova Scotia (Canada); Maine (United States)

John Cabot is believed by many historians to be the first European to set foot in North America since

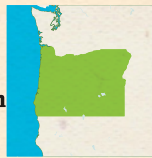
the Vikings established Vinland in the 11th century. Under the patronage of King Henry VII of England, Cabot touched down in Newfoundland, Maine and Nova Scotia. Unfortunately, Cabot was neither the sailor nor the captain that Columbus was and his voyages have largely been forgotten.



## William Clark

AMERICAN 1770-1838

The man who co-charted and co-claimed the Pacific Northwest



**Explored:** Oregon  
**Also:** Kansas City, Missouri, Nebraska, North Dakota

Politician. Soldier. Governor.

Explorer. William Clark remains one of the most influential men to ever chart his own country. At the beginning of the 19th century, North America was divided between the United States, Spain and France. Following the purchase of Louisiana from the French in 1803, Clark, alongside explorer Merriweather Lewis, led a two-year expedition that mapped a practical route through the wilds of the northern states.

“Elizabeth granted Raleigh a patent to explore the New World”



## Henry Hudson

ENGLISH 1560s-UNKNOWN

A China-bound seafarer who stumbled upon New York



**Explored:** New York (United States)

**Also:** Newfoundland, Nova Scotia (Canada);

While the particulars of Hudson's personal life remain speculative,

his actions as an explorer helped change European understanding of the New World's geographical layout. While attempting to create a direct route to Cathay (the medieval name for China), Hudson accidentally discovered what would become New York. In fact, Hudson's mapping of the region was so integral that a river was renamed in his honour.



## Leifur Eiriksson

ICELANDIC CA 970 - CA 1020

500 years before Columbus, a Viking discovered the New World



**Explored:** Vinland (modern-day Newfoundland)

Viking explorer Leifur Eiriksson's travels across the oceans from Scandinavia helped establish a stronghold in Vinland (the Old

Norse name for North America). While Icelandic records like the *Saga Of The Greenlanders* point out Leifur wasn't the first Norseman to place a leathered sole on American soil, he galvanised Viking activity in Vinland. Although he died almost a thousand years ago, the fabled Norse explorer left a mark on Scandinavia and North America that still remains. Visitors to St Paul, Minnesota, will see a bronze statue of Leifur standing proudly near the Minnesota State Capitol, with his image symbolising the migration of Nordic people to America.

## THE WORST EXPEDITIONS REVEALED

Some voyages into the unknown are famous for all the wrong reasons...



### 600 Spaniards die in the Gulf of Mexico

In 1527, the Spanish Crown sent a fleet to conquer and colonise Florida and the Gold Coast. A mutiny reduced the fleet at the Dominican Republic, while a hurricane drowned hundreds of Spanish sailors. The remaining survivors washed up on the coast of Florida, but many died at the hands of native tribesmen. Of the 600-strong crew, only four returned to Spain in 1528.



### Magellan falls foul of the elements

Famous for almost circumventing the globe in the 16th century, Portuguese explorer Ferdinand Magellan miscalculated the size of the Pacific Ocean on a voyage to Asia. Most of his 270-strong crew died of thirst and hunger long before they made landfall on Guam. Those who didn't perish died at the hands of Filipino natives, including Magellan himself.



### A fatal race to the South Pole

In 1911, a group of explorers led by Captain Robert Scott attempted to be the first people to reach the South Pole, but they were beaten in their quest by a Norwegian team led by Roald Amundsen. These five men - Scott, Wilson, Oates, Bowers and Evans - paid the highest price and died. Scott has since been blamed for poor planning but bad luck also played its part as well.



## Robert Gray

AMERICAN 1755-1806

A captain who lost an eye, but gained an extraordinary legacy



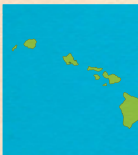
**Explored:** California (United States)  
**Also:** British Columbia (Canada); Washington, Oregon.

A merchant sea captain, Gray pioneered the maritime fur trade on the Northern Pacific coast of his home nation, discovering more regions as he pushed trade further up and down that side of the country. He's most famously credited with the first American circumnavigation of the globe, as well as the travelling on and naming of the Columbia River in 1792. To this day, many geographic features in Washington and Oregon bear his name to mark his historical legacy.

## James Cook

BRITISH 7 NOV 1728 - 14 FEB 1779

A military man turned explorer who met his end in the new worlds he discovered



**Explored:** Hawaii  
**Also:** Saint Lawrence River (Canada/United States),

Much like Columbus and Marco Polo, captain James Cook's name is synonymous with early

exploration. He began his career as a teenager when he joined the Merchant Navy, seeing action in many naval clashes of the Seven Years War. Cook then used his experiencing charting the Saint Lawrence River during the Siege of Quebec to gain the command of three expeditions around the world. Cook's travels also brought him to the island of Hawaii, where his expert cartography skills enabled him to chart the islands with a detail unrivalled by his peers. He died during a clash with native Hawaiians during this third major voyage in 1779.



