

SATURDAY 18 MAY 2019

SAT 19:00 The Return of the Flying Scotsman (b073c7r0)

After a ten-year restoration, we follow the Flying Scotsman, the world's most famous steam engine, as it returns to the tracks.

It's a locomotive legend. Whether people are interested in steam engines or not, everybody seems to love the Scotsman; it's simply a national treasure. A steel celebrity, a media darling... and after a painstaking restoration that has cost over four million pounds, the Scotsman is finally coming home to York.

There is going to be a real welcome back for the 93-year-old engine with its inaugural run from King's Cross Station in London, pulling a trainload of enthusiasts and supporters 200 miles north on the mainline. It is a triumphant return to the museum - and to a city synonymous with steam.

We are on board the train for its final test runs on the East Lancashire Railway and the scenic Settle-Carlisle railway, across Ribbleshead Viaduct, before climbing on board for the inaugural trip. With cameras on the footplate, we capture the exhilaration, the excitement and the sheer hard work required to keep Scotsman on the line.

We join the celebrations - talking to historians, fans and enthusiasts about the engine... and marvel at how the Flying Scotsman has captured the imagination of so many people across the world since it first came to life in Doncaster in 1923.

The programme is narrated by John Shrapnel.

SAT 19:30 TOTP2 (b05y09mh)

FA Cup

Mark Radcliffe rounds up the best and worst football records from the TOTP archives. Liverpool, Tottenham, Chelsea, Gazza and West Ham all feature alongside Arsenal.

SAT 20:00 Gary Lineker on the Road to FA Cup Glory (b05x2x71)

The FA Cup is more than just a football competition, it's part of our nation's history. With the competition returning to the BBC after a six-year absence, Gary Lineker, a winner in 1991 with Spurs, sets off around the nation to test the pulse of the world's oldest football tournament.

Along the way, Gary meets the men whose careers and lives were changed by the trophy. He speaks to former England captain Steven Gerrard about the day his last-minute equaliser sent Liverpool's fans wild with relief. He seeks a foreign perspective from cup-winner Jose Mourinho. He talks to Ryan Giggs about the greatest FA Cup goal ever scored, and to Michael Owen about his miraculous final intervention in 2001.

Ian Wright, Roberto Martinez and Fabrice Muamba all share their stories with Gary, along with the Cambridge United players ahead of their clash with Manchester United.

Gary Lineker on the Road to FA Cup Glory asks serious questions about the health of the competition and shows why it remains in the affections of players and fans alike.

SAT 21:00 Cardinal (m00059bp)

Series 3

Jack

As Sharlene 'Mama' Winston and her family hold Lloyd Kreeger captive, and Cardinal and Delorme continue to investigate the double murder, an unexpected ally emerges in the search for the killer. Meanwhile, Cardinal confronts a man he believes may be connected with Catherine's suicide.

SAT 21:40 Cardinal (m00059bt)

Series 3

Lemur

Cardinal and Delorme make a breakthrough in the case, as an unexpected turn of events provides new evidence and a possible motive behind the murders.

SAT 22:25 Top of the Pops (m00052cn)

Steve Wright and Simon Mayo present the pop chart programme, first broadcast on 19 November 1987 and featuring Maxi Priest, Whitney Houston, The Proclaimers, Barry White, Boy George, The Smiths, Donna Summer, T'Pau and Whitesnake.

SAT 22:55 John Williams at the BBC (b073mrky)

Fifty years of spellbinding performances from one of the guitar's greatest players, John Williams. Gold from the BBC's

archive that takes in classical masterworks, the prog rock of Sky and comedy with Eric Sykes, as well as duets with fellow guitar maestro Julian Bream.

SAT 23:55 Blackadder (b0078vmr)

Blackadder II

Bells

Classic historical comedy. The Blackadder genes resurface in Elizabethan England in the guise of Edmund, great-great-grandson of the repulsive original. Blackadder is struck by Cupid's arrow when he takes on a new servant - a girl named Bob.

SAT 00:25 Blackadder (b015msyb)

Blackadder II

Head

When Edmund is appointed lord high executioner, he moves a beheading forward from Wednesday to Monday, so he and his staff can enjoy some time off. But he didn't take into account the queen's tendency to change her mind.

SAT 00:55 Blackadder (b01nllvy)

Blackadder II

Potato

Historical sitcom set in Tudor England. To keep up with Sir Walter Raleigh, Edmund announces he will navigate the treacherous waters of the Cape of Good Hope.

SAT 01:25 The Kacey Musgraves Country & Western Rhinestone Revue at Royal Albert Hall (b081sx52)

Kacey Musgraves performs live to a packed-out Royal Albert Hall. At just 27 and with a huge international following, Kacey sings a number of her hits and shows what a breath of fresh air she is to the modern country music scene. She wows her fans as she performs some of her biggest hits including Biscuits, Silver Lining and Merry Go Round from her albums Same Trailer Different Park and Pageant Material.

SAT 02:25 World War I at Home (b045ghms)

The Trawlermen

Miranda Krestovnikoff examines the role of east coast fishermen in World War I and in particular finds out about the Grimsby trawler captain who left a zeppelin crew to die and was accused by the Germans of being a war criminal.

SAT 02:55 Gary Lineker on the Road to FA Cup Glory (b05x2x71)

[Repeat of broadcast at 20:00 today]

SUNDAY 19 MAY 2019

SUN 19:00 Secret Agent Selection: WW2 (b0b1z88n)

Series 1

Episode 4

In episode four, the students are transported to a British Stately home - this is SOE Finishing School - a 1940s spy school which prepared agents for a life living undercover in enemy territory. They learn to pick locks, send coded messages and see some real SOE gadgets, before facing an intense mock interrogation designed to prepare agents for the eventuality of capture, torture and possible execution.

