

SATURDAY 03 SEPTEMBER 2016

SAT 19:00 Scotland's Home Movies (b065xgkj)

Narrated by Richard Madden, this film is a nostalgic look at how home movie-making in Scotland became a cultural phenomenon. Featuring fascinating and poignant cine films and the makers and stars of the movies themselves, we look back to some of the very first examples of Scottish home movies from the 1920s.

Whilst cinema itself was still in its infancy, the idea of making movies for yourself wasn't far behind. But early cine cameras were hand-cranked, mechanical and cumbersome. They were also expensive, too expensive for all but the wealthiest. By the 40s and 50s, after the horrors of World War II, home movie-making really took off, capturing the austerity of the 40s and the prosperity of the 50s. Cheaper cameras meant that Scotland's middle classes were now also able to capture their lives on film.

By the 60s there was a sense that anything was possible. It was a truly dynamic period in British history. Revolutions in youth culture, music and fashion transformed the look and feel of the country. Home movie-making became a cultural phenomenon, with people from all walks of life taking up the hobby.

SAT 20:00 Clydebuilt: The Ships that Made the Commonwealth (p01n4kb7)

Cutty Sark

David Hayman explores the stories of four ships, built on the river Clyde, that helped forge links with countries throughout the Commonwealth of Nations - from iconic ships such as Cutty Sark and HMS Hood to the lesser-known CS Mackay-Bennett, a ship that laid the foundations of a Victorian communications revolution and played a crucial role in the world's worst maritime disaster.

Also, David investigates the story of a paddle steamer called Robert E. Lee and the controversial role Glasgow shipbuilders and captains played in the American Civil War. Cutty Sark, built on a tributary of the River Clyde near Glasgow and launched in 1869, is one of the most famous ships in the world.

In this programme, David Hayman travels to Australia to uncover the links Cutty Sark forged with this Commonwealth country, and to reflect on her legacy. It's a story of adventure, money, mutiny and murder. Ravaged by fire in 2007, Cutty Sark has been restored and today stands as a testament to the craftsmanship and ingenuity of Scottish ship designers.

SAT 21:00 Beck (b07tmdw7)

The Eye of the Storm

When the charred remains of a woman are found, Sapo, the Swedish Security Services, suspect Gunvald Larsson of being mixed up in her murder. The dead woman was wanted internationally as a member of a group of militant eco-activists carrying out attacks around the world. Gunvald sets out on his own to find the woman's murderer, with Sapo on his heels. Martin Beck is ordered to arrest Gunvald, and his loyalty to his colleague is put to the test.

In Swedish with English subtitles.

SAT 22:30 The Story of Musicals (b0192pyj)

Episode 1

Three-part series which tells how the British musical became a driving force behind musical theatre around the world - a tale of titanic shows, phenomenal daring, epic rivalries, prodigious talent and gargantuan fortunes, all set in just a single square mile.

The first episode looks at how, from unpromising beginnings in the period after the Second World War, British musicals went on to reclaim the West End from American domination. Highlights include the quintessentially British show The Boyfriend and its failure to conquer Broadway, the riches-to-rags story of Lionel Bart and his masterpiece Oliver, and the extraordinary partnership of Sir Tim Rice and Lord Andrew Lloyd Webber, from the moment they burst onto the scene with Jesus Christ Superstar until their final collaboration of the 1970s, Evita.

Featuring first-hand accounts from the great and the good of musical theatre including Andrew Lloyd Webber, Sir Cameron Mackintosh, Sir Tim Rice, Elaine Paige, Ron Moody, Bill Kenwright, Sheila Hancock, Harold Prince, Robert Stigwood, Tommy Steele, Paul Nicholas and Willy Russell.

SAT 23:30 The Story of Musicals (b019c7pz)

Episode 2

This episode charts how British musical talent in the 1980s

stormed the West End with hits like Cats, Les Miserables, Blood Brothers and Phantom of the Opera. There are first-hand accounts from the extraordinary individuals whose tenacity and creativity ensured these shows became mega-hits despite often precarious beginnings. And it reveals how the titanic shows of Andrew Lloyd Webber and Cameron Mackintosh became global phenomena, securing Britain's reputation as the powerhouse of musical theatre.

With contributions from Lord Lloyd Webber, Sir Cameron Mackintosh, Sir Tim Rice, Bjorn Ulvaeus, Stephen Fry, Trevor Nunn, Sir Cliff Richard, Elaine Paige, Gillian Lyne, Paul Nicholas, Bonnie Langford, Richard Stilgoe, John Caird, John Napier, Bill Kenwright, Willy Russell, Alain Boublil, Claude-Michel Schonberg, Anthony Pye-Jeary, Arlene Phillips, Charles Hart, Don Black, Harold Prince and Michael Ball.

SAT 00:30 The Story of Musicals (b019jsbb)

Episode 3

The final episode brings the story up to the 90s and beyond.

We see the rise of the jukebox musical as Bjorn Ulvaeus and Judy Craymer tell the story of the creation of Mamma Mia! Ben Elton and Brian May reveal how We Will Rock You defied the critics to become a smash hit. And as pop culture invaded musical theatre with celebrities like Jason Donovan taking leading roles, the Jerry Springer Opera proved a step too far for the moral majority.

