

SATURDAY 20 OCTOBER 2018

SAT 19:00 Natural World (b04c9rt1)
2014-2015

Beavers Behaving Badly

Who are you going to call when beavers are behaving badly? Well, if you live in Jackson Hole, Wyoming, Drew Reed is the go-to 'beaver buster'.

Drew works as a wetland conservationist, helping to keep the peace between beavers and people. These busy rodents are incredibly industrious - felling trees and building dams are two of their favourite occupations. This can be good news in the wild, helping create rich habitats for a variety of wildlife, but in back yards it can spell disaster. A beaver is more than capable of bringing down a tree large enough to damage property, and their dam building can result in flooded homes.

Drew must do what he can to steer beavers away from trouble and stop their so-called bad behaviour.

SAT 20:00 Life Story (b04q1rwy)
Series 1

Courtship

The competition to breed has created both the most extraordinary beauty and the most violent battles seen in nature. Waved albatross pair for life and spend hours canoodling with each other. But for a male peacock jumping spider one wrong move in his dazzling courtship routine may well prove fatal.

A male flame bowerbird creates a stick sculpture decorated with shells and berries to impress a mate. Even that isn't enough. He then uses it as a backdrop to show off his vivid colours in a dazzling dance. But things don't go to plan as his bower is destroyed by mischievous youngsters and a rival male.

But the most extraordinary display of all is created by a tiny, drab male pufferfish. He builds a spectacular submarine 'crop circle' in the sand. It's the most perfect and complex structure created by any animal. The crop circles were only discovered in southern Japan in 1995 and the fish architect was only identified in 2011.

SAT 21:00 54 Hours: The Gladbeck Hostage Crisis (b0bpb8m4)
Series 1

Episode 1

Acclaimed two-part series based on the true story of an unprecedented hostage crisis which shocked Germany in the summer of 1988. Two robbers hold up a bank and demand free passage from the police while taking bank employees hostage.

In German with English subtitles.

SAT 22:30 There She Goes (b0bnxpzn)
Series 1

One Day in the Life of Rosie Yates

Rosie Yates is a nine-year-old girl with a severe learning disability due to an undiagnosed chromosomal disorder, living with her dad Simon, mum Emily and brother Ben. It's a typical Saturday for the family, starting with an attempt to get Rosie to the park for some fresh air. She refuses to cooperate, and afterwards she's similarly uncooperative with her dinner. As Simon and Emily are later distracted, Rosie causes carnage in the kitchen.

SAT 23:00 Top of the Pops (b0bntnh0)
Simon Bates and Bruno Brookes present the pop chart programme, first broadcast on 10 July 1986. Featuring Midnight Star, The Real Roxanne, Owen Paul, Rod Stewart, Bananarama and Madonna.

SAT 23:30 Glen Campbell: The Rhinestone Cowboy (b01pwx8)

In 2011, Glen Campbell announced he had been diagnosed with Alzheimer's disease and that he would be bowing out with a final album and farewell tour across Britain and America. This documentary tells Campbell's remarkable life story, from impoverished childhood in Arkansas to huge success, first as a guitarist and then as a singer, with great records like Wichita Lineman and Rhinestone Cowboy. With comments from friends and colleagues, including songwriter Jimmy Webb and Mickey Dolenz of The Monkees, it is a moving story of success, disgrace and redemption as rich as any of the storylines in Campbell's most famous songs.

The peak of Glen Campbell's career was in 1975, when he topped the charts around the world with Rhinestone Cowboy, but his musical journey to that point is fascinating. A self-taught teenage prodigy on the guitar, by his mid-twenties Campbell was one of the top session guitarists in LA, a key member of the band of session players now known as The Wrecking Crew. He played on hundreds of tracks while working for producers like Phil Spector and Brian Wilson of The Beach Boys, including Daydream Believer by The Monkees, You've Lost That Lovin' Feeling by The Righteous Brothers, Strangers in the Night by Frank Sinatra and Viva Las Vegas by Elvis Presley.

But Campbell always wanted to make it under his own name. A string of records failed to chart until, in 1967, he finally found his distinctive country pop sound with hits like Gentle on My Mind and By the Time I Get to Phoenix. The latter was written by Jimmy Webb, and together the two created a string of great records like Wichita Lineman and Galveston. Campbell pioneered country crossover and opened the way for artists like Dolly Parton and Kenny Rogers.

By the end of the 1960s, Campbell was the fastest rising star in American pop with his own television show and a starring role in the original version of True Grit. Over the following ten years, he had more success with Rhinestone Cowboy and Southern Nights, but his private life was in turmoil. Divorce, drink and drugs saw this clean-cut all-American hero fall from grace and a tempestuous relationship with country star Tanya Tucker was front-page news.

Despite a relapse in 2003, when he was arrested for drunk driving and his police mug shot was shown around the world, the last two decades have been more settled. He remarried, started a new family and renewed his Christian faith, and was musically rediscovered by a new generation. Like his friend Johnny Cash, he released acclaimed new albums with young musicians, covering songs by contemporary artists like U2 and The Foo Fighters. Therefore the diagnosis with Alzheimer's was all the more poignant, but his dignified farewell has made him the public face of the disease in the USA.

The film includes contributions by many of Campbell's friends and colleagues, including his family in Arkansas, fellow session musicians Carol Kaye and Leon Russell, long-time friend and collaborator Jimmy Webb, former Monkee Mickey Dolenz, broadcaster Bob Harris, lyricist Don Black and country music writer Robert Oermann.

SAT 00:30 Hello Quo (b03hy6vp)

You don't sell 128 million albums worldwide without putting in the graft and Status Quo are, quite possibly, the hardest-working band in Britain. Alan G Parker's documentary Hello Quo, specially re-edited for the BBC, recounts the band's epic story from the beginning - when south London schoolmates Francis Rossi and Alan Lancaster formed their first band with big ambitions of rock 'n' roll domination, quickly adding drummer John Coghlan and guitarist Rick Parfitt.