SUN 20:00 Kew's Forgotten Queen (b07xjghp)

Within Kew Gardens stands an extraordinary gallery, celebrating the work of one of the most prolific botanical artists of the Victorian age. At a time when women barely left their parlour rooms, Marianne North's globetrotting exploits defied convention as she travelled alone at the height of the British Empire. From Borneo and Brazil to Japan, South Africa, Australia and India, she fearlessly navigated the world twice over in her pursuit of capturing every living plant on canvas.

Actress Emilia Fox tells the story of how this Victorian rebel changed the face of botanical research, propelling her to the top of a male-dominated world of science and exploration, gaining the admiration of Charles Darwin and even Queen Victoria. Retracing Marianne's footsteps and her passion for the natural world, Emilia revisits the awe-inspiring locations of some of her greatest experiences.

With exclusive access to Kew Gardens and Marianne's wealth

of personal memoirs, letters and paintings, this is a tantalising tale of a visionary who rejected marriage and social convention for a pioneering life of conservation and adventure. Her artistic legacy remains as mesmerising today as it was in 1882 when her gallery opened at Kew Gardens.

SUN 21:00 Wonderland (b01nhstk)

Series 5

Walking with Dogs: A Wonderland Special

This film, by acclaimed director Vanessa Engle, explores our remarkable relationship with dogs.

Over a number of months in north London's Hampstead Heath, Engle approached people who were walking their dogs to discover why they have a dog and the role their dog plays in their emotional lives. The people she meets tell their stories, many of which are moving, surprising and profound.

SUN 22:00 Life Is a Circus (m000599v)

A heartwarming story of homelessness, belonging, adventure and hope, told over the course of a year in Oxford, as an unlikely group of homeless people throw loneliness aside and come together to create and perform an entirely new piece of theatre.

SUN 23:00 Cruel Sea: The Penlee Lifeboat Disaster (b00794gz)

In December 1981, the Penlee lifeboat was called out to help a stricken coaster off the coast of Cornwall. In hurricane winds and sixty foot waves, the crew of the Solomon Browne made a heroic attempt to rescue those on board the ill-fated Union Star. Using actual radio footage, eyewitness testimony and memories of bereaved family members, this film tells the story of that tragic night.

Originally shown in 2006 to mark the 25th anniversary of the disaster.

SUN 00:00 Blackadder (b0078vyl)

Blackadder II

Money

Sitcom set in Tudor England. Edmund is in trouble when he is visited by a debt-collecting bishop armed with a red-hot poker.

SUN 00:30 Blackadder (b0078w0y)

Blackadder II

Beer

Comedy series set in Tudor England. There are problems in the Blackadder household due to an embarrassing incident with a turnip, an ostrich feather and a puritanical fat aunt.

SUN 01:00 Blackadder (b01jkh72)

Blackadder II

Chains

Classic historical comedy. The evil Prince Ludwig kidnaps both Blackadder and Lord Melchett, and the Queen remembers Blackadder's earlier advice to have nothing to do with any ransom notes. Is our hero doomed, or does Baldrick have a cunning plan?

SUN 01:30 Bollywood and Beyond: A Century of Indian Cinema (b069g4gg)

Indian cinema has the largest audience of any art form on the planet.

With a population of over a billion, India has recently enjoyed an economic boom and its movie stars are treated like deities. Today their fame stretches across the diaspora, in what has become a truly global industry.

As Indian cinema celebrates its centenary, Sanjeev Bhaskar travels across the subcontinent to get under the skin of the Indian movie business as never before.

From young hopefuls in the slums of Mumbai to superstars like Kareena Kapoor and Amir Khan, he meets the stars of the silver screen and the people behind the scenes - legendary producers, directors, musicians and choreographers - exploring the stories behind some of the greatest films ever made.

Sanjeev grew up in west London, with Indian films providing the backdrop to his childhood, and in a warm and nostalgic live performance, Sanjeev takes us on a personal journey through the most chaotic and intriguing entertainment industry on the

planet.

SUN 03:00 Kew's Forgotten Queen (b07xjgph)
[Repeat of broadcast at 20:00 today]

MONDAY 20 MAY 2019

MON 19:00 Beyond 100 Days (m000599x)
Series 1

20/05/2019

Katty Kay in Washington and Christian Fraser in London report on the events that are shaping the world.

MON 19:30 Great British Railway Journeys (b050mbzt)
Series 6

Hessle to York

Steered by his Bradshaw's guide, Michael Portillo continues his journey from the heart of the East Midlands to Northumberland's Holy Island.

He begins in Hessle, on the north bank of the River Humber, in the shadow of the magnificent Humber Bridge, where he learns about the technology that made it possible. In Kingston upon Hull, Michael meets his friend and sparring partner, local MP Alan Johnson, who tells him about another famous son of his city, William Wilberforce.

In Scarborough, Michael's handbook directs him to the castle, where the founder of the Quaker movement was once imprisoned. His last stop of the day is York, where Michael learns what made the ancient capital a centre for the sweet-making industry.

MON 20:00 Victorian Bakers (b06vn7sq)
Episode 1

Four modern bakers bake their way through the era that gave us modern baking as we know it - the reign of Queen Victoria. Experts Alex Langlands and Annie Gray join them to tell the incredible story of our daily bread.

The journey begins in 1837, when bread was the mainstay of most diets and bakers were at the heart of every community. A rural bake house has been kitted out exactly as it would have been in the 1830s. The bakers must get to grips with centuries-old methods of breadmaking and that means doing absolutely everything by hand.

The first loaves are made with heritage wheat flour and brewers' yeast in a tiny wood-fired oven. It is bog standard bread that fed Victorian rural workers but to modern palates it is an absolute revelation. Fifth-generation baker John Swift gets a taste of the bread his ancestors once made and artisan baker Duncan is in his element in this unhurried, organic world. There is no shop, so the bakers deliver door-to-door. For industrial baker John Foster, who deals with customers as far afield as China, the fixed demand and lack of competition enjoyed by Victorian bakers is an utter joy.

