

**SATURDAY 12 JANUARY 2019**

**SAT 19:00 Hidden Kingdoms (b03rmckl)**  
Secret Forests

This is the story of two tiny animals coming of age.

In the wild woods of North America, a young chipmunk is gathering a vital store of nuts ahead of his first winter - in his way are ruthless rivals and giant predators.

In the steaming rainforest, a young tree shrew is forced deep into the jungle to find food. She must draw on all her intelligence and agility if she is to escape the ultimate jungle predator - a reticulated python!

**SAT 20:00 Wild Arabia (b01r12zm)**  
The Jewel of Arabia

In a remote corner of southern Arabia one mountain range holds a remarkable secret. Swept by the annual Indian Ocean monsoon, the Dhofar mountains become a magical lost world of waterfalls and cloud forests filled with chameleons and honey badgers. Offshore, rare whales that have not bred with any others for over 60,000 years and green sea turtles come ashore in their thousands, shadowed by egg-stealing foxes. Heat-seeking cameras reveal, for the first time, striped hyenas doing battle with Arabian wolves. Meanwhile, local researchers come face to face with the incredibly rare Arabian leopard.

**SAT 21:00 Black Lake (m00023b7)**  
Series 2

Episode 5

Minnie is even more convinced that there is a darkness dwelling over the island Kallskar, and that something terrible has taken place there. Whatever it is, she links it with the name Maja. When Uno takes the group to visit an old, deserted cholera hospital on the other side of the island, Minnie is certain that she is getting close to the truth. She thinks that Maja is there, or rather, that it was there she was murdered. But it becomes clear that there are powers working to prevent the secrets of the island from being exposed. Swedish with English subtitles.

**SAT 21:45 Black Lake (m00023b9)**  
Series 2

Episode 6

Minnie discovers that people have always been disappearing from the island of Kallskar. Is it possible that the current disappearances are related to what happened 70 or 160 years ago? Can it be true, as Gittan claims, that there's something about the island itself that causes people to make bad choices? At the same time, it becomes apparent that it's not only Kallskar which harbours secrets, it's also true for each person there at that moment. And one of them has murdered Amina... Swedish with English subtitles.

**SAT 22:30 Top of the Pops (m0001y8c)**  
Gary Davies presents the pop chart programme, first broadcast on 1 January 1987, featuring Status Quo, a-ha, Alison Moyet, Elkie Brooks, Gary Moore, Spitting Image and Madonna.

**SAT 23:00 Top of the Pops (m0001y8h)**  
Gary Davies presents the pop chart programme, featuring Swing Out Sister, Lionel Richie, The Gap Band, The Pretenders, Paul Simon, Jackie Wilson and Genesis.

**SAT 23:30 The Heart of Country: How Nashville Became Music City USA (b04ndxlr)**  
This historical biography of the city that is the glittering hub of country music reveals the dynamic relationship between commerce and art, music and the market, that has defined Nashville since 1925. It explores the conflicts and demons that have confronted Nashville's artists and music industry down the years, such as the creative pressures of the 'Nashville Sound', the devastating impact of Elvis and then Bob Dylan, the rise and fall of the urban cowboys and the struggle of several Nashville legends to confront their inner demons.

The story unfolds through the testimony of musicians, producers, broadcasters and rare archive of the country legends. These include Dolly Parton, Charley Pride, Willie Nelson, Ricky Skaggs, Steve Earle, Kris Kristofferson and several hit-making contemporary stars - Kasey Musgraves, Brad Paisley and Jason Aldean. This cast reveal the unique power of country music to hold up a mirror to its fans and create a music that has - for decades - touched the hearts of the south and of working people. Kristofferson calls it the 'white man's soul music'.

Also featured are extensive musical performances by

Nashville's greatest, from Johnny Cash to Loretta Lynn and George Jones to Garth Brooks. Several of Nashville's younger stars describe their ongoing journey from their hometowns in the south to the streets of this city, from the first studio demos and the sawdust of the Broadway bars to the stadiums and promo videos that now define country stardom.

**SAT 01:00 Guitar, Drum and Bass (m0001y8k)**  
Series 1

On Drums... Stewart Copeland!

Stewart Copeland explores the drums as the founding instrument of popular modern music. Beats that travelled from Africa via New Orleans and across the world are the consistent force behind musical evolution.

Stewart plays with some of the most inspiring drummers of the last 50 years, including John Densmore of The Doors, Chad Smith of The Red Hot Chili Peppers, Prince's musical director Sheila E, New Order's Stephen Morris and Foo Fighters' Taylor Hawkins. He goes dancing in New Orleans, builds his own bass drum pedal and checks out hot new bands on Santa Monica beach.

**SAT 02:00 Hidden Kingdoms (b03rmckl)**  
[Repeat of broadcast at 19:00 today]

**SAT 03:00 Wild Arabia (b01r12zm)**  
[Repeat of broadcast at 20:00 today]

**SUNDAY 13 JANUARY 2019**

**SUN 19:00 Indian Hill Railways (b00qvk99)**  
The Darjeeling Himalayan Railway

From the Himalayas in the north to the Nilgiris in the south - for a hundred years these little trains have climbed through the clouds and into the wonderful world of Indian hill railways.

The Darjeeling Himalayan Railway is a line so close to the people that it flows like a river through their lives. The relationship between the train and the people is changing, however, as a new generation of Gurkhas populates these hills, demanding an independent state and fighting for a new identity as they journey into the modern Indian world.

