

SATURDAY 30 JULY 2016

SAT 19:00 Roger Bannister: Everest on the Track (b07lxs4s)

On 6 May 1954, Roger Bannister became the first man to run a mile in under four minutes. He was the epitome of Britain's disappearing scholar-athlete ideal.

The lunchtime-trained runner, immersed in his medical school studies, injected a booster shot into Britain's flagging but still flickering morale. This documentary is as much an historical study of Britain's search for something to erase the woes of the Second World War as it is a fresh look at the story of the quest for the first four-minute mile, previously deemed physically impossible. The story is told by Sir Roger himself, his rival John Landy, Seb Coe and the late Chris Chataway - Bannister's friend and pacesetter - among many others.

SAT 20:00 Tutankhamun: The Truth Uncovered (b04n6snp)

What killed King Tutankhamun? Ever since his spectacular tomb was discovered, the boy king has been the most famous pharaoh of all ancient Egypt. But his mysterious death, at just 19 years old, has never been explained.

Dallas Campbell reports on new scientific research being carried out on his fragile remains in an attempt to get to the truth. Using CT scan data, the programme creates the first scientifically accurate image of the king's corpse. DNA analysis uncovers a secret about Tutankhamun's family background, and the genetic trail of clues leads to a new theory to explain his death.

This is an epic detective story that uncovers the extraordinary truth of the boy behind the golden mask.

SAT 21:00 Beck (b07myx6r)

The Silent Scream

Two girls are hit by a train and killed instantly. Was it murder or a double suicide? Martin Beck and his team must answer the question of whether the pressure and intimidation faced by these young women in their everyday lives led to their deaths.

In Swedish with English subtitles.

SAT 22:25 imagine... (b04pn3f)

Winter 2014

Bette Midler: The Divine Miss M

As she is about to begin a run on Broadway in Hello Dolly, imagine... revisits Miss M in New York in a programme first shown in 2014 when she was about to release her girl band-inspired album.

For five decades the woman they call the Divine Miss M has forged a path which has taken her from a pineapple-canning factory in Honolulu to becoming a Hollywood legend. Alan Yentob joins Bette Midler on a journey through the chorus lines of Broadway and the bathhouses and nightclubs of the 1970s to the very top of the film industry. Her combination of a soulful voice and the raucous wit of Mae West has made her name as an outrageous, but always captivating, all-round entertainer.

SAT 23:40 Spike Milligan: Love, Light and Peace (b04t1yj)

A very personal portrait of the truly unique comedy genius of Spike Milligan, as told in his own words and featuring exclusive home movie footage. With contributions from those who worked with him, lived with him and were inspired by him.

SAT 01:10 The Kinks at the BBC (b012ht1w)

The story of The Kinks, one of the UK's most important and influential bands, as told from the vaults of the BBC archive.

From their humble beginnings in north London, brothers Ray and Dave Davies, school friend Pete Quaife and local drummer Mick Avory exploded onto the music scene of early 1960s London.

From this series of unique archive performances, we learn that blues was their first love and Dave's signature guitar sound would go on to influence a generation of guitar players. As Ray's uniquely English songwriting style developed, the spectre of Ray and Dave's rocky fraternal relationship continually loomed in the background, through concerts for The Old Grey Whistle Test in the 1970s to appearances on Top of the Pops in the 1980s.

The inevitable band split came in 1996, and the BBC archive continues with Ray's reinvention as a solo artist with performances on the Electric Proms and up to the present day on Later... with Jools Holland. All the while the brothers continue to tease and goad the press - and one another - with talk of a Kinks reunion.

SAT 02:15 Cilla at the BBC (b067543w)

Much-mourned national treasure Cilla Black commenced her eminent career as a TV host in 1968 on the BBC. Her career as perhaps the nation's favourite female pop singer of the decade had already been established after landing her first Number 1 with Anyone Who Had a Heart, the biggest-selling hit by a female singer in the 1960s.