Billy Elliot took inspiration from the doyenne of British musical theatre, Joan Littlewood, as the hit movie was recreated for the stage, while Andrew Lloyd Webber embraced the medium of television to find new stars.

SAT 01:30 Top of the Pops (b07sxd6v)

John Peel presents the weekly pop chart show. Includes appearances from Motorhead, Imagination, Roxy Music, Status Quo, Japan, Goombay Dance Band and Shakatak.

SAT 02:10 Janis Joplin: Little Girl Blue (b0755ms6)

This extraordinary documentary brings to life the paradox of Janis Joplin - both insecure and brazen - with interviews from old band members, unseen audio and video, plus readings from Janis's letters home to her parents. It offers new understanding of a bright, complex woman whose surprising rise and sudden demise changed music forever.

Janis Joplin is one of the most revered singers of all time. She thrilled millions of listeners with her powerful, soulful voice and blazed new creative trails before her death in 1971 at the age of 27. The film includes some of her most iconic performances which embodied the musical and cultural revolution of the 1960s.

Yet her onstage bravado and uninhibited sexual persona hid hurt and insecurity stemming from her childhood in conservative Texas. On relocating to San Francisco and discovering the blues, Janis found an outlet for her loneliness and fell into a community that would embrace and celebrate her talent.

SUNDAY 04 SEPTEMBER 2016

SUN 19:00 BBC Proms (b07tmglx)

2016

CBSO Plays Tchaikovsky

The City of Birmingham Symphony Orchestra perform Tchaikovsky's Fourth Symphony with their new music director, 30-year-old Lithuanian Mirga Grazinyte-Tyla. Mozart's overture to The Magic Flute and a new piece by Hans Abrahamsen also feature in this broadcast presented by Sara Mohr-Pietsch.

Written in 1877, Tchaikovsky's Fourth famously explores the forces of fate wrestling with human happiness, through music by turns tragic, yearning and celebratory.

The curtain-raiser is Mozart's overture to his opera The Magic Flute. It packs a punch in just a few minutes, with playful inventiveness and dramatic shifts between sparkling melodies and the famous 'masonic' three chords which open and punctuate it.

There's also the London premiere of Danish composer Hans Abrahamsen's acclaimed new work 'let me tell you'. Canadian soprano Barbara Hannigan balances extraordinary vocal dexterity with emotional subtlety to create a powerful interpretation of Hamlet's troubled Ophelia.

SUN 20:45 Wild (b00jd9yx)

Scotland

Otters, Puffins and Seals

Wildlife cameraman Gordon Buchanan explores his native Mull and some of the nearby islands, filming otters, deer, puffins, seals and a minke whale.

SUN 21:00 Woolly Mammoth: Secrets from the Ice (b01fkedr)

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 22:00 Storyville (b075f0n4)

My Nazi Legacy

Three men travel together across Europe. For two of them the journey involves a confrontation with the acts of their fathers, who were both senior Nazi officers. For the third, the eminent human rights lawyer and author Philippe Sands, it means visiting the place where much of his own Jewish family was destroyed by the fathers of the two men he has come to know. An emotional, psychological exploration of three men wrestling with their past, the present of Europe and conflicting versions of the truth.

SUN 23:30 Timewatch (b016xjwh)

The Most Courageous Raid of World War II

Lord Ashdown, a former special forces commando, tells the story of the 'Cockleshell Heroes', who led one of the most daring and audacious commando raids of World War II.

In 1942, Britain was struggling to fight back against Nazi Germany. Lacking the resources for a second front, Churchill encouraged innovative and daring new methods of combat. Enter stage left, Blondie Hasler.

With a unit of 12 Royal Marine commandos, Major Blondie Hasler believed his 'cockleshell' canoe could be effectively used in clandestine attacks on the enemy. Their brief was to navigate the most heavily defended estuary in Europe, to dodge searchlights, machine-gun posts and armed river-patrol craft 70 miles downriver, and then to blow up enemy shipping in Bordeaux harbour.

Lord Ashdown recreates parts of the raid and explains how this experience was used in preparing for one of the greatest land invasions in history, D-day.

SUN 00:30 The Beginning and End of the Universe (b0754t74)

The Beginning

Professor Jim Al-Khalili takes us back in time to tackle the greatest question in science: how did the universe begin? Uncovering the origins of the universe is regarded as humankind's greatest intellectual achievement. By recreating key experiments Jim unravels the cosmic mystery of science's creation story before witnessing a moment, one millionth of a second, after the universe sprang into existence.

SUN 01:30 The Search for Life: The Drake Equation (b00wltbk)

For many years our place in the universe was the subject of theologians and philosophers, not scientists, but in 1960 one man changed all that.

Dr Frank Drake was one of the leading lights in the new science of radio astronomy when he did something that was not only revolutionary, but could have cost him his career. Working at the National Radio Astronomy Observatory in Greenbank in Virginia, he pointed one of their new 25-metre radio telescopes at a star called Tau Ceti twelve light years from earth, hoping for signs of extraterrestrial intelligence.

