

SATURDAY 12 AUGUST 2017

SAT 19:00 The Brain with David Eagleman (b06y8hr)
What Is Reality?

Series in which Dr David Eagleman takes viewers on an extraordinary journey that explores how the brain, locked in silence and darkness without direct access to the world, conjures up the rich and beautiful world we all take for granted.

This episode begins with the astonishing fact that this technicolour multi-sensory experience we are having is a convincing illusion conjured up for us by our brains.

In the outside world there is no colour, no sound, no smell. These are all constructions of the brain. Instead, there is electromagnetic radiation, air compression waves and aromatic molecules, all of which are interpreted by the brain as colour, sound and smell.

We meet a man who is blind despite the fact that he has eyes that can see. His story reveals that it's the brain that sees, not the eyes. A woman with schizophrenia, whose psychotic episodes were her reality, emphasises the fact that whatever our brains tell us is out there, we believe it.

Visual illusions are reminders that what's important to the brain is not being faithful to 'reality', but enabling us to perceive just enough so that we can navigate successfully through it. The brain leaves a lot out of its beautiful rendition of the physical world, a fact that Dr Eagleman reveals using experiments and street demonstrations.

Each one of our brains is different, and so is the reality it produces. What is reality? It's whatever your brain tells you it is.

SAT 20:00 Britain's Treasure Islands (b078lw8y)
Outposts of Empire

The final part of Stewart McPherson's epic journey to visit all of the UK's Overseas Territories takes him to islands that could not be more different, yet are all united by being important military or trading bases, both historically and, in some cases, still today.

This journey begins in the Caribbean, where amongst sunbathing tourists, he finds some unexpected wildlife and an active volcano. In the centre of the Atlantic, the pinprick of Ascension Island, an extinct volcano, looks like somewhere on Mars rather than a part of Britain, yet it too has rich wildlife.

St Helena is so remote it was seen as a safe prison for Napoleon Bonaparte after his defeat at Waterloo. And finally, Stewart visits the newest of the Overseas Territories, the Sovereign Base Areas on Cyprus, along with Gibraltar, the last home of the Neanderthals and the present home of Barbary macaques, Europe's only wild colony of monkeys.

SAT 21:00 I Know Who You Are (b091gv25)
Series 1

Episode 9

We learn that 13 minutes before going missing, Ana is devastated to hear that Juan Elias is about to break his promise to stand down in the election. Giral is questioning Heredia, who is now heavily implicated in Ana's disappearance, when circumstantial evidence increases after a body is found dumped near his summer property.

In Spanish with English subtitles.

SAT 22:20 I Know Who You Are (b091gv27)
Series 1

Episode 10

All is revealed as we learn what really happened on the night of Ana's disappearance.

In Spanish with English subtitles.

SAT 23:40 Top of the Pops (b090tsr6)

Mike Read and Steve Wright present the pop chart programme, first broadcast on 3 May 1984. Includes appearances from Orchestral Manoeuvres in the Dark, Blancmange, New Order, Kenny Loggins, Jocelyn Brown, Human League and Duran Duran.

SAT 00:10 Top of the Pops (b090tsv5)

David Jensen and John Peel present the pop chart programme, first broadcast on 10 May 1984. Includes appearances from Belle and the Devotions, Queen, The Flying Pickets, Bob Marley & the Wailers, Terri Wells, The Pointer Sisters and

Duran Duran.

SAT 00:40 How Quizzing Got Cool: TV's Brains of Britain (b084fs6s)

We all love a good quiz. So here's a question - when did ordinary contestants turn into the pro-quizzers of today? Giving the answers are Victoria Coren Mitchell, Judith Keppel, Chris Tarrant, Mark Labbett, Nicholas Parsons and many more. Narrated by Ben Miller.

SAT 01:40 How to Make a Number One Record (b05r6q4r)

Great pop records are the soundtrack to our lives, and that is why number one hits hold a totemic place in our culture. This film goes in search of what it takes to get a number one hit single, uncovering how people have done it and the effect it had on their lives. As the exploration moves through the decades, the goal is to trace the various routes that lead to the top of the singles chart and discover the role played by art, science, chance and manipulation in reaching the pinnacle of pop.