The film tells the story of Quo's hits from their unusually psychedelic early hit, Pictures of Matchstick Men, followed by a run through their classics from Down Down to Whatever You Want.

The band laughs off the constant ribbing about only using three chords and the film explores how Quo's heads-down boogie defined UK rock in the early 70s. Fender Stratocaster in hand, Quo have stood their ground and never shifted, but they have managed to adapt to scoring pop hits over five decades.

The original members of the 'frantic four' tell their story of a life in rock 'n' roll, alongside interviews from some prominent Quo fans, such as Paul Weller, whose first gig was the Quo at Guildford Civic Hall, to Brian May, who waxes lyrically about the opening riff to Pictures of Matchstick Men, while even Sir Cliff plays homage to the denim-clad rockers.

SAT 01:50 Natural World (b04c9rt1)
[Repeat of broadcast at 19:00 today]

SAT 02:50 The Culture Show (b03hcd7)
2013/2014

Wars of the Heart

For those who remained in London during the Second World War, the Blitz was a terrifying time of sleeplessness, fear and loss, but some of London's literary set found inspiration in the danger and intensity. With the threat of death ever present, nerves were tested and affairs began; it was an absolute gift for a writer seeking new material.

Presenter James Runcie tells the story of novelists Graham Greene, Henry Green and Elizabeth Bowen, and American poet Hilda Doolittle, who revelled in the creative and personal freedom they discovered even as the bombs rained down. The

programme reveals how these writers distilled the surreal and often frightening atmosphere of the time into some of their finest work.

SUNDAY 21 OCTOBER 2018

SUN 19:00 Locomotion: Dan Snow's History of Railways (b01pz9m7)
Episode 1

From their beginnings as a primitive system of track-ways for coal carts in the early 18th century, railways quickly developed into the driving force behind the industrial revolution and the pivotal technology for modern Britain, and a connected world.

Rapid industrial growth during the early 19th century, coupled with the prospect of vast profits, drove inventors and entrepreneurs to develop steam locomotives, metal tracks and an array of daring tunnels, cuttings and bridges that created a nationwide system of railways in just 30 years.

George Stephenson's Liverpool and Manchester Railway became the model for future inter-city travel for the next century and his fast, reliable locomotive, the Rocket, began a quest for speed that has defined our modern world.

SUN 20:00 James May's Cars of the People (b070k3ny)
Series 2

Episode 3

James explores the wilder shores of motoring to discover what happened to the cars of the future that we were promised. From improbable steam cars and ludicrous jet turbines, he reveals how the petrol engine and the power it gave us came to dominate the 20th century. He takes to the waves in an amphibious car, risks his life at the wheel of a notorious electric scooter and takes a hair-raising trip in the fastest driverless car on earth.

SUN 21:00 Royal Opera House - Lessons in Love and Violence (b0bp9kx0)

Sir George Benjamin conducts the world premiere of his darkly dramatic new opera based on the life of Edward II - a major event in contemporary music with an internationally renowned cast. Lessons in Love and Violence is the latest collaboration between composer George Benjamin and playwright Martin Crimp. Their previous work includes the large-scale opera Written on Skin - which has since become the most performed new opera of the 21st century. Director Katie Mitchell and designer Vicki Mortimer complete the creative team.

King Edward II's relationship with Piers Gaveston upsets the personal life of court and the political wellbeing of the country. When the controlling military leader Mortimer joins forces with Queen Isabel, the results are deadly for Gaveston and Edward.

The lessons learned by the characters of this new opera are harsh ones, following a gripping trajectory from warmth and indulgence towards calculating, cold severity.

Presented by Clemency Burton-Hill.

SUN 22:35 Feud: Bette and Joan (p0515fw)
Series 1

Abandoned

Joan begins filming in Louisiana and is frustrated by the convivial atmosphere that Bette is creating with her co-stars as she tries to sleep. She is even further frustrated when Bette insists on watching her scenes being shot. On confronting director Robert Aldrich, he admits that Bette can do what she wants since she has been made an associate producer on Hush... Hush, Sweet Charlotte.

SUN 23:20 Feud: Bette and Joan (p0516fi)
Series 1

You Mean All This Time We Could Have Been Friends?

In 1969, Joan is living in Manhattan and gets a call from her agent, who advises her against appearing in a low-budget British feature, provisionally called The Missing Link. But Joan needs the money, so she arrives in London to film the retitled Trog. In the meantime, Bette has kept working and according to her friend Victor Buono, snatched up everything and lost her high standards.

Both actresses reflect on what might have been.

SUN 00:20 Art of France (b08d7qlq)

Series 1

There Will Be Blood

Andrew Graham-Dixon explores how art in France took a dramatic turn following the French Revolution that ushered in a bold new world. From the execution of King Louis XVI and the rise of Napoleon Bonaparte - a figure who simultaneously repelled and inspired artists of his time - through to the rise of Romanticism and an art of seduction, sex and high drama. Andrew explores artists including Jacques-Louis David - whose art appeared on the barricades and in the streets - as well as the work of Delacroix, Ingres and the tragic but brilliant Theodore Gericault.

SUN 01:20 Cornwall's Native Poet: Charles Causley (b097bcv3)

Charles Causley was one of the great poets of his generation. Born in 1917 in Launceston, north Cornwall, on the edge of Bodmin Moor, the only time he left was for active service in the Royal Navy during the Second World War. His father died when he was a boy as a result of a gas attack in the trenches of World War One and he lived the rest of his life in the same house as his mother. He knew everyone and they knew him. He devoted his life to teaching, poetry and his mum.

Charles Causley said that everything you needed to know about him was in his poetry. He wrote directly from experience about the people of Launceston and the changes in the town, both world wars, his shipmates, local history, myths, animals and God.

SUN 02:20 James May's Cars of the People (b070k3ny)
[Repeat of broadcast at 20:00 today]**MONDAY 22 OCTOBER 2018****MON 19:00 Beyond 100 Days (b0bnk7ln)**
Series 1

22/10/2018

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

MON 19:30 Dangerous Earth (b0824cw7)
Avalanche

Dr Helen Czerski looks at the anatomy of an avalanche. From shocking eyewitness footage from within an avalanche to detailed CT scans showing the microscopic changes that cause them, we can now capture exactly what happens as snow transforms into a deadly and unpredictable danger.