Although project Ozma resulted in silence, it did result in one of the most seminal equations in the history of science - the Drake Equation - which examined seven key elements necessary for extraterrestrial intelligence to exist, from the formation of stars to the likely length a given intelligent

civilisation may survive. When Frank and his colleagues entered the figures, the equation suggested there were a staggering 50,000 civilisations capable of communicating across the galaxy.

However, in the 50 years of listening that has followed, not one single bleep has been heard from extraterrestrials. So were Drake and his followers wrong and is there no life form out there capable of communicating? Drake's own calculations suggest that we would have to scan the entire radio spectrum of ten million stars to be sure of contact.

The answers to those questions suggest that, far from being a one-off, life may not only be common in the universe but once started will lead inevitably towards intelligent life.

To find out about the equation's influence, Dallas Campbell goes on a worldwide journey to meet the scientists who have dedicated their lives to focusing on its different aspects.

SUN 02:30 After Life: The Strange Science of Decay (b012w66t)

Ever wondered what would happen in your own home if you were taken away, and everything inside was left to rot? The answer is revealed in this fascinating programme, which explores the strange and surprising science of decay.

For two months in summer 2011, a glass box containing a typical kitchen and garden was left to rot in full public view within Edinburgh Zoo. In this resulting documentary, presenter Dr George McGavin and his team use time-lapse cameras and specialist photography to capture the extraordinary way in which moulds, microbes and insects are able to break down our everyday things and allow new life to emerge from old.

Decay is something that many of us are repulsed by. But as the programme shows, it's a process that's vital in nature. And seen in close-up, it has an unexpected and sometimes mesmerising beauty.

MONDAY 05 SEPTEMBER 2016

MON 19:00 World News Today (b07tmcqp)

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

MON 19:30 The Bridges That Built London with Dan Cruickshank (b01jv5nr)

Dan Cruickshank explores the mysteries and secrets of the bridges that have made London what it is. He uncovers stories of Bronze-Age relics emerging from the Vauxhall shore, of why London Bridge was falling down, of midnight corpses splashing beneath Waterloo Bridge, and above all, of the sublime ambition of London's bridge builders themselves.

MON 20:30 London 1666 (b07v642t)

Lauren Laverne hosts this landmark event to commemorate the 350th anniversary of the Great Fire of London, as a 100-metre-long representation of the skyline of 17th-century London floating on the River Thames is set ablaze in a dramatic retelling of September 1666.

Designed by internationally acclaimed 'burn artist' David Best in collaboration with creative producers Artichoke, this fusion of art and history marks a moment that saw London devastated, only to rise from the ashes in a remarkable fashion.

As well as showcasing the action from the burning sculpture, the programme contains interviews with key individuals who reflect on the process of making such an unprecedented piece of art.

MON 21:00 London: A Tale of Two Cities with Dan Cruickshank (p00r36lv)

Dan Cruickshank follows in the footsteps of John Stow and John Strype, two of London's greatest chroniclers, to explore one of the most dramatic centuries in the history of London.

The 17th century saw London plunged into a series of devastating disasters. The Civil War, a murderous plague and the destruction that was the great fire should have seen the small medieval city all but destroyed. Yet somehow, London not only survived but emerged as one of the wealthiest and most influential cities in Europe.

Using two remarkable surveys written at either end of this momentous century, Dan discovers how a unique combination of innovation, ambition and sheer spirit of enterprise saw Londoners thrive. His journey reveals the twists and turns of a century that laid the foundations of one of the most important cities on the planet.

MON 22:00 Life Story (p026vhj2)

Series 1

Home

Animals must find somewhere to live - a place that provides the necessities of life, shelter from the elements and a refuge from enemies. Good homes are rare and competition can be intense - finding a home is one thing, but defending it is quite another. Home for a pack of African hunting dogs is a vast plain in Zambia. But it's far from safe. They must protect their young from predators and battle their age-old enemy, the hyena. Hermit crabs on an isolated tropical island make their homes in empty snail shells. But there is a severe housing shortage. When a new property washes ashore the crabs form an orderly queue, in order of size. It's a housing chain. When the chain is complete each crab moves into the newly vacated shell ahead of it in the line. Chimps have made a home on the edge of the Sahara Desert. They only survive by knowing how to find water even in the most extreme droughts. The elders lead their troop on a brutal trek to a dried-out riverbed. Once there they know exactly where to dig to create wells.

MON 23:00 Frost on Sketch Shows (b01sg96h)

Many of Britain's biggest comedy stars cut their teeth on sketch shows and many of our most-loved comedy series began as sketches.

Sir David Frost traces the development of the sketch show over the last 50 years - from the variety theatre to peak-time television, from Arthur Haynes to Morecambe and Wise and The Two Ronnies, from Monty Python to Not the Nine o'Clock News and Catherine Tate.

He is joined by TV comedy greats including Ronnie Corbett, Stephen Fry and Michael Palin as they look back on the highs and lows of their own sketch show experiences. And together with comedy veterans Michael Grade and Richard Curtis, they ask if, in an age dominated by stand-up and sitcoms, the sketch show can continue to flourish and survive.

MON 00:00 Sound of Cinema: The Music That Made the Movies (b03b965y)

Pop Goes the Soundtrack

Composer Neil Brand explores how, in the second half of the 20th century, composers and film-makers embraced jazz, pop and rock to bring fresh energy and relevance to film scores.