SAT 02:40 Britain's Treasure Islands (b078lw8y)
[Repeat of broadcast at 20:00 today]

SUNDAY 13 AUGUST 2017

SUN 19:00 BBC Proms (b091gh8x)
2017

Dausgaard's Rachmaninov

This all-Rachmaninov programme features two of the composer's greatest and most-loved works performed by the BBC Scottish Symphony Orchestra under conductor Thomas Dausgaard. Alexander Gavrylyuk is the soloist for the famously demanding Third Piano Concerto, which is followed by the capricious and impassioned Second Symphony. The Latvian Radio Choir joins the line-up, setting both pieces alongside the Russian Orthodox chants that the composer would have known.

SUN 21:15 The Chopin Etudes (b093jq49)
Opus 25, No 1

Pianist Freddy Kempf plays Chopin's Etude in A minor, Op 25 No 1.

SUN 21:20 John Denver at Wembley Arena (b03jqg83)
Country singer-songwriter John Denver performs in concert at Wembley Arena in 1979, featuring hits including Rocky Mountain High and Take Me Home, Country Roads.

SUN 22:00 The Sky at Night (b091j816)
It Came From Outer Space

In August, the most spectacular meteor shower of 2017 coincides with transmission: The Perseids! If it's clear, it'll be a great chance to see scores of bright shooting stars streaking across the night sky. As those shooting stars vaporise in the atmosphere, a small part of some of them will fall to earth as dust.

This dust will contribute to a total of about 40,000 tonnes of space dust and debris that falls onto our planet every year. In this episode, Chris Lintott and Maggie Aderin-Pocock investigate this mysterious cosmic debris that comes from outer space.

SUN 22:30 Black Roses: The Killing of Sophie Lancaster (b055kpfm)

Sophie Lancaster was kicked to death in a Lancashire park in 2007 because of her appearance. Sylvia Lancaster remembers her daughter and the tragic events after the attack as Sophie tells her own story through a sequence of poems written by poet Simon Armitage.

SUN 23:15 Return to Betjemanland (b04bg6nl)

In 1984, Sir John Betjeman died and was buried at St Enodoc Church, close to the village of Tribetherick in north Cornwall.

Writer, critic and biographer of Betjeman, AN Wilson, visits the real and imagined places that shaped his life to reveal the life and work of the poet and broadcaster.

Wilson explores how Betjeman came to speak to, and for, the nation in a remarkable way. As a poet Betjeman was writing popular verse for the many, not the few. With his brilliant documentaries for television, Betjeman entertained millions with infectious enthusiasm as he explained his many passions and bugbears.

As a campaigner to preserve the national heritage, Betjeman was tireless in his devotion to conservation and preservation, fighting the planners, politicians and developers - railing against their abuse of power and money.

Wilson investigates this by visiting locations in London, Oxford, Cornwall, Somerset and Berkshire. He travels through a landscape of beautiful houses and churches, beaches and seaside piers - a place that Wilson calls Betjemanland.

In doing so he also reveals the complexity and contradictions of Betjeman - how Betjeman, the snob with a love of aristocrats and their country houses, is the same person who is thrilled by the more proletarian pleasures of the Great British seaside; how the poetry of Betjeman shows us that he is haunted by childhood memory, has religious faith but also doubt and is in thrall to love and infatuation; and how the man his friends called Betjeman was full of joie de vivre, but also suffered great melancholy and guilt whilst living an agonised double life.

SUN 00:15 The Man Who Fought the Planners: The Story of Ian Nairn (b03vrz4h)

These days, opinionated journalists are two a penny. But back in the 1950s, Ian Nairn was part of a new breed of Angry Young Men. Aged just 25 and fresh out of the RAF, he burst onto the architectural scene with Outrage, a blistering attack on the soulless destruction of Britain by shoddy post-war planners. Published in the influential Architectural Review in June 1955, it led to the formation of the Civic Trust, whose remit was to tackle the 'subtopian' eyesores Nairn had so graphically exposed.

Over the next two decades, Nairn became a tireless and passionate campaigner, both in print and on the BBC, inspiring a whole generation to take up arms against the second-rate in our towns and cities. But he himself was a deeply flawed and troubled character, who slowly drank himself to death, feeling the battle to save Britain's soul had been lost. Close colleagues and admirers, including Jonathan Meades, Gillian Darley and Jonathan Glancey, pay tribute to a remarkable man who made us look afresh at the world around us.