But the idyll doesn't last. In the 1840s, poor harvests and an economic downturn saw the price of wheat rocket, so barley bread must be made for the poor. It is an irony not lost on the bakers that this bread would only sell in the poshest artisan bakeries today. But it is when they have to turn their hand to making crammings - Victorian chicken feed - that their forebears' role in feeding a starving nation really hits home.

MON 21:00 Swimming through the Seasons: The Hampstead Ponds (m000599z)

In a world of constant flux and chaos, it is almost a shock to discover some experiences remain unchanged, natural, primitive even. In the middle of London lies Hampstead Heath, 320 hectares of forest, parkland and wildlife, plus three swimming ponds.

People take their waters all year round, just as they did in the time of Constable and Keats. Capturing all the beauty of the English seasons, the film follows the swimmers over 12 months as they shiver, laugh, complain, ruminate, philosophise or simply seek respite from all that life threw at them.

Swimming Through the Seasons is a heartwarming celebration of eccentricity and sheer bloody-mindedness as these unusual people, united by a shared passion, meet to take on the weather, the water and life.

MON 22:00 Iraq: A State of Mind (m0005d9j)

As Iraq picks up the pieces after the defeat of the Islamic State

group, this film reveals the mental health crisis currently gripping a country that has just one psychiatric hospital for a population of 38 million.

A year in the making, this highly acclaimed BBC Arabic documentary has won two awards: the BUPA Mind Media Documentary Award and the Grierson Best Current Affairs Documentary Award in 2019.

MON 22:50 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.

MON 23:50 Timeshift (b053pzm)
Series 14

Spicing Up Britain: How Eating Out Went Exotic

Timeshift looks at how postwar Britain went from a place where eating out was more of a chore than a pleasure to a nation of food adventurers, now spending up to a third of our food budget on restaurant meals. It's the story of the British palate being slowly introduced to a range of what would then have been 'exotic' cuisines by successive generations of migrants opening eateries - first Italians, then Chinese and Indians. By encouraging us to try something new - be it spaghetti, stir fry or samosa - they spiced up not just our food but our high streets and our lives.

MON 00:50 Arena (m00059b1)
Paris Is Burning

Where does voguing come from, and what, exactly, is throwing shade? This landmark documentary provides a vibrant snapshot of the 1980s through the eyes of New York City's African American and Latinx Harlem drag ball scene. Made over seven years, this film offers an intimate portrait of rival fashion houses, from fierce contests for trophies, to house mothers offering sustenance in a world where house members face homophobia and transphobia, racism, Aids and poverty. Paris is Burning celebrates the joy of movement, the force of eloquence, and the draw of community.

MON 02:00 World War I at Home (b045gjw5)
Cadburys at War

Brothers Laurence and Egbert Cadbury saw plenty of action during the First World War, but only one of them was a fighter. Former world champion boxer Richie Woodhall investigates the untold story of the chocolate king's sons, a tale full of conflict and conscience.

MON 02:30 Victorian Bakers (b06vn7sq)
[Repeat of broadcast at 20:00 today]

TUESDAY 21 MAY 2019

TUE 19:00 Beyond 100 Days (m00059b3)
Series 1

21/05/2019

Katty Kay in Washington and Christian Fraser in London report on the events that are shaping the world.

TUE 19:30 Great British Railway Journeys (b050mgr4)
Series 6

Middlesbrough to Hexham

Following his Bradshaw's Handbook, Michael Portillo begins this leg of his journey from Derby to Lindisfarne in the Victorian ironopolis of Middlesbrough. He visits one of the last cast-iron foundries in the city and helps cast a carrot valve for a steam engine.

His next stop is Darlington, spiritual home of the railways, where he learns how the city profited from its fast connections to the capitals of England and Scotland by developing a newspaper industry. Michael meets the editor of the Northern Echo and finds out about the colourful history of one of his predecessors, WT Stead.

At Jarrow, Michael visits the monastery to learn about its famous monk, the father of English history, Bede. His last stop on this leg of his journey is Hexham, where he visits a historic ginger-beer emporium.

TUE 20:00 India's Frontier Railways (b0555xgw)
The Maitree Express

Filmed during the holy month of Ramadan, this is a journey from India into Bangladesh on a train that reunites the region of Bengal. Partitioned in 1947, Bengal was divided in half, creating East Pakistan - a satellite state ruled by Pakistan. It was an unwelcome occupation. In 1971, they fought a war of independence and East Pakistan became the People's Republic of Bangladesh. 37 years later, the first train ran between India and Bangladesh - the Maitree Express. Maitree means friendship.

It takes 12 hours to make the 392km journey from Kolkata to Dhaka, and staffing on the train is almost the same on both sides of the border. They speak the same language, share a history and all love fish.

Amirul, once a freedom fighter in the war of independence, now plays announcements and religious tapes on the Maitree. Aalo supports his family by selling chocolates on the train, but has a problem with the 30-degree heat. Sixteen-year-old Abdullah ran away from home and a madrasa. Now he sells papers on Dhaka's trains and platforms, hoping for a brighter future. Gautam Bannerjee is a guard on the Maitree and a respected astrologer. Can his calculations foretell the future? Urmi Rahman, a writer, was born in Bangladesh, married an Indian and lives in Kolkata, but she is very clear about her identity. Krishendu Basu is happy with his life. Not only a guard, he is also a tabla player, photographer and self-confessed foodie. But music is his passion.

These stories of people who work, travel or depend on the Maitree Express take us on a journey through history, sharing their hopes, needs and desires - on India's frontier railways.