## Sir Walter Raleigh

ENGLISH 1554-1618

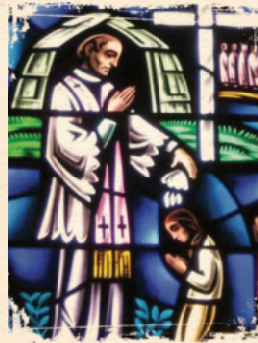
Poet, soldier, courtier, spy, explorer



**Explored:** North Carolina, South Carolina  
**Also:** Georgia, Florida (United States)

Perhaps one of the most famous explorers save Columbus himself,

Sir Walter Raleigh gained favour in the court of Elizabeth I, with his many fabled bounties of treasure and exotic items typifying the Golden Age of the monarch's reign. Following years of war with France and Spain, English merchants were now pushing farther afield into Asia, Africa and the New World. As well as being famous for his pursuit of El Dorado (the City of Gold), Raleigh was instrumental in the English colonisation of North America. In the late-1580s, Elizabeth granted Raleigh a royal patent to explore the New World in the name of the English Crown.



## Claude-Jean Allouez

FRENCH 1622-1689

A passionate zealot who explored the New World



**Explored:** Wisconsin  
**Also:** Michigan, Indiana (United States)

Born in France, Allouez was a Jesuit missionary who travelled to Canada in order to help solidify

a series of missions in the region. As part of his religious journey, Allouez regularly came into contact with members of native tribes, which eventually led him south into the future United States. His initial work setting up a number of missions in Wisconsin also coincided with his travels down the Mississippi River. His extensive and detailed notes of the areas he explored helped the French crown to later claim the Great Lakes for themselves.



## Hernando de Soto

SPANISH, 1497-1542

This conquistador plundered the South for riches



**Explored:** Florida  
**Also:** Georgia, North Carolina, South Carolina, Tennessee, Alabama, Mississippi, Arkansas, Oklahoma, Louisiana, Texas

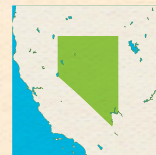
(United States)

Much like English seafarer Henry Hudson, the Spanish conquistador Hernando de Soto initially stumbled upon North America while sailing for China. He had set voyage for the East in search of treasure for the financially precarious Spanish Crown, but instead found a land rich with gold and silver deposits, lush and untamed. While he is most famous for having the first documented crossing of the Mississippi River by a foreigner, his expeditions took him to Oklahoma, Georgia, the Carolinas, Tennessee, Texas, Arkansas, Louisiana and Mississippi.

## David Thompson

BRITISH-CANADIAN 1770-1857

The "greatest land geographer that ever lived"



**Explored:** Nevada  
**Also:** British Columbia, Alberta (Canada); Oregon, Montana, Wyoming,

The Westminster-born Thompson headed south from Canada

into the wilderness of North America and began uncovering its secrets. Over a career that lasted most of his life, Thompson managed to map a staggering 3.9 million square kilometres (1.5 million square miles) of topography across the Frontier. He started his project around 1793 with his expeditions into the Rocky Mountains, before creating a detailed map of trading posts across the region, including Montana and Idaho. Among other things, the explorer has a highway named after him in Canada.





# THE GLOBE

SHAKESPEARE'S  
THEATRICAL PLAYGROUND,  
1599-1642, ENGLAND

One of the first purpose-built theatres in London, this open-air building is best known for its links with the most famous playwright in history, William Shakespeare. Its construction was funded by his playing company, the Lord Chamberlain's Men, and Shakespeare himself was one of four actors who bought a share in the Globe. Up to 3,000 people from all walks of life would pack into the theatre to watch his latest production - that was until a cannon set off during a 1613 production of *Henry VIII* misfired and set the thatched roof ablaze. No one was injured, but the theatre was burned to the ground in less than two hours. It was rebuilt a year later, this time with a tiled roof, but was closed down by Puritans in 1642. It wasn't until 1997 that the theatre was rebuilt and opened to the public once more.

## The galleries

Wealthier spectators could sit in one of the three raised galleries, and pay extra for the added comfort of a cushion. Upper-class women would often wear a mask to hide their identities.

## The yard

For a ticket price of one penny, the lower classes would stand for up to three hours to watch a performance. These people were called 'groundlings', although during the summer months they were also referred to as 'stinkards' - for obvious reasons.

## Entrance

The theatre had only one entrance, meaning the audience had to allow an hour and a half for entry. On arrival, they would drop their entrance fee into a box, hence the term 'box office'.

### The heavens

The ceiling under the stage roof was known as the 'heavens', and would have been painted to look like a sky. A trap door in the ceiling allowed actors to drop down onto the stage using a rope.

