IF OXFORD CALENDAR
FROM PIONEERING PERFORMANCES TO HANDS-ON EXPERIMENTS

BEHIND THE SCENES OF THE LABORATORY
THE JENNER INSTITUTE & UKAEA

THE ART OF ORIGAMI
LIVE IN THE MOMENT

THE OXFORD ARTISAN DISTILLERY
THE BOTANICAL WONDERS OF GIN

The Science Edition

IN PARTNERSHIP WITH
IF OXFORD, THE SCIENCE AND IDEAS FESTIVAL
We present the 29th annual Festival from Oxford that offers a range of science and ideas to everyone. The Festival is a proudly independent charity that has brought together a diverse programme of activities created by an enormous range of people.

This year’s IF Oxford was conceived at a time when we emerged from our homes to cheer those who cared for the vulnerable and kept the country going. This Festival is for them, it is for people who have experienced real anxiety and social isolation for the first time, it is for people prepared to try something new and see the world from different perspectives.

There was a moment when we thought IF wouldn’t happen, but we were certain of the abundant creativity around Oxford, and the unbounded curiosity of people across the UK, and the world. 2020 has been a challenging year of unexpected firsts, from family events by video, learning to cook, or developing skills while home alone.

We’re still here! Our digital-led programme doesn’t mean it’s not physical and social too – there are quizzes, shared food- and drink-tasting sessions, community dance activities and a city-wide art project making a computer-coded Oxford LED light show. There’s theatre and film, music and storytelling, as well as live events and on-demand content for you to try for free.

For those who want to get hands-on, we’ve pulled out all the stops and invested in the most ambitious Explorazone Digital the UK (or possibly even the world) has ever seen, with dozens of virtual activity stations for families, teenagers and adults alike. Hundreds of researchers will guide you through some awesome experiments from 8am on Saturday 17 October, and while most activities can be done with items often found at home, we’ve partnered with Curiosity Box to make sure you’ll have everything you need.

The annual Poetry of Science competition was an enjoyable challenge, whittling down 600 entries into a shortlist of 11 for you to choose your favourite. You can expect our classic mix of quirky and informed talks and discussions too, so get ready to fire up Zoom! We’ve worked with several groups to create self-led activities for you to try across the city, or wherever you are in the world, just please be careful.

Everyone involved in creating IF Oxford contributes because they have something to say, from the food delivery driver merging music with quantum mechanics and the disabled young people creating mesmerising visual art, to researchers developing COVID-19 vaccines or future energy sources. All we ask is that you join us, try something new and make your voice heard. If only we could get together and have a big party?

It’s here: #IFOx2020
Oxford and Oxfordshire are internationally-renowned for world-class science and here, ahead of IF Oxford, the science and ideas Festival, we explore two cutting edge labs as they develop a vaccine for COVID-19 and harness the infinite power of the sun.

**THE JENNER INSTITUTE**

On the top floor of ‘The Green Building’ on Old Road in Headington, you’ll find The Jenner Institute, named for Edward Jenner (1749-1823) the father of vaccinology. In 1876 he discovered that milkmaids who had previously caught cowpox were protected against smallpox, one of the deadliest diseases known, which at the time killed a tenth of the population. The term vaccine is derived from the Latin name for cowpox, Variola vaccinae. Jenner’s discovery has probably saved more lives than that of any other person, and in 2002 Jenner was named in the BBC’s list of the 100 Greatest Britons. He is commemorated in bronze at the entrance to the BBC’s list of the 100 Greatest Britons. He is

The past: delve into the past with a trip back in time to hear more about Jenner and take a fascinating diversion into Typhoidland with games, animation and activities as Lewis Carroll’s Alice discovers the murky underside of the ‘swampy’ city of Oxford. Typhoid, a killer of paupers, princes, and presidents, influenced the design of the water and sewage systems under our feet. The riddle of mysterious typhoid outbreaks in the Victorian era, solved by doctors and engineers, has implications for the ongoing worldwide fight against typhoid.

The present: take a 360° interactive stroll through the corridors of Jenner Institute’s state-of-the-art labs, ‘walking’ through their space from the safety of your sofa. Choose from video footage and information boards as scientists and researchers explain how people’s blood samples are taken, processed and analysed, and how this helps us understand the complexity of the human immune system and how different vaccines work. The Institute’s candidate coronavirus vaccine is currently being trialled in healthy volunteers, across 19 sites in the UK. Researchers will be on-hand to explain their work on this and a range of other diseases too – from malaria and HIV to prostate cancer.

Scientists from the Jenner Institute and the Oxford Vaccine Group started work designing a vaccine for COVID-19 on Saturday 10 January shortly after the SARS-CoV-2 was first detected in China, and before the world was in the grip of the current pandemic.

The vaccine uses a weakened version of a common cold virus from chimpanzees, which has been modified to include the genetic sequence of the club-shaped protein spikes on the coronavirus’ outer coat. It is hoped that this vaccine will successfully prime a person’s immune system to recognise and attack the COVID-19 virus if the body is later infected. Because the vaccine uses a non-replicating virus as a carrier, it cannot cause an ongoing infection in the vaccinated individual and this also makes it safer to give to children, the elderly and anyone with a pre-existing condition such as diabetes.

The future: consider the planning required for a future pandemic by unknown pathogen ‘Diasce X’ and the speed with which the world can react at a presentation in the Explorazone Digital auditorium on Saturday 17 October. In the past the development of a safe and effective vaccine was expected to take ten to twenty years, a timescale that has been compressed beyond all expectations in 2020 as Oxford responds to COVID-19. This raises interesting questions about the way vaccine research will evolve in future including collaborations between academia and industry to enable the production of new vaccines in large numbers at speed.

**MEET THE SCIENTIST**

“I’m Indra Rudiansyah, a DPhil student working on malaria vaccines. Despite the significant progress that has been made to reduce the mortality rate, malaria is still a global burden. The complexity of the parasite has made developing a vaccine a challenge. No commercial vaccine is currently available: however, many have undergone clinical evaluation and two promising candidates give partial protection. My work focuses on improving these vaccines by modifying the way the antigens they carry are presented. Hopefully, this strategy will make the vaccine more effective and durable.”

THE UK ATOMIC ENERGY AUTHORITY

In Culham, a series of unassuming low-rise buildings wrapped in a curve of the Thames, house UK Atomic Energy Authority (UKAEA) scientists and researchers working to create a new form of safe and sustainable low carbon energy: UKAEA is the UK’s leading fusion energy research lab looking to recreate a star.
the sun is our solar system’s natural fusion reactor. Fusion is a process in which hydrogen atoms zip around at high speed and high temperatures, occasionally colliding and fusing together to form helium, a reaction that lets stars give off both heat and the light we see here on Earth.

