

SATURDAY 01 SEPTEMBER 2018

SAT 19:00 Secrets of our Living Planet (b01k740l)
The Emerald Band

Secrets of Our Living Planet showcases the incredible ecosystems that make life on Earth possible. Using beautifully shot scenes from all over the world, Chris reveals the hidden wonder of the creatures that we share the planet with and the intricate, clever and bizarre connections between the species, without which life just could not survive.

Discover previously unknown relationships, like why a tiger needs a crab or why a gecko needs a giraffe. Each week Chris visits one of our planet's most vital and spectacular habitats and dissects it to reveal the secrets of how our living planet works.

In this episode, Chris weaves a spellbinding account of how the very special conditions that exist in the rainforest have allowed vast colourful communities of animals and plants to evolve. And he reveals one particularly extraordinary web of life centred on a tree - the Brazil nut tree. It is one of the mightiest trees in the Amazon but it can only survive thanks to a little rodent called agouti, an orchid and a very unusual bee.

SAT 20:00 Lost Land of the Tiger (b00ty6b0)
Episode 1

Documentary series following a dramatic expedition searching for tigers hidden in the Himalayan Kingdom of Bhutan.

With tigers heading for extinction, an international team of big-cat experts and wildlife film-makers are given unique access to the jungles and mountains of Bhutan for what could be the last chance to save this magnificent animal.

Explorer Steve Backshall is joined by sniffer dog Bruiser - together, they hunt for tigers through the dense forest undergrowth. High in the mountains, wildlife cameraman Gordon Buchanan drives himself to exhaustion tracking tigers that seem as elusive as the yeti. And in a jungle base camp, scientist George McGavin organises a firefly disco, while camerawoman Justine Evans is stuck at the top of a tree during a tropical lightning storm.

For the final team member, big-cat biologist Alan Rabinowitz, time to save the tiger is running out, as he has been diagnosed with incurable leukaemia. Alan bugs the forest with remote cameras to capture whatever secretive creatures are lurking there, but ultimately he needs to find tigers if his ambitious plan to protect them across the Himalayas is to succeed.

We follow the expedition every emotional step of the way as they strive to find evidence that could help to bring wild tigers back from the brink of extinction and safeguard their future.

SAT 21:00 The Plague (b0bjhtgr)
Series 1

Episode 1

Historical drama series set in late 16th-century Seville.

Plague decimates the crowded city, where many have arrived to embark for the New World to seek their fortune. Mateo Nunez is asked to discharge a debt to a dead friend - to bring his illegitimate son from the city. As Mateo seeks out the boy, Celso de Guevara is taken through the overcrowded slums and shown the body of a murdered man whose marked hands are holding a crucifix.

SAT 21:50 The Plague (b0bjhtgt)
Series 1

Episode 2

Historical drama series set in late 16th-century Seville. Mateo is brought before the grand inquisitor and asked to find the murderer of one of an important trader.

SAT 22:45 Reading and Leeds Festival (b0bhwcly)
2018

Highlights

Huw Stephens introduces highlights from some of the many artists performing on the Main and Radio 1 stages at this year's Reading Festival. The legendary festival, which is the world's oldest popular music festival still in existence, features a bill that covers pretty much all bases in 2018.

SAT 23:45 Top of the Pops (b0bhmyyh)
Janice Long and Simon Bates present the pop chart programme, first broadcast on 20 March 1986. Featuring Jim Diamond, Pet

Shop Boys, Cliff Richard and The Young Ones, The Real Thing, Diana Ross and Mister Mister.

SAT 00:15 Top of the Pops (b0bhzmz6)
Janice Long and John Peel present the pop chart programme, first broadcast on 3 April 1986. Featuring Big Audio Dynamite, George Michael, A-Ha, The Real Thing, Cliff Richard and the Young Ones, The Style Council and Falco.

SAT 00:45 Jimi Hendrix: The Road to Woodstock (b03p7p6v)
The definitive documentary record of one of Jimi Hendrix's most celebrated performances, now digitally remastered and featuring footage never seen on television before. It includes such signature songs as Purple Haze, Voodoo Child (Slight Return) and his rendition of the Star Spangled Banner, as well as interviews with Woodstock promoter Michael Lang and Hendrix band members Mitch Mitchell, Billy Cox, Larry Lee and Juma Sultan among others.

SAT 01:45 Secrets of our Living Planet (b01k740l)
[Repeat of broadcast at 19:00 today]

SAT 02:45 Lost Land of the Tiger (b00ty6b0)
[Repeat of broadcast at 20:00 today]

SUNDAY 02 SEPTEMBER 2018

SUN 19:00 BBC Proms (b0bhwdnw)
2018

Elgar Cello Concerto

Tom Service presents a performance of Elgar's much-loved Cello Concerto, composed in the wake of the First World War, with French cellist Jean-Guichen Queyras as soloist. The Prom begins with Edward Gardner conducting the BBC Symphony Orchestra and Chorus in a performance of the choral miniature For A Soldier's Funeral by French composer Lili Boulanger. The final piece is Vaughan Williams's cantata Dona Nobis Pacem, a beautiful but heart-breaking exploration of the violence of war, as part of this season's focus on the centenary of the end of the First World War.