TUE 21:00 Rhythms of India (m00059b5)
Series 1

Ancient Melodies

Musician and composer Soumik Datta presents a musical travelogue around India. From a spectacular religious festival in Kerala to folk musicians in the deserts of Rajasthan, intimate performances on the banks of the Ganges to encounters with Delhi's hip hop superstars, Soumik takes us on an entertaining journey celebrating India's remarkable musical diversity. Meeting and performing with folk, classical and pop musicians, he travels from the biggest cities to the most remote communities, exploring how music helps us understand India's past and its rapidly changing present.

Soumik begins his journey in Kolkata, the city of his birth and the place where he learned to play the traditional Indian classical instrument, the sarod. Travelling from north to south, Soumik discovers how the ancient music of palaces and temples, India's classical music, reveals two very different cultures and traditions - and tells a story of the role conquest and empire played in shaping the nation.

TUE 22:00 The Stolen Maharajah: Britain's Indian Royal (b0bfndw)

Documentary about the last Maharajah of the Punjab, Duleep Singh, who was wrenched from his mother's arms as a child in the 1840s and put into the care of an official of the British Empire. Growing up in a colonial enclave in India, the boy king abandoned his Sikh religion and signed away his ancient kingdom to the British - decisions he would come to bitterly regret. He moved as a teenager to Britain, where Queen Victoria became his godmother. The Maharajah Duleep Singh lived most of his adult life here as a supremely wealthy English country gentleman, part of the British social elite. But, in time, his relationship with Britain turned sour.

This documentary retraces the journeys of Duleep Singh and his family: from the royal palaces of the Punjab to royal palaces in Britain, to his own English country estate, Elveden in Suffolk, to bohemian Paris. The programme uses recently rediscovered

letters by Singh, letters and diaries written by those whose knew him, extraordinary photographs and surviving artefacts. We interview historians to get at the motives and inner life of the Maharajah Duleep Singh as he set out to recover his Sikh heritage and turn his back on his colonial past. This is a story from the age of Empire about someone whose life was defined by those historic forces.

TUE 23:00 Treasures of the Indus (p02qvb6j)
Pakistan Unveiled

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.

All too often, Pakistan is portrayed as a country of bombs, beards and burkhas. The view of it as a monolithic Muslim state is even embodied in the name of the country, 'the Islamic Republic of Pakistan'.

Yet, as Sona Datta shows, it used to be the meeting point for many different faiths from around the world and has an intriguing multicultural past - a past about which it is to some extent in denial. It also produced some extraordinary and little-known works of art which Sona, from her work as a curator at the British Museum, explores and explains.

TUE 00:00 How It Works (b01fq06h)
Plastic

Professor Mark Miodownik tells the story of plastics - created in the lab, they have brought luxury to the masses and shaped the modern age. He recounts tales of the mavericks responsible for some of plastic's most outrageous failures and heady successes, from the explosive attempts to make a replacement for ivory billiard balls to the ultimately ubiquitous Bakelite.

Investigating at atomic level, Mark discovers the extraordinary properties that have allowed plastics to dominate our world and reveals how the next generation of plastics will take its inspiration from nature, creating man-made materials which behave as though they are alive and which could help rebuild the human body.

TUE 01:00 Timewatch (b00f6m71)
2008-2009

Young Victoria

Kate Williams tells the story of how an unassuming little girl rose to be the most powerful woman in the world. At her birth few believed Princess Victoria would ascend the throne, but a number of untimely deaths and the failure of her uncles to father any children meant that Victoria became heiress to the British throne. The battle between her and her mother the Duchess of Kent, however, was to become a fierce maternal struggle, as the duchess schemed to share in the power and riches that would one day be Victoria's.

TUE 01:50 How to Build a Cathedral (b00b09rb)
The great cathedrals were the wonders of the medieval world - the tallest buildings since the pyramids and the showpieces of medieval Christianity. Yet they were built at a time when most of us lived in hovels. Architectural historian Jon Cannon explores who the people were that built them and how they were able to achieve such a bold vision.

TUE 02:50 India's Frontier Railways (b0555xgw)
[Repeat of broadcast at 20:00 today]

WEDNESDAY 22 MAY 2019

WED 19:00 Beyond 100 Days (m00059cv)
Series 1

22/05/2019

Katty Kay in Washington and Christian Fraser in London report on the events that are shaping the world.

WED 19:30 Great British Railway Journeys (b050mj7y)
Series 6

Newcastle to Lindisfarne

With his Bradshaw's guidebook in hand, Michael Portillo journeys from Newcastle up the north east coast to Lindisfarne. He finds out about the world's earliest swing bridge and its inventor, Newcastle engineer Sir William Armstrong, and discovers how the city's Victorian industrial heritage has found a new cultural purpose.

From Seahouses by boat, amid puffs and cormorants, Michael goes in search of a darling of the Victorian press who, with her father, rescued nine people from tumultuous seas.

On the Holy Island of Lindisfarne, Michael explores the lime kilns and finds out how, in the 7th century, Christianity spread from here across northern England.

WED 20:00 Queen Victoria's Children (b01pp965)
The Best Laid Plans...

Queen Victoria and Prince Albert shared a passionate marriage. Behind closed doors, royal domestic life often seemed like a battlefield.

In a 60-year family saga this new three-part series explores the reign of Victoria through her personal relationships with her husband and her nine children. It is a story of manipulation, conflict, intimidation, emotional blackmail, and fevered attempts by her children to escape the clutches of their domineering and needy mother.

The series uses a wealth of written material and photos left by Victoria, Albert and their children, including letters, diaries, memoirs and journals, to bring the subject and characters to life.

This first episode focuses on Victoria's tempestuous relationship with Prince Albert, their attempts to engineer the upbringing of their children and to save the monarchy by projecting a modern image of the royal family.