The sun is 15 million °C at its core. On Earth, because we are recreating the sun’s conditions in miniature, to get the same fusion reactions, the temperature required is 150 million °C, ten times hotter than the sun. In Culham, this reaction is recreated in one of two fusion machines. The first is JET (Joint European Torus) which is the largest in the world at three-four storeys high and it is used by scientists from all over the EU as part of the EUROfusion research programme. Less than half the height, the second is MAST Upgrade, a more compact and condensed version which is more efficient and will offer greater flexibility to power stations in the future.

Both machines are essentially large doughnuts or ‘tokamaks’ of metal and magnets (tokamak is a Russian abbreviation for Toroidal Chamber with Magnetic Coils), and it is the magnets that contain the heat from the atoms within a vacuum chamber within the doughnut’s ring. At extreme temperatures the hydrogen atoms turn into plasma, the fourth state of matter beyond solid, liquid and gas, produced when the atoms in a gas become ionised.

Both JET and MAST Upgrade are experimental devices that produce power allowing scientists and researchers to understand conditions required for best harnessing energy created within them, so that the technology can be used later in future power stations. Scientists are also working on developing a ‘lithium blanket’ to absorb radiation. In the JET machine, for example, tokamaks use powerful magnets to heat up hydrogen fuel to extreme temperatures and then to confine and control hot fusion plasma. I test these magnets to help keep our artificial sun hot and capable of producing energy!”

MEET THE SCIENTIST

“My name is Holly Campbell and I’m an experimental materials scientist at the UK Atomic Energy Authority. Some of the biggest problems that society is facing right now are global warming and climate change. At UKAEA, our goal is to harness the energy which powers the sun, fusion energy, to provide a low-carbon and sustainable energy source for our future. To initiate fusion on Earth, one route involves building huge machines called tokamaks. That’s where I come in! Tokamaks use powerful magnets to heat up hydrogen fuel to extreme temperatures and then to confine and control hot fusion plasma. I test these magnets to help keep our artificial sun hot and capable of producing energy!”

MEET THE SCIENTIST

“I’m Chitra Srinivasan, a real time control software engineer working in fusion energy research at UKAEA. Our mission is to produce sustainable, green fusion energy that would help to solve the climate crisis. To achieve this, we make an artificial star. Our artificial star is many times hotter than our own sun, but it sometimes has instabilities. My job is to write a code to measure and dynamically control those instabilities to keep our artificial stars at the best levels to produce lots of fusion energy. Before I started researching fusion energy with UKAEA, my earlier experiences saw me writing code for medical ventilators and smart energy meters.”
“The Whole Body is Practically Biological Origami”

Esther Lafferty talks to Dr Lizzie Burns, an artist and medical research specialist who has been a visiting academic at the Department of Physiology, Anatomy and Genetics, University of Oxford, and uses art, including origami, to explore the beauty and wonder of life.

How do art and science fit together in your work?

I always loved both art and science. All children are curious and like creating things and for me that never really changed. In my teens I made things like a mitochondria necklace and I loved Salvador Dali’s art partly because he looked to science for inspiration, even painting molecules. Molecules are fascinating: they encapsulate the secrets of life and have a mysterious beauty. Each is so tiny that visualising them requires modelling at a scale that we can comprehend – and creating the models requires imagination and artistry. It’s mind-boggling that we are all made from these tiny building blocks. Biology, at its core, is a very spatial three-dimensional discipline. DNA contains genes that encode long stretches of amino acids, which fold with precision and the way they fold is key. The whole body is practically biological origami.

Although my background is in cancer research, for the last 18 years I have been working as a creative specialist in hospitals in London (UCH) and in Oxford running origami workshops with patients – and medical professionals too – exploring the effects of this ancient paper folding technique on wellbeing. When people are ill, they create art as an escape from what they are going through, and originally my workshops included doodling and other art forms. Then, about eight years ago I was working with a lady who told me she really wasn’t keen on drawing or painting but she’d like to show me something instead. She had grown up in Hong Kong and when she was a child she had also spent time in hospital: while she was there, she learnt origami and found it helped her get through her illness. The act of giving away the paper flowers and other artefacts, she said, made her feel chaotic or out of their control because, people across all spheres of life where life can be terminal, patients help each other. An activity like origami also seems to strike a real chord with people across all spheres of life where life can feel chaotic or out of their control because, just like the acts of giving away the paper flowers and other artefacts, it helps them to feel better to make one. It amazes me that there are so many striking forms such as stars, hearts, complex shapes and repeating patterns which you can create by folding papers with a mathematical complexity, just like the strands of life. While the folds can be following the choice of colour and how you build up a piece can be so expressive and unique. I really enjoy working with modular pieces, building up a complex series of patterns or colours or incorporating my own drawings of life on a tiny scale.

Tell us about Made with gLove, Origami for our times, and the benefits of origami to health.

I am teaching visitors to create a flapping bird. This intriguing bird has become a popular fold; although it’s a mystery who the designer was: it was first mentioned in an 1880 French magazine in which the art of origami was described as a great skill for those with a scientific mind. It’s a miniature piece of engineering combined with a geometric magic that transforms paper into life. I also love to make bunches of lilies and modular ‘kusudama’ balls of flowers which translates as ‘medicine ball’; it really does make you feel better to make one. It amazes me that there are so many striking forms such as stars, hearts, complex shapes and repeating patterns which you can create by folding papers with a mathematical complexity, just like the strands of life. While the folds can be following the choice of colour and how you build up a piece can be so expressive and unique. I really enjoy working with modular pieces, building up a complex series of patterns or colours or incorporating my own drawings of life on a tiny scale.

What are your favourite folded creations?

I love to create the wonders of the natural world from many flower forms to animals, whether that’s the iconic crane or a jumping frog, the endangered red squirrel or an imagined dinosaur. For IF Oxford, I am teaching visitors to create a flapping bird. This intriguing bird has become a popular fold; although it’s a mystery who the designer was: it was first mentioned in an 1880 French magazine in which the art of origami was described as a great skill for those with a scientific mind. It’s a miniature piece of engineering combined with a geometric magic that transforms paper into life. I also love to make bunches of lilies and modular ‘kusudama’ balls of flowers which translates as ‘medicine ball’; it really does make you feel better to make one. It amazes me that there are so many striking forms such as stars, hearts, complex shapes and repeating patterns which you can create by folding papers with a mathematical complexity, just like the strands of life. While the folds can be following the choice of colour and how you build up a piece can be so expressive and unique. I really enjoy working with modular pieces, building up a complex series of patterns or colours or incorporating my own drawings of life on a tiny scale.

