

SATURDAY 01 JULY 2017

SAT 19:00 Britain and the Sea (b03lv22)
Trade and Romance

This third episode traces the crucial importance of the sea to Britain's trade and to individual livelihoods of coastal communities. Joined on this leg of his epic sail by his son Fred, David follows the trade routes of the west coast of Scotland along the monumental channels that cut through the romantic Highlands and brought wealth and prosperity to the heart of Scotland. The journey starts at Craobh Haven and takes David along the Crinan Canal, around the Isle of Bute and up the River Clyde towards Glasgow.

SAT 20:00 Nature's Great Events (b00j4c6b)
The Great Flood

The great flood in the Okavango turns 4,000 square miles of arid plains into a beautiful wetland. Elephant mothers guide their families on an epic trek across the harsh Kalahari Desert towards it, siphoning fresh water from stagnant pools and facing hungry lions. Hippos battle for territory, as the magical water draws in thousands of buffalo and birds, and vast clouds of dragonflies. Will the young elephant calves survive to reach this grassland paradise?

The experienced mother elephants time their arrival at the delta to coincide with the lush grass produced by the great flood. In a TV first, the programme shows the way they use their trunks to siphon clean water from the surface layers of a stagnant pool, while avoiding stirring up the muddy sediment on the bottom with their feet.

Bull hippos also converge on prime territories formed by the rising floodwater. Two big bulls do bloody battle, at times being lifted out of the water by their rival.

Lechwe swamp deer, zebras, giraffes, crocodiles and numerous fish and thousands of birds arrive in the delta. And, in a phenomenon never before filmed in the Okavango, thousands of dragonflies appear - seemingly from nowhere - within minutes of the flood arrival, mating and laying eggs.

As the flood finally reaches its peak, elephants and buffalo, near the end of their epic trek across the desert, face the final gauntlet of a hungry pride of lions.

In a heartrending sequence, a baby elephant is brought down by a lion in broad daylight.

The diary section - Mission Impossible - shows how the versatility and persistence of cameraman Mike Holding results in some amazing sequences of the flood advancing.

SAT 21:00 Kon-Tiki (b05xbpf)

Adventure film. In 1947, Norwegian explorer Thor Heyerdahl crosses the Pacific Ocean on a balsa-wood raft, together with five men, to prove that South Americans back in pre-Columbian times could have crossed the ocean and settled on Polynesian islands. After financing the trip with loans and donations, they set off on an epic 101-day voyage across 5,000 miles, while the world awaits the result.

This film uncovers the origin of the idea, the preparations and the events on the trip.

SAT 22:50 Top of the Pops (b08w9n0w)

John Peel and David Jensen present the pop chart programme, first broadcast on 2 February 1984. Includes appearances from Musical Youth, Queen, Matthew Wilder, Fiction Factory, Thomas Dolby, Thompson Twins, Juan Martin and Duran Duran.

SAT 23:25 Top of the Pops (b08w9nk3)

Simon Bates and Peter Powell introduce the pop chart programme. Featuring Slade, Thompson Twins, Style Council, Shannon, Matt Bianco and Nena.

SAT 23:50 The Old Grey Whistle Test (b014vzy3)
70s Gold

The Old Grey Whistle Test was launched on 21 September 1971 from a tiny studio tucked behind a lift shaft on the fourth floor of BBC Television Centre. From humble beginnings, it has gone on to provide some of the best and most treasured music archive that the BBC has to offer.

This programme takes us on a journey and celebrates the musically mixed-up decade that was the 1970s, and which is reflected in the OGWT archive. There are classic performances from the glam era by Elton John and David Bowie, an early UK TV appearance from Curtis Mayfield, the beginnings of heavy metal with Steppenwolf's iconic Born to Be Wild anthem and

the early punk machinations of the 'mock rock' New York Dolls. Archive from the pinnacle year, 1973, features Roxy Music, The Wailers and Vinegar Joe. The programme's finale celebrates the advent of punk and new wave with unforgettable performances from Patti Smith, Blondie, Iggy Pop and The Jam.

Artists featured are Elton John, Lindisfarne, David Bowie, Curtis Mayfield, Gladys Knight & The Pips, Steppenwolf, Vinegar Joe, Brinsley Schwarz, New York Dolls, Argent, Bob Marley & The Wailers, Captain Beefheart, Johnny Winter, Dr Feelgood, Gil Scott Heron, Patti Smith, Tom Petty & The Heartbreakers, Cher & Gregg Allman, Talking Heads, The Jam, Blondie, Iggy Pop and The Specials.