WED 21:00 Victorian Sensations (m00059cx)
Series 1

Electric Dreams

Victorian Sensations transports us to the last years of Queen Victoria's reign to explore a moment of thrilling discovery and change that continues to resonate today.

In the first of three films focusing on the technology, art and culture of the 1890s, mathematician Dr Hannah Fry explores how the latest innovations, including x-rays, safety bicycles and proto-aeroplanes, transformed society and promised a cleaner, brighter and more egalitarian future.

Whereas Victorian progress in the 19th century had been powered by steam and gas, the end of the 1800s marked the beginning of a new 'Electric Age'. Hannah discovers how electrical energy dominated the zeitgeist, with medical quacks marketing battery-powered miracle cures, and America's new electric chair inspiring stage magicians to electrify their illusions. The future had arrived, courtesy of underground trains and trams (as well as electric cars), and in the 1890s the first houses built specifically with electricity in mind were constructed.

Like our own time, there was concern about where this technology would lead and who was in control. HG Wells warned of bio-terrorism, while the skies were increasingly seen as a future battleground, fuelling the race to develop powered flight.

Hannah outlines the excitement around the coming Electric Age. Electricity was a signifier of modernity, and Hannah discovers how electric light not only redefined the way we saw ourselves but changed what we expected from our homes. The new enthusiasm for all things electric was also something exploited by canny entrepreneurs. In the 1890s, many believed that electricity was life itself and that nervous energy could be recharged like a battery.

In 1896, out of nowhere, the x-ray arrived in Britain. Hannah delves into the story of what Victorians considered to be a superhuman power. This cutting-edge technology was a smash hit with the public, who found the ghoulish ability to peer under flesh endlessly entertaining. In the medical profession, x-rays caused a revolution and, as well as changing our views of our bodies, the x-ray revealed new fears in society about personal privacy and control over technology - concerns that sound very familiar today.

Electricity ruled the imagination, but it was a simple mechanical device that brought the greatest challenge to the social order: the safety bicycle. It offered freedom on a scale unimagined before and, for women of the time in particular, a new independence, changes to their clothes to make cycling easier and the opportunity for a chance encounter with a member of the opposite sex. But there was also a darker side, with fears of how technology might be turned against us becoming a constant element in contemporary 1890s fiction.

One technological landmark that the Victorians knew was coming, and that they (rightly) anticipated would one day unleash fire and bombs on British cities, was the flying machine. A thing of fantasy yet also, due to the ingenuity of the

age's engineers, something that might become a reality at any moment. Leading the way for British hopes of achieving powered flight was Percy Pilcher. Hannah looks at how, after several successful flights, Pilcher designed a triplane with an engine he intended to fly, when disaster struck.

WED 22:00 Workers or Shirkers? Ian Hislop's Victorian Benefits (b076vtmz)

An entertaining, provocative film in which Ian explores the colourful history behind one of the most explosive issues of our times - welfare: who deserves to be helped, and who doesn't.

With his customary mix of light touch and intelligence, Ian tells the stories of five individuals whose Victorian attitudes remain incredibly resonant, inspiring some revealing interviews. Iain Duncan Smith is visibly moved when describing the lack of aspiration he has encountered as minister in charge of benefits, Deirdre Kelly, also known as 'White Dee' from Benefits Street, gets on famously with Ian, teasing him for being middle class, and Owen Jones and Tristram Hunt MP provide illuminating food for thought on the questions that still haunt us.

Pioneer of the workhouse Edwin Chadwick feared that hand-outs would lead to scrounging and sought to make sure that workers were always better off than the unemployed. That sounds fair - but was his solution simply too unkind? James Greenwood, Britain's first undercover reporter, made poverty a cause celebre through sensational journalism - but is the media voyeuristic when it comes to reporting on those on benefits? Helen Bosanquet, an early social worker, believed that poverty was caused by 'bad character'. Are some people genuinely more deserving than others? Bosanquet came to blows with Beatrice Webb, whose economic explanations for the causes of poverty led her to argue for the first foundations of a welfare state. Finally, even if we want to be generous, are there limits on how much we can afford to help? That question faced Margaret Bondfield, Britain's first female cabinet minister, who, despite her own working-class trade unionist credentials, controversially ended up advocating cuts at a time of national austerity.

WED 23:00 1066: A Year to Conquer England (b08hyhm7)
Series 1

Episode 2

In this three-part drama-documentary series, Dan Snow explores the political intrigues and family betrayals between Vikings, Anglo-Saxons and Normans that led to war, and the Battle of Hastings. King Harold of England has to take on two invasion forces. First, his brother Tostig attacks the south coast. He is repelled, but there is more to come. Later in the year, a vast Viking invasion force led by King Harald Hardrada of Norway lands in the north of England. Harold rushes to Stamford Bridge to fight for his kingdom and for his life. Meanwhile, Duke William of Normandy is ready to invade, but storms keep his invasion fleet trapped in port.

WED 00:00 Timewatch (b0074pmc)
2001-2002

The Victorian Way of Death: From Body Snatching to Burning

Dan Cruickshank investigates the circumstances and rituals surrounding death in Victorian Britain by piecing together the fate of five apparently unrelated corpses.

The story he uncovers is one of bizarre extremes - of bodysnatchers and the bodies they snatched; of inner-city graveyards so overflowing that the limbs of the dead could be seen protruding from the newly dug earth; of the great new cemeteries where a tomb cost as much as a terrace of houses in east London; of the suspicious resistance which greeted the 'heathenish' practice of cremation; and of the carnage of the Western Front where Victorian ideals about death - and the afterlife - were finally shattered by the violence of the Great War.