What is particularly special about origami?

The art of origami is age-old and began with the invention of paper. The Chinese were the first to invent paper and were producing it during the 2nd century AD and probably even earlier than that. The process of paper making spread slowly through Asia and the Middle East and only reached Europe in about 1150. The Japanese refined and extended the paper making process until it became an integral part of their everyday lives. Paper became and still remains more important and more revered in Japan that it has ever been in the West.

Origami also seems to strike a real chord with medical professionals too – exploring the effects of this ancient paper folding technique on wellbeing. When people are ill, they create art as an escape from what they are going through, and originally my workshops included doodling and other art forms. Then, about eight years ago I was working with a lady who told me she really wasn’t keen on drawing or painting but she’d like to show me something instead. She had grown up in Hong Kong and when she was a child she had also spent time in hospital: while she was there, she learnt origami and found it helped her get through her illness. The act of giving away the paper flowers and other artefacts, she said, made her feel chaotic or out of their control because, just like the acts of giving away the paper flowers and other artefacts, it helps them to feel better to make one. It amazes me that there are so many striking forms such as stars, hearts, complex shapes and repeating patterns which you can create by folding papers with a mathematical complexity, just like the strands of life. While the folds can be following the choice of colour and how you build up a piece can be so expressive and unique. I really enjoy working with modular pieces, building up a complex series of patterns or colours or incorporating my own drawings of life on a tiny scale.

Tell us about Made with gLove, Origami for our times, and the benefits of origami to health.

In recent years, research has shown that art and craft in health and social care can bring many benefits to the individual. An activity like origami, which requires both
Tip for Origami

Making a neat, firm fold is the essence of origami. It is easier if you rest your paper on a hard surface such as a table or a hardback book.

1. Lay the paper on a firm level surface so that one corner is pointing towards you. Pick up the bottom corner and bring it to the top corner.
2. Move it about until the corners are exactly aligned. Don’t rush this.
3. Hold down the corners with one hand and run your other forefinger firmly down to the centre of the fold.
4. Run the finger firmly to the right to form a crease and back again to the left to complete the crease. Check that the corners are still aligned.
5. Beginners should be sure to start off by creating very basic designs. Origami is an art that must be mastered in increments or it will seem overwhelming. Trying to run before walking may lead to disappointment.

Using our hands stimulates areas of the brain, improving short-term memory and offering a chance to unwind and live in the moment. Furthermore, as well as developing mental concentration, fine motor skills and patience, using our hands stimulates areas of the brain, improving short-term memory and offering a chance to unwind and live in the moment, one fold at a time. It helps to silence negative noises, internal and external, and so encouraging people to pick up paper and fold in support of their wellbeing is more relevant than ever as we live with the coronavirus pandemic and the worries it has brought so many of us.

Made with gLove is funded by the National Lottery as a community project to beat boredom and loneliness and spread the origami love, to bring joy in these challenging times. We love, to bring joy in these challenging times. We will make a difference. As part of this project I will be offering free online origami workshops as part of IF Oxford, the science and ideas Festival, with one live session on Saturday 3 October and several on-demand videos. I’m also offering free workshops through our Central Library online.

You can also get involved by visiting and following Lizzie on her YouTube channel: youtube.com/DrLizzieBurns with a live fold on Wednesdays at 2pm and on the Facebook group: join the fold: Origami to beat the boredom. Or read more at origamipulse.com

A DIAMOND’S SECRET

Diamond and graphite are both made from the element carbon yet have vastly different properties. Whereas diamond is the hardest-known natural material on the planet holding the maximum value of 10 on the Mohs scale of hardness, graphite is very soft.

In diamond, each carbon atom is bonded between four others in a symmetrical cubic lattice. This strongly-bonded, tightly-packed arrangement gives diamond extraordinary properties, and this structure can be modified with other elements or defects to fine-tune its properties, including its hue. The golden yellow and royal blue colours found in natural diamond gemstones are the result of nitrogen and boron having been incorporated into the structure during formation. By making diamonds in the laboratory using either high pressures and high temperatures – similar to the processes in which natural diamonds are formed in the earth, or via a chemical process – it is possible to change these defects in the diamond so they are perfect for industrial applications.

‘GIVE ME A RING!’

From as early as the 16th century, diamonds have been used to polish and cut other diamonds; something so hard needs something equally hard to polish it. The inherent hardness of diamond makes it perfect for use both in abrasive applications from cutting and drilling in the energy sectors and as components in machining, mining, and construction machinery whether big, for roads, or small for a computer component.

Precision machining is vital in the aerospace and automotive sectors. In particular, hybrid motors and green energy sources use aluminium, reinforced plastics and advanced titanium alloys to save weight and ensure efficient combustion. Fortunately, superhard materials like diamond can be cut and shaped for use in inserts, grinding wheels, drills or dies for machining tools – a glittering star in the face of contemporary manufacturing challenges. Diamond is likely to have been used to machine the materials for that phone in your pocket.

THE SPARK OF ATTRACTION

A battery works when two different chemicals react with one another, one giving up electrons to the other so that electricity flows. This process can be run in reverse by passing electrons through two electrodes to make a chemical reaction happen, for example to electroplate the copper on the pennies in your purse or in the production of aluminium from mined ore. The reactions which occur in this electrochemical process depend on both the solution chemistry of the electrolyte and on the material from which the electrodes themselves are made. Adding small amounts of the element boron to diamond as it grows, not only turns the diamond blue, but also allows it to conduct electricity making it suitable as an electrode. The strength of the strongly-bonded structure means that diamond does not...
react easily with other chemicals, so that large
voltages can pass through diamond electrodes
without eating away at them so they can be used
to create ozone (yes, the same stuff that protects
us from harmful UV-rays in the atmosphere) in
tap water. ‘Ozonated’ water has similar bacteria
killing power to that of common chemicals
like bleach (yet doesn’t leave residual harmful
chemicals behind as the ozone simply breaks
down into oxygen, O₂) to leave your surfaces
sparking – all the more important in this world
of COVID-19.

TOO HOT TO HANDLE
When using your smartphone to play the
latest video game or a tablet to watch a film,
you’ll have noticed how your device heats up –
that’s because when electricity passes through
electronic chips, energy is wasted as heat. This
heat can break electronic apparatus – both
big and small – so device designers carefully
plan their internal layouts using tiny metal
components to draw the heat away from the
electronic chips. Diamond can do a much better
job! Because of its rigid structure, diamond
has amazing thermal properties, spreading heat
nine times more efficiently than aluminium
and five times faster than copper. Although
too expensive for a hand-held device, diamond
is used to remove the heat at the mobile base
stations which transmit calls from thousands of
handsets. Did your last conversation make you
feel a million dollars?