MON 20:00 Rome: A History of the Eternal City (b01p6518)
City of the Sacred

Simon Sebag Montefiore looks at how every event in ancient Rome revolved around religion. From the foundation myth through to the deification of emperors, nothing could happen without calling upon the pantheon of Roman gods. Simon investigates how the Romans worshipped and sacrificed to the gods. He discovers that sacredness defined what was Roman and it was the responsibility of every Roman to play their part in the cult. Even the ancient Roman sewer was holy ground!

MON 21:00 A Timewatch Guide (b08ybzbc)
Series 4

Vikings: Foe or Friend?

On 8 June 793 Europe changed forever. The famous monastery at Lindisfarne on the Northumbrian coast was suddenly attacked and looted by seafaring Scandinavians. The Viking Age had begun.

Professor Alice Roberts examines how dramatically the story of the Vikings has changed on TV since the 1960s. She investigates how our focus has shifted from viewing them as brutal, pagan barbarians to pioneering traders, able to integrate into multiple cultures. We also discover that without their naval technology we would never have heard of the Vikings, how their huge trading empire spread, and their surprising legacy in the modern world.

MON 22:00 Storyville (p06mfcfn)
A Woman Captured

A Woman Captured is a raw and intimate portrayal of the psychology behind enslavement. Director Bernadett Tuza-Ritter offers an evocative study of a woman so debased and

disregarded that even she has lost sight of her own life.

A 52-year-old Hungarian woman has been kept by a family as a domestic slave for a decade. Marish has been exploited and abused by a woman for whom she toils as a housekeeper - entirely unpaid, performing all manner of back-breaking household duties seven days a week. In exchange, she only gets cigarettes, leftovers and a couch to sleep on. The money she earns from night shifts in a factory is taken away from her. Deprived of her ID and deep in forced debt, she is forbidden to even leave the house without permission.

Marish's 16-year-old daughter ran away a couple of years ago, unable to bear her circumstances any longer. Marish lives with too much fear in her heart to leave but dreams of being reunited with her daughter.

Drawing courage from the film-maker's presence, Marish eventually reveals her plan: she will leave the unbearable oppression behind and attempt to escape. The film follows Marish's heroic journey back to freedom.

MON 23:15 Horizon (b013yww4)
2011-2012

The Nine Months That Made You

Horizon explores the secrets of what makes a long, healthy and happy life. It turns out that a time you can't remember - the nine months you spend in the womb - could have more lasting effects on you today than your lifestyle or genes. It is one of the most powerful and provocative new ideas in human science, and it was pioneered by a British scientist, Professor David Barker. His theory has inspired a field of study that is revealing how our time in the womb could affect your health, personality and even the lives of your children.

MON 00:15 Secret Life of Sue Townsend (Aged 68 ¾) (b080391j)

Sue Townsend left school at 14 with no qualifications and in her early twenties was a single mother struggling to feed her three children. A decade later, The Secret Diary of Adrian Mole Aged 13 ¾ was a critical and commercial smash and she had become the best-selling author of her era.

Julie Walters narrates this extraordinary story of a working-class woman who achieved literary stardom through sheer talent and an irrepressible will to write. From Adrian Mole to The Queen & I, Sue Townsend's books combine a brilliantly funny writing style with often biting satire, captivating not just a nation's readers but influencing a generation of writers and performers.

A warm and witty celebration of Sue Townsend's life and writing, the story is told with the help of children from Sue's old school, her friends and family, as well as the comedy and literary stars she inspired - including Stephen Mangan, Ian Hislop, David Nicholls, Isy Suttie and Adrian Scarborough. Drawing on Sue Townsend's own archive of letters and notebooks, the film also features unseen photographs, footage and even her appointment diary, which includes poignant entries about her struggles with ill health, written in a humorous style instantly recognisable from her books.

MON 01:15 Hedd Wyn: The Lost War Poet (b0916cy4)

The story of Hedd Wyn is one of Wales's enduring tragedies. A young man with little or no education succeeds in winning The Chair, one of the main literary prizes at the National Eisteddfod, but is killed in WWI before he could claim his prize. To mark the centenary of his death, National Poet of Wales Ifor ap Glyn reassesses Wyn's life and work.

His journey takes him from Trawsfynydd, where Hedd wyn was born and raised, to Liverpool, where he was trained to fight, and onwards to France and Belgium, where he was killed in action on 31 July 1917. In 2013, Hedd Wyn's home at Yr Ysgwrn was sold by his nephew Gerald Williams to the Snowdonia National Park Authority. 88-year-old Gerald wanted to preserve Wyn's legacy for future generations.

Ifor visits Hugh Hayley, one of Britain's leading furniture conservators, to gain an insight into the remarkable woodcarvings embedded into the ancient oak of Wyn's Black Chair. In France and Belgium, Ifor retraces the poet's final weeks, days and minutes. His successful poem, aptly titled Yr Arwr (The Hero), was finished and sent from the trenches, and his florid yet absorbing letters from the front seem to paint a picture of a young man who still felt the creative urge, amidst all that went on around him.

Featuring fascinating first-hand accounts, interviews recorded during the 1960s and 1970s with family and friends, and contemporary archive material from WWI, Ifor reassesses the poet's legacy. Why does this story continue to fascinate us so? What would Hedd Wyn have achieved had he lived? Maybe these are questions that can never be fully answered, but one

thing is for certain, Hedd Wyn's legacy persists.

MON 02:15 The Culture Show (b048s4tj)
2014/2015

Girls Will Be Girls

At the height of the punk explosion almost 40 years ago, a handful of women completely redefined what a woman in music could do. Through sheer talent and lack of fear, they pushed themselves on to a male-dominated music scene and became part of a movement that radically changed the cultural landscape.