**SUN 20:00 Woolly Mammoth: Secrets from the Ice (b01fkcdt)**

Professor Alice Roberts reveals the natural history of the most famous of ice age animals - the woolly mammoth. Mammoths have transfixed humans since the depths of the last ice age, when their herds roamed across what is now Europe and Asia. Although these curious members of the elephant family have been extinct for thousands of years, scientists can now paint an incredibly detailed picture of their lives thanks to whole carcasses that have been beautifully preserved in the Siberian permafrost.

Alice meets the scientists who are using the latest genetic, chemical and molecular tests to reveal the adaptations that allowed mammoths to evolve from their origins in the tropics to surviving the extremes of Siberia. And in a dramatic end to the film, she helps unveil a brand new woolly mammoth carcass that may shed new light on our own ancestors' role in their extinction.

**SUN 21:00 The Eyes of Orson Welles (m000235q)**  
Granted exclusive access to hundreds of drawings and paintings by Orson Welles, film-maker Mark Cousins dives deep into the visual world of this legendary director and actor, to reveal a portrait of the artist as he's never been seen before - through his own eyes, sketched by his own hand, painted with his own brush. Executive produced by Michael Moore, The Eyes of Orson Welles brings vividly to life the passions, politics and power of this 20th-century showman and explores how the genius of Welles still resonates today, more than 30 years after his death.

Welles was one of the great creative figures of the 20th century. But one aspect of his life and art has never been discussed. Like Akira Kurosawa and Sergei Eisenstein, Welles loved to draw and paint. As a child prodigy, he trained as an artist, before a drawing trip to Ireland in his teens led to his sensational stage debut at Dublin's Gate Theatre. Welles continued to draw and paint throughout his life, and his groundbreaking film and theatre work was profoundly shaped by his graphic imagination.

When he died over 30 years ago, he left behind hundreds of character sketches, set designs, visualisations of unmade projects, illustrations to entertain his children and friends, images in the margins of personal letters, and portraits of the

people and places that inspired him. They are a window on to the world of Welles, and a vivid illustration of his creativity and visual thinking. Most of these have never been made public. Now, for the first time, Welles's daughter Beatrice has granted Mark Cousins access to this treasure trove of imagery, to make a film about what he finds there.

The Eyes of Orson Welles is a cinematic essay which avoids the techniques of conventional TV documentaries. It combines Cousins's trademark commentary with new digital scans and specially made animations of the artworks, which bring vividly to life the magic of Welles's graphic world. These are intercut with clips from Welles's films, recordings of his radio performances and TV interviews, and encounters with Beatrice Welles, telling the personal stories of the images. An original score by young Northern Irish composer Matt Regan gives the film emotion and expressivity. The title music is Albinoni's famous Adagio, a nod to the fact that Welles was the first filmmaker to use this in a movie soundtrack, in his 1961 adaptation of Kafka's The Trial.

The film is told in three central acts - Pawn, Knight and King - with an epilogue on the theme of Jester. The Pawn sequence looks at Welles's politics, his sympathy with ordinary people, those images that deal with the modesty of human beings - children, decent people who are not in positions of power. The Knight section looks at Welles's obsession with love, his romances with the likes of Dolores del Rio and Rita Hayworth, and his quixotic attachment to what he himself saw as outmoded chivalric ideals. The King section looks at Welles's fascination with power and its corruption, through illustrations that deal with figures such as Macbeth, Henry V, Kane and Welles himself - the epic mode of human beings, the lawmakers and abusers. The Jester epilogue explores the images that are about fun or mockery, with a surprising intervention by Welles himself.

Cousins also travels to key locations in Welles's life - New York, Chicago, Kenosha, Arizona, Los Angeles, Spain, Italy, Morocco, Ireland - to capture beautiful images and locate the artworks, and serve to dramatised some of the defining moments in Welles's career and personal life.

Mark shot the film with two handheld cameras, one a conventional HD camera and one a 4K camera which gives a new Steadicam style of tracking shot without the need for tracks and dolly. It's the sort of technology that Welles would have loved and could only have dreamed of as he spent a lifetime wrestling with the creative and financial limitations of traditional film-making techniques. This shooting style reflects the immediacy of Welles's sketches and paintings in their swift engagement with the visual world. These cameras are like Mark's paintbrushes, giving him a direct, personal and tactile contact between his hand and the captured/created image, without the intermediation of cumbersome equipment and crews.

In the end, this essay film is about much more than the drawings and paintings. Just as Leonardo da Vinci's sketchbooks show his passions, his changes of mind, his trains of thought and visual thinking, so this film is an almost mythic encounter with the imagination of this great artist, who extended cinema, was profoundly political, engaged with questions about power, existentialism, memory, destiny, psychology, space and light. These ingredients make The Eyes of Orson Welles not only a portrait of a great man, but an account of the 20th century and a meditation on the continuing relevance of his genius in what Mark describes as these Wellesian times.

**SUN 22:40 The Sky at Night (m00023bc)**  
Beyond Pluto

On 1 January 2019, Nasa's New Horizons probe notched up another historic first: the first ever Kuiper belt fly-by. Its target was 2014 MU69, a chunk of ice and rock about four billion miles (approximately 6.4 billion kilometres) from Earth, dubbed Ultima Thule, a Latin phrase meaning a distant, unknown region. It is the most distant fly-by in history, and it is believed the data New Horizons gathers will shed new light on the solar system's early days. Chris Lintott reports from the John Hopkins Applied Physics Laboratory in Maryland to bring the latest news and pictures from this extraordinary mission.