This tribute compilation celebrates the BBC's coverage of Cilla's 60s pop star years on programmes like Peter Cook and Dudley Moore's Not Only...But Also, The Ken Dodd Show, Top of the Pops and The Royal Variety Performance, before selecting just some of the golden moments from the long-running self-titled series she hosted for the BBC between 1968 and 1976 including the Paul McCartney-penned theme song Step Inside Love and that 1973 famous duet with Marc Bolan on Life's A Gas.

SAT 03:15 Top of the Pops (b07m7wpq)

Simon Bates presents the chart show programme, first broadcast on 11 March 1982. Includes performances from Bow Wow Wow, Fun Boy Three & Bananarama, Depeche Mode, Julio Iglesias, Haircut 100, the Associates, Adrian Gurvitz and Tight Fit.

SUNDAY 31 JULY 2016

SUN 19:00 BBC Proms (b07mlqhm)

2016

Berlioz Romeo and Juliet

Shakespeare's influence on the world has been profound, and on no-one more so than Berlioz, who fell in love with the Bard's work in 1827 and so began a lifelong passion for all things Shakespearean.

How fitting, then, to mark 400 years since Shakespeare's death with a performance of Berlioz's dramatic symphony Romeo and Juliet, the grandest of his Shakespeare-inspired works. Sir John Eliot Gardiner conducts the Orchestre Revolutionnaire et Romantique, the Monteverdi Choir, the National Youth Choir of Scotland and soloists Julie Boulianne (mezzo-soprano), Jean-Paul Fouchecourt (tenor) and Laurent Naouri (bass), as Berlioz tells his version of this most famous of stories.

SUN 21:00 Generation '66 (b07myxld)

The defining moment of 1966 may have been England winning the World Cup, but what about the other 364 days of the year? A revealing portrait of '66 told by the generation that shaped it. Featuring Michael Palin, Janet Street-Porter, Peter Stringfellow, Nina Baden-Semper and Geno Washington.

SUN 22:00 The Wednesday Play (b007492r)

Cathy Come Home

Landmark 1960s TV play about a young couple and their children who are cruelly overtaken by events which lead them into an unrelenting trap of debt, homelessness and poverty.

SUN 23:20 Rich Hall's Inventing the Indian (b01nqbqk)

Comedian Rich Hall goes in search of the real American Indian, a people who have too often been stereotyped. This image portrayed through cinema and literature is not a true representation of the Native American, giving Rich the opportunity to redress the balance.

With the help of a Native American, Dallas Goldtooth, Rich explores a different idea of what the American Indian is and what life is like for them today. He not only questions the screen image of the 'savage Indian' in films such as Soldier Blue, Stagecoach and A Man Called Horse, but looks at the written one, through literature such as The Last of the Mohicans, Black Elk Speaks and Bury My Heart at Wounded Knee.

The programme takes Rich from the Navajo Reservation in Arizona to the Pine Ridge Reservation of South Dakota and incorporates interviews with tribal elders and activists, archive clips of some of cinema's finest films, historical photographs and footage, all brought together with Rich's customary wit and intelligence.

A documentary which uncovers the truth about the American Indian and gives us a different perspective on the people who set foot on American soil first.

SUN 00:50 Yellowstone (b00jrh7r)

Summer

As the spring melts the winter snow, the full extent of Yellowstone is gradually revealed. Now, from the surrounding

lowlands herds of elk, pronghorn and bison return from their winter feeding grounds to take advantage of America's richest natural grasslands - right in the heart of Yellowstone. In only a few weeks, a brutally harsh deep freeze has been transformed into a flower-decked nursery perfect for the year's newborn animals. There is also a new cast of characters that emerge bleary-eyed from hibernation as grizzly bears begin to teach their young the secrets of survival in Yellowstone - how to hunt fish in the still-frozen rivers and, as the season progresses, when to move out through valleys and grasslands into summer forests and up into Yellowstone's alpine peaks. In this spectacular wilderness, over 10,000ft high, they slide and scabble, hunting millions of tiny moths buried under rocks on the barren slopes.