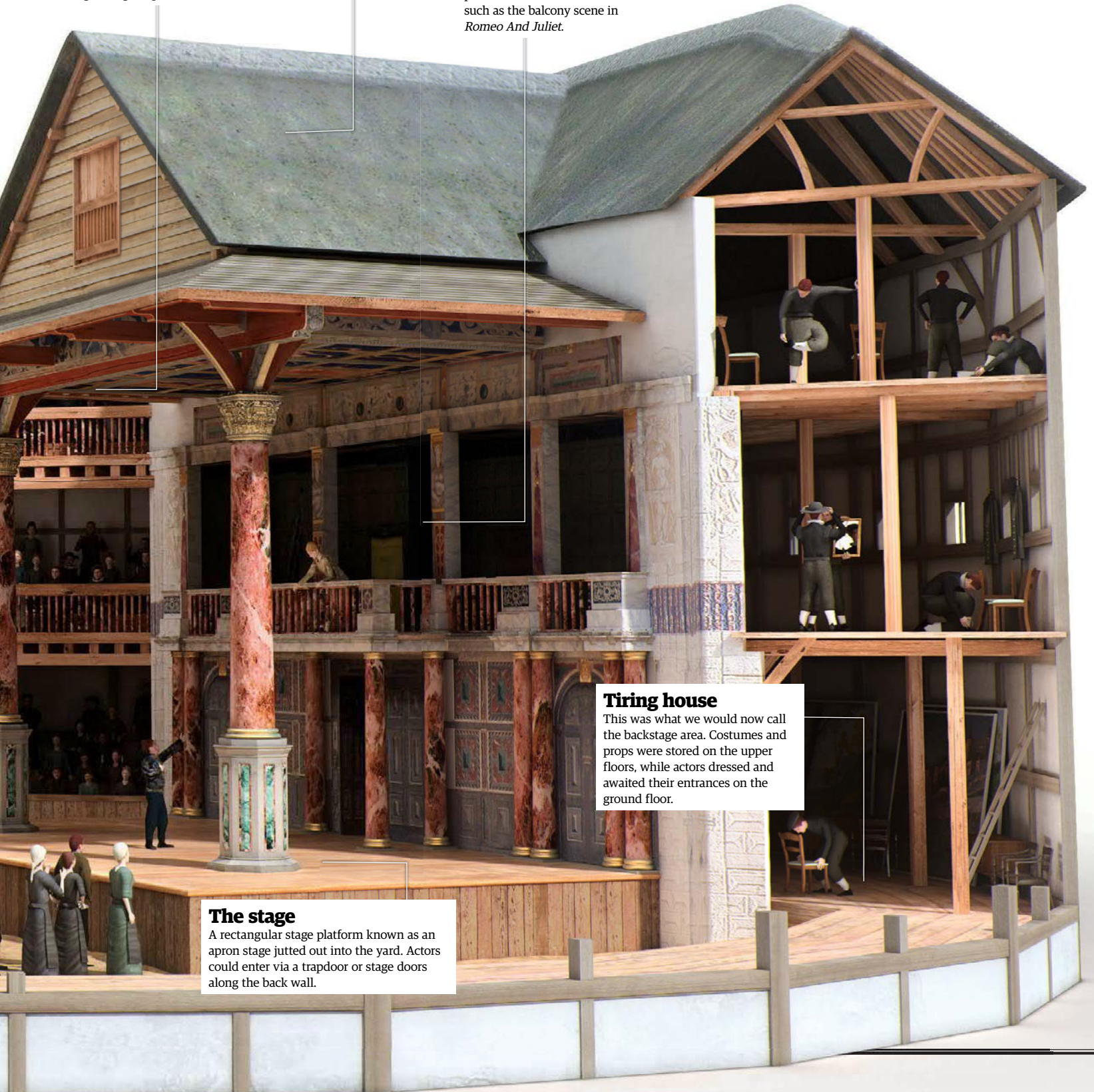
### Roof

The original Globe had a thatched roof that covered the gallery areas and stage, protecting the actors and wealthier spectators from the elements. After a fire destroyed the theatre, it was rebuilt with a less flammable tiled roof.

### Balcony

This was where the musicians performed. It could also be used for scenes performed over two levels, such as the balcony scene in *Romeo And Juliet*.

“ Up to 3,000 people from all walks of life would pack into the theatre ”



### Tiring house

This was what we would now call the backstage area. Costumes and props were stored on the upper floors, while actors dressed and awaited their entrances on the ground floor.

### The stage

A rectangular stage platform known as an apron stage juttied out into the yard. Actors could enter via a trapdoor or stage doors along the back wall.

# Shakespeare: Rebel with a cause?

**WILLIAM SHAKESPEARE**  
English, 1564-1616

**Brief Bio**

Born in Stratford-upon-Avon to glove maker John Shakespeare and landowner's daughter Mary Arden, William Shakespeare had three children with his wife Anne Hathaway. He moved to London in the late 1580s to pursue an acting career, becoming a prominent and prolific playwright and poet, producing an average of two plays a year until 1611 before retiring to Stratford.