SUN 01:15 Storyville (b04m3k1q)

Russia's Toughest Prison: The Condemned

With unprecedented access, this documentary looks into the hidden world of one of Russia's most impenetrable and remote institutions - a maximum security prison exclusively for murderers. Deep inside the land of the gulags, this is the end of the line for some of Russia's most dangerous criminals - 260 men who have collectively killed nearly 800 people. The film delves deep into the mind and soul of some of these prisoners.

In brutally frank and uncensored interviews the inmates speak of their crimes, life and death, redemption and remorselessness, insanity and hope. The film tracks them through their unrelenting days over several months, lifting the veil on one of Russia's most secretive subcultures to reveal what happens when a man is locked up in a tiny cell for 23 hours every day, for life.

A startling insight into inscrutable minds and the forbidding world they have been condemned to.

SUN 02:35 How Quizzing Got Cool: TV's Brains of Britain (b084fs6s)

[Repeat of broadcast at 00:40 on Saturday]

MONDAY 14 AUGUST 2017

MON 19:00 World News Today (b091gfcf)

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

MON 19:30 Eisteddfod (b091gw87)

2017: with Josie d'Arby

Josie d'Arby explores one of the largest and oldest travelling cultural festivals in Europe - the National Eisteddfod of Wales. As a presenter for BBC Young Musician, Choir of the Year, Proms in the Park and BBC Cardiff Singer of the World, Josie has witnessed an abundance of world-class music. But as a proud Welsh woman, this is the first time the Songs of Praise presenter will get to experience this jewel in the crown of the Welsh cultural calendar.

Immersing herself in this festival of druidic pageantry, poetry, music and visual art Josie will find out exactly what drives almost 150,000 people to take on sun, mud and the main stage in this extraordinary nine-day cultural competition, this year taking place on Anglesey. This is far from your average TV talent show. Josie discovers how pride and performance really make this nation sing.

MON 20:00 The Town That Thread Built (b08t9nr)
Paisley, Scotland's biggest town, was one of its wealthiest when local mill owners J & P Coats were at the peak of their powers and one of the world's three biggest companies. This social history tells the story of the company, its workers, and the rise and fall of their town as the centre of the world thread industry. Narrated by leading actress and one-time 'mill girl' Phyllis Logan.

MON 21:00 Vikings (b01mxt26)
Episode 2

Neil Oliver heads out from the Scandinavian homelands to Russia, Turkey and Ireland to trace the beginnings of a vast trading empire that handled Chinese silks as adeptly as Pictish slaves. Neil discovers a world of 'starry-eyed maidens' and Buddhist statues that are a world away from our British experience of axe-wielding warriors, although it turns out that there were quite a few of those as well.

MON 22:00 Storyville (b091gw89)
Out of Thin Air: Murder in Iceland

In 1974, two men vanished several months apart. Iceland, with a population of just over 200,000, was a close, tight-knit community where everyone knew everyone, but the police got nowhere: there were no bodies, no witnesses and no forensic evidence. Then six suspects were arrested and confessed to the murders, many facing long, harsh sentences. It seemed like justice had been done, but nothing could be further from the truth.

Forty years later, this notorious murder case was reopened when new evidence brought into question everything that had gone before. It became clear that the suspects had very quickly lost trust in their memories and were confused about their involvement in the crimes they had confessed to. The extreme police interrogation techniques were brought under intense scrutiny.

This tense, psychological thriller tells the true story of the biggest-ever criminal investigation in Iceland's history, exploring one of the most shocking miscarriages of justice Europe has ever witnessed.

MON 23:25 Sex and Sensibility: The Allure of Art Nouveau (b01fd4z2)
Vienna

In a story that combines scandal and revolution, cultural correspondent Stephen Smith explores how Vienna's artists rebelled against the establishment in the late 19th century and brought their own highly sexed version of art nouveau to the banks of the Danube.

Looking at the eye-watering work of Gustav Klimt, Smith discovers that Viennese 'Jugendstil' was more than just a decorative delight but saw artists struggle to bring social meaning to the new style. Revealing the design genius of Josef Hoffman, the graphic work of Koloman Moser and the emergence of the enfant terrible Egon Schiele, Smith unpacks the stories behind a style that burned brightly but briefly at the fin de siècle.