Along with Siouxsie Sioux, Poly Styrene and Chrissie Hynde, the Slits were among punk's most important figures and their guitarist Viv Albertine's memoir, Clothes, Clothes, Clothes, Music, Music, Music, Boys, Boys, Boys, chronicles life as part of this revolutionary vanguard.

Miranda Sawyer meets up with Viv Albertine and some of the other key female figures of the era, including Chrissie Hynde, The Raincoats, and punk anti-heroine Jordan, to look at how they inspired a generation of young women with the notion that anyone could do anything if they wanted to. And she explores whether the punk spirit still survives today.

MON 02:45 Rome: A History of the Eternal City (b01p6518)
[Repeat of broadcast at 20:00 today]**TUESDAY 23 OCTOBER 2018****TUE 19:00 Beyond 100 Days (b0bnk7lz)**
Series 1

23/10/2018

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

TUE 19:30 Dangerous Earth (b083bm5m)
Volcano

Helen looks at volcanoes. With shocking eyewitness footage of eruptions, and new thermal imagery and ultra high-speed photography, we can now capture on camera the complex processes crucial to understanding how and why these forces of nature erupt.

TUE 20:00 Origins of Us (p00jjjxm)
Guts

In this second episode, Dr Alice Roberts charts how our ancestors' hunt for food has driven the way we look and behave today - from the shape of our face to the way we see, and even the way we attract the opposite sex.

Clues to our ancestors' diet can be found in some surprising places. Alice goes in search of a lion kill to find out how the tapeworms in lions' food reveal our ancestors were eating the same diet of big game 1.7 million years ago. She puts her teeth to the test to reveal that our teeth have evolved to shear through meat. But by comparing her saliva with that of chimpanzees, she demonstrates that our body is as much designed to eat starch as it is to eat meat. And visiting a tribe of hunter-gatherers in Tanzania, who still gather food in a similar way to our ancestors, Alice discovers that starchy tubers are crucial to survival when meat is scarce.

The latest research suggests that the way the different sexes found food throughout our evolution has shaped the way we relate to each other today. The way the Hadza tribe share food and form long-term couples is thought to be the origin of love and marriage in all of us. And a fun experiment with Britain's best skateboarders shows they take more risks when women are present - it seems men are designed to show off to attract a mate.

TUE 21:00 New Zealand: Earth's Mythical Islands (b07mh601)
Wild Extremes

The most extreme and wild parts of New Zealand are in the South Island, which lie towards Antarctica, in the path of the tempestuous 'roaring forties'. This is home to some of the most rapidly rising mountains in the world, the Southern Alps.

From hyper-intelligent parrots to sinister snails with teeth and magical constellations of glow-worms, this is the story of New Zealand's wildest places and its most resilient pioneers, all of whom must embrace radical solutions to survive.

TUE 22:00 There She Goes (b0bpw76q)

Series 1

Bubble Chess

It's bath night for Rosie and, as usual, that means chaos as she insists on having all the bubble bath. Emily decides that she needs to form a strategy - she lays a trap for Rosie, putting the bubble bath out of reach, then leaves the bathroom and waits. Rosie falls for it, and Emily wins this round of 'bubble chess'. But the game becomes more complex as Rosie twigs what is going on. Can she outthink Emily?

TUE 22:30 The Silk Road (p03qb1gq)

Episode 1

In the first episode of his series tracing the story of the most famous trade route in history, Dr Sam Willis starts in Venice and explores how its Renaissance architecture and art has been shaped by the east and by thousands of exchanges along the Silk Road.

From Venice Sam travels to China's ancient capital, Xian. Here, Sam's story takes him back in time to reveal the tale of an emperor who was so desperate for horses to help protect his borders that he struck one of the most significant trade deals in human history - he wanted war horses, he gave the most precious material in the world, silk. From this single deal, a network of trading paths were carved out across thousands of miles by merchants, traders, envoys, pilgrims and travellers. It is known to us today as the Silk Road.

TUE 23:30 Sgt Pepper's Musical Revolution with Howard Goodall (b08tb97f)

50 years ago this week, on 1 June, 1967, an album was released that changed music history - The Beatles' Sgt Pepper's Lonely Hearts Club Band. In this film, composer Howard Goodall explores just why this album is still seen as so innovative, so revolutionary and so influential. With the help of outtakes and studio conversations between the band, never heard before outside of Abbey Road, Howard gets under the bonnet of Sgt Pepper. He takes the music apart and reassembles it, to show us how it works - and makes surprising connections with the music of the last 1,000 years to do so.

Sgt Pepper came about as a result of a watershed in The Beatles' career. In August 1966, sick of the screaming mayhem of live shows, they'd taken what was then seen as the career-ending decision to stop touring altogether. Instead, beginning that December, they immersed themselves in Abbey Road with their creative partner, producer George Martin, for an unprecedented five months. What they produced didn't need to be recreated live on stage. The Beatles took full advantage of this freedom, turning the studio from a place where a band went to capture its live sound, as quickly as possible, into an audio laboratory, a creative launch pad. As Howard shows, they and George Martin and his team constructed the album sound by sound, layer by layer - a formula that became the norm for just about every rock act who followed.

In June 1967, after what amounted to a press blackout about what they'd been up to, Sgt Pepper's Lonely Hearts Club Band was released. It was a sensation, immediately becoming the soundtrack to the Summer of Love - and one of the best-selling, most critically lauded albums of all time. It confirmed that a 'pop music' album could be an art form, not just a collection of three-minute singles. It's regularly been voted one of the most important and influential records ever released.

In this film, Howard Goodall shows that it is the sheer ambition of Sgt Pepper - in its conception, composition, arrangements and innovative recording techniques - that sets it apart.

Made with unprecedented access to The Beatles' pictorial archive, this is an in-depth exploration, in sound and vision, of one of the most important and far-reaching moments in recent music history.

TUE 00:30 Artsnight (b084flz2)

Series 4

The Brits Who Designed the Modern World

If there were an Olympic league table for design, Britain would be right at the top. Since the Second World War, British designers have revolutionised our homes, our workplaces, our roads and our public institutions.