SUN 20:30 The Gardeners of Kabul (p05fhqn1)
Five hundred years ago, the Emperor Babur laid out beautiful gardens in the city of Kabul, now the capital of Afghanistan. The lush, green spaces provided a peaceful retreat when he returned from battle. Over the centuries, the emperor's favourite garden was battered by war, but has now been lovingly restored to its former glory. In this film, we meet the gardeners keeping the emperor's legacy alive and we're invited into the private gardens of Afghans who find refuge among their plants and flowers from the stresses of a violent city.

SUN 21:00 Hull's Headscarf Heroes (b09r8jvr)
Documentary which marks the 50th anniversary of the triple trawler tragedy during January and February of 1968, in which 58 men died. It was one of Britain's deadliest maritime disasters, which tore through the heart of Hull's Hessel Road fishing community. The film tells the epic story of the Hull fishermen who did the most dangerous job in Britain and their wives whose protest ensured such a disaster never happened again. The women's campaign was one of the biggest and most successful civil action campaigns of the 20th century. Combining rare archive and emotional testimony - including that of Yvonne Blenkinsop, the last surviving leader of the women - those who lived through the tragedy and fought for change tell their incredible stories for the first time.

By the 1960s Hull was home to the greatest deep sea fishery on earth. 150 deep sea trawlers were based at St Andrews Dock and every year they brought in up to a quarter of a million tons of fish - 25 per cent of Britain's total catch. But to bring in such large quantities Hull's trawlers had to take enormous risks, because the best hunting grounds were 1,000 miles away in the dangerous Arctic waters around Iceland. There was little regard for the men's health and safety, making this by far the most dangerous job in Britain with 6,000 Hull men lost at sea.

For Hull's women the fact that their men could die at work at any time was a constant worry, made bearable only by the joy of their return. We hear tragic stories of lost loved ones that cast a shadow over family life. This long history of hurt formed the background to the triple trawler disaster of January and early February 1968 - an event which rocked even this extraordinarily stoic community.

In January 1968, Hull's trawlers headed into the Arctic in their quest for the biggest catch. By early February it became clear that three of them had sunk, first the St Romanus, then the

Kingston Peridot and finally the Ross Cleveland. The last two were fishing in Arctic waters when they were hit by the worst storm in living memory and were obliterated by the hurricane force winds, blizzards and ferocious waves. Altogether 58 men were drowned.

Among those who lost a loved one was 17-year-old mother-of-two Denise Wilson. She tells the story of how she became the youngest widow in Hull. The man whose task was to break the news to the families was young port missionary Donald Woolley. He reveals that despite the grief and devastation at the catastrophic loss of so many fathers, brothers and sons, there was an extraordinary spirit of resilience amongst the young wives and mothers.

Fuelled by years of suffering and loss, the headscarfed women rose up to protest against the dangerous working conditions. They were led by larger-than-life fishwife Lillian Bilocca. Her daughter Virginia remembers how she began a petition that was signed by almost everyone in Hessel Road. This was followed by mass meetings, a march on the trawler bosses' offices and dramatic attempts to stop any unsafe trawlers going to sea. What they all wanted was a safer fishing industry - and they were prepared to do anything to get it.

Unbeknown to 'Big Lil' as she came to be known, while she was protesting, her young son Ernie was also caught up in the storm and fighting for his life. He tells the story of his nightmare ordeal. So too does trawlerman Ken Shakesby, who also nearly died in the storm. His wife Jean was another headscarf protester who almost lost her husband.

Yvonne Blenkinsop is the last survivor amongst the women who led the protest. She tells how she was inspired to fight for change by the death of her own father at sea a few years before. She made passionate speeches to the women of Hessel Road about the need for greater safety at sea. After preventing unsafe ships from leaving St Andrews Dock in Hull, during the first week of February 1968 three of the leaders - including Yvonne - travelled to London for top-level talks with the government. 88 safety measures were enacted immediately. The first to be implemented was a mother ship complete with up to date medical and radio facilities. The new fishermen's charter laid the foundations for safety at sea for generations to come, and was welcomed by all.

But in the 1970s the Hull fishing industry fell into rapid decline with the Cod Wars and sadly the old fishing industry disappeared. As it went the memory of what Yvonne, Lil Bilocca and the other women had achieved also faded. When Lil died in 1988 at the age of 59 there was little fanfare. Nevertheless today, with Hull as City of Culture there is now at last new recognition for the women who led one of the most successful protest movements of the last 50 years: Lil Bilocca and the 'headscarf heroes,' including the last surviving leader, the extraordinary Yvonne Blenkinsop.

SUN 22:00 The Last Testament of Lillian Bilocca (b0bhwdp2)
Maxine Peake's exploration of the true story of Lillian Bilocca, a largely forgotten but formidable figure in the fight for safer trawlers.

When three fishing boats sank within 10 days with the loss of 58 lives in 1968, Lillian Bilocca launched a campaign of direct action to improve safety in the notoriously dangerous fishing fleet. She proved successful in bringing about new safety legislation in Parliament but faced a backlash from sections of the community in Hull.

The programme explores Lillian Bilocca's fight at the time through archive and dramatic reconstructions based on the play The Last Testament of Lillian Bilocca, written by Maxine Peake.

Maxine meets with a group of local women from the Hessel Road community - the heart of what was once the fishing industry - to hear first hand about Lillian Bilocca's story and what it means to the women today.

SUN 22:30 Natural World (b041z55p)
2014-2015

France: The Wild Side

France is our closest neighbour and a popular holiday destination for many of us, but how familiar are we with its wildlife? With breathtaking photography, this film reveals that wolves, wild boar and even bears are living amongst France's many mountains, valleys and forests. Journeying from the Pyrenees to the Alps, all around the mainland to Corsica, this is the story of the 'wild side' of France. Narrated by Paul McGann.