**SUN 23:10 The Bridge: Fifty Years Across the Forth (b04g80p8)**

A unique amateur film provides the centrepiece of a documentary celebrating the 50th anniversary of one of Scotland's great landmarks, the Forth Road Bridge. The documentary traces the memories of the people who built the bridge, the biggest of its kind in Europe at the time, as well as those who ran the Forth ferries that stopped running when it opened in 1964.

**SUN 00:10 Treasures of the Indus (b069g53h)**  
The Other Side of the Taj Mahal

This is the story of the Indian subcontinent told through the treasures of three very different people, places and dynasties that have shaped the modern Indian world.

The Mughals created the most famous and dazzling empire that India has ever seen, from the Taj Mahal to fabulously intricate miniatures of court life.

But in the process, did they bring civilisation to India or tear it apart?

From the moment the first Mughal emperor Babur arrived from Afghanistan the debate began - were the Mughals imposing their own religion of Islam on a Hindu country, or were they open to the religion and art of the country they were conquering?

The artworks the Mughals left behind over their 200-year empire - even the very buildings which have traces of Hindu architecture as well as Muslim - clearly show how this debate played out, and Sonu Datta traces how this most spectacular of all Indian civilisations also sowed the seeds of discord.

#### SUN 01:10 Going Going Gone: Nick Broomfield's Disappearing Britain (b07chym0)

Two iconic British buildings are threatened with demolition and the intrepid Nick Broomfield is on the case. In a pair of documentaries, Broomfield profiles the Wellington Rooms in Liverpool and the Coal Exchange in Cardiff.

The Wellington Rooms, built in 1815 by Edmund Aikin, was originally the social hub for the super-rich, slave traders, businessmen and the elite. The prime minister William Gladstone's family, themselves wealthy slave owners, invested heavily in this magnificent building with the most intricate detailing and proportions. A Wedgwood ceiling and sprung dance floor, with classical columns, create a building of love and light.

Despite the depression in Liverpool's fortunes, it's a building that has brought enormous happiness to many different people over a couple of centuries. Countless people seem to have fallen in love and met their future partners in the assembly room. Now in a rundown state of faded glory, the question is - what to do with the Wellington Rooms?

The Coal Exchange in Cardiff, built in 1883 by Edward Seward, is a magnificent celebration of the industry of coal and its immense wealth. A glass-ceilinged exchange room with galleries on three floors and a unique lowered floor are a remarkable monument to this time.

Now in serious neglect, the whole building, the size of a city block, faces demolition. It signifies the serious lack of resourcefulness on the part of Cardiff Council to celebrate and regenerate not only this building but the whole area. The once great Butetown Docks and the magnificent buildings surrounding the Coal Exchange have also been allowed to crumble and disintegrate. Rather than redevelop the docks in a way that they have been so wonderfully done in Liverpool, the docks in Cardiff have been filled in. Magnificent warehouses have been torn down, and the whole history of coal and the uniqueness of this area have been almost obliterated.

#### SUN 02:10 Indian Hill Railways (b00qvk99)

[Repeat of broadcast at 19:00 today]

### MONDAY 14 JANUARY 2019

#### MON 19:00 Beyond 100 Days (m00023bf)

Series 1

14/01/2019

The latest news, exploring the day's events from a global perspective.

#### MON 19:30 Weird Nature (b0078hk5)

Fantastic Feeding

Series exploring strange animal behaviour which reveals the many inventive ways animals catch prey. Discover a creature that employs glue-guns as weapons, a fish that slashes with a chainsaw and a spider that lassos its prey with a swinging blob of glue. Meet a fish that targets its prey using its mouth as a water pistol, a shrimp that stuns its prey with sound and a lemur with an ET-like finger that taps for a meal. Plus a frogfish whose mouth moves faster than its prey can see, a snake with a tail that acts as a maggot-like lure and an eagle that has found a novel way to break into prey. There is even a mantis shrimp with a knockout punch that reaches the speed of a racing bullet and a stoat that uses hypnosis.

#### MON 20:00 Fake or Fortune? (b012m6p5)

Series 1

Rembrandt

Fiona Bruce and art expert Philip Mould team up to investigate mysteries behind paintings.

In this closing episode, suspicions are aroused when Philip and his researcher Bendor spot a rogue picture for sale in a South African auction house. It exudes all the classic sense of being a 'sleeper', an important picture that has been miscatalogued and offered for a very low price.

But there is a darker side revealed when investigations uncover that this is a wanted painting, having been stolen by the Nazis in World War II. Records show it was considered a German national treasure, once thought to have been painted by Rembrandt. A Jewish family have been trying to track it and other works stolen from their gallery ever since.

With minutes to go, Philip and Fiona manage to stop the sale and release the picture for investigation. Having picked it up from Cape Town, Fiona delivers it to Philip and an in-depth examination utilising the latest infrared and forensic testing begins. Can it really be by Rembrandt and will it be possible to see it returned to its rightful owners?

In an effort to solve who painted it, Philip travels to Amsterdam to meet a man with the power of a demigod; the chair of the Rembrandt Research Project on whose word hangs the verdict that can make the value differ by many millions of pounds.

Fiona meanwhile tries to unpick the thorny question of ownership before returning the picture to South Africa, when the owner of the disputed painting finally emerges from the shadows to tell his story.

#### MON 21:00 Art of America (b017755r)

Looking for Paradise

In the first episode of a series exploring the history of American art, Andrew Graham-Dixon embarks on an epic journey from east to west, following in the footsteps of the pioneers who built the foundations of modern America.

