SATURDAY 26 DECEMBER 2015

SAT 19:00 All Aboard! The Sleigh Ride (b06t3psw)

In a Slow TV Christmas special, BBC Four rigs a traditional reindeer sleigh with a fixed camera for a magical journey across the frozen wilderness of the Arctic. Following the path of an ancient postal route, the ride captures the traditional world of the Sami people who are indigenous to northern Scandinavia and for whom reindeer herding remains a way of life

Filmed in Karasjok, Norway - 200 miles north of the Arctic Circle - this journey takes us through breathtaking scenery not normally glimpsed by anyone other than the Sami. Deliberately unhurried, the rhythmic pace of the reindeer guides us along an epic two-hour trip that takes us over undulating snowy hills, through birch forests, across a frozen lake and past traditional Sami settlements.

Facts about the reindeer, natural history, Sami culture and the Arctic climate are delivered by graphics and archive stills embedded into the passing landscape. With no commentary, music or presenter - just the crunching of snow and the soft tinkle of a reindeer bell - this hypnotic sleigh ride is an enchanting experience to put everyone in the Christmas spirit.

SAT 21:00 Natural World (b009w13s) 2007-2008

Elle and Inga, 17-year-old cousins from the north of Norway, are far from ordinary teenagers. They are reindeer herders from one of Europe's last indigenous people, the Sami. So they are equally at home helping reindeer swim fjords or ice fishing as playing with the internet and mobile phones.

We follow the girls and their families as they accompany the reindeer herds on the annual migration across the arctic tundra, gaining a unique insight into the lives of the girls and the reindeer on which they depend in this bleak and beautiful world.

SAT 21:50 Wild (b00796w0)

2006-07 Shorts

Dancing Cranes of Sweden

Wildlife documentary. Each year in the heart of southern Sweden, a special lake hosts a natural spectacle. It's a stop-off point for more than 10,000 cranes migrating northwards. The sight of these huge birds milling around on the icy banks of the lake is a remarkable sight in itself, but the best is yet to come. As the spring sunshine melts the snow and ice, the cranes start to dance. Once seen, the dance of the cranes is never forgotten.

SAT 22:00 Top of the Pops (b00zwrn5)

1964 to 1975 - Big Hits

1964 saw the birth of a very British institution. Spanning over four decades, Top of the Pops has produced many classic moments in pop culture.

Digging deep within the darkest depths of the BBC's archive. this compilation offers some memorable performances from 1964 through to 1975 from the likes of The Rolling Stones Tom Jones, Status Ouo, Procol Harum, Stevie Wonder, Queen and The Kinks, and opens the vintage vaults to rare performances from Stealers Wheel, Julie Driscoll, Peter Sarstedt and The Seekers.

So sit back and witness once again where music met television.

SAT 23:30 Timeshift (b06b36q3) Series 15

A Very British Map: The Ordnance Survey Story

For over 200 years, Ordnance Survey has mapped every square mile of the British Isles, capturing not just the contours and geography of our nation, but of our lives. Originally intended for military use, OS maps were used during wartime to help locate enemy positions. In peacetime, they helped people discover and explore the countryside.

Today, the large fold-out paper maps, used by generations of ramblers, scouts and weekend adventurers, represent just a small part of the OS output. As Ordnance Survey adjusts to the digital age, Timeshift looks back to tell the story of a quintessentially British institution.

SAT 00:30 John Denver: Country Boy (b03i4cz2)

Documentary exploring the private life and public legacy of John Denver, America's original country boy. With exclusive accounts from those closest to him, the man behind the music is revealed in an intimate profile in his 70th birthday anniversary

SAT 01:30 Natural World (b009w13s)

[Repeat of broadcast at 21:00 today]

SAT **02:20 Top of the Pops (b00zwrn5)**

[Repeat of broadcast at 22:00 today]

SUNDAY 27 DECEMBER 2015

SUN 19:00 Blood and Gold: The Making of Spain with Simon Sebag Montefiore (b06ssjfk)

Simon explores Spain's golden age under Philip II through to the Spanish Civil War and dictatorship under Franco, from which Spain has emerged as a modern democratic monarchy.

SUN 20:00 Westminster Abbey (b01pbqng) Episode 2

The unprecedented behind-the-scenes look at one of Britain's most iconic landmarks follows the choir of Westminster Abbey as they prepare for a historic visit to Rome to sing with the Sistine Chapel Choir in the Papal Mass in St Peter's Basilica. For the Abbey Choir and the Sistine Chapel Choir, rehearsing and performing together is a significant moment in the history of both the Catholic Church and the Church of England.