*O slanderous world! Kato like the hazel-twig  
Is straight and slender and as brown in hue  
As hazel nuts, and sweeter than the kernels.  
Oh, let me see thee walk! Thou dost not halt.*

# Rebel with a cause SHAKESPEARE

He may be England's most celebrated writer, but did Shakespeare hide codes and double meanings in his work to subvert the establishment during a time of religious turmoil?

Written by David Crookes

*If you shall chance to write to my brother Robert in the like manner, whereas our  
nices are now on foot, you shall see, as I have said, great*

Two guards grabbed him tightly and dragged him down a stone corridor, his shackled legs meaning he was unable to keep up the frantic pace they had set. He was determined to show no sign of weakness and tried to concentrate on the senses around him, such as the rats scurrying by his feet, the insects crawling on the walls and the warmth on his face from the burning torches that illuminated the short path.

How had things come to this? He was Robert Southwell, born into a good family and a man who devoted his life to God, being ordained a priest in 1584 in Rome. But what had been one of the best years of his life had also turned into one of the most bitter when later the same year, the 'Jesuits, etc Act' had ordered all Roman Catholic priests to leave England. They were given 40 days' grace to do so and many of his friends had hurriedly scrambled their belongings together and fled the island nation for friendlier shores. These were difficult times to be a Catholic in England.

Pain ripped through his body as the guards swung him around a corner and flung open a new cell door for him. Looking at the horrible conditions his mind raced back. Damn that Henry VIII, he thought. Damn him and his desire for a male heir and his lust for Anne Boleyn that had seen him turn his back on the Catholic faith he had been brought up in. And damn that German monk Martin Luther whose

actions had led the Protestant Reformation that had swept through Europe and ultimately been adopted throughout England.

Southwell was levered inside the cramped, dank space. He recognised it from the descriptions of others whose fate had brought them here; it was Limbo, the most feared cell within Newgate Prison, inside a gate in the Roman London Wall. The door closed and the guards walked away. His heart beating wildly with fear, he reflected on his decision to leave Rome in 1586 to travel back to England to work as a Jesuit missionary, staying with numerous Catholic families, thus becoming a wanted man.

Eventually, the door swung open and he was dragged out of his cramped cell. He could barely stand as he was taken to trial, hauled before Lord Chief Justice John Popham and indicted as a traitor. He defiantly laid out his position, admitted to being a priest and his sentence was passed. He was, Popham said, to be hanged, drawn and quartered. After being beaten on the journey through London's streets he was forced to stand. His head was placed in a noose and he was briefly hanged. Cut down while still alive, his bowels were removed before his beating heart was dragged from his body and he was cut into four pieces. His severed head was held aloft. This was England in the late-16th century - Queen Elizabeth's religious compromise wasn't without its share of pain and suffering.

# Shakespeare: Rebel with a cause?

This was the world William Shakespeare lived in as he wrote his great works. He had moved to London from Stratford-upon-Avon in 1587, leaving behind his young family to pursue a career as an actor and a playwright with the troupe Lord Strange's Men. He had married Anne Hathaway in 1582, when he was 18 and she was 26, and together they had three children, Susanna, Hamnet and Judith. But the lure of the stage had been too strong to ignore.

It had not taken Shakespeare long to make a name for himself. His first play, *Henry VI, Part 1*, written in 1591, made its debut a year later. It was successful enough to make fellow playwrights jealous. One of them was Robert Greene, arguably the first professional author in England. Unlike Shakespeare, he was university educated and urged his friends not to give Shakespeare any work, calling him an 'upstart crow.' Shakespeare was unmoved by such words. It would be, academics conferred later, a sign he was making his mark.

By 1594, he had written more plays and seen both *Venus and Adonis* and *The Rape of Lucrece* published. He dedicated them to his patron Henry Wriothesley, the Earl of Southampton. He liked the Earl. Southampton was from a long Catholic dynasty and he appreciated poetry and theatre. When the theatres re-opened in 1594 following an outbreak of bubonic plague, he was keen to invite the Earl along. After all, Shakespeare's new troupe, Lord Chamberlain's Men, was becoming popular, with them even invited to perform in the royal court of Queen Elizabeth I. Shakespeare had also bought shares in Lord Chamberlain's Men and was becoming a powerful and influential figure.

The Reformation had changed England's approach to religion, moving the country away from its Catholic roots and into the arms of Protestantism. But it had not been as peaceful a transition as is sometimes painted. Protest leaders who encouraged more than 30,000 priests, gentry and commoners to demand a return to Catholicism in 1536 had been executed. Two years later, reformers had banished the cult of saints, destroying shrines and banning the population of England from making pilgrimages. Riots in 1549 were repressed in the most vicious of ways - the reformers would hang priests from church towers and lop off the heads of laymen who refused to obey the new order.