During his journey, he travels to Massachusetts to see the earliest portraits in America depicting the Puritan settlers and visits Pennsylvania to uncover the dark truth behind Benjamin West's most famous painting, the spectacular Treaty of Penn with the Indians. In Philadelphia, he turns the pages of one of the world's most expensive books - John James Audubon's exquisite Birds of America, and explores the wilderness that inspired America's greatest landscape painter, Thomas Cole.

He also uncovers the paradox at the heart of America: that progress and innovation have come at a tragic price, the destruction of the unique cultural heritage of Native Americans by European settlers.

Andrew's journey takes us to the end of the 19th century and the announcement that the era of westward expansion was officially over.

#### MON 22:00 Russia's Lost Princesses (b04f1jyk)

The Gilded Cage

Interviews with leading historians, archive footage and dramatic reconstruction reveal the childhoods of Tsar Nicholas II's four daughters - Olga, Tatiana, Maria and Anastasia - and the truth behind the fairy-tale images. The sisters were the most photographed princesses of their day, attracting the same frenzied press attention as Princess Diana later would, but their public profile masked the reality of their strange and very isolated upbringing.

The sisters' lives changed forever after the birth of their little brother Alexei, whose life-threatening haemophilia meant that he became the main focus of their mother Alexandra's love and attention. Alexandra was obsessed with keeping Alexei's illness an absolute secret, so the family lived in a gilded cage - the girls seldom left the confines of their palace, had few friends and knew almost nothing of the outside world. One of the few outsiders to whom the four sisters became genuinely close was their parents' controversial spiritual advisor Rasputin, the only person who seemed able to alleviate Alexei's suffering.

As adolescents, the girls grew even closer to Rasputin. Because their mother was often unwell, frequently locked herself away and refused to see her daughters, they turned instead to Rasputin for advice on all their teenage problems. Rasputin was notorious for his debauchery, so his relationship with Alexandra and the sisters was cause for mounting concern amongst the extended Romanov family, and it wasn't long before shocking rumours started to circulate about what exactly was going on amidst the seclusion of the Alexander Palace.

#### MON 23:00 Francesco's Venice (b0078sl0)

Blood

Francesco da Mosto tells the fantastic story of the birth of the most beautiful city in the world, Venice. Of how a city of palaces, of gold and jewels, of art and unrivalled treasures arose out of the swamp of a malaria-ridden lagoon.

Of how one city came to enjoy all the glory of a royal capital yet did away with kings and queens; of how a tomb violently robbed would make an entire people rich; and of how one man - tortured and blinded by his enemies - would lead Venice to a revenge so terrible it would go down in history as one of the worst crimes ever.

Da Mosto reveals the stunning interiors of the Doge's Palace, the Basilica of St Mark, the Ca da Mosto, the Ca D'Oro and the first low-level aerial shots of the city in years. As a Venetian by birth whose family has lived there for over a thousand years, Da Mosto also reveals secret Venice - beset by violence and political intrigue and yet a place which has become the most romantic destination on earth.

#### MON 00:00 Dan Cruickshank: At Home with the British (b07c645b)

The Cottage

We would all love to live in a cottage. It is the national fantasy - thatch on the roof, roses over the door, fire in the grate. Dan is in Stoneleigh in the beautiful Warwickshire countryside. The village has barely changed in 500 years, its cottages perfectly preserved. But even better, there is a treasure trove of documents in the local abbey which reveal centuries of daily life in extraordinary detail. Whether it is the pub owner fined for serving poor beer, the widow told to pay for her new home with her best chicken, or the first glass windows in the village, this film charts the cottage's transformation from humble medieval hovel to modern dream home.

#### MON 01:00 Pugin: God's Own Architect (b01b1z45)

Augustus Northmore Welby Pugin is far from being a household name, yet he designed the iconic clock tower of Big Ben as well as much of the Palace of Westminster. The 19th-century Gothic revival that Pugin inspired, with its medieval influences and soaring church spires, established an image of Britain which still defines the nation. Richard Taylor charts Pugin's extraordinary life story and discovers how his work continues to influence Britain today.

#### MON 02:00 Fake or Fortune? (b012m6p5)

[Repeat of broadcast at 20:00 today]

#### MON 03:00 Art of America (b017755r)

[Repeat of broadcast at 21:00 today]

### TUESDAY 15 JANUARY 2019

#### TUE 19:00 BBC News Special (m00028y3)

Brexit Deal Vote - BBC Four coverage

BBC Four joins the BBC News channel for more coverage of the Brexit Deal Vote

#### TUE 19:30 Weird Nature (b0078hk2)

Puzzling Partners

Discover a lizard that uses a scorpion as a bodyguard, a toad that sets up home with a tarantula, an animal that uses hummingbirds as an air charter, the barber that fish use, a crab that carries living fisticuffs, mutant frogs, a snake that acts as pest controller in an owl's nest, dolphins that co-operate with fishermen, a bird that guides people to honey and an odd farmyard full of strange friendships.

#### TUE 20:00 The Incredible Human Journey (b00kmtft)

Asia

There are seven billion humans on earth, spread across the whole planet. Scientific evidence suggests that most of us can trace our origins to one tiny group of people who left Africa around 70,000 years ago. In this five-part series, Dr Alice Roberts follows the archaeological and genetic footprints of our ancient ancestors to find out how their journeys transformed our species into the humans we are today, and how Homo sapiens came to dominate the planet.