The choir received this invitation from Pope Benedict XVI after his historic visit to the abbey in 2010. The Dean of Westminster reflects movingly on his hopes towards reconciliation between the two churches

On a more intimate note, minor canon the Rev Dr James Hawkey and his fiancee Carol Ripley tie the knot. This is the first wedding to take place at the high altar of the abbey since the wedding of the Duke and Duchess of Cambridge.

The Venerable Dr Jane Hedges, one of the first women to be ordained and the first female canon appointed at Westminster Abbey, explains the central role of tourism. Finally, continuing the abbey's Benedictine tradition of hospitality, building for a new cafe is underway and in the process unveils a few archaeological surprises.

SUN 21:00 Gypsy: Live from the Savoy Theatre (b06t3shd) Stage musical based on the book by Arthur Laurents and with music by Jule Styne and lyrics by Stephen Sondheim, loosely

based on the memoirs of Gypsy Rose Lee.

The story starts in Seattle in the 1920s at the height of vaudeville and follows the dreams and efforts of Gypsy's mother Rose, the fierce show business mother whose entire life and focus is on raising her daughters to be stage stars. It follows their ups and downs in the changing world of the theatre until her daughter Louise steps into the world of burlesque, as it is all that is left, only to become a huge star - Gypsy Rose Lee.

Gypsy contains many popular stage songs including Everything's Coming Up Roses, Let Me Entertain You and Together (Wherever We Go).

SUN 23:20 ABBA at the BBC (b03lyzpr)

If you fancy an hour's worth of irresistible guilty pleasures from Anni-Frid, Benny, Bjorn and Agnetha, this is the programme for you. ABBA stormed the 1974 Eurovision song contest with their winning entry Waterloo, and this programme charts the meteoric rise of the band with some of their greatest performances at the BBC.

It begins in 1974 with their first Top of the Pops appearance, and we even get to see the band entertaining holidaymakers in Torbay in a 1975 Seaside Special. There are many classic ABBA tunes from the 1979 BBC special ABBA in Switzerland, plus their final BBC appearance on the Late Late Breakfast

This compilation is a must for all fans and includes great archive interviews, promos and performances of some of ABBA's classics including Waterloo, Dancing Queen, Does Your Mother Know, Thank You for the Music, SOS, Fernando, Chiquitita and many more.

SUN 00:20 Agnetha: ABBA and After (b02x9zwc)

In this documentary, the BBC have exclusive access to Agnetha Faltskog, 'The Girl with the Golden Hair' as the song goes, celebrating her extraordinary singing career which began in the mid-60s when she was just 15. Within just two years, she was a singing sensation at the top of the charts in Sweden.

Along came husband Bjorn Ulvaeus and the phenomenal band ABBA that engulfed the world in the 70s, featuring Agnetha's touching voice and striking looks. Agnetha lacked confidence on stage as the global demand for the group grew and grew, while being away from her young children caused her great

With special behind-the-scenes access to the making of her comeback album, the film follows this reluctant star - the subject of much tabloid speculation since she retreated from the stage post-ABBA - as she returns to recording aged 63. Included in the film is her first meeting with Gary Barlow, who contributes a duet to the new album.

The programme features interviews with Bjorn Ulvaeus, Benny Andersson, Gary Barlow, Tony Blackburn, Sir Tim Rice and record producers Peter Nordahl and Jorgen Elofsson.

SUN 01:20 When Albums Ruled the World (b01ghn70)

Between the mid-1960s and the late 1970s, the long-playing record and the albums that graced its grooves changed popular music for ever. For the first time, musicians could escape the confines of the three-minute pop single and express themselves as never before across the expanded artistic canvas of the album. The LP allowed popular music become an art form from the glorious artwork adorning gatefold sleeves, to the ideas and concepts that bound the songs together, to the unforgettable music itself.

Built on stratospheric sales of albums, these were the years when the music industry exploded to become bigger than Hollywood. From pop to rock, from country to soul, from jazz to punk, all of music embraced what 'the album' could offer. But with the collapse of vinyl sales at the end of the 70s and the arrival of new technologies and formats, the golden era of the album couldn't last forever.

With contributions from Roger Taylor, Ray Manzarek, Noel Gallagher, Guy Garvey, Nile Rodgers, Grace Slick, Mike Oldfield, Slash and a host of others, this is the story of When Albums Ruled the World.

SUN 02:50 Westminster Abbey (b01pbqng)

[Repeat of broadcast at 20:00 today]

MONDAY 28 DECEMBER 2015

MON 19:00 Doctor Who (p00vf80v) The Face of Evil

The Doctor arrives on an alien world and is taken captive by the savage Sevateem tribe. Accused of being 'the evil one', the Doctor begins to suspect that he has been here before.