MON 00:25 The Town That Thread Built (b08t9nr)
[Repeat of broadcast at 20:00 today]

MON 01:25 Vikings (b01mxt26)
[Repeat of broadcast at 21:00 today]

MON 02:25 Eisteddfod (b091gw87)
[Repeat of broadcast at 19:30 today]

MON 02:55 Return to Betjemanland (b04gb6nl)
[Repeat of broadcast at 23:15 on Sunday]

TUESDAY 15 AUGUST 2017

TUE 19:00 World News Today (b091gffq)

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

TUE 19:30 The River Taff with Will Millard (b06zyl2v)
Series 1

Episode 1

Writer and fisherman Will Millard tells the extraordinary story of how the River Taff came back from the dead. This river,

once so polluted by heavy industry that no fish could live there, has now become one of the best salmon and trout rivers in Wales. Will travels from the source high in the stunning Brecon Beacons National Park to Merthyr Tydfil where he discovers that the town's ironworks were once vital to the British Empire. Along the way he trains with a mountain rescue team facing a unique set of challenges, meets a group of conservationists working to protect a magical, hidden valley and fishes for wild brown trout in the most unlikely location.

TUE 20:00 Thailand: Earth's Tropical Paradise (b088pcls)
The Central Heartland

In central Thailand's forests, fertile plains and even city streets, nature finds a way of living alongside people. Spirituality can be found in human and animal relationships, both likely and unlikely. This bustling region is known as the nation's rice bowl - but even here, there are magical places to be found.

TUE 21:00 Utopia: In Search of the Dream (b091gx74)
Series 1

Build It and They Will Come

Utopia has been imagined in a thousand different ways. Yet when people try to build utopia, they struggle and very often fail. Art historian professor Richard Clay asks whether utopian visions for living can ever reconcile the tension between the group and the individual, the rules and the desire to break free.

Travelling to America, he encounters experimental communities, searching for greater meaning in life. Richard visits a former Shaker village in New Hampshire and immerses himself for a day at the Twin Oaks eco-commune in Virginia, where residents share everything, even clothes. He looks back at the grand urban plans for the masses of the 20th-century utopian ideologies, from the New Deal housing projects of downtown Chicago to the concrete sprawl of a Soviet-era housing estate in Vilnius, Lithuania. He also meets utopian architects with a continuing faith that humanity's lot can be improved by better design. Interviewees include architect Norman Foster and designer Shoji Sadao.

TUE 22:00 North Korea: Murder in the Family (b091wy13)

On 13 February 2017, the North Korean dictator's half-brother Kim Jong-nam walked into Kuala Lumpur airport to catch a flight to Macau. Two hours later he was dead. He had been assassinated using one of the most deadly chemical weapons on earth - VX. Within days, two women from Vietnam and Indonesia were arrested for his murder, but the CCTV appeared to show several North Korean secret agents orchestrating the events in the airport that day. With brand new accounts from those close to Kim Jong-nam, the award-winning This World strand examines in greater detail the astonishing story of a bitter family feud, secret agents and international arms dealing, lifting the lid on why he was assassinated and how North Korea's powerful international business network has allowed the brutal Kim family dictatorship to remain in power in North Korea for nearly 70 years.

TUE 23:00 The Brain with David Eagleman (b06yrqzh)
What Makes Me?

Series in which Dr David Eagleman takes viewers on an extraordinary journey that explores how the brain, locked in silence and darkness without direct access to the world, conjures up the rich and beautiful world we all take for granted.

This episode explores the question of how the brain gives rise to our thoughts, emotions, memories and personality. We see how the process of becoming 'you' starts at birth. The brain of a newborn baby is not yet fully developed, instead it grows and shapes itself around life experience.

Wiring up begins immediately, and rapidly, as the child's brain starts to adapt to whatever situation - culture, habitat, language - it's born into. This allows humans to flourish in any stimulating environment, but as the story of three Romanian orphans reveals, a lack of social contact and stimulation can result in permanent brain damage as the brain fails to make vital connections in those critical early years.

Tracing the development of the brain - the 'making of you' - through a lifetime, Dr Eagleman tests the social stress levels of teenagers as their brains go through profound changes, meets London cabbies whose intense training to memorise street maps physically alters the shape of their hippocampus, and joins a group of elderly nuns who are defying the symptoms of Alzheimer's by keeping their brains active and building up 'cognitive reserve'.