A DIAMOND REVOLUTION
Computers move electrons around to create
the 1s and 0s of our digital world, however as
well as electronic charge, electrons have another
property called spin. It is this spin, which is
responsible for magnetism and like electric
charge, with the familiar plus or minus on a
battery, spin is classified as up or down. Spin
is a quantum property – that is it obeys the
weird rules of quantum mechanics where for
example the spin can be up and down at the
same time or an electron can be in two places at
once. The challenge is that quantum properties
are delicate, which is why we don’t see these
mysterious quantum effects in everyday life.

If scientists can control spin, many new
technologies become possible. However, to
control spin in most materials requires using
extremely cold temperatures, less than -150°C,
which is not practical for many applications.
This is where diamond comes in. By adding
nitrogen into diamond, you can create
intentional defects within its structure that
have a spin that can be controlled by simply
shining green light and microwaves onto it at –
incredibly – room temperature.

Diamonds are also being used to make 100%
secure quantum internets (where diamond acts
as a node to transfer information over long
distance) and to make a quantum computer.
Quantum computers try to harness weird
quantum effects so that they can perform
certain calculations far quicker than traditional
computers – it’s a diamond revolution.

If you want to find out more about diamond
and its applications, come and join the
scientists from Element Six in the IF Oxford
Explorazone Digital, Saturday 17 October,
8am-9pm
I’LL TELL YOU BECAUSE WE’RE TALKING.” SAM BENNETT

Rory Campbell, AKA Rawz, speaks to me fresh from meetings in Oxford, “really positive and exciting stuff — it’s good to actually see people face-to-face as well after all these months of seclusion.” Lockdown was “a double-edged sword” for the rapper, allowing him to get in touch with his creative self at the same time as separating him from colleagues at Inner Peace Records. “Being in a physical environment with other artists is a really inspiring thing for me,” he says, “so I’ve missed that.”

H is “day job” is at Meadowbrook College, an alternative provision academy for students who have been excluded from, or have trouble accessing, mainstream schools. “All the work I do there is about building relationships with young people, working with them on their terms.” It’s been harder remotely, he says, “an impossible task” to glean the social cues and working with them on their terms.” It’s been harder remotely, he says, “an impossible task” to glean the social cues and working with them on their terms.” It’s been harder remotely, he says, “an impossible task” to glean the social cues and working with them on their terms.”

It’s a lot to ask of the pupils as well, he says, “an impossible task” to glean the social cues and working with them on their terms.”

Rawz’s mother is white and his father is brown. As he grows older I think I will start to have those conversations with him as well.” Rawz’s mother is white and his father is brown. As he grows older I think I will start to have those conversations with him as well.” Rawz’s mother is white and his father is brown. As he grows older I think I will start to have those conversations with him as well.”

The Leys, Rose Hill and Barton — some of the most deprived areas in the country.

The album also features an acoustic version of ‘Son Rise’, the original of which is on 2012’s Spoken. He wrote it when his partner was pregnant with his first son, penning the final verse the night he was born, “again using lyric writing as therapy — I was so overwhelmed by emotion.” His eldest boy is nine now, and into Fortnite, getting the line in ‘Son Rise’, “Hands off my PlayStation, you’re coming home.”

I wonder how he prepares both his sons, the youngest of whom is four, for the world’s racism. His firstborn is similar in skin tone to him and his second is “pretty fair — he takes after my mum. Although they’re brothers,” he continues, “they’ve got the same parents and they’ve been raised in the same household, they’re both going to have different experiences of people judging them because of the colour of their skin. It’s something I want to prepare them for but at the same time I don’t want to make them paranoid and think, ‘everyone hates me because of my skin.’ I’ve had a few conversations with my older son about how some people have never met black people before and so get an idea that black people are this, this and this. They might be fearful or judge on what they’ve picked up through the media or some other source. That’s not something you should take on board as what you are,” he tells his child. “People will judge you on all sorts of things and you have to be sure enough in yourself and secure enough to know that even if someone’s saying bad things about you or treating you in a certain way, that’s their problem, not yours.”

With regards his youngest, “He’s like, ‘me and Mummy are peach skin.’ I’ve had a few conversations with my older son about how some people have never met black people before and so get an idea that black people are this, this and this. They might be fearful or judge on what they’ve picked up through the media or some other source. That’s not something you should take on board as what you are,” he tells his child. “People will judge you on all sorts of things and you have to be sure enough in yourself and secure enough to know that even if someone’s saying bad things about you or treating you in a certain way, that’s their problem, not yours.”

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black. He talks about the racism they both faced before he was born, the “horrendous stories” of which were told to him by his mum, who was even evicted once when the powers that be found out her boyfriend was black. “My mum didn’t want me to have to grow up in that world, so from a very young age she was always giving me positive examples of black people and teaching me about black history. As I got a little bit older she started a support group for parents with children of mixed heritage.” Thus, all his life he’s been aware of racism, against which he’s been involved in campaigns. “So when this new round of Black Lives Matter came about,” he says of this year’s events, “I had a week or so when I was quite depressed about it, like, ‘here we go again, it’s going to be flavour of the month and nothing’s going to happen.’”

Added to which, he was upset by the All Lives Matter hashtag and those who took offence to the statement, Black Lives Matter. However, he says, as BLM gained momentum he began to think that things could perhaps change for the better.

He and I share a colleague in Dane Comerford, director of IF Oxford, of which Rawz is a trustee. IF funded one of his music projects, alongside Oxfordshire Youth Justice Service, which “had a lot of really positive outcomes for young people in The Leys”. That’s how he met Dane, who later asked to meet with him as part of the festival’s “key aim to engage with people who wouldn’t normally connect with science, i.e. people who live in The Leys who aren’t the usual customers of science museums. Basically, what he said was – without wanting to be rude about any of my fellow trustees – ‘we’re a bunch of largely middle-class white people, sitting in a room trying to imagine what people on The Leys want, and it feels wrong. Would you get involved to help us steer this thing, and help us better engage with our target neighbourhood?’”

“You’ve always been interested in science and passionately believe a lot of the adversity faced by people on The Leys is due to a lack of self-expectation – a lot of people feel like they can’t do any more than crime. I wanted to show young people and adults on The Leys that they can engage with science and be scientists themselves. They don’t have to go down any more of these stereotypical routes that Leys residents go down.”