MON 19:25 Doctor Who (p00vf82k) The Face of Evil

With the Sevateem against him, the Doctor attempts to win their trust by facing the trial of the Horta. The tribe prepare to launch an attack to free their god, Xoanon,

MON 19:50 Doctor Who: The Ultimate Guide (b04vs6z3)

A celebration of the 50th anniversary of the Time Lord, taking an in-depth look at one of the most intriguing fictional characters ever created. This episode explores how the first two actors who played the Doctor, William Hartnell and Patrick Troughton, created the characteristics we now associate with

MON 20:00 Royal Institution Christmas Lectures (b06tg0hv)

2015: How to Survive in Space

From the historic Royal Institution, space doctor Kevin Fong takes us on a ride from launch to orbit and the cosmos beyond for the annual children's Christmas Lectures. And there's help direct from outer space as Britain's first astronaut on the International Space Station, Tim Peake, dials in.

In the first lecture, Kevin explores and probes second by second what it takes to 'lift off' into space. With Tim only days into his six-month mission, he helps Kevin answer what keeps

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astronauts safe and on track as they are propelled into orbit.

How do you control the energy of 300 tonnes of liquid fuel? What happens to your body if you don't wear a spacesuit? And how do you catch up with a space station travelling at 17,500 mph to finally get inside?

With explosive live experiments, guest astronauts in the lecture theatre, and planetary scientist Monica Grady direct from the launch pad in Kazakhstan, we learn all this and more as those thrilling minutes of lift off are recreated.

MON 21:00 Michael Palin's Quest for Artemisia (b06t3w73)

Curious about a powerful but violent painting that caught his eye, Michael Palin sets off on a quest to discover the astonishing story of the forgotten female artist who painted it over 400 years ago. Travelling to Italy in search of Artemisia Gentileschi's tale, Michael encounters her work in Florence, Rome and Naples.

Michael unearths not only her paintings but a complex life which included her rape as a teenager and the ensuing indignity of a full trial, her life as a working mother and her ultimate success against all odds as one of the greatest painters of the Baroque age who transformed the way women were depicted in art and who was sought after in many courts across 17th-century

MON 22:00 Sammy Davis Jr: The Kid in the Middle (b04w7wgr)

Sammy Davis Jr was born to entertain. He was a human dynamo who made his debut at the age of five and by the time he was a teenager was wowing audiences across America. A gifted dancer, actor and singer, and a key member of the Rat Pack, Davis is best remembered for his unforgettable rendition of Mr Bojangles and his number one single The Candyman.

However, as a black man, making his way in the entertainment business saw him struggle to overcome racial prejudice, letter bombs and death threats. Davis fought back with his talent and in the 1960s marched alongside Dr Martin Luther King. Despite his reputation as a civil rights campaigner and one of the world's greatest entertainers, Davis remains an enigma. Those closest to him tell of a man never quite comfortable in his own skin, a workaholic and spendaholic who put his career before his family and who died leaving them millions of dollars in

This documentary is Sammy Davis Jr's remarkable life story his rise and his fall - told by those who knew him best. For the first time his family and friends including Paul Anka, Engelbert Humperdinck, Reverend Jesse Jackson and Ben Vereen share their memories - shedding new light on the legacy of one of the most gifted and loved performers in show business

MON 23:00 Papillon (b007bw8d)

Sentenced to life imprisonment in the infamous Devil's Island prison camp for a murder he did not commit, Henri 'Papillon' Charriere's only passion is to escape. To this end he offers to watch over forger Louis Dega, for the man has money. But the jungle and years of brutality lie between Papillon (the butterfly) and freedom. Prison drama based on a true story

MON 01:25 Prehistoric Autopsy (p00xfdmw) Neanderthal

Anatomist professor Alice Roberts and biologist Dr George McGavin go on an extraordinary evolutionary journey to meet three of our ancient ancestors. By the end they will have travelled back nearly four million years.

At the Prehistoric Autopsy HQ in Glasgow, with the help of a team of international experts, each episode follows the rebuilding of one of our most iconic ancient ancestors from the bones up. They start with our closest prehistoric relative - a Neanderthal

To make the reconstructions as accurate as possible, Alice and George have travelled the globe, gathering evidence from the world's leading scientists. In the lab at the Prehistoric Autopsy HQ, scientists put the latest theories to the test to see how similar or different we really are to our ancient ancestors, while experimental archaeologists look for clues as to how they lived.

All the research has been fed to a team of model makers, who have spent months painstakingly reconstructing skeletons, muscles, skin and hair.

The team reveal the latest research that is casting a new light on Neanderthals - not just in the way they may have hunted, clothed their families and even painted jewellery, but also what they may have sounded like.