In November 2016, the Design Museum opened its new £83m home in Kensington. To mark this great moment for British design, BBC Arts profiles ten great living British designers.

Arts reporter Brenda Emmas meets and profiles our 'Top 10', to find out what inspires them to make such phenomenal objects. She reveals how designers have responded to society's evolving tastes, from the brash 60s modernism of Margaret

Calvert's road signs through to the colourful technology of Rick Dickinson's ZX Spectrum. She also meets Britain's most prolific designer, Sir Kenneth Grange (Intercity 125, bus shelters, the Kenwood Chef...), as well as Andrew Ritchie, who gave the world the Brompton Bike.

And we also hear from an illustrious panel of celebrities whose lives have been transformed by British design, including Will.i.am, Jeremy Paxman, Pete Waterman, Ade Adepitan and Jenny Eclair.

TUE 01:30 Origins of Us (p00jjjxm)

[Repeat of broadcast at 20:00 today]

TUE 02:30 New Zealand: Earth's Mythical Islands (b07mh601)

[Repeat of broadcast at 21:00 today]

WEDNESDAY 24 OCTOBER 2018**WED 19:00 Beyond 100 Days (b0bnk7mp)**

Series 1

24/10/2018

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

WED 19:30 Dangerous Earth (b083dgt5)

Lightning

Dr Helen Czerski examines the hottest natural phenomenon on the planet - lightning. Bolts of lightning five times hotter than the surface of the sun strike our planet over three million times every day - and yet we still know little about this deadly force of nature. Now, specialist photography is revealing how lightning travels through the air, high-speed cameras are unlocking the secrets of upward lightning that's triggered by our urban landscapes, and scientific expeditions are capturing rare images of intense electrical discharges over 80 kilometres wide.

WED 20:00 Dancing Cheek to Cheek: An Intimate History of Dance (b04t6kb8)

The Shock of the New

Len Goodman and Lucy Worsley discover how the first few decades of the 20th century witnessed the most rapid and revolutionary change in the history of British dance. The bold new sound of ragtime music arrived on our shores from America and paved the way for wave after wave of new dances that would take the dance floor by storm.

Len gets to grips with quirky animal dances before exploring how a young couple called the Castles found fame as the first dancing screen icons. Lucy discovers how, whilst many people lapped up the new American imports, one woman saved that most English tradition, morris dancing, from extinction.

The First World War marked a pivotal moment - after the armistice everyone wanted to dance and Britain was swept up in the greatest dance boom the country had ever known. Palais de Danse opened across the country and for the first time dancing became a big business opportunity, with the dancing public holding sway over what was in or out of fashion on the dance floor.

Len and Lucy explore how we danced in interwar Britain and how women's new-found freedoms were epitomised by the iconic and reckless dancing girl, the flapper. They visit that most famous dance floor, the Tower Ballroom in Blackpool, to examine how dancing professionals sought to take back control with standardisation of music and dancing.

Finally, under the tutelage of Darren Royston, historical dance teacher at Rada, Lucy and Len put together one final performance of the most iconic dance from the era, the Charleston, in full period costume in front of a crowd at the famous Cafe de Paris in London.

WED 21:00 Magic Numbers: Hannah Fry's Mysterious World of Maths (b0bptsd0)

Series 1

Weirder and Weirder

Hannah explores a paradox at the heart of modern maths, discovered by Bertrand Russell, which undermines the very foundations of logic that all of maths is built on. These flaws suggest that maths isn't a true part of the universe but might just be a human language - fallible and imprecise. However, Hannah argues that Einstein's theoretical equations, such as $E=mc^2$ and his theory of general relativity, are so good at predicting the

universe that they must be reflecting some basic structure in it. This idea is supported by Kurt Godel, who proved that there are parts of maths that we have to take on faith.

Hannah then explores what maths can reveal about the fundamental building blocks of the universe - the subatomic, quantum world. The maths tells us that particles can exist in two states at once, and yet quantum physics is at the core of photosynthesis and therefore fundamental to most of life on earth - more evidence of discovering mathematical rules in nature. But if we accept that maths is part of the structure of the universe, there are two main problems: firstly, the two main theories that predict and describe the universe - quantum physics and general relativity - are actually incompatible; and secondly, most of the maths behind them suggests the likelihood of something even stranger - multiple universes.

We may just have to accept that the world really is weirder than we thought, and Hannah concludes that while we have invented the language of maths, the structure behind it all is something we discover. And beyond that, it is the debate about the origins of maths that has had the most profound consequences: it has truly transformed the human experience, giving us powerful new number systems and an understanding that now underpins the modern world.

WED 22:00 Empire (b01f1nhl)

Doing Good

In the final part of his personal account of Britain's empire, Jeremy Paxman tells the extraordinary story of how a desire for conquest became a mission to improve the rest of mankind, especially in Africa, and how that mission shaded into an unquestioning belief that Britain could - and should - rule the world.

In central Africa, he travels in the footsteps of David Livingstone who, though a failure as a missionary, became a legendary figure - the patron saint of empire who started a flood of missionaries to the so-called 'Dark Continent'.

In South Africa, Paxman tells the story of Cecil Rhodes, a man with a different sort of mission, who believed in the white man's right to rule the world, laying down the foundations for apartheid.

The journey ends in Kenya, where conflict between white settlers and the African population brought bloodshed, torture and eventual withdrawal.

WED 23:00 The Real Doctor Zhivago (b09djrjr)

Dr Zhivago is one of the best-known love stories of the 20th century, but the setting of the book also made it famous. It is a tale of passion and fear, set against a backdrop of revolution and violence. The film is what most people remember, but the story of the writing of the book has more twists, intrigue and bravery than many a Hollywood blockbuster.