SAT 01:20 Electric Proms (b009zj8p)
2006

The Who

Pete Townshend and Roger Daltrey are on blistering form in a session recorded at the Roundhouse in north London, as the grand finale of the BBC's Electric Proms in 2006. The setlist showcases a sprinkling of songs from their new mini-opera Wire and Glass, but it's also packed with big singalong tunes like My Generation, Who Are You, Baba O'Riley and Pinball Wizard.

SAT 02:10 Totally British: 70s Rock 'n' Roll (b01r3pm9)
1970-1974

Trawled from the depths of the BBC Archive and classic BBC shows of the day - Old Grey Whistle Test, Top of the Pops and Full House - a collection of performance gems from a totally rock 'n' roll early 1970s.

This was a golden era for British rock 'n' roll as everyone moved on from the whimsical 60s and looked around for something with a bit more oomph! In a pre-heavy metal world bands were experimenting with influences that dated back to 50s rock 'n' roll, whilst taking their groove from old-school rhythm and blues. It was also a time when men grew their hair long!

In a celebration of this era, we kick off with an early 1970s Badfinger number direct from the BBC library and continue the groove from the BBC vaults with classic rock 'n' roll heroes like Free, Status Quo, the Faces, Humble Pie and Mott the Hoople. Plus from deep within the BBC archives we dig out some rarities from the likes of Babe Ruth, Stone the Crows, The Sensational Alex Harvey Band, Man, Heavy Metal Kids and original rockers Thin Lizzy... to name but a few.

Sit back and enjoy a 60-minute non-stop ride of unadulterated Totally British 70s Rock 'n' Roll!

SUNDAY 02 JULY 2017

SUN 19:00 Handmade in Japan (b08v8gx1)
Series 1

Samurai Sword

On the island of Kyushu in Japan, one of the country's last remaining families of Samurai sword makers are continuing a tradition their ancestors began 230 years ago. Working with his brother and son, Shiro Kunimitsu is dedicated to perfecting the art of producing swords of exceptional sharpness and durability. This film follows Shiro and his family as they lovingly craft a sword - a process that takes many months. We discover the importance of the sword in the ancient Samurai code, its enduring spiritual and symbolic power, and the challenges facing the dwindling numbers of sword makers in Japan today.

SUN 19:30 Handmade in Japan (p054mch)
Series 1

Kimono

The second episode takes us to the remarkable island of Amami Oshima in the southern oceans of Japan, to follow the elaborate handmade production of a traditional Japanese kimono. Over five hundred people are involved in producing the island's famous mud-dyed silk which takes many months to produce. The film follows the painstaking process of the silk being bound, hand dyed, woven and finally turned into a kimono by a seamstress. Along the way we not only discover the history of the kimono tradition, but also the many difficulties facing the kimono industry in modern Japan.

SUN 20:00 Handmade in Japan (p054mcv)
Series 1

Mingei Pottery

The final episode features one of Japan's most famous family of potters - the Hamadas. Shoji Hamada was a major figure in the Mingei folk art movement of the 1920s and '30s and helped turn the town of Mashiko into a major centre of ceramics, famous for its thick and rustic pottery. He also spent time in Britain where he taught renowned St Ives potter Bernard Leach the art of Japanese pottery.

Today, his grandson Tomoo Hamada continues the family tradition and this film follows him at work, painstakingly shaping his pots and firing them in an old-style wood-fuelled kiln. We also hear how Tomoo played a vital role in saving Mashiko as a pottery centre after many of its kilns were destroyed in the 2011 earthquake.

SUN 20:30 Summer Night Concert from Vienna (b08wzv6b)
2017

Katie Derham introduces the 2017 open-air concert from the magnificent gardens of the Schonbrunn Palace in Vienna, given by the Vienna Philharmonic Orchestra conducted by Christoph Eschenbach.

Fairy tale and myth influence all of the evening's music, with highlights from classical favourites such as Tchaikovsky's The Sleeping Beauty, Stravinsky's Firebird Suite, John Williams's Hedwig's Theme from the Harry Potter films and the Prologue to Humperdink's opera Hansel and Gretel.

They are joined by American soprano Renee Fleming performing some of her favourite songs and arias, including Russalka's Song to the Moon.

SUN 22:00 Storyville (b08wzv6d)
Oink: Man Loves Pig

Oink explores man's relationship to pigs, diving headfirst into a beguiling mix of sentimentality and violence - from keeping pigs in your bed to factory farming.

The documentary veers wildly from the birth of Dorothy, our saddleback narrator, to zeno-transplantation of organs, from Ralph Steadman cartoons for Animal Farm to wild hogs being machine-gunned from a helicopter.

Oink is a mad, bad journey from China to Wiltshire via Brooklyn, which reflects on who we are and how we deal with the world around us.