Alice and George also put their own DNA to the test to see just how closely related we really are to Neanderthals.

And at the end of the programme, our reconstructed Neanderthal will finally be revealed - as we come face-to-face with one of our prehistoric ancestors from 70,000 years ago

MON 02:25 Michael Palin's Quest for Artemisia (b06t3w73) [Repeat of broadcast at 21:00 today]

TUESDAY 29 DECEMBER 2015

TUE 19:00 Doctor Who (p00vf83x)

The Face of Evil

Penetrating the barrier with Leela, the Doctor enters the spaceship, which is controlled by the Tesh. There he discovers the truth about Xoanon and realises that he is to blame

TUE 19:25 Doctor Who (p00vf896)

The Face of Evil

Determined to rectify his earlier mistake, the Doctor tries to repair Xoanon. But the insane computer refuses to accept his help and prepares to destroy the entire planet.

TUE 19:50 Doctor Who: The Ultimate Guide (b03wysz4)

A celebration of the 50th anniversary of the Time Lord, taking an in-depth look at one of the most intriguing fictional characters ever created. This episode looks at the dandyish third Doctor, played by Jon Pertwee, and his regenerated replacement, the iconic scarf-wearing fourth Doctor played by Tom Baker.

TUE 20:00 Royal Institution Christmas Lectures (b06tk0g5)

2015: How to Survive in Space

Life in Orbit

From the historic Royal Institution, space doctor Kevin Fong takes us on a ride from launch to orbit and the cosmos beyond for the annual children's Christmas Lectures. And there's help direct from outer space as Britain's first astronaut on the International Space Station Tim Peake, dials in

In the second lecture, Kevin explores life in orbit on board the International Space Station As Tim settles in to his new home he sends special reports about what it takes to live and work in

Four hundred kilometres above the Earth, hurtling at a speed of 17,500mph, astronauts' bones and muscles waste away, the oxygen they breathe is artificially made, and they face constant threats from micrometeorites, radiation and extreme temperatures. If a medical emergency strikes, Tim is a very long way from home.

In its 15-year lifetime, the International Space Station has never had a major accident. With a British astronaut in orbit, gravitydefying experiments and guest astronauts in the lecture theatre. Dr Fong shows us how to survive life in orbit.

TUE 21:00 Roy Orbison: One of the Lonely Ones (b06t3vb9)

Biography of iconic rock balladeer Roy Orbison told through his own voice, casting new light on the triumphs and tragedies that beset his career. Using previously unseen performances, home movies and interviews with many who have never spoken before, the film reveals Orbison's remote Texas childhood, his battles to get his voice heard, and how he created lasting hits like Only the Lonely and Crying.

The film follows Roy's rollercoaster life, often reflected in the dark lyrics of his songs, from success to rejection to rediscovery in the 80s with The Traveling Wilburys supergroup. It uncovers the man behind the shades, including intervie with his sons, many close friends and collaborators like Jeff Lynne, T Bone Burnett, Bobby Goldsboro and Marianne

TUE 22:00 Roy Orbison and Friends: A Black and White Night (b00g6349)

First broadcast in 1988 and filmed in black and white (hence the title!), this TV concert classic features Roy Orbison performing his classic songs with friends like Bruce

Springsteen, Tom Waits, Elvis Costello, Jackson Browne, kd lang, Jennifer Warnes and Bonnie Raitt.

The TCB Band which backs all featured artists was Elvis Presley's band till his death in 1977 and includes James Burton, Glen D Hardin, Jerry Scheff and Ronnie Tutt with musical drector T Bone Burnett.

Filmed at the Coconut Grove nightclub in Los Angeles, the show was first broadcast on HBO in 1988, the year of Roy Orbison's death.

TUE 23:00 The Richest Songs in the World (b01pjrt5)

Mark Radcliffe presents a countdown of the ten songs which have earned the most money of all time - ten classic songs each with an extraordinary story behind them. Radcliffe lifts the lid on how music royalties work and reveals the biggest winners and losers in the history of popular music.

TUE 00:30 Timeshift (b06l0v9d)

Series 15

Looking for Mr Bond: 007 at the BBC

After more than 60 years tracking James Bond in print and on screen, the BBC opens up its vaults to reveal the forgotten files on the world's most famous secret agent. Featuring rare and candid interviews with all six actors to play 007, and exclusive behind-the-scenes footage, this is James Bond unguarded, unrestricted and unseen.

TUE 01:30 Prehistoric Autopsy (b01nlz8j) Homo Erectus

At the Prehistoric Autopsy HQ in Glasgow, anatomist professor Alice Roberts and biologist Dr George McGavin continue their journey back into our evolutionary past.