He shows how in the 1960s, films as diverse as the James Bond movies, spaghetti westerns and Disney's musicals drew on the talents of pop arrangers and composers like John Barry, Ennio Morricone and the Sherman Brothers to create unforgettable soundtracks. But the role of the film composer would subsequently be challenged by directors like Martin Scorsese and Quentin Tarantino, who showed that a soundtrack consisting of carefully chosen pop songs could be as effective as a specially written one.

Neil's journey sees him meet leading film-makers and composers including Martin Scorsese and composers Richard Sherman (Mary Poppins, The Jungle Book), Lalo Schifrin (Bullitt) and David Arnold (Casino Royale).

MON 01:00 Woolly Mammoth: Secrets from the Ice (b01fkcdt)

[Repeat of broadcast at 21:00 on Sunday]

MON 02:00 The Art of Australia (b03ccmpt)

Strangers in a Strange Land

Edmund Capon tells the story of how art helped European settlers come to terms with such an unfamiliar land on the other side of the world and how, ignoring 60,000 years of indigenous culture, they saw the place through a distorted European lens, until a uniquely Australian impressionism reflected the emergence of a distinctive national identity and an independent nation.

MON 03:00 London: A Tale of Two Cities with Dan Cruickshank (p00r36lv)

[Repeat of broadcast at 21:00 today]

TUESDAY 06 SEPTEMBER 2016

TUE 19:00 World News Today (b07tmcqw)

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

TUE 19:30 The Boats That Built Britain (b00sbp0t)

The Pickle

HMS Pickle is the unsung hero of the British navy. In 1805 Britain had just won the most significant sea battle in history, Trafalgar. But how to get the message home to an expectant nation? Enter the Pickle, the smallest ship in the fleet, a little boat with a revolutionary new design that beat her bigger rivals back to Britain to deliver the news. Sailor and writer Tom Cunliffe sets out in the Pickle and tells the story of a boat that, against all the odds, delivered the most important news in Britain's maritime history.

TUE 20:00 Illuminations: The Private Lives of Medieval Kings (b01b4v8t)

Libraries Gave Us Power

Dr Janina Ramirez unlocks the secrets of illuminated manuscripts that were custom-made for kings, and explores the medieval world they reveal. In this episode, the story of the British Library's Royal Manuscripts collection reaches its end with the last great flowering of illumination, in the magnificent courts of the Tudors. She investigates astrological texts created for Henry VII, and unwraps his will - still in its original, extravagantly decorated velvet and gold cover. She hears music written for Henry VIII, which went unperformed for centuries, and reads love notes between the king and Anne Boleyn, written in the margins of a prayer book. Nina also visits Bruges, the source of many of the greatest manuscripts, where this medieval art form collided with the artistic innovations of the Renaissance.

TUE 21:00 All Together Now: The Great Orchestra Challenge (b07tmnwj)

Episode 2

Four-part series looking for the orchestra that best captures the spirit of great British amateur music-making in the UK.

Presented by Proms host and former Strictly Come Dancing finalist Katie Derham, it attempts to get under the skin of the real musical and personal challenges that face five amateur orchestras as they try to truly come together and rise to new musical heights. Can the players master their sheet music while also getting on with their varied day jobs as farmers, supermarket workers, carers and undertakers? Who will rise to the challenge? And who will find themselves dismissed from the contest?

In episode two, the five amateur orchestras have become four - The North Devon Sinfonia, The London Gay Symphony Orchestra, The Stirling Orchestra and The People's Orchestra from Birmingham, who must all get to grips with opera. It's hard enough for professionals to play with opera singers - how will the cheesemakers, lupin-growers and GCSE students of our amateur orchestras cope?

Each orchestra receives a masterclass from the series judge, world-renowned conductor Paul Daniel, while double-bass maestro Chi-chi Nwanoku mentors each orchestra as they strive to reach their full potential.

TUE 22:00 Hidden Histories: Britain's Oldest Family Businesses (b03qlp97)

Toye the Medal Maker

Fiona Toye married into a family that has been making regalia for generations, including OBES for the royal family. The film follows Fiona as she steers this traditional company through the 21st century.

Narrated by Margaret Mountford.

TUE 23:00 Egyptian Journeys with Dan Cruickshank (b0078z27)

The Rebel Pharaoh

Dan Cruickshank travels the Nile, from magnificent Karnak to the desolate ruins of El Amarna, in search of the truth about Akhenaten, the most radical and mysterious pharaoh ever to rule Egypt, and his beautiful wife Nefertiti.

They were a golden couple, rich and all-powerful, but when Akhenaten had a personal religious conversion, it changed everything. Akhenaten decided to overturn the entire religious belief system of ancient Egypt and convert the whole nation to his own new religion. He swept aside centuries of worship of many gods and declared that there was only one god, the Sun -

the 'Aten'. To the ancient Egyptians this was heresy, but as he was the pharaoh, no-one could stop him. He then built a vast new sacred city in the desert, far away from the ancient capital of Thebes, a city dedicated to the Aten, in which he and Nefertiti lived in splendour.