But summer here is fickle - even on Midsummer's Day, winter can descend from the surrounding mountains bringing punishing snows to fragile flower meadows. August is the only month in the year when it does not snow, but then, just as it seems the easy living of summer has finally arrived, it is brought to an abrupt end as fires sweep through the forest, laying Yellowstone to waste.

Yellowstone is the most geothermally active place on earth. There are 10,000 boiling springs, bubbling mudpots and fumeroles there, and more geysers than in all the rest of the world put together. For some, nature's fountains are more than just a marvel, they are an obsession. 'Geyser Gazers' have seen them all and can even imitate them.

SUN 01:50 Burma, My Father and the Forgotten Army (b036x83s)

Apart from a few fragmentary stories, Griff Rhys Jones's father never talked about his war. Yet as a medical officer to a West African division he travelled 15,000 miles from Wales to Ghana and the jungles of Burma. He and his men were part of an army of a million raised in Africa and Asia to fight the Japanese. To understand their story Griff travels first to Ghana and then, accompanied by 90-year-old veteran Joshua, he goes to jungles of Burma. It is known as the forgotten war, but Griff discovers how it transformed these West Africans from children of the British Empire into masters of their own destiny.

SUN 02:50 Generation '66 (b07myxld)

[Repeat of broadcast at 21:00 today]

MONDAY 01 AUGUST 2016

MON 19:00 World News Today (b07mj1b8)

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

MON 19:30 The Wonder of Animals (b04m9r3s)

Snakes

Chris Packham delves beneath a snake's skin to discover what has made them some of the most successful predators on earth. Their simple body plan hides remarkable adaptations that enable them to rival their limbed, winged and finned counterparts.

Chris reveals the variety of ways in which snakes use their bodies not just to slither, but to climb, fly and swim. He explores how they use their senses to hunt, from heat-sensitive pits used to capture prey in the dark to tongues used to lure fish, and how venom acts not just to kill prey but also to predigest it.

MON 20:00 Roy Orbison: One of the Lonely Ones (b0613vb9)

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 interviews with his sons, many close friends and collaborators like Jeff Lynne, T Bone Burnett, Bobby Goldsboro and Marianne Faithfull.

MON 21:00 The Girl from Ipanema: Brazil, Bossa Nova and the Beach (b07mlkzl)

Documentary in which Katie Derham travels to Rio de Janeiro (where her father was born) to explore the story behind Brazil's most famous and enduring song. Written in 1962 by Antonio Carlos Jobim with lyrics by Vinícius de Moraes, and a later English translation by Norman Gimbel, The Girl from Ipanema defines the moment Brazil charmed the world with a laid-back

song about a haunting woman.

It's a vibrant musical journey to the stunning beaches, majestic mountains and buzzy clubs of Rio, where Katie meets key musicians and architects of bossa nova, including Carlos Lyra, Roberto Menescal, Joyce, Daniel Jobim and Marcos Valle, witnesses intimate musical performances, and uncovers the genesis and story behind Brazil's most successful musical export.

The Girl from Ipanema is quintessential bossa nova and tracing its roots reveals the fascinating story of this unique musical style. Invented by a gang of young bohemians in Rio in the late 50s, bossa grew into a 60s phenomenon, especially in the US where it became a youth craze and later a significant part of the modern jazz repertoire. The Girl from Ipanema, as sung by Astrud Gilberto with sax from Stan Getz, went top five in the US and became a major international hit in 1964.

Nothing sums up Rio as well as the simple and seductive lyrics to The Girl from Ipanema. What better way to get to understand the city, its people and its mid-60s zeitgeist than through its most famous song?