SUN 23:30 Storyville (b06yghfw)
The Golden Age of Circus: The Show of Shows

Roll up, roll up for an unforgettable experience!

This film tells the story of itinerant circus performers, cabaret acts and vaudeville and fairground attractions. Rarities and never-before-seen footage of fairgrounds, circus entertainment, freak shows, variety performances, music hall and seaside entertainment are chronicled from the 19th and 20th centuries. Featuring early shows that wowed the world and home movies of some of the greatest circus families.

SUN 00:45 Scotland's Vital Spark: The Clyde Puffer (b06s5n0f)

David Hayman explores the rich history of one of Scotland's best-loved boats, the Clyde Puffer. He meets the last of the men who worked on them, explores the communities whose lives they transformed, celebrates their fictional history in the form of the Vital Spark, and takes a trip out to sea on the last remaining steam-powered puffer.

SUN 01:45 Going Going Gone: Nick Broomfield's Disappearing Britain (b07chym0)

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

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

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

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

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

SUN 02:45 The No 5 War (b0bh5v16)

The story, both thrilling and dark, of the world's most famous perfume. In 1921, Coco Chanel's revolutionary perfume concept was as audacious as her outlandish designer clothing. At its launch, it was an instant hit. From the 1920s to the 1940s the Number 5 brand was at the centre of a war between the celebrated designer and her entrepreneurial business partners, the Wertheimer brothers. During WWII, with the help of her high-ranking Nazi lover, Coco Chanel attempted to oust her Jewish partners - who had fled German-occupied France and were operating the business from New Jersey - to take control of the highly lucrative business.

MONDAY 03 SEPTEMBER 2018

MON 19:00 Beyond 100 Days (b0bhrwt8)

Series 1

03/09/2018

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

MON 19:30 Francesco's Mediterranean Voyage (b00csp2p)
The Peloponnese

Architect and historian Francesco da Mosto embarks on a journey across the Mediterranean sea. The Black Swan docks near Athens - on route for Istanbul - so Francesco heads off alone on motorbike into the wild west of Greece, the Peloponnese. Here the people in the south have a reputation for, at best, unfriendliness, and it isn't long before Francesco runs into trouble with the locals. But there is plenty to marvel at.

Mystra, the ruined Byzantine town, once known as 'the Florence of the East', the ancient theatre at Epidaurus where a stage-whisper can be heard throughout an auditorium seating thousands, a tiny cave-like church that boasts incredible frescoes, and Vathia - the abandoned town of towers where neighbour fought against neighbour to get the upper hand.

Meanwhile, in the aptly named region of Arkadia, Francesco finds a sweet surprise - a field of beehives where the bees make the best honey in Greece and the biggest worry bead shop in Greece. At Methoni, he visits a great Venetian fortress at the sea's edge, the site of a massacre of his ancestors at the hands of the Ottoman empire.

MON 20:00 Art of Germany (b00wlrzx)

In the Shadow of Hitler

Andrew Graham-Dixon concludes his exploration of German art by investigating the dark and difficult times of the 20th century.

Dominating the landscape is the figure of Adolf Hitler - failed artist, would-be architect and obsessed with the aesthetics of his 1,000-year Reich. In a series of extraordinary building projects and exhibitions, Hitler waged a propaganda war against every kind of modern art as a prelude to unleashing total war on the whole of Europe.

After the war the shadow of the Third Reich persisted. Germany remained divided and traumatised. How would artists deal with a past that everybody wanted to forget? From the work of Otto Dix and George Grosz and the age of the Bauhaus to the post-war painters Georg Baselitz, Hilla Becher and the conceptual artist Joseph Beuys is a long strange journey, but the signs are there that art has a place at the heart of the new reunited Germany.

MON 21:00 Britain's Lost Waterlands: Escape to Swallows and Amazons Country (b07k18jf)

Documentary which follows presenters Dick Strawbridge and Alice Roberts as they explore the spectacular British landscapes that inspired children's author Arthur Ransome to write his series Swallows and Amazons.

The landscapes he depicted are based on three iconic British waterlands. The beauty and drama of the Lake District shaped by ancient glaciers and rich in wildlife and natural resources, the shallow man-made waterways of the Norfolk broads so crucial to farming and reed production, and the coastal estuaries and deep-water harbours of the Suffolk coastline shaped by ferocious tides and crucial to trade.

Engineer and keen sailor Dick uses vintage boats to explore the landscapes and meet people whose lives are shaped by the water, while wildlife enthusiast Alice explores the rich shorelines, interrogating the underlying geography and meeting the wildlife. Together they evoke the nostalgia of Ransome's writing and a bygone era of childhood freedom and adventure, but they also explore the economic significance of these special locations and the ways in which water was harnessed to change the course of British history.

MON 22:00 Story of Ireland (b00zq2br)

Age of Nations

A new five-part landmark series, written and presented by BBC special correspondent Fergal Keane.

The dramatic history of Ireland throughout the 20th century is the subject of this concluding episode of Fergal Keane's series. The War of Independence in the south and the fierce resistance that ensued in the north led to a partition of the island for the first time in its history. Keane charts the developments of the two religiously dominated states, driven by big personalities like Edward Carson and Ian Paisley in the North and Eamonn de Valera and Charles Haughey in the South, up to present day. He follows Northern Ireland's troubles and peace process and the boom and bust of the Celtic Tiger years in the Republic.