He specifically mentions a 2018 IF Oxford event he went to with his sons, at Blackbird Leys Community Centre, “a trip to Wakanda, to visit a Wakandan science lab. They had a whole choreographed fight scene with Black Panther. One of the absolutely great things about that event, which made me 100 percent sure I wanted to be involved in the festival, was that there were so many children from The Leys coming in and talking to scientists from Harwell and University of Oxford, doing experiments with really well respected scientists. Also, the scientists were people of colour. Being able to show black children black scientists makes [a science career] a much more reachable goal for them. It demonstrates: ‘look, this person has the same colour skin as you and has probably experienced a lot of the same prejudices and knockbacks, but they’re still made it and they’re doing this really cool experiment.’ That’s what IF Oxford is about – showing that there is a whole world of opportunity out there.”
CALL THE MIDWIFE AND CARTESIAN RABBIT HOLES

In Conversation with
Stephen McGann

Actor and science communicator Stephen McGann talks to Esther Lafferty about the way popular BBC drama Call the Midwife has engaged millions of viewers with the changes in medical practice over the last 60 years, the issues of memory and identity raised by the award-winning film Eternal Sunshine of the Spotless Mind (2004; starring Kate Winslet, Jim Carrey and Kirsten Dunst), and the interface between social history, science and culture.

You're best known for your role as Dr Turner in Call the Midwife. What do you think the series, with its medically-accurate storylines and authentic characters, has done for people's understanding of medicine today? It has really surprised us. Call the Midwife is set in a particular post-war period, starting in the late 1950s and the next series will be set in 1966, so we've gone through a time of tumultuous change in British public health. After the Second World War – and Dr Turner is an army medical, a product of WWII – we emerged into Attlee's Britain, the remaking of a land fit for heroes and the building of a health system in a time of austerity on the back of developments like penicillin to solve the problems that had plagued my dad's generation. Suddenly there was this way to kill some of these dragons with mass vaccinations and mass X-ray programmes, and the early years of antibiotics seemed magical.

It was fascinating to see how the audience perceived and responded to the series. We now live in an environment where people are essentially 'spoilt' for want of a better word: because of vaccination programmes, we don't see even what we saw as a kid (I'm 57). Now, we don't see measles, we don't see diphtheria and many people therefore don't understand the dangers that plagued my dad and his generation. My dad, for example, was born in 1924 and served in the Second World War. He'd had a strep throat infection as a child in the 1920s that led to rheumatic heart disease, which killed him at 60. All he'd have needed back then was antibiotics, but they didn't have them.

So back when I was a kid, no parent argued against medication and vaccination because they saw the damage disease did; it was all around them. Antibiotics were a miracle. Vaccination was a miracle. Now we screen and vaccinate against infections, the programme's viewers find it hard to imagine how bad something you can't really could be and the damage and death it could bring, and that's where Call the Midwife is important. Drama isn't science but can communicate scientific issues with a power other things can't. Call the Midwife is very proud of its accuracy, and to the viewers it feels very real. It also makes people want to find out more.

For example, there was a great moment the first time we covered diphtheria – we've just covered it again recently – and there was this awful scene which people could hardly believe. The next day NH's online contacted us to say that hits on their web page on diphtheria had absolutely exploded following the show. Call the Midwife is so immediate and so visceral, it can be a great interface between the population and health messaging bodies like Public Health England. If we cover important or topical issues – such as measles – then we know people will look up the facts afterwards, which is great.

Eternal Sunshine of the Spotless Mind is a romantic film with the possibilities of memory erasure at its heart. During IF Oxford, the science and ideas Festival, you are leading a panel discussing the scientific possibility of a spotless mind – what ideas from the film intrigue you most?

Eternal Sunshine of the Spotless Mind is one of those films everyone loves and I'm very interested in the questions it raises around neuroscience. My undergraduate degree was in computer science and it was the idea of artificial intelligence (AI) and the comparison with human consciousness that led me into a postgrad course in science communication. I was blown away by AI because when, as a computer guy, you study human consciousness and memory, very quickly you come up against philosophical questions of what intelligence is, suddenly you're in a Cartesian rabbit hole of philosophy, ethics and robotics. There are questions to consider like just because we might be able to do something why should we? In the film, a scientist has the ability to erase selective memories in people's heads, making them happy, but how much are we our memories, how do we narrate ourselves and how does this define our sense of self? What impact would removing memories have on someone's identity? These are all relevant to the challenges in Alzheimer's disease. I'm also interested in the way scientists are portrayed in films and on TV. The way people see scientists is often influenced by the characters they see on screen – for example, as brilliantly bright mad professors or cold, analytical villains looking to profit from big science. Yet in reality they're just people like everyone else – caring, funny, thoughtful and flawed, and some of the most committed and politically-progressive people I know. I also think doctors can be key to the perception of the scientist in public culture, being the most commonly encountered practitioners of science in most ordinary people's day-to-day lives. TV shows and films that portray scientists and medics with a genuine human authenticity and compassion can be a great catalyst for wider scientific understanding and curiosity.

Eternal Sunshine: The scientific possibility of a spotless mind. Saturday 24 October
What's lockdown meant in general for you and your field?
It’s the greatest irony because in international relations we’re all about connecting people at long distances and I can talk to colleagues in Japan, the US, Africa and across Europe and work with the UK while I’m here in Greece or from France where I was before. You can manage transborder relations even better. Suddenly the way in which you move around — for either personal or professional reasons — is disconnected from the work stuff so it’s good from a professional point of view but perhaps bad for the personal side of things because your work can now follow you everywhere.

You wrote your book, Exodus, Reckoning, Sacrifice: Three Meanings of Brexit not long ago at all, but everybody stopped talking about Brexit once the pandemic struck. Indeed, although today I was in the lounge with Greek members of the government and we did talk about Brexit! People in the know do realize that COVID-19 will last for a long time but the peak of it will pass, whereas the impact of Brexit will be here for decades to come. The relationship between Britain and continental Europe is an old story of hundreds and hundreds of years but we'd found an uneasy equilibrium when the UK was part of Europe — now it's all back on the table. People are turning their attention back to Brexit, it's not gone away. I did a book tour in the fall all around Europe to 20 different cities which was fun and inspiring. The second leg was to be in the spring but of course none of it happened — what can you do? So it is hard to know if the public is still interested...