SUN 23:20 Climate Change by Numbers (p02jsdrk)

At the heart of the climate change debate is a paradox - we've never had more information about our changing climate, yet surveys show that the public are, if anything, getting less sure they understand what's going on.

This programme aims to remedy that, with a new perspective on the whole subject. Presented by three mathematicians - Dr Hannah Fry, Prof Norman Fenton and Prof David Spiegelhalter - it hones in on just three key numbers that clarify all the important questions around climate change. The stories behind these numbers involve an extraordinary cast of characters, almost all of whom had nothing to do with climate change, but whose work is critical to our understanding of the climate.

The three numbers are:
0.85 degrees (the amount of warming the planet has undergone since 1880)

95 per cent (the degree of certainty climate scientists have that at least half the recent warming is man-made)

1 trillion tonnes (the total amount of carbon we can afford to burn - ever - in order to stay below 'dangerous levels' of climate change)

Understanding how scientists came up with these three numbers gives a unique perspective on what we know about the past, present and future of our changing climate.

SUN 00:35 Darwin's Struggle: The Evolution of the Origin of Species (b00hd1mr)

Documentary telling the little-known story of how Darwin came to write his great masterpiece On the Origin of Species, a book which explains the wonderful variety of the natural world as emerging out of death and the struggle of life.

In the 20 years he took to develop a brilliant idea into a revolutionary book, Darwin went through a personal struggle every bit as turbulent as that of the natural world he observed. Fortunately, he left us an extraordinary record of his brilliant insights, observations of nature, and touching expressions of love and affection for those around him. He also wrote frank accounts of family tragedies, physical illnesses and moments of self-doubt, as he laboured towards publication of the book that would change the way we see the world.

The story is told with the benefit of Darwin's secret notes and correspondence, enhanced by natural history filming, powerful imagery from the time and contributions from leading contemporary biographers and scientists.

SUN 01:35 Nature's Great Events (b00j4c6b)

[Repeat of broadcast at 20:00 on Saturday]

SUN 02:35 Boxing at the Movies: Kings of the Ring (b01r5mhb)

Danny Leigh explores the elemental drama of the boxing movie. For over 120 years, boxing and film have been entwined and the fight film has been used to address powerful themes such as redemption, race and corruption. Film writer Leigh examines how each generation's fight films have reflected their times and asks why film-makers from Stanley Kubrick to Martin Scorsese have returned time and again to tales of the ring.

Interviewees include former world heavyweight champion Lennox Lewis, Rocky director John G Avildsen and Thelma Schoonmaker, editor of Raging Bull.

MONDAY 03 JULY 2017

MON 19:00 100 Days+ (b08wzgd0)

Series 1

03/07/2017

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

MON 19:30 Great British Railway Journeys (b0517s9p)

Series 6

Swansea to Hereford

Michael Portillo continues his journey from Pembroke Dock to Cambridge. On this leg, he begins in the ruinous gardens at Aberglasney in Llandeilo before riding shotgun in the driver's cab on the Heart of Wales Line on one of the most scenic routes in Britain. En route, Michael learns about the Victorian signalling system still in place today and struggles with his Welsh pronunciation. Over the border in Leominster, Michael steps out on to the dance floor at the Lion Hotel Ballroom, where a grand ball was held to celebrate the opening of the Ludlow to Hereford railway. He finishes this leg of his journey at a traditional cider house in Hereford, where he is invited to enjoy the fruits of his labour.

MON 20:00 Colour: The Spectrum of Science (p02vmx6x)
Colours of Earth

We live in a world ablaze with colour. Rainbows and rainforests, oceans and humanity, Earth is the most colourful place we know of. But the colours we see are far more complex and fascinating than they appear. In this series, Dr Helen Czerski uncovers what colour is, how it works, and how it has written the story of our planet - from the colours that transformed a dull ball of rock into a vivid jewel to the colours that life has used to survive and thrive. But the story doesn't end there - there are also the colours that we can't see, the ones that lie beyond the rainbow. Each one has a fascinating story to tell.

In the first episode, Helen seeks out the colours that turned planet Earth multicoloured. To investigate the essence of sunlight Helen travels to California to visit the largest solar telescope in the world. She discovers how the most vivid blue is formed from sulphur atoms deep within the Earth's crust and why the presence of red ochre is a key sign of life. In gold, she discovers why this most precious of metals shouldn't even exist on the surface of the planet and in white, Helen travels to one of the hottest places on Earth to explore the role salt and water played in shaping planet Earth.

MON 21:00 Science and Islam (b00gkxs4)

The Language of Science

Physicist Jim Al-Khalili travels through Syria, Iran, Tunisia and Spain to tell the story of the great leap in scientific knowledge that took place in the Islamic world between the 8th and 14th centuries.