WED 00:50 Amazon Abyss (b00hh4sw)
Compilation 1

The bottom of the Amazon River is home to many of the strangest and fiercest creatures in the world. This is the first in a two-part series following the high-adrenaline adventures of a team of divers as they explore and film the depths of the world's greatest river system.

It is the first time an expedition has ever attempted anything so ambitious, and they discover an alien world, full of beautiful and bizarre creatures. Stingray, freshwater dolphins, talking fish and the mysterious Jau are all to be found in the river's depths.

Mike deGruy and Kate Humble lead the international team of scientists and divers as they search for species new to science and come face to face with the monsters of the deep.

WED 01:50 A Timewatch Guide (b08xxsw5)

Series 4

Decoding Disaster

From earthquakes to tsunamis to volcanic eruptions, natural disasters are both terrifying and fascinating - providing endless fresh material for documentary makers. But how well do disaster documentaries keep pace with the scientific theories that advance every day?

To try and answer that question, Professor Danielle George is plunging into five decades of BBC archive. What she uncovers provides an extraordinary insight into one of the fastest moving branches of knowledge. From the legendary loss of Atlantis to the eruption that destroyed Pompeii, Danielle reveals how film-makers have changed their approach again and again in the light of new scientific theories.

While we rarely associate Britain with major natural disaster, at the end of the programme Danielle brings us close to home, exploring programmes which suggest that 400 years ago Britain was hit by a tidal wave that killed hundreds of people, and that an even bigger tsunami could threaten us again.

WED 02:50 Victorian Sensations (m00059cx)

[Repeat of broadcast at 21:00 today]

THURSDAY 23 MAY 2019**THU 19:00 Beyond 100 Days (m00059b9)**

Series 1

23/05/2019

Katty Kay in Washington and Christian Fraser in London report on the events that are shaping the world.

THU 19:30 Top of the Pops (m00059bc)

Simon Bates and Gary Davies present the pop chart programme, first broadcast on 26 November 1987 and featuring Blue Mercedes, Boy George, The Communards, Shakin' Stevens, The Hooters, Paul McCartney, The Housemartins, T'Pau and George Harrison.

THU 20:00 Neanderthals - Meet Your Ancestors (b0b3gdg2)

Series 1

Episode 1

According to recent science the Neanderthals are not the knuckle-dragging apemen of popular imagination. In fact they are our distant ancestors. About 2% of the DNA of most people is of Neanderthal origin - and it continues to affect us today.

This first programme in a two-part series investigates what Neanderthals looked like and how they lived in their Ice Age world. It turns out that almost everything we thought we knew about them is wrong. They weren't hunched, grunting, knuckle-dragging ape-men at all. In reality they were faster, smarter, better looking - and much more like us than we ever thought. Our guide is Ella Al-Shamahi, a young, British, rising star in Neanderthal research, with an unusual sideline as a stand-up comic. She enlists the skills of special effects company Jellyfish and Andy Serkis, best known as Gollum in the Lord of the Rings and Caesar in Planet of the Apes, to create the first ever scientifically accurate, 3D, working avatar of a real Neanderthal. In Andy Serkis's studio, Ella brings together a core group of experts from all over the world - our Key Investigating Scientists - who are at the cutting edge of Neanderthal research.

Ella also gathers evidence by pursuing leads across the globe, meeting leading experts in their labs and at significant sites of Neanderthal discovery, from Iraqi Kurdistan to Gibraltar. She begins with a fossil Neanderthal skull found in Shanidar Cave in Iraq that she calls Ned and takes it to a forensic expert who is able to reconstruct the face using clues from the bone structure, allowing us to admire the face of one of our ancient ancestors - one that hasn't been seen for more than 50,000 years.

Next, Ella enlists the help of her team to work out what Ned's body was like, building up layers from the fossil skeleton to create a digital Neanderthal. Then, using his motion-capture skills, Andy Serkis brings Ned back to life. Physically, he was smaller than modern humans, but much stronger and faster. With the help of our experts, we are able to reconstruct a Neanderthal hunt, showing how they used their immense strength and speed to ambush and bring down vast animals like woolly mammoths. These were people supremely adapted to their environment. But there was more to Neanderthals than their physiques. New archaeological research is revealing intriguing details about the Neanderthal mind. In the sea caves of Gibraltar, we find evidence of Neanderthal art - and even

their penchant for dressing up in vulture feathers. And in London, computer modelling of the Neanderthal vocal track can let us hear a Neanderthal voice 40,000 years after they became extinct. These were no brutish apemen - they were surprisingly like us. So finally, to see just how well Neanderthals would blend in to modern society, we put Ned amongst the commuters on a busy tube train. He fits right in.

THU 21:00 Britain's Nuclear Secrets: Inside Sellafield (b065x080)

Lying on the remote north west coast of England is one of the most secret places in the country - Sellafield, the most controversial nuclear facility in Britain. Now, Sellafield are letting nuclear physicist Professor Jim Al-Khalili and the television cameras in to discover the real story. Inside, Jim encounters some of the most dangerous substances on earth, reveals the nature of radiation and even attempts to split the atom. He sees inside a nuclear reactor, glimpses one of the rarest elements in the world - radioactive plutonium - and even subjects living tissue to deadly radiation. Ultimately, the film reveals Britain's attempts - past, present and future - to harness the almost limitless power of the atom.

THU 22:00 Operation Cloud Lab: Secrets of the Skies (p01hm0n9)

Episode 1

Flying coast to coast across the United States aboard one of the world's largest airships, a team of scientists undertake a series of exciting experiments shedding light on the causes of wild weather, how life exploits the atmosphere, and the human impact upon the weather.

The team begins their voyage with an exploration of clouds. Expedition leader and meteorologist Felicity Aston examines how clouds capture liquid water and tries to weigh a cloud in an ambitious experiment.