As we make new memories, learn new skills and have life experiences, the brain is constantly and dynamically rewiring itself. It never stops. Nor do we - the human brain is always changing, and therefore so are we. From cradle to grave, we are

works in progress.

TUE 23:55 A History of Art in Three Colours (b0114fy1)
Gold

For the very first civilisations, the yellow lustre of gold is the most alluring and intoxicating colour of all. From the midst of prehistory to a bunker deep beneath the Bank of England, Fox reveals how golden treasures made across the ages reflect everything that has been held as sacred.

TUE 01:00 Thailand: Earth's Tropical Paradise (b088pcls)
[Repeat of broadcast at 20:00 today]

TUE 02:00 North Korea: Murder in the Family (b091wy13)
[Repeat of broadcast at 22:00 today]

TUE 03:00 Utopia: In Search of the Dream (b091gx74)
[Repeat of broadcast at 21:00 today]

WEDNESDAY 16 AUGUST 2017

WED 19:00 World News Today (b091gffw)

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

WED 19:30 The River Taff with Will Millard (b0705d04)
Series 1

Episode 2

Writer and fisherman Will Millard travels the length of the wild River Taff in South Wales, from its source high in the stunning Brecon Beacons to the Bristol Channel. He explores how the coal industry changed this beautiful landscape and its people forever. The river once ran black with coal dust but is now one of the finest trout and salmon rivers in Wales. Will meets the members of the Lewis Merthyr Colliery Brass Band and fishes for grayling with a former miner who is now a champion fly-fisherman. He visits one of Britain's biggest open-cast coal mines and sees how this spectacular landscape is being reclaimed after centuries of mining.

WED 20:00 Fair Isle: Living on the Edge (b084jy10)
Episode 2

Fair Isle is Britain's most remote inhabited island, situated halfway between the Shetland and Orkney Islands. Life here is at the mercy of the weather. Once home to nearly 400 people, today there are just 57. Fair Isle must boost its population if it is to survive. Filmed over a critical year, this intimate series captures the community as they launch their development plan with an aim of bringing new families to the island and bolstering the fragile economy. This final episode continues to follow 11-year-old Ythan and his family as they learn to deal with his homesickness, and reveals if Fair Isle's newest inhabitants Shaun and Rachel have survived their first winter and decided to stay on.

WED 21:00 Milton Keynes and Me (b091gy05)

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

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

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

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

first names.

WED 22:00 The World's Most Photographed (b0078xcb)
Elvis Presley

Series which unearths photographs previously lost or suppressed, to explore the power of the image and the nature of iconography. It decodes the carefully constructed public image of ten of the world's most photographed people to reveal more about the personalities, lives and intentions of the subjects.

In this edition, the photographers who captured the spontaneous side of Elvis Presley before he was consumed by the publicity machine, as well as the last pictures ever to be taken of the real Elvis Presley.

WED 22:30 Mind the Gap (b09209zs)
Series 1

Love Me Tender

Drama set in 1960. Billy loves Rose, Rose loves Elvis. Will her dream of visiting Graceland be fulfilled?

WED 23:00 How It Works (b01fkc5n)
Metal

Professor Mark Miodownik travels to Israel to trace the history of our love affair with gleaming, lustrous metal. He learns how we first extracted glinting copper from dull rock and used it to shape our world and reveals how our eternal quest for lighter, stronger metals led us to forge hard, sharp steel from malleable iron and to create complex alloys in order to conquer the skies.

He investigates metals at the atomic level to reveal mysterious properties such as why they get stronger when they are hit, and he discovers how metal crystals can be grown to survive inside one of our most extreme environments - the jet engine.

WED 00:00 Bricks! (b07w6hdm)

In 1976 Carl Andre's sculpture Equivalent VIII, better known as 'The Tate Bricks', caused a national outcry. 'What a Load of Rubbish' screamed the papers, 'it's not even art'. Worse still, in the midst of a severe economic depression, the Bricks were paid for with taxpayers' money. One man was so outraged he went to the Tate Gallery and threw blue food dye all over at them.