They are going back 1.5 million years to meet one of the earliest humans. Once again with the help of a team of international experts, this shows the recreation of one of our most successful prehistoric ancestors from the bones up. They walked the earth far longer than any other human species and were the first ancestors to look a lot like we do today. The species is Homo erectus and the individual being reconstructed is known as Nariokotome Boy.

To make the reconstructions as accurate as possible, Alice and George have travelled the globe, gathering evidence from the world's leading scientists. In the lab at the Prehistoric Autopsy HQ, scientists put the latest theories to the test to see how similar or different we really are to our ancient ancestors, while experimental archaeologists look for clues as to how they lived.

All the research has been fed to a team of model makers who have spent months painstakingly reconstructing his skeleton, muscles, skin and hair.

The team reveal the latest research that suggests Homo erectus were good hunters, were skilled at making stone tools and could probably control fire. They also look at evidence that suggests some individuals were helping those who couldn't help themselves. It may be the oldest evidence we have for something we think of as a human trait - compassion

And in the end the carefully reconstructed Narikotome Boy will finally be revealed as we come face to face with another of our prehistoric ancestors

TUE 02:30 Dinosaurs, Myths and Monsters (b014lsgb)

From dinosaurs to mammoths, when our ancient ancestors encountered the fossil bones of extinct prehistoric creatures what did they think they were? Just like us, ancient peoples were fascinated by the giant bones they found in the ground.

In an epic story that takes us from Ancient Greece to the American Wild West, historian Tom Holland goes on a journey of discovery to explore the fascinating ways in which our ancestors sought to explain the remains of dinosaurs and other giant prehistoric creatures, and how bones and fossils have shaped and affected human culture.

In Classical Greece, petrified bones were exhibited in temples as the remains of a long-lost race of colossal heroes. Chinese tales of dragons may well have had their origins in the great fossil beds of the Gobi desert. In the Middle Ages, Christians believed that mysterious bones found in rock were the remains of giants drowned in Noah's Flood.

But far from always being wrong, Tom learns that ancient explanations and myths about large fossilsed bones often contained remarkable paleontological insights long before modern science explained the truth about dinosaurs. Tom encounters a medieval sculpture that is the first known reconstruction of a monster from a fossil, and learns about the

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Native Americans stories, told for generations, which contained clues that led bone hunters to some of the greatest dinosaur finds of the nineteenth century.

This documentary is an alternative history of dinosaurs - the neglected story of how mythic imagination and scientific inquiry have met over millennia to give meaning to the dry bones of prehistory. Today, as our interest in dinosaurs and prehistoric creatures continues unabated, it turns out we are not so far away from the awe and curiosity of our ancient ancestors.

WEDNESDAY 30 DECEMBER 2015

WED 19:00 Canals: The Making of a Nation (b06828hz) Capitalism

Liz McIvor tells the story of 'canal mania' - a boom period of frenzied activity that helped develop Britain's modern financial economy, now centred in London. The canal capitalists made money by investing and speculating in the new inland waterways used to carry fuel and goods around the country. Many of the investors were part of an emerging middle class. The Grand Junction Canal - built to improve the connection between London and the Midlands - was one of the new routes, and eventually proved to be a good investment for shareholders. However, not all canals were profitable. The new investors discovered that investment capitalism was a system that created winners and losers.

WED 19:30 Tomorrow's World (b06tgd6w) Series 12

Christmas Special 1975

Christmas special of the science magazine programme from 1975. Raymond Baxter, William Woollard, Michael Rodd and Judith Hann invite a party of children to their workshop, where young and old can enjoy magic moments of science.

WED 20:00 Royal Institution Christmas Lectures (b06tk225)

2015: How to Survive in Space

The Next Frontier

From the historic Royal Institution, space doctor Kevin Fong takes us on a ride from launch to orbit and the cosmos beyond for the annual children's Christmas Lectures. And there's help direct from outer space as Britain's first astronaut on the International Space Station, Tim Peake, dials in.

In the third and final lecture, Kevin explores the next frontier of human space travel. Live from the Station hurtling at 17,500mph, 400 km above the Earth, Tim answers questions directly from the children in the lecture theatre audience. With Tim's help out in Earth's orbit, Kevin investigates how the next generation of astronauts will be propelled across the vast chasm of space to Mars and beyond.

So, how will life be artificially sustained as we travel the millions of kilometres to the red planet and on into the cosmos? How will our food last for three years or more? And what is waiting what for us when we finally land? With earth-shattering experiments, top space scientists and our astronaut live from space, Dr Fong reveals how we'll survive that voyage to space's next frontier and beyond.