MON 23:00 Could We Survive a Mega-Tsunami? (b01s0zqv)

Starting off a kilometre high, travelling at the speed of a jet aircraft, and heading for us. It doesn't make for a good outcome. Hollywood-style graphics and real-life archive bring home an imagined near-future scenario, all based on cutting-edge science.

MON 00:00 Milton Keynes and Me (b091gy05)

Is Milton Keynes a soulless place or a utopian dream? It might be famous as the home of roundabouts and concrete cows but it's also one of the most ambitious experiments in social engineering. The famous new town is about to turn 50 and so is documentary maker Richard Macer, who grew up there.

This film brings the two of them back together as Macer returns to the place he left at 18 and seeks to reevaluate a town he always felt a bit embarrassed by. These days MK has one of the fastest-growing economies in the country and huge approval ratings from the people who live there. But for many years it's been the butt of the nation's jokes and seen only as a concrete jungle. What's the reality of MK? Is there a chance that Macer might discover a different Milton Keynes to the one he left behind?

Created in the late sixties as an overspill for the inner-city slums of London, the new city was a place of high ideals. People would live in a world that was green and spacious and where according to the masterplan 'no building would be taller than the tallest tree'.

Macer learns that far from being dull and boring, MK was actually a place that attracted some of the best architects of their day and it now boasts the only listed shopping centre in the country. To make the film, Macer returns home to mum and dad who still live in MK and have always loved it. Over the course of a few months he meets key contributors to the MK story: architects, artists and social workers, and pays a visit to his old school which was revolutionary in the sense that all the classrooms were carpeted and you called the teachers by their first names.

MON 01:00 The Story of Scottish Art (b06jdnnd)

Episode 2

The 18th century heralded the greatest blossoming of Scottish artistry in its history. The most powerful and influential figures in Britain clamoured to have their portraits painted by Allan Ramsay and Henry Raeburn and their houses designed by Robert Adam; they stood in awe at the epic Highland landscapes of Horatio McCulloch and wept at the sensitive genre paintings of David Wilkie.

Scots artist Lachlan Goudie explores how the intellectual revolution of the Enlightenment and the classical influence of the continent gave these artists the confidence and the inspiration to forge a whole new artistic landscape.

From dusty storerooms of Edinburgh to the dazzling antiquities of ancient Rome this is a journey of startling contrasts - between the past and the future, between the forces of reason and romance, between Presbyterian restraint and unfettered emotion. Out of the ashes of the Reformation a new culture identity was beginning to emerge and it was built on art.

MON 02:00 Britain's Lost Waterlands: Escape to Swallows and Amazons Country (b07k18jf)

[Repeat of broadcast at 21:00 today]

MON 03:00 Art of Germany (b00wlrzx)

[Repeat of broadcast at 20:00 today]

TUESDAY 04 SEPTEMBER 2018

TUE 19:00 Beyond 100 Days (b0bhrvhg)

Series 1

04/09/2018

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

TUE 19:30 Francesco's Mediterranean Voyage (b00csp3w)

The Cyclades

Francesco da Mosto continues his sea tour around the Mediterranean from Venice to Istanbul by visiting the magical, mystical Greek islands known as the Cyclades.

First stop is the most sacred island of all, Delos, the birthplace of the god Apollo. Francesco encounters the lions of Delos and the great phalli of Dionysus.

On Tinos, a place of miracle and pilgrimage, he meets a woman who crawls on her hands and knees for a kilometre uphill to give thanks to the Virgin Mary for the recovery of her sick husband.

The island of Naxos was a key port for the Venetian empire and even the houses feel Italian - a home-from-home for the travel-weary Francesco, who enjoys the island's traditional and very strong liqueur.

After a spot of octopus hunting, Francesco arrives at the great sunken, flooded volcano of Santorini which boasts a civilisation older than the Classical world and the best sunset in Greece.

TUE 20:00 Andrew Marr's History of the World

(p00xvvn)
Original Series

Age of Industry

In the seventh episode of this landmark series charting the story of human civilisation, Andrew Marr tells how Britain's Industrial Revolution created the modern world.

The old agricultural order of aristocratic landowners, serfs and peasant farmers was replaced by a new world of machines, cities and industrialists. Across the world, many resisted this sweeping change. From China to America, Russia to Japan, bitter battles were fought between the modernisers and those who rejected the new way of life.

In Europe, new industrial powers competed with each other to create vast empires which dominated the world. But this intense competition would lead to the industrial-scale slaughter and destruction of the First World War.

TUE 21:00 The Joy of AI (b0bhwhw1)
Professor Jim Al-Khalili looks at how we have created machines that can simulate, augment, and even outperform the human mind - and why we shouldn't let this spook us.

He reveals the story of the pursuit of AI, the emergence of machine learning and the recent breakthroughs brought about by artificial neural networks. He shows how AI is not only changing our world but also challenging our very ideas of intelligence and consciousness.

Along the way, we'll investigate spam filters, meet a cutting-edge chatbot, look at why a few altered pixels makes a computer think it's looking at a trombone rather than a dog and talk to Demis Hassabis, who heads DeepMind and whose stated mission is to 'solve intelligence, and then use that to solve everything else'. Stephen Hawking remarked 'AI could be the biggest event in the history of our civilisation. Or the worst'.

Jim argues that AI is a potent new tool that should enhance our lives, not replace us.