The journey continues into Asia, the world's greatest land mass, on a quest to discover how early hunter-gatherers managed to survive in one of the most inhospitable places on earth - the Arctic region of northern Siberia. Alice meets the nomadic Evenki people, whose lives are dictated by reindeer, both wild

and domesticated, and discovers that the survival techniques of this very ancient people have been passed down through generations. Alice also explores what may have occurred during human migration to produce Chinese physical characteristics, and considers a controversial claim about Chinese evolution - that the Chinese do not share the same African ancestry as other peoples.

**TUE 21:00 Rome Unpacked (b09m6bmp)**

Series 1

Episode 2

Andrew Graham-Dixon and Giorgio Locatelli continue their exploration of Rome off the beaten track. In search of its Papal, Renaissance and Baroque history, they discover that it is visible all around them. In Rome, everything has been kept, from broken cooking pots from the time of the empire that piled up to form one of the city's hills to the gastronomy, art and architecture created not just by successive popes and Caesars but by ordinary Romans.

As well as marvelling at the mosaics in the 12th-century Basilica di San Clemente, Andrew takes Giorgio to its deepest basement and an ancient Roman schoolteacher's classroom. Then it is on to a true architectural and civic wonder - the vast Testaccio Slaughterhouse, where workers were once paid in offal which they took home and used as the basis of delicious dishes that are still sold in Rome today. Giorgio takes Andrew to his favourite Trippa stall to sample some of the best. Travelling to the Palazzo Colonna, Andrew in turn wants to show Giorgio just one painting - the Beaneater by Carracci, a Baroque masterpiece that makes an everyday subject extraordinary. Finally, together they discover Rome's Fascist architecture, which might have been destroyed anywhere else, but here remains standing in a city that houses all of its history. To understand the truth about the past, they argue, you have to taste all its layers - just like one of Giorgio's lasagnes.

**TUE 22:00 Wild West - America's Great Frontier (b07zvr81)**

The High Country

America's high country is the land of grizzly bears and giant trees, of frigid winters and scorching summers, of tough ranchers and gold-rush fever. From the Rockies to the Sierra Nevada, survival demands endurance and know-how. From parasitic plants to thieving black bears, tenacious pikas and battling bison, it's in the high country that the west gets really wild.

**TUE 23:00 The Plantagenets (b03zdm4b)**

Series 1

An English Empire

Professor Robert Bartlett continues the remarkable story of the Plantagenets. England's longest-reigning royal dynasty fights to expand their power across the British Isles and win back their lands in France. In this golden age of chivalry, a clear sense of English nationhood emerges and parliament is born.

**TUE 00:00 Metalworks! (b01hdhpy)**

The Knight's Tale

Art historian and curator Tobias Capwell celebrates the great age of armour. Referencing the unstoppable rise of the Royal Armaments at Greenwich, he tells the forgotten story of how Henry VIII fused German high technology with Renaissance artistry in the pursuit of one aim - to become the very image of the perfect knight. Using the talents of foreign craftsmen and his court artist Hans Holbein, Henry transformed himself into a living metal sculpture. His daughter Elizabeth I further exploited that image, making her courtiers parade before her in the most innovative and richly decorated works ever commissioned in steel.

**TUE 01:00 Genius of the Modern World (b07gpdxb)**

Marx

Bettany Hughes investigates the revolutionary ideas of Karl Marx. Born to an affluent Prussian family, Marx became an angry, idealistic radical, constantly on the run for his political agitating and incendiary writing. In Paris, he first formulated his explosive analysis of capitalism and its corrosive effects on human nature. In Brussels, he co-authored the Communist Manifesto with Frederick Engels. In London, his obsessive theorizing dragged his family into poverty and tragedy.

Marx's masterpiece Das Capital was largely overlooked in his lifetime, and only 11 people attended his funeral. Yet his ideas would generate one of the most influential, and divisive, ideologies in history. Drawing on expert opinion and new evidence, Bettany reveals the flesh-and-blood man and his

groundbreaking ideas.

**TUE 02:00 The Incredible Human Journey (b00kmtft)**

[Repeat of broadcast at 20:00 today]

**TUE 03:00 Rome Unpacked (b09m6bmp)**

[Repeat of broadcast at 21:00 today]

**WEDNESDAY 16 JANUARY 2019**

**WED 19:00 The Flying Archaeologist (b01s1ll4)**

Stonehenge

Archaeologist Ben Robinson flies over Wiltshire to uncover new discoveries in the Stone Age landscape. Sites found from the air have led to exciting new evidence about Stonehenge. The discoveries help to explain why the monument is where it is, and reveal how long ago it was occupied by people.

**WED 19:30 Weird Nature (b0078hny)**

Peculiar Potions

Series exploring strange animal behaviour looks at how a surprising number of creatures take substances for pleasure or to cure ailments. Discover starlings that use aromatherapy, chimps that administer their own medicine, an odd amphibian that can heal itself, bee bouncers that stop drunk and disorderly bees returning to the hive, monkeys whose liking for happy hour tells us about our own drinking habits, lemurs that ingest mind-altering millipedes, hedgehogs that indulge in strange rituals, cats that get high on plants and reindeer whose fondness for magic mushrooms may have spawned the greatest legend of them all.

**WED 20:00 Armada: 12 Days to Save England (b05xj5t4)**

Series 1

The Battle for England

In the second part of a major three-part drama-documentary series, Anita Dobson stars as Elizabeth I, and Dan Snow takes to the sea to tell the story of how England came within a whisker of disaster in summer 1588. Using newly discovered documents, Dan relives the fierce battles at sea and we go behind the scenes in the royal court of Elizabeth as the Spanish fleet prepares for full-on invasion.