All this affected the Bard; he wasn't writing in a bubble and nor were the actors who performed his work. Clare Asquith states in *Shadowplay: the Hidden Beliefs and Coded Politics of William Shakespeare*: "Shakespeare's family are thought to have been Catholics [...] his early years would have echoed to angry discussions of the impact of fines and imprisonments, the liberties taken by the Queen's commissioners, the wreckage under Edward and the wicked errors of the old King."

Speaking out against the establishment was hard - not least for those who wanted to keep their heads. Anyone wanting to put across another point of view had to be smart and Asquith believes the man who would go on to be England's most celebrated poet and playwright rebelled and devised a secret

## "Queen Elizabeth's religious compromise wasn't without its share of pain"

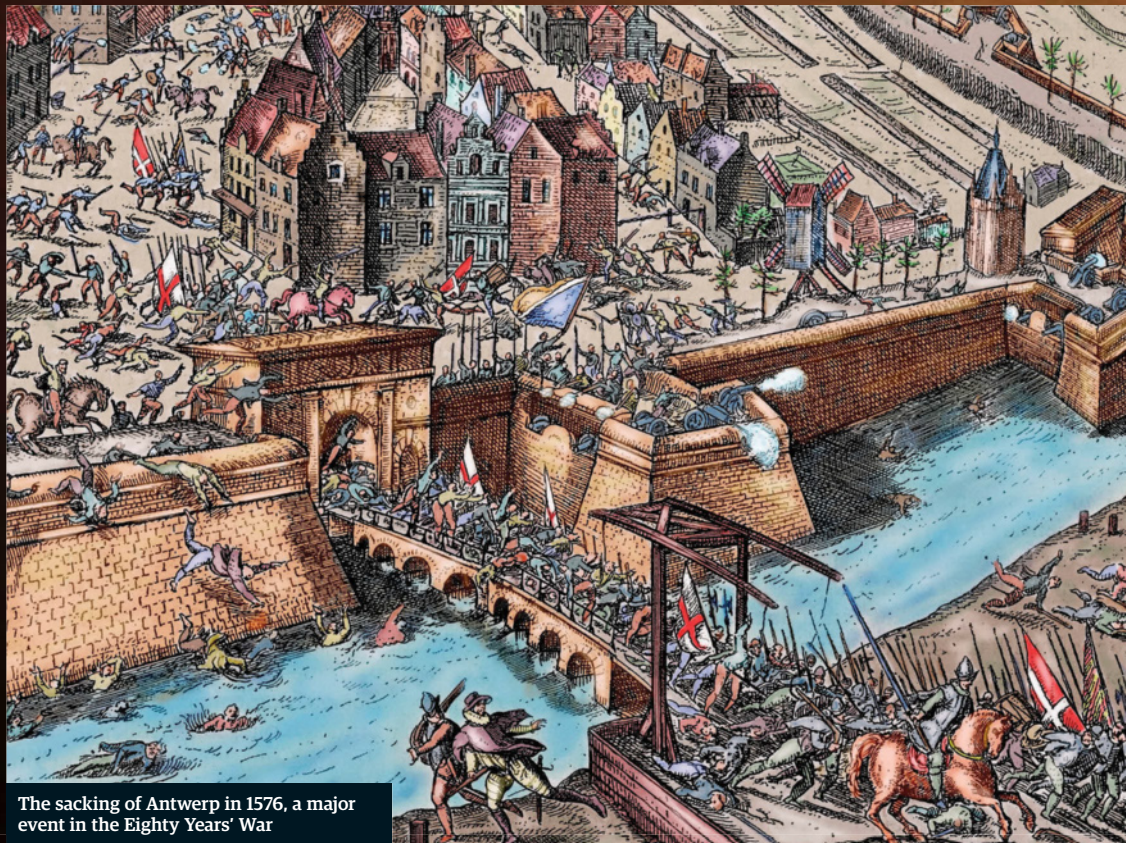
code, inserting messages and double meaning into his writing. It isn't as outlandish as it may sound; cryptology had been used since ancient times and there were examples of secret codes being used in this time period. For example, it is known that Mary, Queen of Scots used a cipher secretary called Gilbert Curle to handle her secret correspondence. It wasn't entirely sophisticated, though, so her plot to overthrow Elizabeth was soon uncovered - Catholic double agent Gilbert Gifford intercepted letters that had been smuggled out in casks of ale and reported them to Sir Francis Walsingham, who had created a school for espionage.

For Catholics, certain words and key phrases stood out. For example, 'tempest' or 'storm' were used to signify England's troubles, according to Asquith. So Shakespeare may well have been convinced he could change people's view of the world by writing on an entertainment and political and religious level.