TUE 22:00 The Horizon Guide to AI (b0bhwhw3)
The BBC's Horizon programme began in 1964, and since then has produced films looking at computer technology and the emergence of 'artificial intelligence'.

Our dreams always begin with ideology and optimism, only for this optimism to be replaced with suspicion that AI machines will take over. However, as the Horizon archive shows, throughout each decade once we have learnt to live with the new emerging technology of the time, the pattern begins again. We become once more optimistic, before becoming fearful of it. The dream for decades had been for a computer with AI to be embedded within a humanoid robot, but just as scientists began to perfect machines with these qualities, something happened nobody expected.

Today, AI systems power our daily lives through smart technology. We are currently experiencing a level of fear about the power of AI, but will we enter the next decade optimistic about all that AI can deliver - or fearful of its ability to control vast areas of our lives?

TUE 23:00 Horizon (b08wnwnk)
2017

Dawn of the Driverless Car

The car has shrunk the world, increased personal freedom and in so many ways expanded our horizons, but there is a flipside. Fumes from car exhausts have helped to destroy our environment, poisoned the air we breathe and killed us in far more straightforward ways. But all that is going to change.

This episode enters a world where cars can drive themselves, a world where we are simply passengers, ferried about by wholesome green compassionate technology which will never ever go wrong. And it is almost here. Horizon explores the artificial intelligence required to replace human drivers for cars themselves, peers into the future driverless world and discovers that, despite the glossy driverless PR (and assuming that they really can be made to work reliably), the reality is that it might not be all good news. From the ethics of driverless car crashes to the impact on jobs, it might be that cars are about to rise up against us in ways that none of us are expecting.

TUE 00:00 Hyper Evolution: Rise of the Robots (b08zj4v5)
Series 1

Episode 1

Professor Danielle George MBE, an electronics engineer from Manchester University and a robot supporter, and Dr Ben

Garrod, an evolutionary biologist from Anglia Ruskin University and robo-sceptic, uncover whether the rise of the robots will enhance the progress of humanity or ultimately threaten the survival of the human race.

With extraordinary access to the world's leading robot-makers, they meet the trailblazing machines who pioneered key evolutionary leaps for robot-kind, and their most advanced descendants - to uncover just how far we've really come.

Ben is unashamedly unmoved by the tremendous rate that robots are evolving, whilst Danielle is welcoming them with open arms. To make sense of Ben's fears and Danielle's optimism, they set out to investigate the evolution of robots - treating them as if they are an emerging 'species'.

Ben meets one of the most humanlike robots in the world - the disarmingly charming Erica - who might be warm to the touch, but whose sense of humour falls decidedly flat. Their encounter seems weird enough until he meets her creator, who has made a robot twin of himself, and even has cosmetic enhancements to ensure they continue to look the same. He also finds out why it's so difficult for robots to walk like us.

This episode uncovers the roots with our obsession with robots in human form, with a visit to the fearsome Eric - the UK's first robot - to unpack the deep distrust of robots inherent in western culture.

Danielle meets an early pioneer of robotic movement, who led the way for robots to take over the workplace, and ends up in a sea of robot arms, working in beautiful robotic harmony at a car plant. She also meets the latest breed of robots at Boston Dynamics, who combine biology with technology. Videos of their extraordinary robots - inspired by humans, animals and machines in form - have spawned millions of hits on the internet.

The series explores questions over what happens when robots learn to think for themselves, and what that will mean for the future of humankind.

TUE 01:00 Towards Tomorrow: Robot (b0bjdgx7)
Documentary from 1967 on how robotics could shape human society. Your future is being created now - for better or for worse?

How close are we to constructing the robot of the future? Will there be one in every house? How human will it look? These are some of the questions this programme tries to answer.

Isaac Asimov, science fiction writer and prophet of the robot age, introduces the programme and predicts a future in which man and robots form a combined culture. A culture in which, to use his own words, 'mankind may want robots not only as helpers and servants but also as friends, as something with which they can identify'.

Towards Tomorrow explores laboratories in England and America to discover how near scientists and engineers are to turning Asimov's science fiction into science fact.

TUE 01:50 This Green and Pleasant Land: The Story of British Landscape Painting (b01173pk)
400 years of art history in 90 minutes? This film takes an eclectic group of people from all walks of life, including artists, critics and academics, out into the countryside to take a look at how we have depicted our landscape in art, discovering how the genre carried British painting to its highest eminence and won a place in the nation's heart.

From Flemish beginnings in the court of Charles I to the digital thumbstrokes of David Hockney's iPad, the paintings reveal as much about the nation's past as they do the patrons and artists who created them. Famous names sit alongside lesser-known works, covering everything from the refined sensibilities of 18th-century Classicism to the abstract forms of the war-torn 20th century with a bit of love, loss, rivalry and rioting thrown in.

Contributions come from a cast as diverse as the works themselves, including filmmaker Nic Roeg, historian Dan Snow and novelist Will Self, who offer a refreshingly wide range of perspectives on a genre of art which we have made very much our own.

WEDNESDAY 05 SEPTEMBER 2018

WED 19:00 Beyond 100 Days (b0bhrvnq)
Series 1

05/09/2018

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

WED 19:30 Francesco's Mediterranean Voyage (b00cwkbc)
Crete

Francesco da Mosto continues his sea tour around the Mediterranean. The stormy seas of the Cyclades take a turn for the worse as Francesco approaches Crete, the biggest of the Greek islands. As the storm passes, his first stop is the beautiful but abandoned island of Spinalonga - just off the coast of Crete. It is an island haunted by sadness and tragedy.