**WED 21:00 Andrew Marr's History of Modern Britain (b00brnr1)**

Advance Britannia

Andrew Marr revisits Britain in 1945 and finds the country victorious, but badly beaten up and nearly bankrupt. With astonishing archive and telling anecdote, he tells the story of Britain's extraordinary struggle for national and cultural survival in the post-war world.

As the newly elected Labour government sets out to build 'New Jerusalem', Britain is forced to hold out the begging bowl in Washington. Back in Britain, Ealing Studios attempts to hold back the tide of Hollywood with a series of very British comedies.

There is a spirit of hope and optimism in the air, but the shortage of consumer goods and the British people's growing impatience with austerity threaten to take the country from bankruptcy to self-destruction.

A stirring story of Britain's battle against the odds to retain its world power status.

**WED 22:00 Life on Air - David Attenborough's 50 Years in Television (p031d2k6)**

Michael Palin presents a profile of the television career of David Attenborough, from controller of BBC Two to his wildlife programmes such as Life on Earth and The Blue Planet.

**WED 23:00 Life on Earth (b01qgr55)**

The Infinite Variety

The first ever episode of the landmark natural history series Life on Earth. David Attenborough explores the wildlife and landscape that inspired Charles Darwin's theory of evolution.

**WED 23:55 Pop Go the Sixties (b00crz39)**

Series 2

Herman's Hermits

Pop moments from the BBC's sixties archive. Britain's inoffensive pop conquerors of America, who anticipated the sound that the Monkees would later call their own, perform Something Is Happening on the Wednesday Show in 1968. Peter Noone leads the band on the song that made number six in the Swiss charts.

**WED 00:00 Immortal Egypt with Joann Fletcher (b06wj4bw)**

Chaos

In the second episode, Joann explores how the Pyramid Age ended in catastrophe. In one of Saqqara's last pyramid complexes, Joann uncovers evidence of famine as the young Egyptian state suffered a worsening climate and political upheaval. With depleted coffers, Egypt was plunged into the dark ages and civil war. With the land fractured into many small states, Joann tells the story of small-town leaders rising through the ranks.

In a little-known tomb in Thebes, Joann uncovers stories of warriors who fought in the bloody battle which eventually would mark the reunification of Egypt. This burial represents the world's first recorded war cemetery and the rise of Thebes. The country was reborn, resuming grand building projects for Egypt's mighty kings and bejewelled queens.

Joann reveals how settlers known as the Hyksos tried to infiltrate the government and take the throne. But their rule was short-lived as they were ousted by southern rulers who laid the groundwork for Egypt's largest empire.

**WED 01:00 How the Celts Saved Britain (b00ktrby)**

Salvation

Provocative two-part documentary in which Dan Snow blows the lid on the traditional Anglo-centric view of history and reveals how the Irish saved Britain from cultural oblivion during the Dark Ages.

He follows in the footsteps of Ireland's earliest missionaries as they venture through treacherous barbarian territory to bring literacy and technology to the future nations of Scotland and England.

**WED 02:00 Armada: 12 Days to Save England (b05xj5t4)**

[Repeat of broadcast at 20:00 today]

**WED 03:00 Andrew Marr's History of Modern Britain (b00brnr1)**

[Repeat of broadcast at 21:00 today]

**THURSDAY 17 JANUARY 2019**

**THU 19:00 Beyond 100 Days (m00023vw)**

Series 1

17/01/2019

The latest news, exploring the day's events from a global perspective.

**THU 19:30 The Sky at Night (m00023bc)**

[Repeat of broadcast at 22:40 on Sunday]

**THU 20:00 Wonders of Life (b01qm913)**

Original Series

Expanding Universe

Amidst the rich natural history of the United States, Professor Brian Cox encounters the astonishing creatures that reveal how the senses evolved.

Every animal on Earth experiences the world in a different way, using a unique suite of senses to detect its physical environment. Tracing the evolution of these mechanisms is a story that takes us through life's journey - from single-celled organisms to more complex, sentient beings. Brian finds that over the course of 3.8 billion years, the senses have driven life in new directions and may, ultimately, have led to our own curiosity and intelligence.

Brian begins deep in the caves of Kentucky, where, devoid of light, he must orientate by sense of touch and sound alone. Yet even in this limited environment he encounters a creature that is perfectly able to find its way around. This is the paramecium, a microscopic single-celled organism.

Despite their apparent simplicity, paramecia display a clear sense of touch, changing direction whenever they bump into

something. Brian finds that the electrochemical process through which they 'feel' the world underlies practically all senses in all living things.

Brian next explores the sense of taste in the muddy waters of the Mississippi Delta. With a metre-long catfish in his arms, Brian explains how its entire body is covered in taste buds. These behave like one giant tongue, allowing the catfish to build up a three-dimensional map of its otherwise murky surroundings.

A scuba-dive off the coast of California brings Brian face to face with the strange yet remarkable mantis shrimp. These inhabitants of the ocean floor see the world through eyes made of 10,000 lenses, each with twice as many visual pigments as any other animal on Earth.

But it's in the eyes of the octopus that Brian finds a link between the ability to process sensory data and the emergence of intelligence. This tantalising discovery may be evidence that humans evolved large brains in order to process the vast amounts of information gathered through our sense of vision.

For Brian this raises an extraordinary prospect - that ultimately it was our senses that allowed us to gaze up at the vast expanse of the universe and begin to understand its origins.