MON 22:00 The Real White Queen and Her Rivals (b037mw8c)
Episode 2

Author Philippa Gregory tells the interweaving stories of the women who were decisive figures in the Wars of the Roses. Gregory brings a rich story of intrigue, betrayal, love and bloodshed vividly to life. For Gregory, these women matter as much as the kings and nobles in this age of instability and dynastic feud.

She describes the lives of Elizabeth Woodville, the White Queen, a commoner whose beauty enchanted a king and who suffered shocking tragedy as she struggled to hold a grip on the throne for herself and for her children.

Gregory also brings to life the woman who would be queen to Richard III, the heiress Anne Neville. Gregory depicts a young woman born into power and privilege who survives traumatic losses to become queen. We see her grow from a political pawn of her noble father to a determined and canny player on the national stage.

Gregory also reveals the real character of Margaret Beaufort, mother of the Tudor dynasty. This extraordinary woman devotes her life to the cause of her son Henry Tudor and plays a cunning game of alliance and conspiracy to keep his claim to the throne of England alive. She is never queen, but ends the era more powerful than Queen Elizabeth or Queen Anne. Her brilliant strategic plotting steers her exiled son to the pinnacle of power.

MON 23:00 Calculating Ada: The Countess of Computing (p030s5bx)

Ada Lovelace was a most unlikely computer pioneer. In this film, Dr Hannah Fry tells the story of Ada's remarkable life. Born in the early 19th century, Ada was a countess of the realm, a scandalous socialite and an 'enchanted of numbers'. The film is an enthralling tale of how a life infused with brilliance, but blighted by illness and gambling addiction, helped give rise to the modern era of computing.

Hannah traces Ada's unlikely union with the father of computers, Charles Babbage. Babbage designed the world's first steam-powered computers - most famously the analytical engine - but it was Ada who realised the full potential of these new machines. During her own lifetime, Ada was most famous for being the daughter of romantic poet Lord Byron ('mad, bad and dangerous to know'). It was only with the advent of modern computing that Ada's understanding of their flexibility and power (that they could be far more than mere number crunchers) was recognised as truly visionary. Hannah explores how Ada's unique inheritance - poetic imagination and rational logic - made her the ideal prophet of the digital age.

This moving, intelligent and beautiful film makes you realise we nearly had a Victorian computer revolution.

MON 00:00 A History of Art in Three Colours (b011ng0m)
White

In the Age of Reason, it was the rediscovery of the white columns and marbles of antiquity that made white the most virtuous of colours. For flamboyant JJ Wickelmann and British genius Josiah Wedgwood, white embodied all the Enlightenment's values of justice, equality and reason.

MON 01:00 The Story of Music Hall with Michael Grade (b016fm23)

Michael Grade traces the raucous history of the music hall in a revelatory journey that takes him from venues such as Wilton's

Music Hall in London to Glasgow's once-famous Britannia. Talking to enthusiasts and performers, Lord Grade discovers the origins of this uniquely British form of entertainment and revisits some of the great acts and impresarios, from Charles Morton and George Leybourne to Bessie Bellwood and Marie Lloyd.

Featuring Jo Brand and Alexei Sayle, with performances from Barry Cryer and many more, Grade hears about dudes, swells, mashers and serio-comics and hears how, in many a house, no turn was left unstoned.

MON 02:30 Rude Britannia (b00sss1g)
You Never Had It So Rude

The final part of a series exploring British traditions of satire and bawdy humour brings the story of a naughty nation up to date and explores how a mass democracy of rude emerged, beginning with the 1960s revolutions and continuing with the today's controversies.

There is a look at how a tradition of rude cartooning came back to life, as cartoonists draw the iconic political figures of the last 50 years: Gerald Scarfe captures Harold Macmillan, Steve Bell does Margaret Thatcher and Martin Rowson depicts Tony Blair.

The rude comic art of Viz is revealed in the characters of Sid the Sexist and the Fat Slags, and the rude theatre of Joe Orton, the rude radio of Round the Horne and the hippy rudeness of underground magazine Oz are also investigated.