Docking at Iraklion, capital of Crete, Francesco sets off for the deep underground caves where Zeus, king of the gods, is reputed to have been born. Just down the road lies the immense palace of Knossos - excavated by an Englishman - reputedly the home to King Minos and the legendary Minotaur. There, he tries his hand at the ancient Cretan art of pot-making.

At the beautiful monastery of Arkadhi he stands in the very spot Cretan independence fighters blew themselves up with gunpowder rather than be captured. Their skulls, together with the remains of their enemies, are stacked on shelves in the monastery.

Then a surprise for Francesco - an invitation to a Cretan wedding - but first he must help prepare the wedding feast. With 1,500 guests invited, the task is enormous: 150 sheep make up the main course alone. Francesco dances until dawn and the boat has left Crete before he even knows it.

WED 20:00 Timeshift (b00795qb)
Series 6

Planet Ping Pong

The story of table tennis and how it became the most popular sport in Asia. The programme revisits the glory days of the 30s and 40s, when thousands would cram into Wembley to watch top players do battle.

Contributors include British world champion Johnny Leach, China's former World and Olympic women's champion Deng Yaping, and writers Howard Jacobson and Matthew Syed.

WED 21:00 Made by Machine: When AI Met the Archive (b0bhwk3p)

Documentary. Dr Hannah Fry and a virtual host present a new way of making television, as the BBC research and development department uses artificial intelligence to delve into the treasures of the BBC Archive.

Computers trawl through more than quarter of a million shows using a variety of machine learning techniques, then let loose to create short programmes-within-a-programme in the style of BBC Four.

WED 22:00 The Age of Excess: When Britain Went Too Far (b008415q)

Documentary which looks back at Britain during the 18th century, a time of sexual excess and liberation, particularly in London. Vast amounts of erotic art and literature were produced - from the debauches of Fanny Hill, the orgies pictured by Thomas Rowlandson and accounts of the activities of the Hellfire Club. Presenter Matthew Sweet argues that the creators of this erotic enlightenment were not merely grubby pornographers, but that they conjured new ways of understanding human subjectivity.

WED 23:00 Rebel Physician: Nicholas Culpeper's Fight for Medical Freedom (b0074syf)

Benjamin Woolley presents the gripping story of Nicholas Culpeper, the 17th century radical pharmacist who took on the establishment in order to bring medicine to the masses.

Culpeper lived during one of the most tumultuous periods in British history. When the country was ravaged by famine and civil war, he took part in the revolution that culminated in the execution of King Charles I.

But it is Culpeper's achievements in health care that made him famous. By practicing (often illegally) as a herbalist and publishing the first English-language texts explaining how to treat common ailments, he helped to break the monopoly of a medical establishment that had abandoned the poor and needy. His book *The English Physician* became the most successful non-religious English book of all time, remaining in print continuously for more than 350 years.

WED 00:00 Hyper Evolution: Rise of the Robots (b08zn62b)
Series 1

Episode 2

Professor Danielle George MBE, an electronics engineer from

Manchester University and a robot supporter, and Dr Ben Garrod, an evolutionary biologist from Anglia Ruskin University and robo-sceptic, uncover whether the rise of the robots will enhance the progress of humanity or ultimately threaten the survival of the human race.

With extraordinary access to the world's leading robot-makers, they meet the trailblazing machines who pioneered key evolutionary leaps for robot-kind, and their most advanced descendants - to uncover just how far we've really come.

In this episode, Danielle and Ben investigate whether robots will ever become our friends, if we should trust them with our lives, and if one day they will even become conscious.

The programme uncovers the roots of an essential ingredient of any relationship - the art of conversation. The presenters come face to face with a whole range of creations - from one of the first talking robots, Alpha, a 1930s gun-toting womaniser; and the one-sided conversations with Siri; or Valkyrie - a heroic female robot designed to pave the way for us to set up home on Mars; to a little robot called Kirobo - designed to be a companion on the International Space Station. Unbearably cute, Kirobo even has the body language off pat - turning and nodding as he speaks.

Ben visits the first attempt to make a robotic brain - a 1940s tortoise born in Bristol - with a rudimentary awareness of its surroundings, before meeting its most advanced descendant - the driverless car. Can Ben overcome his inherent fear of robots and put his trust in a robotic car enough take his hands off the wheel?

Finally, we meet some astonishing robots who aren't simply pre-programmed with facts about the world, they learn about it for themselves. The one-metre-high iCub not only looks like a child, but he learns like one. Just like a two-year-old he is learning to count on his fingers and is forming his own unique understanding of the world.

As robots continue to evolve, Ben and Danielle consider the unsettling question of what it would mean if robots developed consciousness.

WED 01:00 The Treasure Hunters (b040r3bv)
Raw Treasure

From pirates' hoards and shipwrecked booty to dazzling gems to precious metals, we lust after treasure, fight over it and go to the ends of the earth to find it - our planet is a treasure chest just waiting to be opened. In this series, Ellie Harrison and Dallas Campbell journey around the globe on the ultimate treasure hunt.

They scratch the surface of our planet to uncover its most extraordinary riches - from mountains of gold to the most valuable gemstones in the world and the largest natural treasure ever found.