At IF Oxford you’re going to be looking at topical issues in relation to Greek mythology, for example Oedipus in relation to COVID-19, how do you think this will help people approach these issues?
Hopefully it’ll be interesting and exciting for people because approaching politics through the lens of archetypal myths is a different way of looking at the old political problems that we all know about. My biggest concern is to find better, more mature and mutually respectful ways to have a democratic conversation. The foreignness or strangeness of myth paired with some residual familiarity can allow people who may think they’re on very opposite sides, to find a common language with which they have some ironic distance. Myths allow us to ask questions in a different way and while they don’t provide us with any new answers, they give us a new angle. In the case of Oedipus — oh, he killed his dad and married his mum which is not a great thing to do and he was dearly punished for it, stabbing his eyes out and thrown into exile with his daughter Antigone. But in truth, was he responsible for his curse and the deeds that followed? It was actually his father who had been a horrible person.

The message here is that history is a complex series of causes and effects which of course we need to explore. But humans tend to try to simplify and blame a scapegoat who will carry...
the burden of what we have done wrong. This is what we need to deconstruct by finding the patterns which we can recognise. A scapegoat has to be someone or a group of people who are enough like us that it’s significant to sacrifice them, but different enough that we can sacrifice them. What I want to convey at IF Oxford is that with these stories in our minds, we can have a conversation about ourselves and about how people come to be scapegoats and how we can resist this urge.

Are we too keen to find someone to blame for the handling of the current crisis, for example? Yes, I would say we’re blaming for the sake of blaming because the truth is that the pandemic is due to many interacting factors. From an epistemological view, we’re not going to find one culprit, we’re going to find a very complex mix of factors. IF Oxford is about trying to convey how social science works, which is very different from blaming. To blame X, Y or Z – a politician here or a bureaucrat there – that’s useless, and that’s not a scientific attitude, that’s a social attitude. Social attitudes can be good but they can also be lethal and the one that consists of looking for scapegoats has been a terrible plague on society throughout history.

In another of your IF Oxford sessions, you talk about hubris and about whether it is a good or a bad thing. Does that session reach a conclusion? I want to make a crucial point here: throughout all the sessions, my audience will not hear some right or wrong answer. That’s really important. Social sciences is not physics. Whether hubris is good or bad depends. Hubris has a bad reputation, as it is linked in our minds with actions that violate the accepted order while betraying recklessness and overconfidence. People like our prime minister in Britain or Trump are often accused of hubris. Of course, if you’re endangering other people or society then it’s a bad idea, but if you’re daring to do something that will open up the skies, is it a good thing? Very often we root for hubristic characters in Greek mythology, like Prometheus who stole the fire from the gods to give it to human beings. There are many stories of hubris in Greek mythology that can lead us to different conclusions which I plan to bring up during our IF session.

You question whether it’s gendered, is that about seeing whether self-confidence and pride are perceived differently depending on whether it’s exercised by a man or a woman? Yes. A great mythical woman who exercises hubris is Arachne. She’s a beautiful young woman who weaved the tapestry showing how the gods raped women. She was transformed into a spider by goddess Athena to punish her for claiming to have greater talent. Today, we can see her as the godmother of #metoo, but how was she perceived in antiquity?

The chorus has always been an integral part of Greek theatre, you’ll be touching on that aspect as well, possibly across all of your sessions.

That’s the experiment about which I’m most excited but you don’t know. You just have to hope you’ve made a difference. Positive – you don’t know. You just have to hope you’ve made a difference from people who are negative rather than those who are positive – you don’t know. You just have to hope you’ve made a difference.

If you’re daring to do something that will open up the skies, is it a good thing? Often wise, sometimes a bit whimsical, they either tell you what happened before or they comment on the ongoing plot in some way or another. They often criticise the characters or they ask questions like, ‘What has she done and why has she done this?’ Sometimes the whole chorus speaks with one voice but sometimes you have different voices in a story. They will always however, react and engage with the actions on the stage. When I did my TEDx Talk, I was speaking to the public as if they were the chorus, but I couldn’t involve them because I was only on the stage for 15 minutes. The science and ideas Festival will be an occasion to move one step further in the experiment.

What else is on your agenda? I always have 500 projects! The reform of transnational governance, thinking about Europe after COVID, developing my ‘demoicratic theory.’ But ‘myths and politics’ encapsulates a lot of where I’m at – exploring ways to bring the social sciences to the larger public. I’ve been thinking a lot about the COVID pandemic and what it means – as you can see on my website – as an opportunity to rethink. My sessions each explore different flaws in our democracies which are met by the desire for change including through new modes of communication. I hope to create spaces for futures of recognition, our mutual recognition by helping people talk with one another across social, cultural or ideological divides – it’s a very big agenda.

Once you do the sessions, is it hard to work out whether they’ve worked, whether people have taken note? You hope that people like it and are inspired by it but apart from comments on social media – which are more often from people who are negative rather than those who are positive – you don’t know. You just have to hope you’ve made a difference.

Kalypso Nicolaidis will take part in IF Oxford via Zoom on 4, 11, 18 and 25 October. If you want to see more of her work, visit her website (kalypsonicolaidis.com) where you can find her TEDx Talk, details of her latest book and much more.
Are Humans Responsible for Natural Disasters?

This edition of OX also features an interview with John Holmes, who’s written a book about Oxford’s Museum of Natural History called Temple of Science. People may think of science and religion as separate to each other, but there’s real overlap, that book and its subject just one example.

There is a lot of crosstalk, particularly historically, which is the focus of a lot of my work and the upcoming IF Oxford event. I did a Radio 3 documentary last year about Isaac Newton’s religious beliefs and his belief in alchemy. It is amazing how they get intertwined. There’s a view that scientific reason is value-free; it studies facts, you uncover the truth of the universe, and it’s purely impartial. I think that’s something the science and religion debate helps to challenge. A lot of scientists think science can be a source of our moral and religious values, and is there really a way of studying reality without involving our own values and hopes? Today, we sometimes hold up science as a new form of religion, a way of accessing truth.

Tell us about your IF Oxford event, ‘Are humans responsible for natural disasters?’

In lockdown I was reading a lot of news, you know the news apps that give you the latest headlines? There were three in a row: one from Miley Cyrus, one from Sarah Ferguson, and another from Jameela Jamil. Jameela wondered if the virus was a “clap back from Mother Nature”; Fergie said “Mother Nature has sent us to our rooms”; Cyrus said Mother Nature’s getting a break from us. It all thinks of nature as something divine; we’ve done something and Mother Nature is like a person who’s punishing us, telling us off for getting things wrong – if we go away for a little while, she will recover and take care of us again. It raises the question, who’s responsible: human beings, nature, or God? It really did flash me back to the debate between Voltaire and Rousseau, who had different ways of describing and explaining who caused the 1755 Lisbon earthquake, in the same way we were thinking about who was responsible for coronavirus. We seem to need to know who’s responsible as we know who to blame, and then somehow we can work out what to do about it. I don’t know what that’s about but that seems to be the connection.