BBC Four marks the fortieth anniversary with award-winning director Clare Beavan's entertaining and revealing documentary looking back at the creation of the sculpture - which consists of 120 fire bricks - and the frenzied outcry that followed. With contributions from some of the key players involved at the time, as well as contemporary artists, historians and critics, Bricks! tells the tale of what happened when modern art and public opinion came up against a brick wall. Did Carl Andre's artwork pave the way for a greater appetite for conceptual art in Britain?

WED 01:00 Fair Isle: Living on the Edge (b084jy10)
[Repeat of broadcast at 20:00 today]

WED 02:00 The World's Most Photographed (b0078xcb)
[Repeat of broadcast at 22:00 today]

WED 02:30 Mind the Gap (b09209zs)
[Repeat of broadcast at 22:30 today]

WED 03:00 Milton Keynes and Me (b091gy05)
[Repeat of broadcast at 21:00 today]

THURSDAY 17 AUGUST 2017

THU 19:00 World News Today (b091fgg9)
The latest national and international news, exploring the day's events from a global perspective.

THU 19:30 The Sky at Night (b091j816)
[Repeat of broadcast at 22:00 on Sunday]

THU 20:00 Sword, Musket & Machine Gun: Britain's Armed History (b0888mjv)
The Big Bang

Dr Sam Willis charts the impact of gunpowder on the battlefield, from cannons to the first handheld weapons.

His journey starts in the 13th century with Oxford scientist and monk Roger Bacon, believed to be the first Englishman to write

down a recipe for gunpowder. Sam sees one of the largest surviving medieval cannons still in existence - Mons Meg in Edinburgh Castle. He examines a primitive 1400s 'handgonne' in the Tower of London Armouries that seems more like a mini cannon, with no trigger.

Sam tells the story of the Earl of Moray James Stewart who was regent of Scotland having ejected Mary Queen of Scots from the throne in 1570.

Sam next tells the story of the gunpowder plot. He includes lesser-known details of the 1605 attempted attack. For example, Guy Fawkes was discovered not just once but twice. Also the amount of gunpowder is thought to have been far more than was required. Another strange side to gunpowder's story is revealed - the saltpetre men. Gunpowder requires three ingredients - charcoal, sulphur and saltpetre. In the 17th century chemistry was primitive. Saltpetre or potassium nitrate forms from animal urine and the saltpetre men would collect soil where animals had urinated. This meant they dug up dovecots, stables and even people's homes. They had sweeping powers to come onto people's property and take their soil. They abused these heavily and one of the grievances against King Charles I was the heavy handedness of the saltpetre men.

Eventually, the conflict with the king would turn into the English Civil War. A key weapon in this war was the musket. It was so basic blacksmiths could churn it out by the dozen. Sam fires one with the help of expert gunsmith Robert Tilney. He shows both the musket's power and the lack of accuracy. Muskets were inaccurate but the tactic used was to wait until opponents were very close and then fire one huge volley. Sam shows that the musket would then be used as a heavy club.

Gunpowder weapons gave different injuries to swords and arrows. This led to changes in battlefield surgery, and one who was a key influence was surgeon Richard Wiseman. Sam shows that Wiseman had learnt that any cloth or fragment left from a bullet wound could cause infection and kill the patient.

Finally, Sam travels to Saint Malo in France to tell the story of a frightening attack by the British. In 1693, France and Britain were at war and French pirates had been attacking English ships. Captain John Benbow was asked to launch an attack using a ship crammed with gunpowder. Benbow put 20,000 pounds of gunpowder into the ship as well as many other inflammable ingredients - pitch, straw, sulphur, mortars and grenades. He planned to put this 'Infernal', as it was known, right next to the harbour walls of Saint Malo. But as the ship came near it struck a rock and held fast, within a pistol shot of the town. Then the ship exploded. The sound was heard 100 miles away yet a witness claimed 'no life was lost except a cat in a gutter.' The explosion was 'terrible beyond description' and it shows how far the English were prepared to go in the name of national security.

THU 21:00 Andrew Marr's The Making of Modern Britain (b00ntgb5)
Road to War

Britain basks in the heat of a long Edwardian summer, but tension and violence are never far below the surface. Women are attacked while campaigning for the vote, Ireland is divided over liberation from the British Empire, and dockers and miners strike for improved conditions and wages.