Its legacy is tangible, with terms like algebra, algorithm and alkali all being Arabic in origin and at the very heart of modern science - there would be no modern mathematics or physics without algebra, no computers without algorithms and no chemistry without alkalis.

For Baghdad-born Al-Khalili, this is also a personal journey, and on his travels he uncovers a diverse and outward-looking

culture, fascinated by learning and obsessed with science. From the great mathematician Al-Khwarizmi, who did much to establish the mathematical tradition we now know as algebra, to Ibn Sina, a pioneer of early medicine whose Canon of Medicine was still in use as recently as the 19th century, Al-Khalili pieces together a remarkable story of the often-overlooked achievements of the early medieval Islamic scientists.

MON 22:00 The Hidden Art of Islam (b01dczjj)

At the British Museum, a collection of artefacts from the Muslim world is on show, which tells the history of a journey to Mecca always forbidden to non-Muslims. It features a succession of examples of the rich visual language of Islamic culture past and present, artwork created to reflect the powerful experience for any Muslim making the Hajj pilgrimage to Islam's most sacred city and its most sacred building, the Ka'aba. However, an art form not usually associated with Islam is also on show, a form many believe is prohibited by Islam - portraits, depictions of human figures and whole tableaux showing pilgrims performing the most important pillar of the Muslim faith.

In this documentary, Rageh Omaar sets out to find out that if human depiction is the source of such controversy, how is it that the art displayed here shows a tradition of figurative art at the heart of Islam for century after century? He explores what forms of art are acceptable for a Muslim - and why this artistic tradition has thrived - in the hidden art of the Muslim world.

MON 23:00 The Secret Life of Waves (b00y5jhx)

Documentary maker David Malone delves into the secrets of ocean waves. In an elegant and original film, he finds that waves are not made of water, that some waves travel sideways, and that the sound of the ocean comes not from water but from bubbles. Waves are not only beautiful but also profoundly important, and there is a surprising connection between the life cycle of waves and the life of human beings.

MON 00:00 Hidden Kingdoms (b03qkegs)

Under Open Skies

This is the story of two young animals forced to grow up fast.

In Africa's savannah, a baby elephant shrew learns how speed is the secret to survival amongst the largest animals on earth. And in America, a young grasshopper mouse confronts the Wild West's deadliest creatures to stake a claim of his own.

MON 01:00 Natural World (b01rl4xr)

2006-2007

Wye - Voices from the Valley

The River Wye runs through some of Britain's most beautiful and varied countryside, from the mountain tops of mid Wales to the wide open spaces of the Severn Estuary. This film is a lyrical portrait of the valley through the eyes of four characters who make their living from the land: a cider maker, a salmon fisherman, a sheep farmer and a beekeeper. It might seem idyllic, but when you live this close to nature a change in the weather can make all the difference between success and failure.

MON 01:50 Science and Islam (b00gkxs4)

[Repeat of broadcast at 21:00 today]

MON 02:50 Colour: The Spectrum of Science (p02vmx6x)

[Repeat of broadcast at 20:00 today]

TUESDAY 04 JULY 2017

TUE 19:00 100 Days+ (b08wzgd5)

Series 1

04/07/2017

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

TUE 19:30 Great British Railway Journeys (b0517t3m)

Series 6

Abergavenny to Hanborough

Armed with his Bradshaw's guidebook, Michael Portillo makes his way from west Wales across Britain to Cambridge. On this leg, he begins underground at Big Pit coal mine in Blaenavon, where he learns how Victorians toiled night and day to power the industrial revolution. On the River Usk, Michael casts a line and learns about 19th-century developments in angling. On

rebellious turf in Ascott-under-Wychwood, Michael discovers the Ascott Martyrs and lends a hand ploughing on the farm where they struck their early blow for labourers' rights. Michael's last stop is Hanborough and Blenheim Palace, where he investigates a fire described in his Bradshaw's which is said to have claimed some risqué art.

TUE 20:00 Britain Beneath Your Feet (b0619k6l)

Series 1

Building Britain

This series is a unique view of Britain - from below. In this first of two programmes, Dallas Campbell reveals why we can only understand the familiar world around us by discovering the hidden wonders beneath our feet. Breathtaking computer graphics strip away the earth to lay bare this secret world that's rarely explored.

Dallas finds out how the Shard of London - the tallest skyscraper in Western Europe - stays standing on soft clay. He canoes along a secret river under the city of Bristol and discovers why Edinburgh was sited on an ancient volcano. Exploring the natural world, he abseils down an underground waterfall higher than Niagara. And beneath one of the nation's oldest oak trees, he discovers a vast root system that's wider and more intricate than its branches.