In this documentary, Stephen Smith traces the revolutionary beginnings of this bestseller to it becoming a pawn of the CIA at the height of the Cold War. The writer of the novel, Boris Pasternak, in the words of his family, willingly committed acts of literary suicide in being true to the Russia he loved, but being honest about the Soviet regime he hated and despised. Under Stalin, writers and artists just disappeared if they did not support the party line. Many were murdered.

Writing his book for over 20 tumultuous years, Boris Pasternak knew it could result in his death. It did result in his mistress being sent to the gulag twice, but he had to have his say. This is the story of the writing of perhaps the bravest book ever published. It is the story before the film won Oscars and its author, the Nobel Prize. It is the untold story of the real Dr Zhivago - Boris Pasternak.

WED 00:00 Masters of the Pacific Coast: The Tribes of the American Northwest (b07mlpjp)

Survival

Two-part documentary in which archaeologist Dr Jago Cooper explores the extraordinary and resilient culture of the American north west, revealing one of 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. Theirs 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 01:00 Dancing Cheek to Cheek: An Intimate History of Dance (b04t6kb8)
[Repeat of broadcast at 20:00 today]

WED 02:00 Carved with Love: The Genius of British Woodwork (b01pyfd2)
The Glorious Grinling Gibbons

Series about great British woodworkers continues by looking at the life and work of Grinling Gibbons. He isn't a household name, but he is the greatest woodcarver the British Isles has ever produced. Working in the aftermath of the Great Fire of London, Gibbons created delightful carved masterpieces for the likes of Charles II and William of Orange. This film explores the genius of the man they called the 'Michelangelo of wood'.

WED 03:00 Magic Numbers: Hannah Fry's Mysterious World of Maths (b0bptsd0)
[Repeat of broadcast at 21:00 today]

THURSDAY 25 OCTOBER 2018

THU 19:00 Beyond 100 Days (b0bnk7n8)
Series 1

25/10/2018

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

THU 19:30 Top of the Pops (b0bpz9dq)

Gary Davies and Peter Powell present the pop chart programme, first broadcast on 23 July 1986. Featuring Hollywood Beyond, Sinitta, Audrey Hall, Robert Palmer, Haywoode and Madonna.

THU 20:00 Human Universe (p0276pxp)
Are We Alone?

Brian Cox explores the ingredients needed for an intelligent civilisation to evolve in the universe - the need for a benign star, for a habitable planet, for life to spontaneously arise on such a planet and the time required for intelligent life to evolve and build a civilisation. Brian weighs the evidence and arrives at his own provocative answer to the puzzle of our apparent solitude.

THU 21:00 The Motorway: Life in the Fast Lane (b04kntmp)

No Such Thing as an Accident

Every year in Britain there are an estimated 250,000 road traffic collisions. It is a widely held theory amongst those working on the motorway that there is no such thing as an accident - usually something or someone is to blame. This episode takes a look at the work of the Highways Agency, motorway police and other agencies who are making Britain's motorways safer and also explores the environmental, economic and emotional costs of accidents that occur on Britain's motorways.

Catthorpe Junction is a major interchange linking the M1 and A14 to the start of the M6. Its outdated road layout has witnessed a number of road traffic collisions in the last few years but now it's about to be redesigned to make it safer and less congested, all to the tune of over £190 million. Overseeing the work is construction manager Mark Sutton, but it's not just a case of building a road. With the roadworks taking place on 78 acres of newly acquired farmland nestled amongst rural villages, Mark and his team have to ensure locals are happy, including the local wildlife. A protected colony of great crested newts needs to be relocated away from the works. This is a lengthy and expensive process, and the cost of relocating each newt could run into thousands of pounds.

Meanwhile out on the road, the Central Motorway Police Group patrol the motorway in their unmarked lorry, spying on drivers

who fall afoul of the law. The Highways Agency and maintenance teams cope with the aftermath of an overturned lorry that has spilled its cargo of milk onto the carriageway, threatening to contaminate a local watercourse.

THU 22:00 Blackadder (p00bf6md)

Blackadder Goes Forth

Plan A - Captain Cook

Edmund cheats to win a competition to be named Official War Artist, thinking it's his ticket out of the trenches. So he's furious when his reward turns out to be going into no man's land to sketch the German positions.

THU 22:30 Blackadder (p00bf6pz)

Blackadder Goes Forth

Plan B - Corporal Punishment

Blackadder faces court martial for eating a carrier pigeon. With the pigeon's owner Melchett as judge and Darling as prosecutor, Edmund is relying on George and Baldrick to save his skin.

THU 23:00 Britain's Forgotten Slave Owners (b063jzdw)

The Price of Freedom

Historian David Olusoga continues his examination of Britain's forgotten slave owners. In this episode, David explores how in 1834 the government arrived at the extraordinary decision to compensate the slave owners with the equivalent of £17 billion in today's money. Tracing the bitter propaganda war waged between the pro-slavery lobby and the abolitionists, he reveals that paying off the slave owners for the loss of their human property was, ultimately, the only way to bring the system to an end.

Meticulously kept records held at the National Archives detail the names of the 46,000 slave owners from across the British empire who had a slice of this vast handout. Combined with new research, shared exclusively with the BBC by University College London, it reveals more about Britain's slave owners than we've ever known before.

Of the 46,000 names in the 1834 compensation records, 3,000 lived in Britain, yet they owned half of the slaves across the empire and pocketed half of the compensation money. These include members of the clergy and of the House of Lords. The records also show that at the point of abolition, more than 40 per cent of all the slave owners were women.

David goes on to investigate what happened to the wealth generated by the slave system and compensation pay out. He reveals aspects of Britain's spectacular industrialisation in the 19th century, the consolidation of the City of London as a world centre of finance, and a number of the country's most well-known institutions that all have links to slave-derived wealth.

Ultimately, David discovers that the country's debt to slavery is far greater than previously thought, shaping everything from the nation's property landscape to its ideas about race. A legacy that can still be felt today.

THU 00:00 Top of the Pops (b0bpz9dq)

[Repeat of broadcast at 19:30 today]

THU 00:35 Storyville (b00ml582)

How the Beatles Rocked the Kremlin

Documentary which tells the extraordinary unknown story of how The Beatles helped to destroy the USSR.