With magical archive footage and vivid storytelling, Andrew Marr explains why fears of a German invasion were stoked by the popular press. He also shows how the radical new Liberal chancellor, David Lloyd George, faced a very modern dilemma: pensions or battleships, welfare or warfare? With the birth of flight and the movies, this is also a story of magnificent men in their flying machines, and future Hollywood stars Charlie Chaplin and Stan Laurel touring together across Britain.

The assassination of an archduke in Sarajevo sets in motion the wheels of world war. In the corridors of Westminster old allies Winston Churchill and David Lloyd George fight over strategy. Out on the streets, the people are eager for battle, determined to 'teach the Hun a lesson'. Britain is on the road to war.

THU 22:00 Wonders of the Universe (b00zf9dh)
Destiny

Having explored the wonders of the solar system, Professor Brian Cox steps boldly on to an even bigger stage - the universe.

Who are we? Where do we come from? For thousands of years humanity has turned to religion and myth for answers to these enduring questions. But in this series, Brian presents a different set of answers - answers provided by science.

In this episode, Brian seeks to understand the nature of time and its role in creating both the universe and ourselves. From an extraordinary calendar built into the landscape of Peru to the beaches of Costa Rica, Brian explores the cycles of time which define our experience of life on Earth. But even the most epic

cycles of life can't begin to compare to the vast expanse of cosmic time.

For instance, just as the Earth orbits the Sun, the solar system orbits the entire Milky Way galaxy. This orbit takes a staggering 250 million years to complete.

Ultimately, Brian discovers that time is not characterised by repetition but by irreversible change. From the relentless march of a glacier, to the decay of an old mining town, the ravaging effects of time are all around us. The vast universe is subject to these same laws of change. As we look out to the cosmos, we can see the story of its evolution unfold, from the death of the first stars to the birth of the youngest. This journey from birth to death will ultimately lead to the destruction not just of our planet, but also the entire universe, and with it the end of time itself.

Yet without this inevitable destruction, the universe would be without what is perhaps the greatest wonder of all - the brief moment in time in which life can exist.

THU 23:00 Horizon (b01d99vb)
2011-2012

Solar Storms - The Threat to Planet Earth

There is a new kind of weather to worry about and it comes from our nearest star.

Scientists are expecting a fit of violent activity on the sun, which will propel billions of tonnes of superheated gas and pulses of energy towards our planet. They have the power to close down our modern technological civilisation - in 1989, a solar storm cut off the power to the Canadian city of Quebec.

Horizon meets the space weathermen who are trying to predict what is coming our way, and organisations like the National Grid, who are preparing for the impending solar storms.

THU 00:00 Gaga for Dada: The Original Art Rebels (b07w6j9h)

On the 100th anniversary of Dada, Jim Moir (aka Vic Reeves) goes on an irreverent trip into the world of the influential avant-garde art movement.

Absurd, provocative and subversive, Dada began as a response to the madness of World War I. But its radical way of looking at the world inspired generations of artists, writers and musicians, from Monty Python to punk, Bowie to Banksy.

Jim restages an early Dada performance in Zurich's Cabaret Voltaire, where the movement began. Among those joining him in his playful celebration of the Dadaists and their impact are Armando Iannucci, Terry Gilliam, designer Neville Brody and artists Michael Landy and Cornelia Parker.

THU 01:00 A History of Art in Three Colours (b0114fy1)
[Repeat of broadcast at 23:55 on Tuesday]

THU 02:00 Wonders of the Universe (b00zf9dh)
[Repeat of broadcast at 22:00 today]

THU 03:00 Sword, Musket & Machine Gun: Britain's Armed History (b0888mjv)
[Repeat of broadcast at 20:00 today]

FRIDAY 18 AUGUST 2017

FRI 19:00 World News Today (b091fggg)
The latest national and international news, exploring the day's events from a global perspective.

FRI 19:30 BBC Proms (b091gmb8)
2017

Beethoven's Eroica Revisited

The fearlessly brilliant members of Aurora Orchestra put Beethoven's revolutionary Eroica Symphony under the Proms microscope. Presenter Tom Service and conductor Nicholas Collon perform a lively and revealing on-stage dissection of the score that changed musical history. The Prom culminates with a full performance of the symphony, which the orchestra will play entirely from memory.

FRI 20:45 Mozart Uncovered (b07dwrgr)
Arias

Conductor Charles Hazlewood examines arias and duets from

Mozart's The Marriage of Figaro and The Magic Flute with soprano Camilla Tilling, tenor Toby Spence and baritone Andrew Shore.