TUE 21:00 The Queen Mary: Greatest Ocean Liner (b07d2wy4)

With exclusive access to the magnificent liner and its extensive archive of film and photographs, this documentary explores the action-packed life of the Clyde-built ship - an epic journey through some of the most dynamic periods of the 20th century.

Built with the blood and sweat of the master craftsmen of the Clydebank shipyards, she helped drag a nation from the depths of the great depression and set sail as a symbol of new hope and a better future. Leaving Southampton on 27 May 1936, her maiden voyage to New York set a new benchmark in transatlantic travel. Designed in peacetime to link the old world with the new, she ferried movie stars, politicians and royalty across the Atlantic, luxuriously cocooned in an art-deco floating palace.

Then, in 1939, she was transformed to challenge the fury of the Nazis in the Battle of the Atlantic. With a wartime record to rival that of the highest-ranking general, she carried whole armies through enemy-infested seas. Hitler offered a bonus of \$250,000 and the Iron Cross to any U-boat captain who could sink the Queen Mary.

When the war was over, the Queen Mary gave passage to thousands of British war brides and children who planned a new life in the New World. The Queen Mary was a great attraction to the rich and famous celebrities of the 1950s and 60s.

From an exclusive interview with singer Johnny Mathis, we find out what it was like to perform on the rough seas of the Atlantic. The liner continued in service until 1967 and is now a floating luxury hotel and museum docked in a custom-made lagoon in Long Beach, California.

TUE 22:00 Photographing Africa (b03xsbj9)

Photographer and film director Harry Hook, who grew up in Sudan and Kenya and has been documenting life in Africa for 40 years, uses his images to tell a personal story as he crosses the continent to visit remote tribal groups.

Harry tracks down five Samburu women he first photographed in Kenya 30 years ago. His aim is to give them a copy of their portrait and discover how their lives have changed over three decades. The search will be no small task - Samburuland covers an area the size of Wales and, as a semi-nomadic group, the women may well have moved great distances.

During his search Harry witnesses a Lenkarna Lmuget, a once-in-a-decade coming-of-age ceremony for Samburu warriors, as they are initiated to become elders.

There are not many parts of Africa where the lure of the city life is not felt. Harry ventures to isolated communities and encounters people living with one foot rooted in a rich cultural past, but who also embrace the here and now of contemporary Africa.

TUE 23:00 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.

TUE 00:00 The Brits Who Built the Modern World (b03vrz4f)

The Freedom of the Future

How an exceptional generation of British architects, led by Norman Foster and Richard Rogers, conquered the globe with their high-tech vision.

The first episode includes glimpses of some of their most stunning recent work, such as London's new 'Cheesegrater' skyscraper, Spaceport America and the KK100 skyscraper in China (the tallest tower ever built by a British architect), before looking in detail at some of their revolutionary projects from the 1960s and 70s.

Foster, Rogers, Nicholas Grimshaw, Michael Hopkins and Terry Farrell were born within six years of each other in the 1930s; shaped by both the optimism of the postwar years and the sixties counterculture, these pillars of today's establishment began their careers as outsiders and radicals. Rogers and his collaborators tell the story of one of the most influential buildings of the 20th century - the Pompidou Centre in Paris - the result of a contest he didn't want to enter and no-one ever thought they would win.

Other early projects featured include Norman Foster's glassy Willis Faber & Dumas Headquarters in Ipswich, Farrell & Grimshaw's corrugated aluminium tower block next to Regent's Park in London and the industrial-style Hopkins House in Hampstead.

TUE 01:00 Medieval Lives: Birth, Marriage, Death (b03cv0lm)

A Good Birth

For a medieval woman approaching the moment of labour and birth, there were no antiseptics to ward off infection or anaesthetics to deal with pain. Historian Helen Castor reveals how this was one of the most dangerous moments a medieval woman would ever encounter, with some aristocratic and royal women giving birth as young as 13. Birth took place in an all-female environment and the male world of medicine was little help to a woman in confinement. It was believed that the pains of labour were the penalty for the original sin of humankind - so, to get through them, a pregnant woman needed the help of the saints and the blessing of God himself.