And the history of rude television is traced from Till Death Us Do Part to Little Britain via Spitting Image. Finally, there is a look at how rude comedy begins to be seen as offensive in sexist and racist ways.

TUESDAY 02 AUGUST 2016

TUE 19:00 World News Today (b07mj1bf)

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

TUE 19:30 The Wonder of Animals (b04n1mpr)

Birds of Prey

Chris Packham explores what enables birds of prey to rule the aerial roost. Their ability to dominate their fellow birds in terms of strength, manoeuvrability and phenomenal speed is down to a combination of anatomical and physiological adaptations.

Chris explains the internal workings of the bald eagle's ratchet talons and how sharp eyes and a gyrosopic head enable the goshawk to keep its sight firmly fixed on both its prey and its surroundings as it tears through the undergrowth. New research reveals how pop-up feathers on the peregrine falcon's back act like pits on a golf ball to reduce drag - allowing it to reach 220mph.

TUE 20:00 Sacred Wonders of Britain (b03qkzbp)

Episode 3

Neil Oliver examines how the creation of saints by the early church led to a new generation of sacred wonders across Britain. On Iona, in the Inner Hebrides, Neil discovers the traditional resting place of Macbeth. He also delves back through time to discover how St Columba sanctified the island with a tough brand of monasticism all the way from the Egyptian desert. On Lindisfarne, Neil sees how the epic journey of St Cuthbert led to the writing of the extraordinary Lindisfarne Gospels and the building of Durham Cathedral.

At Canterbury Cathedral, Neil learns how St Thomas Becket's grisly murder was harnessed to build its nave, one of the great glories of medieval architecture, and on Glastonbury Tor in Somerset, he investigates layer after layer of powerful legend in the story of the Holy Grail, the sacred cup of everlasting life.

TUE 21:00 Britain's Pompeii: A Village Lost in Time (b07myxws)

Professor Alice Roberts joins the team excavating a 3,000-year-old Bronze Age village in the Cambridgeshire Fens that has been called the British Pompeii.

The village earned its nickname because 3,000 years ago it burned to the ground, and as it burned it fell into the peat, preserving both the houses and their contents. Until its discovery, we had little real idea of what life was like in Bronze Age Britain.

Now we can peek inside our Bronze Age ancestors' homes as archaeologists discover perfectly preserved roundhouses, and the contents inside them - right down to the utensils in their kitchens. These roundhouses were built in a style never seen in

the UK before - testimony not only to the villagers' technical skills, but also of their connections to Europe.

The team has made other incredible discoveries on the dig - from Britain's oldest-found wheel, to swords used in battle, and bowls still containing preserved remnants of food. One of the biggest revelations is the discovery of a complete set of the early technology used to produce cloth - a full industrial process we've never seen in Britain before.

This glimpse into domestic life 3,000 years ago is unprecedented, but it also transforms our impressions of Bronze Age Britain - far from being poor and isolated, it seems the villagers were successful large-scale farmers who used their farming surplus to trade with Europe, exchanging their crops for beautiful glass jewellery and multiple metal tools per household.

As part of the dig, the archaeologists also investigate the cause of the fire - was it just a terrible accident, or did the villagers' wealth provoke an attack?

TUE 22:00 The Bermuda Triangle: Beneath the Waves (b007c68n)

Professor Bruce Denardo attempts to prove whether there is any truth behind the legend of the Bermuda Triangle, where many ships and planes have disappeared in mysterious circumstances. New investigation techniques reveal the truth behind the infamous disappearance of Flight 19. Graham Hawkes is also able to reveal, by using a state-of-the-art submarine, how five wrecks mysteriously wound up 730 feet down in the heart of the Bermuda Triangle.

TUE 23:00 Fossil Wonderlands: Nature's Hidden Treasures (b03z05zz)

The Mammal Hothouse

Professor Richard Fortey investigates the remains of an ancient volcanic lake in Germany where stunningly well-preserved fossils of early mammals, giant insects and even perhaps our oldest known ancestor have been found.