In this episode, Ellie ventures down one of the deepest gold mines in the world in search of the gleaming metal that was once thought to be the skin of the gods and the sweat of the sun. Dallas free-dives for lustrous pearls in the waters around north west Australia and, using one of the largest treasure-hunting machines, he seeks out diamonds from the bottom of the ocean.

Dallas and Ellie reveal how you could make your fortune on the beach. Lumps of ambergris can wash up on almost any shoreline in the world. Although it starts life in a sperm whale's stomach, it ends up as a costly raw ingredient in the most expensive perfumes.

And while Dallas tries his hand at opal mining in one of the most hostile places on earth, Ellie discovers how one of the largest and most unusual treasures ever uncovered has helped us solve a 67-million-year-old puzzle.

WED 02:00 Made by Machine: When AI Met the Archive (b0bhvk3p)
[Repeat of broadcast at 21:00 today]

WED 03:00 The Joy of AI (b0bhwhw1)
[Repeat of broadcast at 21:00 on Tuesday]

THURSDAY 06 SEPTEMBER 2018

THU 19:00 Beyond 100 Days (b0bhrvtn)
Series 1

06/09/2018

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 (b0bhmz6)
[Repeat of broadcast at 00:15 on Saturday]

THU 20:00 Metamorphosis: The Science of Change (p00zv0wk)

Metamorphosis seems like the ultimate evolutionary magic trick, the amazing transformation of one creature into a totally different being: one life, two bodies.

From Ovid and Kafka to X-Men, tales of metamorphosis richly permeate human culture. The myth of transformation is so common that it seems almost preprogrammed into our imagination. But is the scientific fact of metamorphosis just as strange as fiction or... even stranger?

Film-maker David Malone explores the science behind metamorphosis. How does it happen and why? And might it even, in some way, happen to us?

THU 21:00 A Timewatch Guide (b06zw45j)
Series 2

The Crusades

Historian Dr Thomas Asbridge explores the BBC's archive to reveal how television's telling of the Crusades has changed over the last 60 years. Using footage from Crusade documentaries shot during the Vietnam era, the Palestinian Crisis, the First Gulf War and the more recent War on Terror, he reveals how our interpretation of this medieval story has been influenced by modern political and social change. Thomas highlights the alternative Arabic perspectives on the Crusades, and asks whether this 1,000-year-old story really does cast its long shadow over the modern world, as so many have claimed.

With contributions from Monty Python star and medievalist Terry Jones, Washington economist JK Galbraith, and historians Simon Sebag Montefiore, Dr Peter Frankopan, Prof Konrad Hirschler and Dr Fozia Bora.

THU 22:00 Tankies: Tank Heroes of World War II (b01pzv78)
Episode 2

In the last of this two-part series, historian and former tank commander Mark Urban continues the story of six remarkable men from the Fifth Royal Tank Regiment in World War II.

Surviving veterans and previously unseen letters and diaries relate in visceral detail how an extraordinary 'band of brothers' fought throughout the war.

This episode picks up the story with the regiment's triumphant return from north Africa and victory at Alamein. Expecting a well-earned rest, instead they are joined by new recruits and re-equipped with brand new British-made Cromwell Tanks in preparation for D-Day - the invasion of Europe.

Fighting in the hedgerows in northern France is a shock to the men of the Fifth Tanks, who were used to fighting in the wide-open spaces of the desert. German soldiers lie in ambush behind hedgerows with hand-held anti-tank weapons. Veteran Gerry Solomon, one of the most experienced tank commanders, tells how his tank is knocked out and he is wounded.

The new Cromwell tank proves no match against the German Tiger tank. At the battle of Villers Bocage, a single Tiger brings the advance of the whole British Army to a standstill. But it meets its match when it comes up against another new British tank - the Sherman Firefly.

Veterans describe how for two months they fought a battle of attrition, losing hundreds of tanks in the British Army's biggest ever tank battle, but keeping the German tanks fighting in the British sector so the Americans could break out of their sector into open countryside beyond.

The Fifth Tanks advance rapidly, the first to liberate Ghent in Belgium. Pushing on into Germany just days before the end of the war, some of the regiment's most experienced veterans, who had been fighting since the beginning, are tragically killed.

THU 23:00 Filthy Cities (b010mw7x)
Industrial New York

Dan Snow travels back to a seething Manhattan in the throes of the industrial revolution. Millions fled persecution, poverty and famine in Europe in the 19th century in search of the Promised Land. When they arrived what they found was even worse than what they'd left behind.

New York was a city consumed by filth and corruption, its massive immigrant population crammed together in the slums of Lower Manhattan. Dan succumbs to some of the deadly disease-carrying parasites that thrived in the filthy,

overcrowded tenement buildings. He has a go at cooking with some cutting edge 19th century ingredients - clothes dye and floor cleaner - added to disguise reeking fetid meat. And he marvels at some of the incredible feats of engineering that transformed not just the city, but the world.

THU 00:00 Maps: Power, Plunder and Possession (b00s77pc)
Spirit of the Age

In a series about the extraordinary stories behind maps, Professor Jerry Brotton shows how maps can reveal the fears, obsessions and prejudices of their age.

Religious passion inspires beautiful medieval maps of the world, showing the way to heaven, the pilgrims' route to Jerusalem and monstrous children who eat their parents. But by the Victorian era society is obsessed with race, poverty and disease. Royal cartographer James Wyld's world map awards each country a mark from one to five, depending on how 'civilised' he deems each nation to be. And a map made to help Jewish immigrants in the East End inadvertently fuels anti-semitism.