TUE 02:00 Britain and the Sea (b03lv22)
[Repeat of broadcast at 19:00 on Saturday]

TUE 03:00 The Queen Mary: Greatest Ocean Liner (b07d2wy4)

[Repeat of broadcast at 21:00 today]

WEDNESDAY 05 JULY 2017

WED 19:00 100 Days+ (b08wzdgb)
Series 1

05/07/2017

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

WED 19:30 Great British Railway Journeys (b0517v7x)
Series 6

Oxford to Luton

Steered by his Bradshaw's Handbook, Michael Portillo continues his journey from Pembroke Dock to Cambridge. Beginning in the heart of academia in Oxford, Michael visits the Bodleian - the university's research library - to see some Victorian treasures, including Mary Shelley's manuscript of Frankenstein and a pocket-sized edition of Bradshaw's Companion. At Bicester, Michael investigates two exciting new rail projects, one of which will be the first in over a hundred years to connect the capital with a major city. Michael finds out about Victorian philanthropy in Bedford, and in Luton he explores the dark arts of the hatter.

WED 20:00 Sound of Cinema: The Music That Made the Movies (b03bm2fy)
New Frontiers

In the last of three programmes in which composer Neil Brand celebrates the art of cinema music, Neil explores how changing technology has taken soundtracks in bold new directions and even altered our very idea of how a film should sound.

Neil tells the story of how the 1956 science fiction film Forbidden Planet ended up with a groundbreaking electronic score that blurred the line between music and sound effects, and explains why Alfred Hitchcock's The Birds has one of the most effective soundtracks of any of his films - despite having no music. He shows how electronic music crossed over from pop into cinema with Midnight Express and Chariots of Fire, while films like Apocalypse Now pioneered the concept of sound design - that sound effects could be used for storytelling and emotional impact.

Neil tracks down some of the key composers behind these innovations to talk about their work, such as Vangelis (Chariots of Fire, Blade Runner), Carter Burwell (Twilight, No Country for Old Men) and Clint Mansell (Requiem for a Dream, Moon).

WED 21:00 Spies of Warsaw (b01pwxh)
Episode 2

Classic tale of spying, intrigue and romance, based on the novels of Alan Furst.

Warsaw 1938. French military attache Colonel Jean-Francois Mercier is also a spy on a mission, one which takes him undercover to Czechoslovakia on the trail of the elusive Chaika, a man who can lead him into the heart of the Nazi war machine.

Back in Warsaw, his erstwhile mistress Anna Skarbek is devastated by news of her ex-lover and political refugee and journalist Max Mostov. Heartbroken, she flees to Spain on a League of Nations mission of mercy.

As the Nazi storm clouds gather over Europe, dashing Polish Colonel Anton Pakulski undertakes his own mission, a mission that goes to the heart of protecting the very future of Poland itself.

WED 22:30 The Last Dukes (b06mvy6r)
Dukedoms are created by the monarch for reasons ranging from a grateful nation rewarding a major war leader to a king acknowledging his illegitimate son. The last dukedom to be created was by Queen Victoria. As they gradually become extinct, what will become of those that remain? Do they still have power and wealth? What is it to be a duke in the 21st century?

Answers come from a surprising variety of extraordinary characters - the Duke of Marlborough and his aunt, born Lady Rosemary Spencer-Churchill, who remembers being brought up in Blenheim Palace with 36 indoor servants, and the Duke of Atholl, who until 2012 was a rural South African sign-maker called Bruce Murray - on succeeding to the dukedom he now heads the only private army in Europe - the Atholl Highlanders.

The Duke of Montrose is a Scottish hill farmer and a politician, one of the few dukes who still sit in the House of Lords. The Duchess of Rutland made dozens of people redundant when she took over Belvoir Castle, but is determined to make it an efficient business.

The Duke and Duchess of St Albans don't have a stately pile, but do have their coronets and coronation robes. The duke's heir Charles Beauclerk is fascinated by the history of mental illness in the family. And if Camilla Osborne had been a boy, she would have become the 11th Duke of Leeds. But she wasn't and the dukedom is now extinct. Where does that leave her?

WED 23:30 The Renaissance Unchained (b070sq9t)
Gods, Myths and Oil Paints

Waldemar Januszczak challenges the traditional notion of the Renaissance having fixed origins in Italy and showcases the ingenuity in both technique and ideas behind great artists such as Van Eyck, Memling, Van der Weyden, Cranach, Riemenschneider and Durer.

WED 00:30 Natural World (b04g4qm5)
2014-2015

Attenborough's Fabulous Frogs

As a boy, frogs were the first animals Sir David Attenborough kept and today he is still just as passionate about them. Through his eyes, the weird and wonderful world of frogs is explored, shedding new light on these charismatic, colourful and frequently bizarre creatures.

David reveals all aspects of the frogs' life, their anatomy, their extraordinary behaviour and their ability to live in some of the most extreme places on the planet, as he goes on an eye-opening

journey into the fabulous lives of frogs.