Among the amazing finds are bats as advanced and sophisticated as anything living today, more than 50 million years later, dog-sized 'dawn' horses, the ancestor of the modern horse, and giant ants as large as hummingbirds.

TUE 00:00 Sacred Wonders of Britain (b03qkzbp)

[Repeat of broadcast at 20:00 today]

TUE 01:00 A History of Art in Three Colours (b011ng0m)

[Repeat of broadcast at 00:00 on Monday]

TUE 02:00 The Bermuda Triangle: Beneath the Waves (b007c68n)

[Repeat of broadcast at 22:00 today]

TUE 03:00 Britain's Pompeii: A Village Lost in Time (b07myxws)

[Repeat of broadcast at 21:00 today]

WEDNESDAY 03 AUGUST 2016

WED 19:00 World News Today (b07mj1bl)

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

WED 19:30 Elsa the Lioness (b00v1xk5)

First transmitted in 1961, David Attenborough travels to Meru National Park in Kenya to visit Joy and George Adamson and meet Elsa the lioness and her cubs shortly before Elsa's death.

In the late 1950s, game warden George and his wife Joy became the carers of three orphaned cubs - Elsa, Big One and Lustica - after George had been forced to kill their mother. Big One and Lustica were eventually sent to Rotterdam Zoo in the Netherlands, but Elsa remained with the Adamsons. Joy's quest to train Elsa to survive in the wild and Elsa's subsequent independence became the basis for the book and film Born Free.

Now living in the wild with her own three cubs in Meru National Park, David joins the Adamsons as they try and track down Elsa to check up on her wellbeing.

WED 20:00 Yellowstone (b00jmqk1)

Autumn

Over the summer, Yellowstone has flourished - in late August

there are more living things here than at any other time of the year. But winter is around the corner and there are just two months for all Yellowstone's animals to get ready or get out.

An early dusting of snow is a sign for elk to start moving down from the mountains to focus on finding food in the valleys. Although the wolves are waiting for them, the male elk are distracted, their haunting bugle call boasting that they are fired up and ready to fight each other to the death for the right to breed.

As temperatures fall further, beavers get busy in a rush to repair dams and stock underwater larders before ice freezes their ponds. Yellowstone's forests - the aspens, cottonwoods and maples - start to shut down for the winter, their colours painting the park a blaze of red and gold. Meanwhile, another tree is coming into its own, the whitebark pine. It offers up a bumper crop of pine nuts which fatten grizzly bears and squirrels alike. But its nuts are meant for another animal - the Clark's nutcracker, a small bird with a colossal memory and one that will reward the tree's efforts well by carrying its seeds far and wide, and even planting them.

As autumn ends, the snow and ice return and many animals now move out from the heart of Yellowstone and away from the protection of the national park. Their fight is not only to survive the cold, but also to find what little wild space remains in the modern world. All around Yellowstone, the human world is encroaching - it is now that the true value of the 'world's first national park' becomes clearer than ever.

Mike Kasic is a local sound recordist who got many of the natural sounds for the series, but in his spare time he dons snorkel and fins and jumps into the raging waters of one of the USA's wildest rivers to explore Yellowstone from the point of view of the unique Yellowstone cut-throat trout. Whilst his exploits might seem strange to the other park users - fly fishermen and bison alike - in becoming a fish, Mike not only uncovers an enchanting hidden Yellowstone, but finds out that things are not what they used to be for the cut-throat trout.

WED 21:00 Masters of the Pacific Coast: The Tribes of the American Northwest (b07mlplp)
Survival

Two-part documentary in which archaeologist Dr Jago Cooper explores the extraordinary and resilient culture of the American north west, revealing one the most inspiring stories in human history.