WED 21:00 The Sky at Night (b06t3wst)

The Real Star of Bethlehem: A Christmas Special

Astronomers have been fascinated by the idea of the Star of Bethlehem for centuries. Did it exist? And if so, what was it?

The list of candidates includes some of the most exciting objects in the night sky - supernovae, comets, meteors and unusual alignments of the giant planets.

In this surprising and entertaining Christmas special the Sky at Night team go in search of the potential causes of the Star of Bethlehem.

The team explore the possibilities, investigating the nature of the phenomena and digging through the historical records including Babylonian clay tablets and ancient Chinese manuscripts, to reconstruct events in the night sky 2,000 years ago.

Maggie Aderin-Pocock goes hunting for supernovae using the most powerful laser in Britain, and discovers that these mighty explosions caused by the death of stars can shine brighter than the moon in our sky.

Chris Lintott reconstructs the night sky over Jerusalem at the time of Jesus's birth, discovering a once-in-a-millennium

conjunction of Saturn and Jupiter that was first suggested as a cause of the star by the great astronomer Johannes Kepler in 1604

Armed with his telescope, Pete Lawrence searches out the features of the night sky we can observe today that may provide clues to the origin of the Star of Bethlehem.

Professor Alan Fitzsimmons explains why the sudden appearance of a comet in the night sky has always been seen as an omen of great events on Earth.

Dallas Campbell goes in search of the historical and archaeological records that can shed light on the identity of the star. Finding Babylonian tablets in the vaults of the British Museum and ancient Chinese texts that record all the unusual events in the night sky 2,000 years ago, including a bright new star that appeared for 70 days in the year 5BC.

WED 22:00 Vertigo (b0077dty)

Suddenly dangerously disorientated by heights, detective John Ferguson resigns from the San Francisco police and is reluctant when asked by an old college friend to trail the man's wife, Madeleine, whose behaviour is causing concern. But John gradually becomes obsessed with the troubled woman and increasingly intervenes in her life.

Classic Hitchcock psychological thriller.

WED 00:05 Premium Bond with Mark Gatiss and Matthew Sweet (p02sx893)

In impeccable evening dress, Mark Gatiss and Matthew Sweet ponder the Bonds we've seen on screen since Dr No in 1962 and ask - which 007 is the best? To date, six actors have portrayed British Secret Service agent James Bond. Was Sean Connery impossible to surpass? Was George Lazenby really that bad? Was Live and Let Die really a blaxploitation movie in disguise? Gatiss and Sweet consider these and many other questions, and raise a martini in honour of their premium Bond.

WED 01:00 The Sky at Night (b06t3wst)

[Repeat of broadcast at 21:00 today]

WED 02:00 Prehistoric Autopsy (b01nlzsh) Lucy

It is the final day at the Prehistoric Autopsy HQ in Glasgow. Anatomist Professor Alice Roberts and biologist Dr George McGavin continue their journey back into our evolutionary nast.

They meet probably the most famous of all our early ancestors. She is called Lucy from the species Australopithecus afarensis and she lived 3.2 million years ago. Lucy's species had traded life in the trees for life on the ground, but this ability to routinely walk upright came at a price and it is one we are still paying today.

Once again with the help of a team of international experts, this follows the rebuilding of this iconic prehistoric ancestor from the hones up

To make the reconstructions as accurate as possible Alice and George have travelled the globe, gathering evidence from the world's leading scientists. In the lab at the Prehistoric Autopsy HQ, scientists put the latest theories to the test to see how similar or different we really are to our ancient ancestors, while experimental archeologists look for clues as to how they lived.

All the research has been fed to a team of model makers who have spent months painstakingly reconstructing skeletons, muscles skin and hair

At HQ, the team studies evidence that reveals how Lucy and her kind walked, what they are and even how they gave birth. They also examine the fossilised remains of the world's oldest child to see what clues it can reveal about Lucy's species and the origins of childhood.

At the end of this extraordinary evolutionary journey the team will have travelled back nearly four million years. On the way they will have come face to face with a Neanderthal, a Homo erectus and finally one of our earliest prehistoric ancestors -

WED 03:00 Natural World (b009w13s)

[Repeat of broadcast at 21:00 on Saturday]

THURSDAY 31 DECEMBER 2015

THU 19:00 Canals: The Making of a Nation (b068c3zh) Engineering

Liz McIvor tells the story of the early canal builders who struggled with the rugged terrain of England's Pennine hills. Creating a network of canals in this landscape was an uphill challenge -sometimes literally! But connecting the powerhouses of Yorkshire and Lancashire was a great prize at the time of the industrial revolution. What should the engineers do? Should they build over, under or around the hills? Who succeeded, and who struggled?