Andy Torbet, former paratrooper, sets out to measure the forces that keeps clouds afloat by parachuting through the turbulent and hazardous air that surrounds a large cumulus cloud.

Microbiologist Dr Chris Van Tulleken examines one of the most radical theories in meteorology today - that some clouds are actually alive, and as a consequence are more likely to form rain than others.

Finally, the team examine why there has been an increase in hurricanes along the Gulf Coast in recent years. Their investigation leads to some surprising results.

THU 23:00 Botany: A Blooming History (b011wz4q)

Photosynthesis

The air we breathe, and all the food we eat, is created from water, sunlight, carbon dioxide and a few minerals. That's it, nothing else. It sounds simple, but this process is one of the most fascinating and complicated in all of science. Without it there could be no life on earth. It's that important.

For centuries people believed that plants grew by eating soil. In the 17th century, pioneer botanists began to make the connection between the growth of a plant and the energy from the sun. They discovered how plants use water, sunlight and carbon dioxide to produce sugars - how, in fact, a plant grows.

The process of photosynthesis is still at the heart of scientific research today. Universities across the world are working hard to replicate in the lab what plants do with ruthless efficiency. Their goal is to produce a clean, limitless fuel and if they get it right it will change all our lives.

THU 00:00 Top of the Pops (m00059bc)

[Repeat of broadcast at 19:30 today]

THU 00:30 Storm Troupers: The Fight to Forecast the Weather (b07cv9g9)

Episode 1

Alok Jha investigates how weather forecasting was transformed from superstition into science.

At the heart of story is pioneering meteorologist, Robert Fitzroy. Driven to prevent disasters at sea - like the wrecking of a passenger ship off the Anglesey coast in 1859 - Fitzroy issued Britain's first storm warnings and came up with the first weather forecast to be published in a newspaper.

Alok explores the knowledge Fitzroy was building on. He investigates weather folklore, asking if sayings such as 'red sky at night, shepherd's delight' have any merit. He tells the stories of the other heroes of meteorology - people like Evangelista Torricelli, a student of Galileo's, who invented the barometer; Luke Howard, who classified the clouds and Francis Beaufort,

who came up with the famous wind scale.

Alok also discovers that public complaints about weather forecasts date back to the very first forecasts.

THU 01:30 Michael Mosley vs The Superbugs (b08qkz77)

More and more bacterial infections are becoming resistant to antibiotics. Not just MRSA but also TB, pneumonia and e-coli. In Britain, hundreds die of these infections - mainly the very young or the frail and elderly. Health experts warn, unless we crack the problem, that by 2050 we will be facing a pathogenic apocalypse with over 10 million people dying of resistant bacterial infection worldwide every year.

Michael Mosley goes in search of the causes of this crisis and possible solutions to overcome it. At the heart of the film is an unprecedented experiment to create a life-size clone of Michael in agar and then grow bacteria on it taken from all over his body. This is 'Microbial Michael', a living bacterial sculpture that offers new insights into what happens when we hit our body - and our bacteria - with a broad spectrum antibiotic.

Michael finds that he has some resistant bacteria. But how has this happened and how do bacteria acquire resistance to antibiotics? In a cave in New Mexico, Michael discovers that it is a natural process, which has been going on for millennia, long before the discovery of penicillin. Our overuse of antibiotics in medicine and farming accelerates the development of resistance among bacteria, but evolution ensures that bacteria will gradually overcome the antibiotics we use to defeat them.

So, we desperately need new antibiotics, or ways to make our existing antibiotics work effectively again. In a trip that goes to the US, to Poland and to research labs around the UK, we meet the 'resistance hunters' - scientists who are trying to find new ways of beating resistant bacteria. And in a finale to the 'Microbial Michael' experiment, some of Michael's agar body parts - his face and his hands - are infected with superbugs. Can any of the new treatments get rid of them?

THU 02:30 World War I at Home (b045jgnp)

The Spies Who Loved Folkestone

Writer Anthony Horowitz learns how Folkestone became a hotbed of espionage and discovers the men, women and children who risked their lives operating as spooks during the First World War.

THU 03:00 Neanderthals - Meet Your Ancestors (b0b3gdg2)

[Repeat of broadcast at 20:00 today]

FRIDAY 24 MAY 2019**FRI 19:00 World News Today (m00059d9)**

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

FRI 19:30 Top of the Pops (m00059dc)

Janice Long and Gary Davies present the pop chart programme, first broadcast on 3 December 1987 and featuring The Hooters, Alexander O'Neal, The Proclaimers, Def Leppard, Cutting Crew, Jellybean ft Elisa Fiorillo, Michael Jackson, Paul McCartney, T'Pau and Maxi Priest.

FRI 20:00 Dusty Springfield at the BBC (b01qyww7)

A selection of Dusty Springfield's performances at the BBC from 1961 to 1995. Dusty was one of Britain's great pop divas, guaranteed to give us a big melody in songs soaring with drama and yearning.

The clips show Dusty's versatility as an artist and performer and include songs from her folk beginnings with The Springfielders; the melodrama of You Don't Have to Say You Love Me; Dusty's homage to Motown with Heatwave and Nowhere to Run; the Jacques Brel song If You Go Away; the Bacharach and David tune The Look of Love; and Dusty's collaboration with Pet Shop Boys in the late 1980s.

There are also some great duets from Dusty's career with Tom Jones and Mel Tormé.

FRI 21:00 Saturday Night Fever - The Ultimate Disco Movie (b09jxjxs)

John Travolta and Barry Gibb star in Saturday Night Fever - The Ultimate Disco Movie, with Bruno Tonioli. This documentary celebrates the 40th anniversary of the 1977 blockbuster dance movie, and sees Strictly Come Dancing's Bruno, who was a young dancer in New York in 1977, walk us through the steps that made the movie legendary. He also revisits the streets of New York where the film was shot and looks back

at the success of a film that gave everyone disco fever.