1,400 miles of rugged, windswept and rocky coastline in what is now the Alaskan panhandle, British Columbia and Washington state have been home to hundreds of distinct communities for over 10,000 years. There is the longest continuing culture to be found anywhere in the Americas. They mastered a tough environment to create unique and complex communities that have redefined how human societies develop. They produced art infused with meaning that ranks alongside any other major civilisation on earth. And they were very nearly wiped out - by foreign disease, oppression and theft of their lands. But a deep connection to the environment lies at the heart of their endurance, and - unlike many indigenous cultures annihilated following European contact - their culture sustains and has much to offer the rest of the world today.

In the second episode, Jago reveals how a cultural tradition that began over 10,000 years ago managed to survive against the odds. Following European contact, the indigenous peoples of what is now south east Alaska, British Columbia and Washington state suffered disease, theft of their land and oppression. But Jago argues that northwest coast culture has an extraordinary resilience. Its connection to the land has been developed over thousands of years, which meant that it was able to adapt and transform when faced with threats and disruption. These qualities make it one of the longest continuous cultures in the Americas.

WED 22:00 Britain's Pompeii: A Village Lost in Time (b07myxws)
[Repeat of broadcast at 21:00 on Tuesday]

WED 23:00 The Horizon Guide to Mars (b00p1crx)
The intriguing possibility of life on Mars has fuelled man's quest to visit the Red Planet. Drawing on 45 years of Horizon archive, space expert Dr Kevin Fong presents a documentary on Earth's near neighbour.

Man's extraordinary attempts to reach Mars have pushed technological boundaries past their limit and raised the tantalising prospect of establishing human colonies beyond our own planet.

While the moon lies 240,000 miles away, Mars is at a distance of 50 million miles. Reaching the moon takes three days, but to land on Mars would take nearly eight months, and only two thirds of the missions to Mars have made it. The BBC has been

analysing the highs and lows throughout - including the ill-fated British attempt, the Beagle.

Horizon has explored how scientists believe the only way to truly understand Mars is to send people there. If and when we do, it will be the most challenging trip humanity has ever undertaken.

WED 00:00 The Real White Queen and Her Rivals (b037mw8c)
[Repeat of broadcast at 22:00 on Monday]

WED 01:00 Timeshift (b03mp53s)
Series 13

The Ladybird Books Story: The Bugs that Got Britain Reading

To millions of people, Ladybird books were as much a part of childhood as battery-powered torches and warm school milk. These now iconic pocket-sized books once informed us on such diverse subjects as how magnets work, what to look for in winter and how to make decorations out of old eggshells. But they also helped to teach many of us to read via a unique literacy scheme known as 'key words'. Ladybird books were also a visual treat - some of the best-known contemporary illustrators were recruited to provide images which today provide a perfect snapshot of the lost world of Ladybirdland: a place that is forever the gloriously ordinary, orderly 1950s.

WED 02:00 Calculating Ada: The Countess of Computing (p030s5bx)
[Repeat of broadcast at 23:00 on Monday]

WED 03:00 Masters of the Pacific Coast: The Tribes of the American Northwest (b07mlplp)
[Repeat of broadcast at 21:00 today]

THURSDAY 04 AUGUST 2016

THU 19:00 World News Today (b07mj1bs)

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

THU 19:30 Top of the Pops (b07mzkxz)

Steve Wright presents the chart show, first broadcast on 18 March 1982. Includes appearances by Tight Fit, Gary Numan, Japan, Classix Nouveaux, ABC, Imagination and Visage.

THU 20:00 Masters of the Pacific Coast: The Tribes of the American Northwest (b07mlplp)
[Repeat of broadcast at 21:00 on Wednesday]

THU 21:00 Scotland's First Oil Rush (b07cb31r)

Scotland witnessed the world's first true 'oil rush', when inventor James 'Paraffin' Young first refined lighting fuel from a shale rock known as torbanite in 1851. There followed more than a century of the shale oil industry, which employed thousands and whose fortunes ebbed and flowed with industrialisation and two world wars.