THU 19:30 Canals: The Making of a Nation (b06823cv) Geology

Liz McIvor discovers how carving up the landscape in order to build canals helped further our understanding of the earth below. The canal builders struggled with rocks. Without maps or geological surveys, construction often relied on guesswork. The Kennet and Avon had more than its fair share of problems. William Smith, a surveyor working on the connecting Somerset Coal Canal, discovered a way of ordering layers of rocks. He eventually created the first geological map of England and Wales - the so-called 'map that changed the world'.

THU 20:00 Canals: The Making of a Nation (b06822p8) Heritage

Liz McIvor explores the heritage of our canal network. After years of decline in the postwar period much of the network was eventually restored. Once places of labour and industry, they became places of leisure and tranquillity. The newly renovated canals were increasingly popular for boating holidaymakers. Liz visits the Pontcysyllte Aqueduct in Wales and travels to Birmingham where canals have become catalysts for property development and urban regeneration. Canals offer so many benefits today. Perhaps, Liz suggests, it is time to construct a few more?

THU 20:30 Canals: The Making of a Nation (b06829t1) The Boat People

Presenter Liz McIvor tells the story of the people who operated the canal boats, carrying fuel and goods around the country. Conditions were tough, days were long. Victorian society began to grow suspicious of these 'outsiders' and they gained reputations for criminality, violence and drinking. But was this reputation really deserved? Liz discovers grisly canal crimes, investigates health and welfare onboard working boats, and looks at why canal children were last on the list to be offered safeguards and formal education. The Victorians eventually championed the needs of children who were forced to labour in factories and mines, but the boat children were often ignored. Liz discovers the campaigners who set out to tackle this injustice, including George Smith of Coalville, Leicestershire, and Sister Mary Ward of Stoke Bruerne.

THU 21:00 Sinatra: All or Nothing at All (b06tg506) Series 1 Compilations

art 1

An up-close and personal examination of the life, music and career of the legendary entertainer. In 1971, Frank Sinatra sang his legendary 'retirement concert' in Los Angeles, featuring music which was said to reflect his own life. Told in his own words from hours of archived interviews, along with commentary from those closest to him, this definitive series weaves the legendary songs he chose with comments from friends and family, as well as never-before-seen footage from home movies and concert performances.

An unprecedented tribute to the beloved showman, with the full participation of the Frank Sinatra Estate, the opening episode takes us from Sinatra's birth to his early years as a roadhouse performer, revealing the influences behind his meteoric rise.

$\it THU~22:55~Made~in~Dagenham~(b01rcc33)$

Comedy drama charting the fight of female factory workers at the Ford Dagenham plant for equal pay. In 1968, one determined factory worker leads her colleagues out on strike in the hope of eradicating unfair working conditions and sexual discrimination.

$\it THU$ 00:40 David Bowie and the Story of Ziggy Stardust (b01k0y0n)

The Rise and Fall of Ziggy Stardust and the Spiders from Mars is arguably the most important album in the mind-blowing career of David Bowie. Released in 1972, it's the record that set the mercurial musician on course to becoming one of the best-known pop stars on the planet. In just over a year, Bowie's messianic Martian invaded the minds of the nation's youth with a killer combination of extraterrestrial rock 'n' roll and outrageous sexuality, all delivered in high-heeled boots, multicoloured dresses and extravagant make-up. In Bowie's own words, Ziggy was 'a cross between Nijinsky and Woolworths',

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but this unlikely culture clash worked - Ziggy turned Bowie into

This documentary tells the story of how Bowie arrived at one of the most iconic creations in the history of pop music. The songs, the hairstyles, the fashion and the theatrical stage presentation merged together to turn David Bowie into the biggest craze since the Beatles. Ziggy's instant success gave the impression that he was the perfectly planned pop star. But, as the film reveals, it had been a momentous struggle for David Bowie to hit on just the right formula that would take him to the

Narrated by fan Jarvis Cocker, it reveals Bowie's mission to the stars through the musicians and colleagues who helped him in his unwavering quest for fame - a musical voyage that led Bowie to doubt his true identity, eventually forcing the sudden demise of his alien alter ego, Ziggy

Contributors include Trevor Bolder (bass player, Spiders from Mars), Woody Woodmansey (drummer, Spider from Mars), Mike Garson (Spiders' keyboardist), Suzi Ronson (Mick Ronson's widow, who gave Bowie that haircut), Ken Scott (producer), Elton John (contemporary and fan), Lindsay Kemp (Bowie's mime teacher), Leee Black Childers (worked for Mainman, Bowie's production company), Cherry Vanilla (Bowie's PA/press officer), George Underwood (Bowie's friend), Mick Rock (Ziggy's official photographer), Steve Harley, Marc Almond, Holly Johnson, Peter Hook, Jon Savage, Peter Doggett and Dylan Jones.