But, as Dan discovers, the royal couple's dreams would soon come to a tragic end. From the grand temples at Karnak, Dan traces the route of the heretic king and queen along the Nile to the site of their splendid new city at El Amarna, in Middle Egypt - now just a poignant, desolate ruin where Akhenaten and Nefertiti lived out their glorious but doomed lives.

TUE 23:30 Egyptian Journeys with Dan Cruickshank (b0078z5p)
Building for Eternity

Dan Cruickshank discovers the ingenious techniques that the ancient Egyptians used to make their pyramids, temples and mummies last forever, driven by their obsession with magic and the afterlife.

The Egyptians believed they could live forever - that death was not necessarily the end. But to enjoy the afterlife depended on preserving the important things from this life - their bodies, possessions and monuments.

Dan explores how the ancient Egyptians pioneered remarkable ways of preparing for eternity. He visits the colossal, indestructible pyramids at Saqqara and Giza as well as the massive stone temple at Dendera, and examines the mummification process that allowed the Egyptians to keep their bodies intact long after death.

The religious belief in the afterlife dominated the lives and deaths of everyone in the land, and meant that hundreds of monuments were built to survive, and can now help us understand their beliefs. Above all, thousands of mummies found all over Egypt bear witness to how they thought, more than any other culture in history, that the preservation of the human body after death played a part in the everlasting survival of the spirit.

TUE 00:00 Planet Oil: The Treasure That Conquered the World (b053gf85)
Episode 2

By the early 1950s, a holy trinity of oil, plastics and fertilisers had transformed the planet. But as Professor Iain Stewart reveals, when the oil-producing countries demanded a greater share in profits from the western energy companies, the oil and gas fields of the Middle East became a focus for coup d'etats and military conflict.

In the North Sea, Prof Stewart recalls the race against time to find alternative supplies in the shallow, but turbulent waters both here and in America's Gulf coast.

The offshore discoveries in the 1970s proved to be a game changer. It marked an engineering revolution, the moment when 'difficult' oil and gas (previously unviable sources) could be commercially produced from the ocean depths. It was the moment when Western Europe and the US finally unshackled themselves from their 20th-century energy security nightmare.

TUE 01:00 Planet Ant: Life Inside the Colony (p00scslp)
Ant colonies are one of the wonders of nature - complex, organised and mysterious. This programme reveals the secret, underground world of the ant colony in a way that's never been seen before. At its heart is a massive, full-scale ant nest, specially designed and built to allow cameras to see its inner workings. The nest is a new home for a million-strong colony of leafcutter ants from Trinidad.

For a month, entomologist Dr George McGavin and leafcutter expert Professor Adam Hart capture every aspect of the life of the colony, using time-lapse cameras, microscopes, microphones and radio tracking technology. The ants instantly begin to forage, farm, mine and build. Within weeks, the colony has established everything from nurseries and gardens to graveyards.

The programme explores how these tiny insects can achieve such spectacular feats of collective organisation. This unique project reveals the workings of one of the most complex and mysterious societies in the natural world and shows the surprising ways in which ants are helping us solve global problems.

TUE 02:30 Illuminations: The Private Lives of Medieval Kings (b01b4v8t)
[Repeat of broadcast at 20:00 today]

WEDNESDAY 07 SEPTEMBER 2016

WED 19:00 World News Today (b07tmcrc)

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

WED 19:30 The Boats That Built Britain (b00scqb3)
The Phoenix

The square rigger is arguably the most important vehicle in history. In the 19th century these boats transported finished goods and raw materials all over the world, transforming Britain from a second-rate European power into the richest and most powerful nation on earth.

Sailor and writer Tom Cunliffe sets out on the Phoenix, a plank-perfect square rigger, to discover just how these incredible boats changed Britain and the world forever.

WED 20:00 Rule Britannia! Music, Mischief and Morals in the 18th Century (b040w7xx)
Episode 2

Broadcaster and writer Suzy Klein explores the remarkable music that became the soundtrack to the roaring 18th century.

As money poured in from a flourishing trade empire, the British rediscovered a taste for pleasure and fun, and music was at the very centre of it. Aspiring young girls played the keyboard to attract a good husband and nothing beat dancing a minuet if you wanted a place in the best society.

Europe's best composers and performers descended upon Britain, certain that the 'rage for music' would make them rich. Music had become a tool for social mobility, but it was also starting to shape the physical fabric of Britain - concert halls, assembly rooms and pleasure gardens sprang up across the country as the thirst for entertainment grew.

WED 21:00 Operation Crossbow (b011cr8f)

The heroic tales of World War II are legendary, but Operation Crossbow is a little-known story that deserves to join the hall of fame: how the Allies used 3D photos to thwart the Nazis' weapons of mass destruction before they could obliterate Britain.

This film brings together the heroic Spitfire pilots who took the photographs and the brilliant minds of RAF Medmenham that made sense of the jigsaw of clues hidden in the photos. Hitler was pumping a fortune into his new-fangled V weapons in the hope they could win him the war. But Medmenham had a secret weapon of its own, a simple stereoscope which brought to life every contour of the enemy landscape in perfect 3D.

The devil was truly in the detail. Together with extraordinary personal testimonies, the film uses modern computer graphics on the original wartime photographs to show just how the photo interpreters were able to uncover Hitler's nastiest secrets.