**THU 21:00 American History's Biggest Fibs with Lucy Worsley (m00023vy)**  
Series 1

The American Revolution

In the first of a three-part series, Lucy Worsley explores how American history has been mythologised and manipulated by generations of politicians, writers and protesters. This episode examines the American Revolution – a David-and-Goliath battle of men with high ideals taking on the might of the British Empire. But how much of America's founding story is based on fact?

**THU 22:00 Light and Dark (b03jrxh)**  
Dark

Professor Jim Al-Khalili tells the story of how we went from thinking we were close to a complete understanding of the universe to realising we had seen almost none of it. Today, our best estimate is that more than 99 per cent of the cosmos is hidden in the dark, invisible to our telescopes and beyond our comprehension.

The first hints that there might be more out there than meets the eye emerged from the gloom in 1846 with the discovery of the planet Neptune. It was hard to find, because at four billion kilometres from the sun there was precious little light to illuminate it and, like 89 per cent of all the atoms in the universe, it gives off almost no light.

In the middle of the 20th century scientists discovered something even stranger - dark matter - stuff that wasn't just unseen, it was fundamentally un-seeable. In fact, to explain how galaxies are held together and how they formed in the first place, there needed to be four times as much dark matter as there was normal atomic matter.

In the late 1990s scientists trying to measure precisely how much dark matter there was in the universe discovered something even more elusive out there - dark energy, a mysterious new force driving the universe apart that is thought to make up a colossal 73 per cent of it.

Finally, Jim explores the quest to uncover the nature of dark energy and to see dark matter pull the first stars and galaxies together, a quest that involves peering into the darkest period in the cosmos's past.

**THU 23:00 Spider House (b04mqc4z)**

Ever wondered what spiders really get up to in your home? In this Halloween special Alice Roberts overcomes her arachnophobia to enter a spider-filled house where an astonishing drama unfolds within its walls.

Inside she meets entomologist Tim Cockerill, who loves spiders and quickly immerses Alice in the wonders of web-building, the secrets of fly-catching and the dangerous spider-eat-spider world they inhabit.

Tim wants us to welcome spiders into our homes. He takes Alice on a macro mystery tour of the rooms of the Spider House, revealing what goes on in the cracks and crannies of our homes.

Why do we always find spiders in the bathroom? And what happens if we flush them down the plughole? Using powerful macrophotography, Tim and Alice find out.

In the dining room, they uncover the complex engineering behind the most beautifully constructed 'dinner plate' in the home - a spider's web. In the kitchen Alice witnesses the extraordinary hunting ability of the keen-eyed jumping spider, while Tim finds out how spiders kill their prey using venom.

In the bedroom, the secrets of spider courtship are revealed. For spiders, mating is a high-stakes life-or-death game, where males risk being eaten by females. In the nursery, we enter an enchanting cocoon where tiny spiderlings struggle out of their exoskeletons - the first of many moults on the road to becoming adult spiders. Meanwhile, down in the cellar, we meet an unexpectedly voracious killer - the daddy longlegs.

Many of us have a love-hate relationship with spiders. The rational side of Alice Roberts understands their benefits, but can she overcome her irrational fears? She faces the ultimate challenge: to spend the night alone... with the spiders... in Spider House.

**THU 00:30 Inside No. 9 (b05sz3sd)**  
Series 2

Seance Time

Having never consulted the spirit world before, Tina isn't quite sure what to expect. Her visit to the spiritualist medium Madam Talbot has been arranged by her sister, Hives, Talbot's assistant in the mundane world, seems quite helpful, but there's something already waiting for Tina on the Other Side, and Hives knows all about it.

**THU 01:00 A Timewatch Guide (b051h0gy)**  
Series 1

The Mary Rose

Historian Dan Snow explores the greatest maritime archaeology project in British history - the Mary Rose. Using 40 years of BBC archive footage Dan charts how the Mary Rose was discovered, excavated and eventually raised, and what the latest research has revealed about this iconic ship and her crew. Dan also investigates how the Mary Rose project helped create modern underwater archaeology, examining the techniques, challenges and triumphs of the divers and archaeologists involved.

**THU 02:00 Wonders of Life (b01qm913)**  
[Repeat of broadcast at 20:00 today]

**THU 03:00 American History's Biggest Fibs with Lucy Worsley (m00023vy)**  
[Repeat of broadcast at 21:00 today]

**FRIDAY 18 JANUARY 2019**

**FRI 19:00 World News Today (m00023xg)**

The latest national and international news, exploring the day's events from a global perspective.

**FRI 19:30 Top of the Pops (m00023xj)**

Gary Davies and Steve Wright present the pop chart programme, first broadcast on 22 January 1987, featuring Deady or Alive, UB40, Randy Crawford, Curiosity Killed the Cat, Pepsi & Shirlee, Siouxsie and the Banshees, Steve 'Silk' Hurlley and Swing Out Sister.

**FRI 20:00 The Everly Brothers: Harmonies from Heaven (b077x1fh)**

Documentary which celebrates, over the period covering the end of the 1950s and the beginning of the 60s, the phenomenon of The Everly Brothers, arguably the greatest harmony duo the world has witnessed, who directly influenced the greatest and most successful bands of the 60s and 70s - The Beatles, The Stones, The Beach Boys and Simon & Garfunkel to name but a few.

Don and Phil Everly's love of music began as children, encouraged by their father Ike. Little Donnie and Baby Boy Phil sang on Ike's early morning radio shows in Iowa.

After leaving school, the brothers moved to Nashville where, under the wing of Ike Everly's friend, the highly talented musician Chet Atkins, Don and Phil signed with Cadence Records. They exploded onto the music scene in 1957 with Bye Bye Love, written by Boudleaux and Felice Bryant.