In these pages Kalypso Nicolaidis (also at IF Oxford) talks about Oedipus in relation to the current blame culture, our need for scapegoats, so it’s interesting that comes up in your event too. I suppose if we all live cleaner, better lives we dilute the chances of bad things happening, but there’s no logic in saying that a pandemic is punishment for not doing that, is there? It does seem to get into problems… that word, punishment, is an interesting one because again it does have these overtones of an agency, a personification. To go back to Voltaire and Rousseau, what Voltaire was trying to get at, really, was that there wasn’t anyone to blame. We can think about the coronavirus pandemic as something that’s come about because of our treatment of animals or the way we’ve employed global trade and so on, but how do you explain the earthquake? For Voltaire, there is natural evil in the world, these events happen to us and we just have to submit to the fact. Rousseau reads a different line which I think is a refinement of what you’ve just said about punishment. He would have agreed that punishment is the wrong term for things like the earthquake or plagues, but he criticised Voltaire because he wanted to say that there’s still something about human responsibility, even for natural disasters, because of the way in which we interact with nature.

Voltaire wants to say there is a great evil because there’s significant loss of life around the world, not least in Lisbon, but Rousseau wants to say there wouldn’t have been such loss of life if human beings had built their homes in a different way or hadn’t built them in those places or if people hadn’t gone back to their homes to rescue their possessions. I don’t think either, despite their differences, would want us to fall into that trap of punishment. Voltaire is clearly into a sort of terminology. They want us to think about it in different ways. There’s something about punishment which just seems cheap, whereas there’s probably a different route here of thinking about responsibility, not in terms of blame, but how we respond and adjust ourselves to each other as well as the natural world.

You won’t be appearing alone at IF Oxford. I’m with a good friend and colleague, Joe Cunningham. I had the idea and started to think about putting it together as an event, which struck me as an interesting way of exploring these problems, with an audience involved. So I was really happy that Joe, a philosopher at Jesus College, agreed to recreate the debate with me – he brings a lot to it in terms of his work on rationality, responsibility, human action and agency. During the discussion, we thought we’d take a vote of where people are, who they think has won it, and then see if people have changed their mind by the end.

It’s a very exciting event, of course, but you’ve also appeared on our screens in the same programme as Morgan Freeman, as part of National Geographic’s The Story of God. That’s got to be hard to beat career-wise. What can I say to that! I didn’t expect to become an academic at Oxford, I was a trainee schoolteacher, then this post was there at the end of that and I applied and got it. So, everything that I’m able to do always just amazes me. I step back and find it unusual. There’s no way I ever thought that someone would be calling me on a Wednesday to talk about an event – it’s an incredible honour.

How and why did the 18th century debate reappear this year? In 1755, the Lisbon earthquake killed thousands, causing philosophers, scientists, and priests to question who is to blame for natural disasters: humans, nature, or God? COVID-19 is global and more deadly but raises the same question. As part of this year’s IF Oxford, Dr Joe Cunningham and Dr Dafydd Mills Daniel recreate disagreement between two Enlightenment philosophers – Voltaire and Rousseau – and ask you which side you agree with. From Yorkshire, Dr Dafydd Mills Daniel – a University of Oxford lecturer in Christian ethics – tells Sam Bennett more.
We talk to Yatir Linden, a materials scientist and a pioneer of chocolate made without the high-sugar content of modern brands, and Aaron Torres, head roaster at Ue Coffee Roasters, a Witney-based company who handcraft specialist coffee to perfection, to discover the secrets of some of our favourite things to eat and drink.
Yatir Linden is a chocolate maker. Whereas a chocolatier takes readymade chocolate to create their designs, a chocolate maker builds the recipe and using a machine, grinds the ingredients themselves. This is the story of his Jericho-based micro-batch chocolate lab.

When I was in my early twenties I was involved in competitive endurance sport in which my performance really benefitted from a healthy lifestyle. I wished to eat well and even the chocolate in health shops contains 30-40% sugar. Butter, sugar and cream combined taste delicious but in large quantities aren’t necessarily good for you. Sugar for example is not only abundant, it’s addictive too. And although you can bake a cake from scratch at home and adapt the ingredients to make the end result healthier, it wasn’t really possible to make chocolate at home. And everyone loves a chocolate treat!

To make chocolate you first need to grind down the cacao beans or nibs (shards of cocoa beans), a process that takes at least a full day to grind the particles to a level of fineness that is imperceptible for one to notice. However, it has become possible over recent years because the automated machinery you need – unless you are going down the laborious pestle and mortar route – became smaller and more affordable. This stone-grinder which is the only option (at the moment) for small-scale chocolate making, was a revelation to me! From then, over five years I learnt to make chocolate from scratch, largely by trial and error.

My wife and I began playing with the ingredients and in 2016 set up the Linden Chocolate Lab with the intention of more than halving the sugar content of chocolate and reducing the proportion of added sugar in the finished bar from the industry average of 30-50%. Even in 70% dark chocolate the average sugar content is usually 30%, and we have reduced this proportion in our chocolate to only 15-16%, even in white chocolate. It had never been done before. Actually, when you reduce the sugar content, the natural flavour of the chocolate comes out more strongly, and now we combine the traditional batch-making methods of small artisan chocolatiers with the healthy ambition of the vegan and raw chocolate makers to create chocolate that is healthy and yet still tastes delicious.

We’re called the Linden Chocolate Lab because making good chocolate is a science – it’s a very meticulous, measured and precise process. Even as a child I was always interested in the structure of things and as a youngster I chose to study materials science as a kind of midpoint between chemistry and engineering, and everything I learnt applies to chocolate, from its crystalline structure to the way butterfat in the milk reduces the melting point of white chocolate – just as salt reduces the freezing point of water, as we know when preventing roads from becoming icy in winter. Chocolate’s also a polymorph, which means it can take on different crystal forms when it solidifies from liquid form.

I enjoy playing with flavours, and finding the perfect balance of spices is a real challenge. Our range includes both classic flavours like caramel and more unusual ones like pink peppercorn, which is sweet with a bit of kick. Some of our flavours such as chai masala and spiced coffee have multiple ingredients to get the taste just so, and I’m particularly proud of them as they’re hard to make.

You can join Yatir to hear more about chocolate making as part of IF Oxford, the science and ideas Festival (The surprising science of chocolate, Thursday 8 October)
A great cup of coffee is all about science. There are many chemical reactions throughout the whole process of roasting and brewing.