FRI 21:00 BBC Proms (b091gmbb)
2017

Philip Glass and Ravi Shankar

Two goliaths of 20th-century music, Ravi Shankar and Philip Glass, recorded the studio album Passages together in 1989. The result was a unique fusion of Hindustani sitar music with American minimalism. Tonight the album is performed live and in full for the first time, with Shankar's daughter Anoushka playing the sitar alongside a dazzling array of Indian soloists and the Britten Sinfonia, conducted by Karen Kamensek.

FRI 22:20 Psychedelic Britannia (b06jp24b)

Documentary exploring the rise and fall of the most visionary period in British music history: five kaleidoscopic years between 1965 and 1970 when a handful of dreamers reimagined pop music.

When a generation of British R&B bands discovered LSD, conventions were questioned. From out of the bohemian underground and into the pop mainstream, the psychedelic era produced some of the most groundbreaking music ever made, pioneered by young improvising bands like Soft Machine and Pink Floyd, then quickly taken to the charts by the likes of The Beatles, Procol Harum, The Small Faces and The Moody Blues, even while being reimagined in the country by bucolic, folk-based artists like The Incredible String Band and Vashti Bunyan.

The film is narrated by Nigel Planer, with contributions and performances from artists who lived and breathed the psych revolution - Paul McCartney, Ginger Baker, Robert Wyatt, Roy Wood, The Zombies, Mike Heron, Vashti Bunyan, Joe Boyd, Gary Brooker, Arthur Brown, Kenney Jones, Barry Miles, The Pretty Things and The Moody Blues.

FRI 23:20 Totally 60s Psychedelic Rock at the BBC (b06jp24d)

A compilation from the depths of the BBC archive of the creme de la creme of 1960s British psychedelic rock from programmes such as Colour Me Pop, How It Is, Top of the Pops and Once More with Felix.

Featuring pre-rocker era Status Quo, a rustic-looking Incredible String Band, a youthful Donovan, a suitably eccentric performance from The Bonzo Dog Doo Dah Band, a trippy routine from Julie Driscoll, Brian Auger & The Trinity, a groovy tune from The Moody Blues, a raucous rendition by Joe Cocker of his version of With a Little Help From My Friends and some pre-Wizzard Roy Wood with The Move.

Plus classic performances from the likes of Procol Harum, Cream, Jimi Hendrix and The Who.

FRI 00:20 Tubular Bells: The Mike Oldfield Story (b03cw8g0)

In 1973, an album was released that against all odds and expectations went to the top of the UK charts. The fact the album launched a record label that became one of the most recognisable brand names in the world (Virgin), formed the soundtrack to one of the biggest movies of the decade (The Exorcist), became the biggest selling instrumental album of all time, would eventually go on to sell over 16 million copies and was performed almost single-handedly by a 19-year-old makes the story all the more incredible. That album was Tubular Bells, and the young and painfully shy musician was Mike Oldfield.

This documentary features contributions from Sir Richard Branson, Danny Boyle, Mike's family and the original engineers of the Tubular Bells album among others. The spine of the film is an extended interview with Mike himself, where he takes us through the events that led to him writing Tubular Bells - growing up with a mother with severe mental health problems; the refuge he sought in music as a child, with talent that led to him playing in folk clubs aged 12 and signing with his sister's folk group at only 15; his frightening experience of taking LSD at 16; and finally arriving at the Manor Recording Studios as a young session musician where he gave a demo tape to a recording engineer who passed it along to young entrepreneur Richard Branson.

After the album's huge success, Mike retreated to a Hereford hilltop, shunned public life and became a recluse until he took part in a controversial therapy which changed his life.

In 2012 Mike captured the public's imagination once again when he was asked to perform at the London Olympic Opening Ceremony, where Tubular Bells was the soundtrack to 20 minutes of the one-hour ceremony.

Filed on location at his home recording studio in Nassau, Mike also plays the multiple instruments of Tubular Bells and shows how the groundbreaking piece of music was put together.

FRI 01:20 Psychedelic Britannia (b06jp24b)
[Repeat of broadcast at 22:20 today]

FRI 02:20 Totally 60s Psychedelic Rock at the BBC (b06jp24d)
[Repeat of broadcast at 23:20 today]