First he had to work out exactly what message he wanted to put across. Philip II of Spain, who had married Mary I, felt England's Catholics had been abandoned and there had long been a promise that, if the Catholics bided their time, help would come. Relations between Spain and England had declined to an all-new low. This culminated in the sailing of 122 ships from Spain in 1588 with the aim of the Spanish Armada being to overthrow Elizabeth I and replace the Protestant regime.



The Spanish Armada tried to overthrow Elizabeth I's rule in England with a massive naval assault



The sacking of Antwerp in 1576, a major event in the Eighty Years' War

## SHAKESPEARE'S PRESSURES AND INFLUENCES

What were the factors which helped, motivated and threatened to break the Bard?

### Religion

With the death of Mary I and the accession of her half sister Elizabeth I, the religion of England changed. Elizabeth took the country towards Protestantism. It is hard to overstate just how an important part of everyday life religion was during Shakespeare's lifetime. During the course of the Bard's life people believed so strongly in either Catholicism or Protestantism that they refused to recant their beliefs even when they were burned alive at the stake.



### Politics

Two main forces were at play during Shakespeare's lifetime in England: the monarch and religion. The monarch held ultimate power over the life of their citizens, literally the power of life and death. Staying on the right side of those in power was obviously a strong influence on the Bard and his plays as it was vital for his career and for his life that he remained in the good graces of those in power.



### Social mobility

For centuries, English society had been a feudal one with a very clear distinction between the upper and the lower classes. During the Bard's lifetime, this began to change and a middle class was beginning to emerge - social mobility was increasing, meaning you no longer had to born a peer to become a person of wealth and influence. Shakespeare himself is an example of this as, although born to a good family, he climbed the social strata through his success. His own social mobility and that going on around him was an influence on his work.



### James I

Previously James VI, King of Scotland, the union of the Scottish and English crowns made him the ruler of both countries, as well as Ireland. He solidified Protestantism and sanctioned the *King James Version of the Bible* in 1611. James was a great admirer of poetry, drama and art and it is believed Shakespeare wrote *Macbeth* to win his favour and, much as he did with Elizabeth, sometimes wrote to flatter one of his main patrons. Formally the Lord Chamberlain's Men, the Bard's troupe changed their name to The King's Company and received more money and performed more regularly for James than they had for Elizabeth.



### Elizabeth I

One of England's golden monarchs returned England to Protestantism but allowed some Catholic traditions to continue and argued for greater toleration than her sister Mary had. Much of her reign coexisted with that of Shakespeare and the Bard and his work became known to the queen and she became one of his patrons. She was undoubtedly a major influence on him and some of his poems and plays contained passages directly aimed at pleasing her.



### Playwrights and poets

Like all creative writers, Shakespeare was heavily influenced by the great writers that had gone before him. Chaucer, one of England's greatest poets, was a major influence as seen by the fact that several of the Bard's works were based on Chaucer poems. Greek writer Plutarch also provided inspiration for his works and Shakespeare sometimes copied whole passages of his work, with only minor alterations.



# Shakespeare: Rebel with a cause?

The Armada was defeated but it had succeeded in creating further religious and political divisions, so the authorities were on even greater alert. Within this world Shakespeare got to work and, at first, kept things simple. "My reading is that the early plays were light, comical, critical and oppositional, written for Lord Strange's Men", asserts Asquith. The earliest plays addressed political reunion and spiritual revival. Their plots related to divided families, parallels for an England cut in two.

Asquith believes the Bard placed certain markers in his texts that signalled a second, hidden meaning.

He would use opposing words such as 'fair' and 'dark' and 'high' and 'low': 'fair' and 'high' being indications of Catholicism while 'dark' and 'low' would indicate Protestantism. Asquith takes this as reference to the black clothes worn by Puritans and to the 'high' church services that would include mass as opposed to the 'low' services that didn't. If this theory is true - a matter of some debate - then it enabled Shakespeare to get specific messages across, using characters to signify the two sides and by using words commonly associated with Catholic codes. For example, according to the theory, 'love' is divided into human and spiritual and 'tempest' refers to the turbulence of the Reformation and Counter-Reformation and the Bard used his own terms to disguise a message that was pro-Catholic.

At the same time, Shakespeare was operating in establishment circles. "He was drawn into the orbit of the court and wrote elegant pleas for toleration to Elizabeth, in the elaborate allegorical language she was used to", says Asquith. But England was becoming more violent again. Shakespeare's patron, the Earl of Southampton, rebelled against Elizabeth I, becoming Robert, Earl of Essex's lieutenant in an attempt to raise the people of London against the government.

The Essex faction had ordered a performance of the 'deposition' play *Richard II* just before the rebellion and Shakespeare's company had their work cut out afterward denying complicity. The plan ended in failure in 1601, but in that same year, Shakespeare wrote *Hamlet*, encouraging action against unjust rule. "His more critical work supported the cause of the Earl of Essex against the [William] Cecil regime", says Asquith. If this is true, then Shakespeare really was one of the defining rebels of the period.