'Map wars' break out in the 1970s when left-wing journalist Arno Peters claims that the world map shown in most atlases was a lie that short-changed the developing world. In Zurich, Brotton talks to Google Earth about the cutting edge of cartography and at Worldmapper he sees how social problems such as infant mortality and HIV are strikingly portrayed on computer-generated maps that bend the world out of shape and reflect the spirit of our age.

THU 01:00 Planet Oil: The Treasure That Conquered the World (b0546d5q)
Episode 3

As we entered the 21st century, the world was guzzling oil, coal and gas like never before. Despite fears of 'peak oil', Professor Iain Stewart discovers that while huge technological advances are helping extend the life of existing oilfields, new unconventional oil and gas supplies like shale gas and tar sands are extending the hydrocarbon age well into the 21st century.

Given there's plenty of fossil fuels still in the ground, the spectre of climate change has forced many to ask can we really afford to burn what's left? In this concluding episode, Iain Stewart argues we face a stark choice.

Do we continue feed our addiction - suck Planet Oil dry - and risk catastrophic climate change, or do we go hell for leather for alternative energy sources, such as nuclear and renewables, to make the transition from our fossil fuel past to a low-carbon future. In which case, how do we make that shift?

THU 02:00 A Timewatch Guide (b06zw45j)
[Repeat of broadcast at 21:00 today]

THU 03:00 Metamorphosis: The Science of Change (p00zv0wk)
[Repeat of broadcast at 20:00 today]

FRIDAY 07 SEPTEMBER 2018

FRI 19:00 World News Today (b0bhwxm0)
The latest news from around the world.

FRI 19:30 BBC Proms (b0bhwlp5)
2018

Tango

Temperatures are set to soar in the Royal Albert Hall with this fiesta of tango music from across the world. From the bars of Buenos Aires via Finland, where a passion for tango exploded at the beginning of the 20th century, this concert traces the development of the sexiest and sultriest music genre on the planet. Grammy Award-winning pianist Pablo Ziegler and a hand-picked group of world-class soloists join the Britten Sinfonia and conductor Clark Rundell for this one-off spectacular, presented by tango devotee Katie Derham.

FRI 21:30 TOTP2 (b08qgxdn)
80s Special

Mark Radcliffe presents a look back at some of the most memorable Top of the Pops performances from the 80s including Adam Ant, Kylie and Jason, Culture Club, Bucks Fizz, Yaz, Duran Duran and Wham!

FRI 23:00 BBC Proms (b0bhwp7)

2018

Youssou N'Dour

The legendary Senegalese cultural icon Youssou N'Dour and his band Le Super Etoile de Dakar take over the Royal Albert Hall for this special Late Night Prom. The singer, composer, occasional actor, entrepreneur and political activist has been thrilling audiences for over 40 years. For his Proms debut, he brings his distinctive sound of Mbalax, the fusion of jazz, soul, Latin, and rock blended with sabar, the traditional drumming and dance music of Senegal. This largely acoustic performance spotlights N'Dour's spine-tingling vocals and demonstrates why he is widely considered the first superstar of world music.

FRI 00:25 Guitar Heroes at the BBC (b00lk48h)

Part II

A celebration of Seventies-era axe-men, acoustic virtuosos and thumping riff merchants, in a compilation of guitar-heavy performances from the BBC TV archives.

Guitar gods including Jimi Hendrix, Pete Townshend, Peter Green and Johnny Winter are joined by, among others, flamenco maestro Manitas De Plata, bottleneck bluesman Ry Cooder and straight-up rockers AC/DC and Thin Lizzy.

Everything from Fleetwood Mac's ambient masterpiece Albatross to hits like The Jam's In The City and Free's All Right Now feature along with lesser-known gems like Maid in Heaven by Be Bop Deluxe and Nils Lofgren's Keith Don't Go.

The tracks were recorded in the heyday of BBC shows such as The Old Grey Whistle Test, Top of the Pops and Rock Goes to College.

FRI 01:30 Music Moguls: Masters of Pop (p039w64c)

Money Makers

Three-part series revealing the secret history of pop and rock from the men and women who pull the strings behind the scenes.

Programme one tells the story of the maverick managers who controlled the careers of megastar artists, from Colonel Parker (Elvis) right the way up to Scooter Braun (Justin Bieber). Along the way are rollicking tales of industry legends like Led Zeppelin's Peter Grant, and Don Arden, who managed The Small Faces, Black Sabbath and ELO.

Narrated by Simon Napier-Bell, it also features contributions from Andrew Loog Oldham (The Rolling Stones), Jon Landau (Bruce Springsteen), Bill Curbisley (The Who), Paul McGuinness (U2) and Jonathan Dickins (Adele).

FRI 02:30 Singer-Songwriters at the BBC (b00v9lhx)

Series 1

Episode 3

Compilation which unlocks the BBC vaults to explore the burgeoning singer-songwriter genre that exploded at the dawn of the 1970s and became one of the defining styles of that decade.

Featuring classic songs from Bobbie Gentry, Kris Kristofferson, Buffy Saint-Marie, Janis Ian, Gordon Lightfoot, John Martyn, Randy Newman, Linda Lewis, Joni Mitchell, Don McLean, Ralph McTell, Loudon Wainwright III, Don Williams and Paul Brady.

Programme sources include The Old Grey Whistle Test, Top of the Pops, Sounds for Saturday, The Bobbie Gentry Show and One in Ten.