After Bye Bye Love came other hits, notably Wake Up Little Susie, followed by the worldwide smash hit All I Have to Do Is Dream and a long string of other great songs which also became hits.

By 1960, however, the brothers were lured away from Cadence to Warner Bros with a \$1,000,000 contract. Their biggest hit followed, the self-penned Cathy's Clown, which sold 8 million copies. Remaining at Warner Bros for most of the 60s, they had further success with Walk Right Back, So Sad and the King/Greenfield-penned track Crying in the Rain.

**FRI 21:00 Guitar, Drum and Bass (m00023xl)**  
Series 1

On Bass... Tina Weymouth!

Tina Weymouth of Talking Heads and Tom Tom Club celebrates the extraordinary contribution of bass to popular music, tracing its progress from street-corner doo-wop and the overlooked 'guy at the back' in rock 'n' roll, via Paul McCartney, the anonymous James Jamerson and Carol Kaye - whose genius bass lines underpinned The Beatles, Motown and LA sound respectively - British jazzier Herbie Flowers's immortal line in Walk on the Wild Side, the emergence of 70s funky bass stars Bootsy Collins and Chic's Bernard Edwards, the driving lead bass of postpunk maverick Peter Hook in both Joy Division and New Order, through to the growth of bass culture in reggae, whose sound systems sparked whole new genres in drum and bass, grime and beyond.

With Bootsy Collins, Dizzee Rascal, Ray Parker Jr, Nile Rodgers, Peter Hook, Carol Kaye, Herbie Flowers, Valerie Simpson, The Marcels' Fred Jonson, DJ Aphrodite and Gail Ann Dorsey.

**FRI 22:00 Forever Young: How Rock 'n' Roll Grew Up (b00sxjls)**

Documentary which looks at how rock 'n' roll has had to deal with the unthinkable - namely growing up and growing old, from its roots in the 50s as music made by young people for young people to the 21st-century phenomena of the revival and the comeback.

Despite the mantra of 'live fast, die young', Britain's first rock 'n' roll generations are now enjoying old age. What was once about youth and taking risks is now about longevity, survival, nostalgia and refusing to grow up, give up or shut up. But what happens when the music refuses to die and its performers refuse to leave the stage? What happens when rock's youthful rebelliousness is delivered wrapped in wrinkles?

Featuring Lemmy, Iggy Pop, Peter Dinklage, Rick Wakeman, Paul Jones, Richard Thompson, Suggs, Eric Burdon, Bruce Welch, Robert Wyatt, Gary Brooker, Joe Brown, Chris Dreja of The Yardbirds, Alison Moyet, Robyn Hitchcock, writers Rosie Boycott and Nick Kent and producer Joe Boyd.

**FRI 23:00 Reginald D Hunter's Songs of the South (p02j952b)**  
Alabama and Georgia

In the second of a three-part road trip, Georgia-born but London-based Reginald D Hunter heads home to explore the interplay between gospel, soul and hip-hop. Passing through Alabama, Reg witnesses a Lynryd Skynryd gig and discovers the soul riches of the town of Muscle Shoals.

Arriving in Georgia, Reg visits the Athens of the B52s and REM, as well as Martin Luther King's and Ludacris's Atlanta.

Featuring Arrested Development, St Paul and the Broken Bones, Clarence Carter and Sharon Jones.

**FRI 00:00 The Easybeats to AC/DC: The Story of Aussie Rock (b0705t5j)**

A film about the sound of Australian rock and the emergence of one of the world's greatest rock bands - AC/DC, or Acca Dacca as they are known in Australia, and the legendary music company, Albert Music (Alberts) that helped launched them on to the global rock scene.

Through the 1960s, 70s and 80s, Alberts created a house of hits in Australia that literally changed the sound of Australian popular music.

It started with The Easybeats and their international hit Friday on My Mind back in the 60s. In the 1970s when Australia was in the midst of a deep recession, a rough and ready pub rock sound emerged, characterised by bands like Rose Tattoo who were promoted by family-run company Alberts. The raw power and fat guitar sound that characterised Aussie rock was pioneered by the Alberts and took Australia and the world by storm.

The sound of Aussie rock really exploded when the Alberts, a well-to-do family from the Sydney suburbs, joined forces with the Youngs, a Glasgow family who had emigrated to Australia. The result was AC/DC.

The documentary tells the story of how brothers Angus and Malcolm Young were produced by their older brother George and fellow Easybeats member Harry Vanda. Vanda and Young produced the band at Albert Studios and they were soon joined by the wild and charismatic lead singer Bon Scott.

Head of Alberts was Ted Albert - a quietly confident risk-taker. He backed AC/DC for many years with rock-solid conviction when their type of music and fashion seemed completely at odds with a UK and US music scene dominated by punk. Then, in 1980, AC/DC's Back in Black album was a massive success around the world and the rest is history. The film retraces the band's explosion in popularity, the relentless touring and the tragic death of Bon Scott.

Even after Bon's death, and with the addition of Brian Johnson, the band went from strength to strength and remain hugely popular and one of the world's most legendary bands. Today, the Albert family remains a potent force in Australian music.

**FRI 01:00 Top of the Pops (m00023xj)**

[Repeat of broadcast at 19:30 today]

**FRI 01:30 The Everly Brothers: Harmonies from Heaven (b077x1fh)**

[Repeat of broadcast at 20:00 today]

**FRI 02:30 Guitar, Drum and Bass (m00023xl)**

[Repeat of broadcast at 21:00 today]