WED 22:00 Catching History's Criminals: The Forensics Story (p0214px7)

Traces of Guilt

There will always be those who think they can commit the perfect murder. In reality it's virtually impossible to leave no evidence at the scene of a crime. Fingerprints, hair, fibres and blood can all lead to the killer. In this second episode, surgeon Gabriel Weston explores the cases that were solved by examining the smallest traces of forensic evidence, from the first murder case solved in the UK based on fingerprint evidence to the patterns of blood in a bedroom which helped overturn an infamous murder conviction.

As well as looking to the past, Gabriel investigates the cutting-edge techniques that are proving vital in catching the killers of today. Amazingly, forensic science can now detect with pinpoint accuracy where someone has walked across an area the size of Scotland, based on nothing more than the soil stuck to the sole of a suspect's shoe.

WED 23:00 The Search for Alfred the Great (b03sbp73)

Neil Oliver is given exclusive access to a team of historians and scientists investigating the final resting place of Alfred the Great. Alfred's bones have been moved so many times over the centuries that many people concluded that they were lost forever. Following a trail that goes back over 1,000 years, the team wants to unravel the mystery of Alfred's remains. Travelling from Winchester to Rome, Neil also tells the extraordinary story of Alfred's life - in the 9th century, he became one of England's most important kings by fighting off the Vikings, uniting the Anglo-Saxon people and launching a cultural renaissance. This was the man who forged a united language and identity, and laid the foundations of the English nation.

The film investigates the equally extraordinary story of what happened to Alfred's remains after his death in 899. They have been exhumed and reburied on a number of occasions since his original brief burial in the Anglo-Saxon Old Minster in Winchester. The Saxons, the Normans, Henry VIII's religious reformers, 18th-century convicts, Victorian romantics and 20th-century archaeologists have all played a part in the story of Alfred's grave.

Neil joins the team as they exhume the contents of an unmarked grave, piece the bones together and have them dated. With the discovery of some unexpected new evidence, the film reveals the extraordinary outcome of an important investigation.

WED 00:00 Voyages of Discovery (b0074t4k)
Ice King

Explorer Paul Rose tells the story of his hero Fridtjof Nansen who, in 1892, announced a daring plan to be first to the North Pole, an idea considered so off-the-wall that no scientist would volunteer to join him on a venture they believed was nothing short of suicide.

He allowed his ship to become stuck in the crushing pack ice, hoping it would drift to the Pole, and then set off on foot across the frozen wastes. Nansen became the forefather of polar exploration, inventing practical techniques that today allow people to survive, travel and work in the most hostile and forbidding places on our planet.

WED 01:00 Clydebuilt: The Ships that Made the Commonwealth (p01m4kb7)
[Repeat of broadcast at 20:00 on Saturday]

WED 02:00 Rule Britannia! Music, Mischief and Morals in the 18th Century (b040w7xx)
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[Repeat of broadcast at 22:00 today]

THURSDAY 08 SEPTEMBER 2016

THU 19:00 World News Today (b07tmcrc)

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

THU 19:30 Top of the Pops (b07tq0fc)

Simon Bates presents the weekly chart show, first broadcast on 8 April 1982. Includes appearances from Haircut 100, Chas & Dave, Boomtown Rats, Elton John, Stevie Wonder & Paul McCartney, Foster & Allen, Goombay Dance Band and Pigbag.

THU 20:00 The Science of D-Day (b045gr8m)

In June 1944, one of the greatest amphibious assaults in history was launched from the south coast of England. Within a matter of hours, 7,000 vessels had landed 156,000 troops on the beaches of Normandy. It was a manoeuvre that changed the course of the war and tested innovations in science and engineering for the first time.

In this programme, engineer Rob Bell looks at the nuts and bolts which made such a staggering invasion possible - from giant troop-carrying gliders to tanks that could drive on water - and how necessity really did become the mother of invention. Like all new inventions, not all of them worked and resulted in devastating consequences. We find out why. This is the science of D-Day.

THU 20:30 Hive Minds (b07v34vs)
Series 2

Cruciverbalists v Ortographobes

Fiona Bruce presents the quiz show where players not only have to know the answers, but have to find them hidden in a hive of letters. It tests players' general knowledge and mental agility, as they battle against one another and race against the clock to find the answers.

The Cruciverbalists take on the Ortographobes in the first episode of the second series.

THU 21:00 Lost Sitcoms (b07tq1kv)
Hancock's Half Hour

Series which recreates three classic lost British sitcoms with a stellar new cast. In this episode of Hancock's Half Hour

originally broadcast in 1956, Tony has a new neighbour whose behaviour is very, very suspicious.

THU 21:30 James May: The Reassembler (b076wf8f)

Series 1

Telephone

James tackles a 1957 Bakelite dial telephone - 211 pieces, most of them very small indeed, must be reassembled in the correct order if this telephone is ever to ring again. From the receiver with its carbon filings that enable speech to be amplified, to the electrical pulses created by the dial itself that connect the phone to the outside world, James soon discovers that every single piece of the telephone played a crucial role in revolutionising communication around the world.