Critics have said for decades that the writer was against populist rebellions and supported authority and the rule of law, "but with the recent reassessment of the extent of dissidence at the end of Elizabeth's reign, Shakespeare's Elizabethan work begins to seem more oppositional", Asquith argues.

"What if the authority he upholds was not that of the breakaway Tudor state, but of the European church against which Henry VIII rebelled?" she asks. "What if he sympathised with the intellectual Puritan reformers, who felt secular monarchs like the Tudors had no business assuming spiritual authority over individual conscience? What if he, like so many contemporaries, opposed the destruction of the old English landscape, from the hostels,



"He devised a secret code, inserting messages and double meaning into his writing"

## RELIGIOUS COMPROMISE?

With the untimely death of King Edward VI in 1553, struck with fever and cough that gradually worsened, Mary I ascended to the throne and set about calling a halt to the Reformation. She swung England firmly back towards Catholicism, causing reformers to run scared and flee. Among those displaced was civil servant William Cecil, his relief of a lucky escape palpable as he heard of the 273 Protestants burnt to death under Mary's reign. Terror had been brought on the Protestants but Cecil had the ear of Elizabeth, who he had known for years. She had embraced the Church of England, so much that she had been imprisoned for two months in the Tower of London by her half-sister Mary, who feared she was part of a plot to depose her.

When Mary died in 1558, Cecil wanted to return to a Protestant England. Queen Elizabeth succeeded the throne since Mary had born no child and Cecil became her advisor. Within the year, a uniform state religion had returned. Elizabeth was confirmed as Supreme Governor of the Church of England.

The Act of Uniformity in 1558 set the order of prayer in the *English Book of Common Prayer*. Crucifixes and candlesticks were to be allowed, although new bishops protested. But Protestants who had fled returned and wanted their religion to be supreme. Cecil ensured Catholics would be excluded from public life although he allowed them to worship as long as they did not threaten the queen and did so discreetly. Catholics who rose would be dealt with in the most serious of ways.



The religious upheaval before and during Elizabeth I's reign saw many people executed

## CODEBREAKING THE BARD'S PLAYS

Claire Asquith on the secret codes she believes are imbued within Shakespeare's works



### TITUS ANDRONICUS

**Synopsis:** Written between 1588 and 1593, the play is set in the latter days of the Roman Empire. Bloody in the extreme, the play explores the life of a fictional Roman general, Titus, caught in a vicious circle of revenge with the queen of the Goths, Tamora.

**Rebel?** Shakespeare appears to be pleading for calm among England's dissidents, having written a play that highlights suffering and repression while arguing the case against a violent rebellion. The message, claims Asquith, is very much about biding time, waiting for help in the guise of a promised invasion and, as such, it mirrored the rhetoric of Catholic leaders who stressed England would be saved via diplomacy or invasion rather than an internal uprising. "It is a gory portrayal of just the kind of state atrocities conducted in the mid-1590s, and in the previous reign as well. Yet it discourages equally bloody revenge", says Asquith.



### TAMING OF THE SHREW

**Synopsis:** Written between 1590 and 1592, the courtship of Petruchio is at the heart of the play. It shows his attempts to tame the wild Katherina, a girl he loves but is rebuffed by until he manages to win her over.

**Rebel?** Displaying evidence of the 'high-low' opposition language that Shakespeare used to refer to Catholics and Protestants, Katherina is "brown in hue." Her sister is called Bianca, meaning 'white' and she is the respectable one of the two. This paints Katherina to be like a reformer and in need of being brought into line. Asquith says the "oddly political language" used by the chastened shrew is "meant to alert us to the play's secondary level." For those accustomed to finding deeper meanings, the message would have been obvious, according to her. She says: "The play shows England as a warring family, the monarch helpless to stop vengeful puritans baiting afflicted Catholics."



### KING LEAR

**Synopsis:** The tragedy is set in the court of an ageing monarch. He wants to pass the monarchy to his three daughters and asks them to prove they love him the best but one cannot so he splits it between two before falling into madness.

**Rebel?** Lear's actions caused a tumbling effect as various people were banished, reunited, imprisoned and heartbroken. Asquith claims this is an "unvarnished dramatisation of the state of James' England, a final attempt to awaken the King to the intolerable humiliations and sufferings of his Catholic subjects." She tells us the message within is clear: "If you exile true Christian spirituality - and both puritans and Catholics were exiled - the country descends into amoral anarchy." She adds: "It is worth noticing that though he discourages mob-led rebellion, he includes nine invasions in his work, and they are all portrayed as positive events."



### THE WINTER'S TALE

**Synopsis:** Suspicious that his childhood friend is his pregnant wife's lover, Leontes accuses his wife of infidelity and having an illegitimate child. Having ordered the newborn baby to be abandoned, he is later reunited with her, much to his delight.