WED 01:30 Climate Change by Numbers (p02jsdrk)
[Repeat of broadcast at 23:20 on Sunday]

WED 02:45 Voyages of Discovery (b0074t2w)
Circumnavigation

Explorer Paul Rose reveals the real story behind the first ever circumnavigation of the world.

Ferdinand Magellan set out 500 years ago to find the westward route to the riches of the Spice Islands. But, contrary to popular perception, he never reached them. Rose explains the dramatic sequence of events that led his scurvy-riddled crew to continue around the world without him. The incredible expedition was laced with bloody mutiny and murder, but its achievement was to fundamentally change the lives of the generations that followed, influencing life even today.

THURSDAY 06 JULY 2017

THU 19:00 100 Days+ (b08wzdgb)
Series 1

06/07/2017

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

THU 19:30 Top of the Pops (b08wzynw)

Mike Read and Janice Long present the pop chart programme, first broadcast on 23 February 1984. Includes appearances from Hot Chocolate, Rockwell, Marilyn, Nik Kershaw, Carnel and Howard Jones.

THU 20:00 Castles: Britain's Fortified History (b04tt2f9)
Kingdom of Conquest

Sam Willis tells the story of the English ruler who left the most indelible mark on the castle - the great Plantagenet king, Edward I, who turned it into an instrument of colonisation. Edward spent vast sums to subdue Wales with a ring of iron comprised of some of the most fearsome fortresses ever built. Castles like Caernarfon and Beaumaris were used to impose England's will on the Welsh. But when Edward turned his attention to Scotland, laying siege to castles with great catapults, things didn't go so well for him.

THU 21:00 Horizon (b08r3xr3)
2017

Strange Signals from Outer Space!

For decades some have suspected that there might be others out there, intelligent beings capable of communicating with us, even visiting our world. It might sound like science fiction, but today scientists from across the globe are scouring the universe for signals from extraterrestrials.

In 2006, husband and wife team Duncan Lorimer and Maura McLaughlin discovered an enigmatic signal from space, known as a fast radio burst. It was a pulse of radiation so bright, it didn't appear to be caused by any known object in the universe. Explanations ranged from colliding neutron stars to communication signals from an alien civilisation far more advanced than our own.

Scientists have been searching the cosmos for strange signals like the Lorimer Burst for more than 50 years. The film ends with scientists' latest search for extraterrestrial intelligence. Horizon obtained exclusive access to film researchers at the Green Bank Telescope searching for radio signals from Tabby's Star, a star so mysterious that some scientists believe it might be surrounded by a Dyson Sphere, a vast energy collector built by advanced aliens.

THU 22:00 The Big Thinkers (b0788q6m)
Aliens

The hunt for aliens is on! After a distinguished career in cosmology Professor Martin Rees, the astronomer royal, has taken up the search for extra-terrestrials. Looking for aliens is no longer science fiction - it is a question that's engaging some of the greatest minds in science.

As our knowledge of the universe has increased, we're getting closer to answers. Many scientists now think we live in galaxy with a billion Earth-like planets, many of which may be teeming with life. But what kind of life? Has anything evolved into beings we could communicate with? This film gets inside the

minds of the scientists considering one of the most exciting and profound questions we can ask - are we alone in the universe?

Professor Rees thinks we may have our idea of what an alien is like all wrong. If he's right, it's not organic extra-terrestrials we should look for, it's machines.

THU 23:00 Guts: The Strange and Wonderful World of the Human Stomach (p07801ts)

What's really going on inside your stomach? In this one-off special, Michael Mosley offers up his own guts to find out. Spending the day as an exhibit at the Science Museum in London, he swallows a tiny camera and uses the latest in imaging technology to get a unique view of his innards digesting his food. He discovers pools of concentrated acid and metres of writhing tubing which is home to its own ecosystem. Michael Mosley lays bare the mysteries of the digestive system and reveals a complexity and intelligence in the human gut that science is only just beginning to uncover.

THU 00:00 Top of the Pops (b08wzynn)

[Repeat of broadcast at 19:30 today]

THU 00:35 What Ever Happened to Rock 'n' Roll? (b063h4lm)

Lauren Laverne hosts an all-star discussion from London's iconic 100 Club, asking if rock 'n' roll is in crisis and what it now means in the 21st century. Can rock 'n' roll still be as dangerous and subversive as the original or has it become more about lifestyle and decoration? Joining Lauren are Savages' lead singer Jehnnny Beth, Dr John Cooper Clarke and former Animal Eric Burdon. Featuring original contributions from Noel Gallagher, Dave Grohl, Sleaford Mods and Alabama Shakes. Music from Mercury-winning Young Fathers and Matthew E White.