Presented by geologist Professor Iain Stewart, this film tells the story of shale, its lasting impact on one Scottish community - West Lothian - and the massive and unique landmarks still visible today.

THU 22:00 Rome's Lost Empire (b01pc063)

Dan Snow uses satellite technology to reveal the secrets of the Roman Empire. Together with space archaeologist Sarah Parcak, Dan sets out to identify and then track down lost cities, amphitheatres and forts in an adventure that sees him travel through some of the most spectacular parts of the vast empire. Cutting-edge technology and traditional archaeology help build a better understanding of how Rome held such a large empire together for so long.

THU 23:30 Roy Orbison: One of the Lonely Ones (b06t3vb9)
[Repeat of broadcast at 20:00 on Monday]

THU 00:30 Top of the Pops (b07mzkxz)
[Repeat of broadcast at 19:30 today]

THU 01:10 The Girl from Ipanema: Brazil, Bossa Nova and the Beach (b07mlkzl)
[Repeat of broadcast at 21:00 on Monday]

THU 02:10 Danny Baker Rocks... A Bit (b03v0svf)
The Seventies

In the first of three programmes showcasing the best of British rock, Danny Baker tees up, with characteristic humour, great performances from the 70s by the likes of The Who, Genesis, Kate Bush and The Specials.

THU 02:40 Scotland's First Oil Rush (b07cb31r)
[Repeat of broadcast at 21:00 today]

FRIDAY 05 AUGUST 2016

FRI 19:00 World News Today (b07mj1by)

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

FRI 19:30 BBC Proms (b07mn2kl)
2016

Finnish Folk Song

Two Russian heavyweights and a living Scottish composer are the focus of tonight's prom, featuring the BBC Scottish Symphony Orchestra under the direction of chief conductor in waiting Thomas Dausgaard.

Finnish soloist Pekka Kuusisto performs Tchaikovsky's passionate and virtuosic Violin Concerto. It is followed by Petrushka, the first of a trio of landmark Stravinsky ballet scores for the Ballet Russes to be performed by Scottish orchestras.

The concert opens with a world premiere of the first part of a new BBC commission from Helen Grime. Two Eardley Pictures - I: Caterline in Winter was inspired by the landscape paintings of Joan Eardley and folk music of the far north east.

FRI 21:10 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 ELLO.

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

FRI 22:10 Music Moguls: Masters of Pop (p039x53y)
Melody Makers

Part two of this enlightening series exploring the music business from behind the scenes looks at the music producers. These are the men and women who have created the signature sounds that have defined key periods in rock and pop history. Highlights include Trevor Horn on inventing the 'Sound of the Eighties', Lamont Dozier on Motown, and a TV first with legendary producer Tony Visconti taking us through David Bowie's seminal song Heroes.

Narrated by master producer Nile Rodgers.

FRI 23:10 Music Moguls: Masters of Pop (p039x57f)
Myth Makers

Part three of this illuminating series exploring the music business from behind the scenes takes a look at PR, the unseen force behind all the biggest musical acts in the world. With unique revelations, unseen footage and unrivalled access, it tells the story of the rise of PR within the music industry through the eyes of the people who lived it. Highlights include the PR campaigns behind superstars Jimi Hendrix, Taylor Swift and David Bowie.

Narrated by PR Alan Edwards.

FRI 00:10 Danny Baker Rocks... A Bit (b03v4hsf)
The Eighties

In the second of three programmes showcasing the best of British rock, performances from the 80s by the likes of The Clash, The Pretenders, Ivor Cutler and Prefab Sprout are

saluted by arch-enthusiast Danny Baker.

FRI 00:40 Music Moguls: Masters of Pop (p039w64c)
[Repeat of broadcast at 21:10 today]

FRI 01:40 Music Moguls: Masters of Pop (p039x53y)
[Repeat of broadcast at 22:10 today]

FRI 02:40 Music Moguls: Masters of Pop (p039x5f7)
[Repeat of broadcast at 23:10 today]