In August 1962, director Leslie Woodhead made a two-minute film in Liverpool's Cavern Club with a raw and unrecorded group of rockers called The Beatles. He arranged their first live TV appearances on a local show in Manchester and watched as the Fab Four phenomenon swept the world.

Twenty-five years later while making films in Russia, Woodhead became aware of how, even though they were never able to play in the Soviet Union, The Beatles' legend had soaked into the lives of a generation of kids. This film meets the Soviet Beatles generation and hears their stories about how the Fab Four changed their lives, including Putin's deputy premier Sergei Ivanov, who explains how The Beatles helped him learn English and showed him another life.

The Soviet authorities were alarmed by the seditious potential of rock 'n' roll, with The Beatles a special target and denounced as 'bugs' in official papers. Their smuggled records were destroyed and their music was banned, but the myth blossomed as bootlegs and photos were covertly traded and even rented amongst fans.

Soon there were thousands of rock bands across the USSR trying to make music with crude homemade guitars. Speakers on lampposts installed to broadcast propaganda were grabbed by rock hopefuls, while reports that an electric pickup could be cannibalised from a telephone led to phone boxes being raided and disabled.

Millions of young people fell in love with The Beatles and the culture of the Cold War enemy, and defected emotionally from the Soviet system. The Beatles prepared the cultural way for the fall of the Berlin Wall and ultimately helped to wash away the foundations of that system.

THU 01:35 Smile! The Nation's Family Album (b08j8jj3)

In today's digital age, the classic family photo album has become an object of nostalgic affection. But it's much more than just a collection of sentimental snapshots.

Celebrating everyday moments and shared experiences, family photography offers an intimate portrait of Britain's postwar social history. And each generation had a different camera to tell their story.

Discovering how new technologies and evolving social attitudes inspired the nation to pick up a camera, the film charts a journey from the Box Brownie to Instagram, offering a touching portrait of our changing lives, taken not by the professional photographer but on our own cameras.

With increasingly affordable, quick-to-load and easy-to-use cameras, domestic photography became part of family life in the 20th century.

Suddenly we could all now document our family's celebrations, holidays and hobbies, and capture the most fleeting and precious memories, from birth to death.

We became a nation obsessed with taking photos, and tirelessly curating scrapbooks, and filling shoeboxes and albums with pictures that tell our family's own story.

But with the advent of digital cameras, the era of patiently waiting for the holiday snaps to come back from the processor and carefully arranging them in photo albums feels a long way from today's frenzy of digital images, instantly shared and uploaded...

The film features expert voices explaining the impact of different camera technologies, the role of Kodak in helping create an industry of popular photography, the impact of the digital revolution and the way changes in family photography have also reflected shifts in the family dynamic itself. It's no longer just dad in control of the camera, and mobile phones and social media have turned kids into photographers from a young age...

Among the stories featured in the film...

Using her father's Box Brownie as a young girl, then armed with the latest Kodak instamatic in her teens, and now using a digital SLR, Jenny Bowden's photos capture the past 60 years, from the 1950s street parades to the 60s mods, the 70s fashions when she married and started her own family, the various birthdays, graduations and weddings and deaths, and in the past decade the arrival of her own grandchildren, her albums span across her house. Today when her grandchildren visit, they head straight to the shelves as they love to flick through the albums and see themselves as babies.

Besotted and first-time mum Astrid has taken thousands of photos on her iPhone of her son Alexander since his birth eight months ago. Unlike her own mother Terry, whose photos of Astrid as a baby were considered and less frequent due to the costs of 35mm film, Astrid has the luxury of snapping away all day, taking advantage of the ease and low costs of the digital age, as she records her and Alexander's first year together. Proud Astrid spreads the happiness Alexander brings with Terry and other family via WhatsApp and Instagram.

We meet the English eccentric John Dobson, who has 161 carefully annotated scrapbooks - and counting! His careful curating of happy family memories helped him overcome his own childhood spent in a children's home.

We also meet the devoted Yorkshire dad Ian Macleod, who took a photo of his son every single day until his 21st birthday, and the Slight family in Essex, whose larger-than-life characters grew up in a pub and captured an East End way of life that no longer exists.

And we discover the emotional impact of family photos, with a family movingly sharing the very last film taken on a father's camera before he died.

From the extraordinary to the mundane, family photos capture the intimate moments of our lives. Often overlooked in the official story of photography, this film champions the family photo and the unique portrait it reveals of how the nation tells

its own story.

THU 02:35 Human Universe (p0276pxp)
[Repeat of broadcast at 20:00 today]

FRIDAY 26 OCTOBER 2018

FRI 19:00 World News Today (b0bnk7np)
The latest national and international news, exploring the day's events from a global perspective.

FRI 19:30 Top of the Pops (b0bpzd98)
Janice Long and Mike Read present the pop chart programme, first broadcast on 31 July 1986. Featuring Spandau Ballet, The Jesus and Mary Chain, Five Star, Stan Ridgway and Chris de Burgh.

FRI 20:00 Blues & Beyond with Cerys Matthews and Val Wilmer (b0bpb14f)
DJ and broadcaster Cerys Matthews and acclaimed blues photographer Val Wilmer select their favourite blues musicians, several of whom Val has met and photographed.

As they view their selection, they reveal the reasons behind their choices. Discover why Muddy Waters is their master of mojo, and how Val rescued Jimi Hendrix from some over-eager fans. From Howlin' Wolf to John Lee Hooker, Sister Rosetta Tharpe to Peggy Lee and many more, their playlist is packed with classic blues and punctuated with great stories.

Blues and Beyond offers new insights on both the subject and the narrators, as well as providing a heady nostalgic hit of the very best in blues music, from the intimate to the epic.

FRI 21:00 Queen: Rock the World (b09d5xfp)
Behind-the-scenes archive documentary following Queen's Freddie Mercury, Brian May, Roger Taylor and John Deacon as they record their sixth album News of the World and embark on a groundbreaking tour of North America.