THU 01:35 Castles: Britain's Fortified History (b04tt2f9)

[Repeat of broadcast at 20:00 today]

THU 02:35 Horizon (b08r3xr3)

[Repeat of broadcast at 21:00 today]

FRIDAY 07 JULY 2017

FRI 19:00 World News Today (b08wzdgs)

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

FRI 19:30 Top of the Pops (b08wzpp9)

John Peel and David Jensen present the pop chart programme, first broadcast on 1 March 1984. Featuring Matt Bianco, Van Halen, Alexei Sayle, Break Machine, Wang Chung, Slade, Nena and Julia & Company.

FRI 20:00 Becoming a Lied Singer: Thomas Quasthoff and the Art of German Song (b08wzppd)

Thomas Quasthoff, one of the premier baritones of his generation, presents his personal guide to the love of his life, the German lied song. Drawing on his multiple roles as maestro, teacher and founder of an international lied singing competition, Professor Quasthoff goes on a personal journey into this short, domestic but intensely expressive art form.

Lied means 'song' in the German language and lieder are poems of nature, love, and death set for solo voice and a piano. Quasthoff used to sing these songs around the world and now he has turned from practitioner to teacher, passing on this two-century-old tradition to a new generation of young singers.

With a wide range of contributors, including musicians and academics, there is a focus on Franz Schubert as the first great lieder writer. In the early 19th century Schubert, who died tragically young, seized the new possibilities of the piano and created over 600 songs. Thomas unlocks the factors that then came together to create an explosion of lieder: the rise of the German Romanticism and the role that personal, emotional poetry played in the homes of the growing German middle class, the spectacular popularity of the domestic piano and an emerging philosophical imperative to explore the soul.

Lied is the most intimate music of the great composers and in Hamburg Quasthoff goes looking for Johannes Brahms, a composer he feels a great empathy with, and discovers the grave of an almost forgotten poet who inspired a masterpiece of lied song.

The documentary goes to Heidelberg where Quasthoff chairs the Das Lied International song competition - here 26 young lied singers and their pianists spend five days performing before an international jury, including singers Brigitte Fassbaender,

Bernarda Fink and Dame Felicity Lott.

The programme includes rare archive of Thomas Quasthoff before his retirement from the classical stage, performing with pianist Andras Schiff in 2003 as well as a newly restored telerecording of Quasthoff's lied singing hero, Dietrich Fischer-Dieskau. In the most personal section of the film Quasthoff takes a late night vocal excursion to the island of Sicily.

FRI 21:00 Rock 'n' Roll Guns for Hire: The Story of the Sideman (b08xdlts)

Film shining a spotlight on the untold story of the sidemen, the musicians behind some of the greatest artists of all time. The sidemen are the forgotten 'guns for hire' that changed musical history. Featuring interviews with Mick Jagger, Billy Joel and Keith Richards, taking viewers from the 1960s to today, via global stars such as Prince, David Bowie, The Rolling Stones and Beyonce.

FRI 22:30 Girls in Bands at the BBC (b06mxpjc)

Compilation celebrating some guitar band performances at the BBC that feature some of the best female musicians in rock. Beginning with the oft-forgotten American group Fanny performing You're the One, it's a journey along rock's spectrum from the 1970s to now.

The selection includes the powerful vocals of Elkie Brooks on Vinegar Joe's Proud to Be a Honky Woman, the mesmerising poetry of Patti Smith's Horses and the upbeat energy of The Go-Go's on We Got the Beat.

Mighty basslines come courtesy of Tina Weymouth on Psycho Killer and Kim Gordon on Sugar Kane, whilst we trace the line of indie rock from the Au Pairs through Lush, Elastic and Garbage to current band Savages.

FRI 23:30 The Genius of David Bowie (b01k0y0q)

A selection of some of David Bowie's best performances from the BBC archives, which also features artists who Bowie helped along the way, such as Mott the Hoople, Lulu, Iggy Pop and Lou Reed.

FRI 00:30 Top of the Pops (b08wzpp9)

[Repeat of broadcast at 19:30 today]

FRI 01:00 Rock 'n' Roll Guns for Hire: The Story of the Sideman (b08xdlts)

[Repeat of broadcast at 21:00 today]

FRI 02:30 Sounds of the Eighties (b0074sl)

Episode 4

Another in the series of 1980s pop archive shows highlights those bands that swayed on the spot, compulsory for the synthesiser bands that dominated the decade. Doing the standing still are Depeche Mode (featuring Vince Clarke), The Human League, Yazoo (featuring Vince Clarke), Soft Cell, New Order, Bronski Beat, Pet Shop Boys and Erasure (featuring Vince Clarke).

FRI 03:00 Girls in Bands at the BBC (b06mxpjc)

[Repeat of broadcast at 22:30 today]