THU 22:00 The Beginning and End of the Universe (b075dxsq)

The End

Professor Jim Al-Khalili carries us into the distant future to try to discover how the universe will end - with a bang or a whimper? He reveals a universe far stranger than anyone imagined and, at the frontier of our understanding, encounters a mysterious and enigmatic force that promises to change physics forever.

THU 23:00 The Wonderful World of Blood - with Michael Mosley (b05nyyhf)

Of all the wonders of the human body, there's one more mysterious than any other. Blood: five precious litres that keep us alive. Yet how much do we really know about this sticky red substance and its mysterious, life-giving force?

Michael Mosley gives up a fifth of his own blood to perform six bold experiments. From starving it of oxygen to injecting it with snake venom, Michael reveals the extraordinary abilities of blood to adapt and keep us alive. Using specialist photography, the programme reveals the beauty in a single drop. Michael even discovers how it tastes when, in a television first, he prepares a black pudding with his own blood.

Down the ages, our understanding of blood has been as much myth as science, but Michael reveals there might be truth in the old vampire legends, as he meets one of the scientists behind the latest research that shows young blood might be able to reverse the ageing process - the holy grail of modern medicine.

THU 00:00 Life Story (p026vhj2)

[Repeat of broadcast at 22:00 on Monday]

THU 01:00 Natural World (b00z7x5h)

2010-2011

The Last Grizzly of Paradise Valley

Canadian wildlife film-maker Jeff Turner returns to his roots and embarks on a beautiful and lyrical exploration of the wildlife around his home in the Cascade Mountains of southwestern British Columbia. Tracking the wildlife through the four seasons of one year, he encounters many animals from his childhood including black bears, a family of osprey, coyotes and mule deer. But the animal he most wants to find and film is one of the few remaining grizzly bears that still survive in these mountains.

THU 02:00 Top of the Pops (b07tq0fc)

[Repeat of broadcast at 19:30 today]

THU 02:35 The Wonderful World of Blood - with Michael Mosley (b05nyyhf)

[Repeat of broadcast at 23:00 today]

FRIDAY 09 SEPTEMBER 2016

FRI 19:00 World News Today (b07tmcrl)

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

FRI 19:30 BBC Proms (b07tqlpz)

2016

Verdi Requiem

The 2016 Proms season draws to a close with a bang not a whimper, with Verdi's thunderous Requiem. Marin Alsop is at the helm of the penultimate prom, conducting the Orchestra of the Age of Enlightenment and the BBC Proms Youth Choir.

Tom Service introduces for television and talks to Marin Alsop backstage. The soloists lining up for Verdi's largest scale non-operatic work are soprano Tamara Wilson, mezzo-soprano Alisa Kolosova, Dimitri Pittas and bass Morris Robinson.

The Requiem had its British premiere in 1875 at the Royal Albert Hall with the composer himself conducting and it is still packing the audiences in. Its fire and brimstone depiction of death and destruction never fails to appeal, most famously of all in the tumultuous Dies Irae.

FRI 21:10 Sounds of the Sixties (b051rz4d)

Reversions

1964-5: Getting in on the Act 3

The Seekers kick off this episode of the sixties archive pop programme. The Hollies and The Byrds, precursors to Crosby, Stills and Nash, also appear.

FRI 21:20 Sounds of the Sixties (b051rz0q)

Reversions

The Singer and the Song

Sandie Shaw, Dusty Springfield and Lulu sing a few classics in this solo artist-themed episode of the sixties archive pop programme.

FRI 21:30 Music for Misfits: The Story of Indie (b06f17bk)

The DIY Movement

The story of British indie over three musically diverse episodes. Much more than a genre of music, it is a spirit, an attitude and an ethos.

In the 1970s, the music industry was controlled by the major record labels, and the notion of releasing a record independently seemed like an impossible dream. At a time when even The Sex Pistols were on a major label, the true act of rebellion was would be to do it yourself.

It took an independent release from Buzzcocks in 1976 with the Spiral Scratch EP to begin a change in the game. The initial pressing of 1,000 copies was funded by family and friends and sold out immediately. The notion of independently releasing your own music was compelling, and it became a call to action.

Independent record labels began to pop up all over the UK, each one with its own subculture and sound - from Factory in Manchester to Zoo in Liverpool, Postcard in Glasgow and London labels such as Mute, Beggars Banquet and Rough Trade. They were founded by people with no business experience, just a passion for music and a commitment to helping others achieve creative autonomy. These labels were cutting, releasing and distributing the music themselves. Bedsits became offices and basements became studios. This was DIY, and it felt like a countercultural movement set against all that the mainstream had to offer.

These labels were pivotal in getting the new sounds to a generation hungry for change. Queues of hopeful bands waited to drop off demo tapes, and the first wave of indie bands emerged from the newly formed labels. It was a fantastically creative, if somewhat hand-to-mouth time, yet bands also had the freedom to make all the decisions about their image and musical direction themselves. Pioneering music from bands such as Joy Division, Throbbing Gristle, Echo and the Bunnymen, Orange Juice and Aztec Camera is featured in this episode.