By 1977, Queen had become a major headlining act in the UK, releasing chart-topping albums and singles as well as playing sell-out concerts in all the country's major venues. However, they were facing an increasingly hostile music press, who had a new favourite in punk and had turned against the elaborate, multi-layered recording techniques that had become the hallmark of the band's previous albums.

But an unfazed Queen had their sights set on greater things. As the band announced plans to record their next album, the expectation was it would be another production extravaganza, but Freddie, Brian, Roger and John already had other ideas. News of the World showcased them at their most raw, simple and best, returning to their roots as a live act. With a self-imposed limit on studio time and produced entirely on their own for the first time, this stripped-back album took the fans and press by surprise and demonstrated Queen's ability to transcend fashions. It was to prove a seminal moment in the band's history.

At the time, BBC music presenter Bob Harris was given exclusive and extensive access to the band to cover this period. Conducting insightful interviews with all four band members as well as filming them at work in the studio as they were planning and rehearsing their forthcoming North American tour, and then following them as they performed across the US, Bob captured a band attempting to replicate their huge domestic success on the global stage. Curiously, the documentary he set out to make was never completed, and the footage lay unused in the archive until now.

To mark the 40th anniversary of the release of the News of the World album, the footage has now been carefully restored and revisited to compile this hour-long portrait of a group setting out to take the next step on their remarkable journey to becoming one of the biggest bands on the planet. Armed with an array of new songs, including the monster hits We Will Rock You and We Are the Champions, Queen dazzled the American audience and laid the foundations of a relationship that endures to this very day.

Coming full circle, this film is bookended by footage shot in the summer of 2017 as Brian May and Roger Taylor took Queen back to the US with Adam Lambert as lead singer. Revisiting many of the cities they had performed in 40 years previously and including many of the songs from that 1977 album, they prove that despite the tragic loss of Freddie Mercury over 25 years ago, Queen can still rock the world.

FRI 22:00 The Story of Bohemian Rhapsody (b0074d94)
The full story behind the iconic song, featuring Brian May and Roger Taylor's return to Rockfield Studios, where they re-

record the guitar and drum parts and tell the story of how the song came together. Narrated by Richard E Grant, the documentary includes exclusive rare recordings of Freddie Mercury performing the song in studio, Queen's first ever TV performance and the making of the video, as well as interviews with Mercury's friends and family, The Darkness and Bjorn Ulvaeus from Abba.

FRI 22:55 Bowie at Glastonbury 2000 (b0bntp2p)
On Sunday 25 June 2000, David Bowie closed Glastonbury with a two-hour performance. Only half an hour or so of that stunning set was broadcast on BBC television that night at Bowie's insistence. At the time, the BBC were heavily criticised for coming off Bowie after broadcasting the first five songs of the set live and only returning for a couple of encore songs at the end of the show. Fortunately the cameras kept rolling and captured the whole set.

This programme features an hour of highlights from that performance, including such previously unbroadcast hits as Ashes to Ashes, Starman and Let's Dance. Bowie was returning to the festival for the first time since 1971. His star was not in the ascendant after the Tin Machine era and such 90s solo albums as Outside, Earthling and Hours. But from the moment he walked out on the Pyramid Stage, resplendent in an Alexander McQueen frock coat with his hair in Hunky Dory mode, and launched into Wild is the Wind, it was clear that he had decided to embrace and fully restate both his catalogue and his legend. Arguably it was Bowie's greatest live performance since the 70s.

After a heart attack in June 2004 while at the end of the 110-plus dates of A Reality Tour, Bowie never played live with a band again. His final stage performance was at a private Aids benefit show with pianist Mike Garson in 2006.

FRI 00:00 The People's History of Pop (b083dj11)
1986-1996 All Together Now

Lauren Laverne celebrates the decade 1986-1996 when music had the power to unite fans - even sworn rivals - like never before. It's a decade that starts with a turn to the alternative, even among the fans of mega pop bands.

We hear from Depeche Mode fans who were invigorated by the band's darker sounds in Black Celebration - and have saved a lot of memorabilia from the gigs they went to see back then. We also hear from a fan of hip hop who discovered a burgeoning UK hip hop scene when he moved to London and shares footage of his friends MCing and DJing at home.

In 1988, the acid house wave hit and the show meets those who lived through it and loved it. They have saved flyers and photos from the halcyon days of raving that completely changed their lives, including one man who went from football hooligan to raver to club promoter.

Out of the clubs came mega pop bands. The programme meets an avid Take That fan who bought every type of merchandise she could as a teenager - saving pretty much all of it. Another fan takes viewers back to the site of her first ever Blur gig in 1994 and the show finishes by talking to fans of the most successful girl group of all time - The Spice Girls.

Pop treasures uncovered along the way include one of the first Hacienda membership cards, covered with signatures of Hacienda dignitaries, from New Order to Dave Haslam, A Guy Called Gerald, Bez and, of course, Tony Wilson. The programme also meets a club promoter who shares rare footage of one of The Prodigy's early rave-inspired gigs. And Lauren also meets someone with a rare Oasis demo tape from a gig at the Boardwalk in London in January 1992.

FRI 01:00 Top of the Pops (b0bpzd98)
[Repeat of broadcast at 19:30 today]

FRI 01:30 Sound of Song (b04z23v1)
Reeling and Rocking

Musician Neil Brand explores the magical elements that come together to create great songs by recreating some of the most memorable and innovative recording sessions in music history - from Elvis's slapback echo in Memphis and The Beatles' tape loops at Abbey Road to Phil Spector's Wall of Sound and The Beach Boys' pop symphonies.

He shows that all this was made possible by the discovery of magnetic tape by an American soldier in the ruins of WWII Germany, the invention that, more than any other, drove the emergence of the music studio as a compositional tool and the rise of the producer as a new creative force shaping the sound of song.

FRI 02:30 Blues & Beyond with Cerys Matthews and Val

Wilmer (b0bpb14f)
[Repeat of broadcast at 20:00 today]