THU 01:40 Queens of Disco (b0074thh)

Graham Norton profiles the leading ladies of the disco era, including Gloria Gavnor, Donna Summer, Grace Jones, Chaka Khan, Madonna and 'honorary disco queen' Sylvester. Includes contributions from the queens themselves, plus Antonio 'Huggy Bear' Fargas, choreographer Arlene Phillips, songwriters Ashford and Simpson, disco artists Verdine White from Earth, Wind and Fire, Bonnie Pointer of The Pointer Sisters and Nile Rodgers of Chic.

THU 02:40 Disco at the BBC (b01cqt74)

A foot-stomping return to the BBC vaults of Top of the Pops, The Old Grey Whistle Test and Later with Jools as the programme spins itself to a time when disco ruled the floor. the airwayes and our minds. The visual floorfillers include classics from luminaries such as Chic, Labelle and Rose Royce to glitter ball surprises by The Village People.

FRIDAY 01 JANUARY 2016

FRI 19:00 New Year's Day Concert (b06t3xcr)

2016 - Highlights

A chance to enjoy highlights from the live concert in which Latvian conductor Mariss Jansons conducted the Vienna Philharmonic Orchestra in their traditional start to the New Year. Petroc Trelawny is on hand to guide us through the finest galopps, polkas and waltzes composed by the Strauss family and

2016 marks the 75th anniversary of the annual concert from the beautiful Musikverein in the heart of Vienna, and viewers can enjoy performances not only from the Vienna Philharmonic but also by dancers from the Vienna State Ballet and the worldfamous Vienna Boys' Choir.

In keeping with tradition, the concert ends with the much-loved By the Beautiful Blue Danube and culminates in the perennially crowd-pleasing Radetzky March.

FRI 21:00 The Joy of Rachmaninoff (p039q3qd)

Tom Service takes a cinematic journey through Russia on the trail of the wondrous yet melancholic melodies of Russian giant Sergei Rachmaninoff. A celebration of a composer's musical triumph over critical adversity and Soviet terror, with performances and contributions from Vladimir Ashkenazy, Denis Matsuev, Steven Isserlis, Stephen Hough, Vladimir Jurowski, Lucy Parham and James Rhodes.

FRI 22:00 Sinatra: All or Nothing at All (b06tkbvh) Series 1 Compilations

An up-close and personal examination of the life, music and career of the legendary entertainer. In 1971, Frank Sinatra sang his legendary 'retirement concert' in Los Angeles, featuring music which was said to reflect his own life. Told in his own words from hours of archived interviews, along with commentary from those closest to him, this definitive series weaves the legendary songs he chose with comments from friends and family, as well as never-before-seen footage from

home movies and concert performances.

FRI 00:00 Roy Orbison: One of the Lonely Ones (b06t3vb9) [Repeat of broadcast at 21:00 on Tuesday]

FRI 01:00 Sammy Davis Jr: The Kid in the Middle

[Repeat of broadcast at 22:00 on Mondav]

FRI 02:00 The Kate Bush Story: Running Up That Hill (b04dzswb)

Documentary exploring Kate Bush's career and music, from January 1978's Wuthering Heights to her 2011 album 50 Words for Snow, through the testimony of some of her key collaborators and those she has inspired

Contributors include the guitarist who discovered her (Pink Floyd's David Gilmour), the choreographer who taught her to dance (Lindsay Kemp) and the musician who she said 'opened her doors' (Peter Gabriel), as well as her engineer and expartner (Del Palmer) and several other collaborators (Elton John, Stephen Fry and Nigel Kennedy).

Also exploring their abiding fascination with Kate are fans (John Lydon, Sidi Larbi Cherkaoui) and musicians who have been influenced by her (St Vincent's Annie Clark, Natasha Khan (aka Bat for Lashes), Tori Amos, Outkast's Big Boi, Guy Garvey and Tricky), as well as writers and comedians who admire her (Jo Brand, Steve Coogan and Neil Gaiman).

FRI 03:00 Sounds of the 70s 2 (b01gvmg9)

Reggae - Stir it Up

By the start of the 70s, the Windrush generation of immigrants who came to the UK from the Caribbean and West Indies were an established part of the British population and their influence and culture permeated UK society

This second programme rejoices and revels in the reggae music exported from Jamaica and the home-grown reggae-influenced sounds that sprouted from the cities of England. Reggae's dominance of the UK charts is celebrated with performances from Ken Boothe, Dave and Ansel Collins, Steel Pulse, Althea and Donna, Bob Marley and the Wailers, Janet Kay, Susan Cadogan and The Specials.

Supported by bbc.co.uk/programmes/