These new indie sounds offered a defiantly oppositional stance to prevailing trends in popular culture. With new music exploding out of cities everywhere, it was indie label founder Iain McNay, from Cherry Red, who had the idea for an indie chart - its music spoke to a generation of kids who did not identify with the mainstream sounds on the radio.

FRI 22:30 Music for Misfits: The Story of Indie (b06gxxxk)

The Alternative 80s

Episode two explores a time when the independent labels transformed from cottage industries into real businesses that could compete with the majors. It examines the evolution of 'indie' - a guitar-based genre of music with its own sound, fashion and culture.

Independent record labels provided a platform for some of Britain's most groundbreaking artists at this time, including The Jesus and Mary Chain and The Smiths, who would burst onto the scene in 1983 staging a mainstream intervention and starting a small revolution.

In the midst of shiny 80s sounds and shoulder-padded fashion, indie was anti-image and anti-flamboyance. Through many of

the indie bands in this period, everyday life was repackaged in melody and poetic lyrics. It's not hard to see why a generation of youth, disaffected from the times they were living in, sought refuge in the poetic haze of early indie. The bands were accessible too, and aspiring music journalists could meet their favourite indie stars at the small and intimate gigs where they performed.

The programme concludes in the late 80s with the Madchester scene, as alternative music crossed over into the mainstream chart. This breakthrough was inspired by a merging of indie rock and the burgeoning acid house culture, and it was led by a new crop of bands such as The Stone Roses and Happy Mondays.

The series is presented by BBC Radio 6 Music's Mark Radcliffe and this episode features exclusive interviews with performers including James Dean Bradfield of Manic Street Preachers, New Order's Stephen Morris and Gillian Gilbert, Shaun Ryder, Suede's Bernard Butler, The KLF's Bill Drummond, Stuart Murdoch of Belle and Sebastian, Cocteau Twins' Simon Raymonde, The Jesus and Mary Chain's Jim Reid, and Talulah Gosh's Amelia Fletcher.

It also includes interviews with a number of influential music industry figures such as former Happy Mondays manager Nathan McGough, Pete Waterman, Factory Records' designer Peter Saville and journalists Alexis Petridis and Sian Pattenden.

FRI 23:30 Music for Misfits: The Story of Indie (b06hhxr7)

Into the Mainstream

The story of British indie over three musically diverse episodes. Much more than a genre of music, it is a spirit, an attitude and an ethos.

It's 1989 and a new grassroots music craze is sweeping across Britain. Despite the authorities railing against 'the zombification of a nation', acid house and its bed partner ecstasy are influencing a wave of indie bands. On the eve of a new decade while original independent labels struggle in the wake of acid, young indie labels Heavenly and Creation are thriving, signing both Manic Street Preachers and Primal Scream respectively.

By the mid 90s, in a bid to break the stranglehold of American grunge bands, the music press construct Britpop and push two bands, Oasis and Blur, to the top of the pile. The key thing that separates Britpop bands from the previous generation is the mindset. These bands, who grew up in the Thatcher era, want to sell (and make) a million. Bands with an old indie ethos, such as Suede, are still breaking through but will switch from independent labels to majors, thus guaranteeing international recognition.

Indie truly goes mainstream when Noel Gallagher shakes hands with Tony Blair and Oasis fill Knebworth. The spirit of the DIY boom had all but gone and indie becomes a genre rather than an alternative approach to making and releasing music. The late 90s are dark days for indie, but as Rough Trade rises from the ashes with two fresh signings - The Strokes and The Libertines - it feels like a new dawn.

More new completely independent labels emerge. They've learnt from the mistakes of old and are excellent at artist development - labels such Domino, who manage the Arctic Monkeys and Franz Ferdinand. We hear why these two bands - who had the majors tripping over themselves to sign them - choose Domino instead.

These bands also heralded a new way in which music was being discovered. It's the fans at a grassroots level, sharing their favourite band via clips on social media, who would be the new A&R - alerting the record labels to new talent.

We finally come full circle to discover just what constitutes indie music now, if there still a need for independent labels and, finally, whether the spirit of rebellion that inspired the DIY movement of the 1970s still exists today.

The series is presented by BBC Radio 6 Music's Mark Radcliffe and this episode features exclusive interviews with performers including Alex Kapranos of Franz Ferdinand, Shaun Ryder of Happy Mondays, The Libertines' Carl Barat, Stuart Murdoch from Belle & Sebastian and Bob Stanley of Saint Etienne. It also includes interviews with a number of influential music industry figures such as James Endacott, formerly of Rough Trade Records and founder of Sony BMG subsidiary record label 1965 Records, Heavenly Recordings' Jeff Barrett, Creation Records' Alan McGee and indie music author Richard King.

FRI 00:30 Music for Misfits: The Story of Indie (b06f17bk)

[Repeat of broadcast at 21:30 today]

FRI 01:30 Music for Misfits: The Story of Indie (b06gxxxk)

[Repeat of broadcast at 22:30 today]

FRI 02:30 Music for Misfits: The Story of Indie (b06hhxr7)
[Repeat of broadcast at 23:30 today]

FRI 03:30 Sounds of the Sixties (b051rz4l)
[Repeat of broadcast at 21:10 today]

FRI 03:40 Sounds of the Sixties (b051rz0q)
[Repeat of broadcast at 21:20 today]