Travolta, Gibb and other members of the cast and crew give gripping accounts of supreme success against a backdrop of setbacks and unexpected twists and turns. Bruno unpacks the skill, athleticism and dedication of Travolta, whose incandescent performance prompted a disco dance craze. We also hear about the potent influence of impresario Robert Stigwood, whose faith in Travolta, and a group who had hit a glitch in their career - The BeeGees, proved visionary.

With clips from the original movie, as well as astonishing access to those involved and rarely seen on-location archive, this programme retells the nail-biting evolution of a groundbreaking US film that originated in the work of a British journalist, saw a director fired, suffered mafia threats, filmed guerrilla style on the streets of Brooklyn, had a newcomer cast, benefited from disco hits written in a weekend and delivered a white suit and a performance from the man who wore it that have gone down in history.

Other interviewees include actors Karen Lynn Gorney, Donna Pesco, Joseph Cali and Paul Pape, producer Kevin McCormick, former head of RSO records Bill Oakes, writer Nik Cohn, director John Badham, dance instructor Denney Terrio, costume designer Patricia von Brandenstein and location manager Lloyd Kaufman.

FRI 22:10 The Bee Gees at the BBC... and Beyond (b04v8679)

Classic Bee Gees studio performances from the BBC and beyond including all the big hits, rare 60s performances from European TV, including a stunning I Started a Joke, a rarely seen Top of the Pops performance of World, the big hits of the 70s and some late performances from the 90s, with the brothers Gibb in perfect harmony.

FRI 23:10 The People's History of Pop (b07124rf)
1966-1976: The Love Affair

Writer, journalist and broadcaster Danny Baker looks at the years of his youth - 1966 to 1976 - a time when music fans really let rip.

From the psychedelia of the Beatles' Sgt Pepper to the birth of the large-scale music festival, this is when hair, sounds and ideas got wilder and looser as a whole new generation of fans got really serious about British pop music and the world around them.

There is testimony from hippies who found love and happiness at the 1970 Isle of Wight festival, from a teenager growing up in Birmingham who discovered a new sound called 'heavy metal', and from fans sent wild with excitement after David Bowie and Marc Bolan were beamed down and glam rock was born.

A shy young man tells how he found expression through progressive rock, a fan relives her weekend escapes to Wigan Casino and a new scene called northern soul, and a young man discovers a new hero as reggae becomes mainstream.

Unearthed pop treasures include a rare item of clothing worn by Marc Bolan and given to a young fan as a gift after he knocked on Marc's door. A former teacher and pupil of Peckham Manor School are reunited, more than forty years after they witnessed an unknown Bob Marley perform in their sports hall, and rare photos of the event are shown. Plus, some rare and special material from the biggest star of the 70s himself - David Bowie.

FRI 00:10 Top of the Pops (m00059dc)

[Repeat of broadcast at 19:30 today]

FRI 00:40 Psychedelic Britannia (b06jp24b)

Documentary exploring the rise and fall of the most visionary period in British music history: five kaleidoscopic years between 1965 and 1970 when a handful of dreamers reimagined pop music.

When a generation of British R&B bands discovered LSD, conventions were questioned. From out of the bohemian underground and into the pop mainstream, the psychedelic era produced some of the most groundbreaking music ever made, pioneered by young improvising bands like Soft Machine and Pink Floyd, then quickly taken to the charts by the likes of The Beatles, Procol Harum, The Small Faces and The Moody Blues, even while being reimagined in the country by bucolic, folk-based artists like The Incredible String Band and Vashti Bunyan.

The film is narrated by Nigel Planer, with contributions and performances from artists who lived and breathed the psych revolution - Paul McCartney, Ginger Baker, Robert Wyatt, Roy Wood, The Zombies, Mike Heron, Vashti Bunyan, Joe Boyd, Gary Brooker, Arthur Brown, Kenney Jones, Barry Miles, The

Pretty Things and The Moody Blues.

FRI 01:40 Dusty Springfield at the BBC (b01qyvw7)
[Repeat of broadcast at 20:00 today]

FRI 02:40 Pump Up the Bhangra: The Sound of Asian Britain (b0bgfmxv)

Pump Up the Bhangra is a celebration of the way young British Asians have found their voice and their identity through bhangra music over the past thirty years. Fronted by BBC Asian Network DJ Bobby Friction, the film tells the story of how a simple folk tradition from the wheat fields of north India was transformed in the 1980s to become a unique British club music - outselling many mainstream UK acts.

It's a story of cassette tapes, corner shops and glitter-clad musical heroes, of teenagers bunking off school to attend secret daytime gigs and of generational culture clashes - as this underground scene became as popular among Asians as Wham and Culture Club were to the mainstream.

Bobby grew up listening to bhangra - dancing in his living room to his parents' records and then himself attending daytime gigs as a teenager. His story mirrors that of thousands of other second-generation British Asians who through bhangra became comfortable with their heritage and their place in Britain.

The film traces the birth of bhangra amid the early Punjabi immigrants in the steel foundries of the West Midlands. It explores its glitzy heyday when, despite selling hundreds of thousands of records, artists remained unknown by the mainstream and failed to make it into the charts.

Tracing the growing self-confidence of second-generation Asians that came with bhangra, the film tells the story of the emergence of the so-called Asian underground scene - when Asian 'Kool' finally came of age. And it reveals how bhangra finally came to triumph and crossover to the mainstream when one Punjabi folk song was remixed with hip-hop beats by Jay-Z to become a global anthem.

Today, bhangra remains at the heart of the British Punjabi community. And even though today's young bhangra fans live in a very different world to that of the first generation of immigrants to Britain, they remain passionately committed to the music and the connection it gives them to their roots.

Part of the Big British Asian Summer Season.