**Rebel?** With the play believed to have been written in 1611, this was one of Shakespeare's later plays and it appears to contain a strong message: "After all the post-reformation trauma, the spirituality that was lost turns out to have been secretly preserved", says Asquith. As with *The Tempest*, *Pericles* and *Cymbeline*, *The Winter's Tale* started with suffering and ended with happiness. It showed a transition that could put past remorse to bed, highlighting the possibility that evils can be defeated and overcome and that a true home can be found for spiritualism if it is wanted. It would have encouraged the audience to keep the faith and not give up hope.

colleges, monasteries and hospitals to the rich iconography of churches to local roadside shrines and holy wells?"

It can be argued that the Bard personified England itself so that he could explore just why the ideas behind the Reformation had taken hold, presenting it as gullible and deluded, willing to turn its back on spiritual heritage, with the play *Two Gentlemen Of Verona* cited as evidence of this. The more elaborate plays retained the puns, wordplay and double meanings so beloved of audiences in Elizabethan times, but Asquith notes that some of Shakespeare's characters came to be increasingly dramatic and allegorical; they had a hidden spiritual meaning that transcended the literal sense of the text.

When King James assumed the throne in 1603, Catholics had assumed that he would lend them

greater support than Elizabeth, given that his mother was a staunch Catholic. But that was not to be and Shakespeare must have been well aware of a growing political and religious resentment against the monarchy, with a feeling of rebellion growing. His plays in this period became more cynical, which some have speculated was a consequence of the world he was living in.

Matters came to a head with an explosive event in 1605. Five conspirators, Guy Fawkes, Thomas Wintour, Everard Digby and Thomas Percy hired a cellar beneath the Houses of Parliament for a few weeks, spending time gathering gunpowder and storing it in their newly acquired space. Their plan was to blow the building sky high, taking parliamentarians and King James I with it. But their cover was blown and Guy Fawkes was taken away to be tortured into confession, the deadly rack being the instrument said to have broken him. He was sentenced to be hanged, drawn and quartered.

At around the same time, Shakespeare wrote *King Lear*, *Othello* and *Macbeth*, all plays warning against unjust and persecuting rule, which many



A depiction of Macbeth from William Shakespeare's play of the same name

“Their plan was to blow the building sky high, taking parliamentarians and King James I with it”



The Gunpowder Plot was a politically and religiously charged conspiracy to blow up the Houses of Parliament

Catholics felt James I was guilty of. “My own theory is that Shakespeare, though not an outright rebel, used his increasingly privileged position to address the court and the crown, both Elizabeth, and James, on the issue of religious toleration”, Asquith asserts. “He protested against the persecution and injustice perpetrated in the name of the monarch, and pleaded for religious toleration.”

Such an assessment revises the prevailing thinking that Shakespeare wrote universal plays and avoided any topicality. Some literary scholars remain hostile to the idea that the playwright was involved in the volatile religious issues of the day, but could he really have ignored what was going on around him? It's plausible that he wanted to do more than merely shake the literary world; he wanted to influence politics and religion, to affect his society.

When he sat at his desk, overlooking the squalid, filthy conditions of London, William Shakespeare may have been looking out at a more enlightened nation than ever before, but it was still a city and a country where the screams of religious and political prisoners filled the corridors of cramped jail cells as torturers extracted forced confessions. This sobering reality was a stark reminder of the perils of religious divisions that continued throughout Shakespeare's life. Was it a society that he rebelled against in his own way? The final and definitive answer to that, like some of the great man's work, is unfortunately lost to the ages.

## SHAKESPEAREAN THEORIES

### He didn't really write the works

The authorship of Shakespeare's work has been the subject of debate for decades. With no original manuscripts, no mention of him even being a writer in his will and a command of Latin, Greek and other languages that would belie his apparent poor education, many believe that Edward de Vere, the 17th Earl of Oxford was the writer rather than the small-town boy from Stratford. And if not him, then one of 80 other historical figures that have been mentioned over the years, such as Marlowe.

### He didn't even exist

Some scholars believe that the Shakespeare revered today as a playwright was actually a fictional character. They believe that the few documents relating to him were actually for a man called William Shaxper or Shaksper who was born in 1564, married and had children but became an actor and remained in such a role until his retirement. Certainly, Shakespeare's death appears to have been unmarked. Had Shakespeare been such a prominent playwright, there would surely have been many documents mourning his passing, critics say.

### He was an Italian

Those who argue Shakespeare was not quite who he claims he was are called anti-Stratfordians. One of their theories is that Shakespeare - or Michaelangelo Florio Crollalanza - had moved from Sicily to London, fearing the Holy Inquisition. The family name of Crollalanza was translated and became Shakespeare. Sicilian professor Martini Luvara claims to have proof and mentions the Sicilian play *Tanto Traffico Per Niente* written by Crollalanza. It can, he claims, be translated into *Much Ado About Nothing*.



Lord Chamberlain's Men, Shakespeare's famous troupe, performed for Queen Elizabeth I