Of course, it all starts with the beans themselves, the seeds of coffee cherries, and even the soil in which the coffee plants are grown has an effect on the chemistry of the beans. We’ll roast each type of bean slightly differently to bring out the best taste. There are 100 different types of coffee bean but mostly only two of these are sold in supermarkets, *Coffea arabica* and *Coffea robusta*, and the prices of these are fixed globally. The other types are much more exclusive specialty coffees and that’s what we work with. There’s so much more variety!

We source our beans from all around the world, and it is important to us that the farms treat their staff properly, and schools are provided for the employees’ children, and so on, so that we are supporting the social development of these places.

Here in Witney we receive the raw agricultural material from these farms – green beans in jute sacks. The beans are 70% cellulose, a tough vegetable fibre that doesn’t dissolve, and first we roast the beans to break it down. It’s only then that we can release the flavour from the other 30% of the bean, a rich mix of sugars like fructose and glucose and acids, including citric acid. It’s the combination of these sugars and acids that makes coffee taste the way it does.

While roasting there is a Maillard reaction, when the sugars begin to caramelize, and that’s what gives coffee its sweetness. Even the timing of opening the roaster after the roasting process makes a difference because it alters the amount of carbon dioxide in the bean, which affects the flavour and texture. It is the carbon dioxide, for example, that gives an espresso its body, or crema; that rich, aromatic froth on the top of a shot of espresso.

Then during the brewing process, we extract the sweetest part of the coffee. As with any chemical reaction, it is by measuring all the variables precisely – from the quantity of dried coffee and the amount of water, to the temperature of the water and the length of time it is brewed – that we achieve the sweetest and most balanced flavour in every cup. Under-extraction will make the finished drink rather sour, and extracting too much flavour makes the coffee bitter. And so, we find that perfect balance for a delicious coffee. We always use filtered water as a cup of coffee is 98% water after all, so the chemistry of the water will affect the coffee too.

We have three machines at Ue Coffee Roasters – the smallest of which roasts just 100g of green beans at a time. I enjoy experimenting with the different variables to work out how to get the best tasting coffee from each type of bean. South American beans tend to be mild with a chocolatey-sweet taste; African coffee has a complex and lively flavour with more fruity and floral aromas; whilst Asian varieties have spicy notes of cloves or tobacco, nuts or pepper.

You can hear more about the science of coffee, from the cultivation and harvesting of the coffee beans, through the selection and roasting processes, to the grinding, brewing and tasting experience in a digital event as part of IF Oxford, the science and ideas Festival (The art and science of coffee, Saturday 3 October)

uecoffeeroasters.com
Gin.
IT’S PERSONAL.

Whether you’re a saint or a ginner, much like us, you might not know a lot about what goes into your tipple of choice. We speak to Leslie Walker of The Oxford Artisan Distillery, ahead of its virtual appearance at IF Oxford, where he and master distiller Cory Mason will explore the wonders of gin.

What’s its like working at The Oxford Artisan Distillery?
It’s not one of those jobs where you’re just able to talk the talk and big up the distillery, we all properly muck in. When I first started, there were only a few of us so if something needed making, you’d make it. If something needed bottling, you’d bottle it. If it needed selling, you’d sell it. I think I’ve done every role I can do within the business since I started, from bottling to basking in the glorious sunshine and drinking it!

Is gin-making a complicated process?
It’s easy to make but it’s also such a varied product. Gin goes as far as your imagination will take you because it starts as a plain vodka, and then you do anything you want with it to make it a gin. It’s a great expression of someone’s creativity. The hardest part is making the alcohol, after that you’re just adding your botanicals. Most of the gin distilleries buy in their alcohols so we’re one of the rarer ones, there’s only about 12 in England who make their alcohols from scratch – we’re doing it a bit differently from everyone else. After you’ve made the alcohol it’s like a canvas or tapestry which you decorate with botanicals to get your product. We work a lot with fragrances and use lots of things which you’d expect to be in perfumes.

Do you have a favourite product of yours and how best would you serve it?
I’m a classic gin person. When you work in the gin industry you taste so many fabulous gins, but you end up going to a very classic gin and tonic. Our dry gin is probably my go-to and then it would be the Oxford Botanic Garden Physic Gin because it’s just so herby and spicy. It’s one of those where 75 percent of people absolutely love it because it’s so different, but others are like ‘wow, that’s a bit too weird for me.’ I’ve gone back to Schweppes for my tonic water choice, their signature 1783 has got loads of caramel in it and it’s fabulous.

Tell us about your relationship with Oxford Botanic Garden and Arboretum, with whom you produce the Physic Gin.
If you’ve got the oldest, biggest and best botanical garden on your doorstep, why would you not dig into their greenhouse and root through their gardens to find some weird and wonderful bespoke products to use in your gin? We’re very lucky that Simon Hiscock [Oxford Botanic...
Garden director] is a big fan of gin and wanted to make the Physic Gin. Something like 30 different iterations of this gin have been tasted by Simon and the team at the Botanic Garden so it’s actually their gin – we haven’t just made it and slapped their label on it – it was part of an exploration into the gardens. It was exciting, we spent a lot of time literally digging through mud finding seeds and bits and bobs that we could use. There are 25 botanicals included and each one has an impact. That’s what we’re going to show people at IF Oxford. We want the event to be as inclusive as possible, there are taster kits available online (the proceeds of which go to the Botanic Garden) but if you don’t purchase one of those it doesn’t matter.

Finally, what do you make of the Copa de Balon gin glass?
There’s an argument if you want to start one. If you ask head distillers, they’re not fans. They like a small rimmed top – like that of a highball – to focus the aroma and taste. I’m a fan of them, the reason being they look fabulous. It’s an experience when you have a gin and tonic and so to have it in its own glass is great. A gin and tonic is personal, like a roast dinner. The only person who knows how you like it best is you.

The science of gin tasting, Friday 23 October Oxford Botanic Garden & Arboretum and The Oxford Artisan Distillery invite you to an evening all about the wonders of gin. Join a special virtual tour of the gin botanicals at the Garden followed by an exclusive gin tasting session with the gin creators themselves all from the comfort of your own home. Taster packs will be available for purchase beforehand but are not essential, feel free to drink your own drinks instead.
Adult only.
theoxfordartisandistillery.com
obga.ox.ac.uk

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RENÉE WATSON
THE BIG BANG

Are the words quantum physics your Kryptonite? Science is full of words that induce grimaces, boredom and even terror in people. Scientists themselves will often bask in the joy of one subject and cringe in a corner with another. So let’s get rid of the words and get down to basics. At the root of it, science is about understanding ourselves, our world and beyond. This is not about subjects and complicated names. This is about thinking. And I am here to make the bold claim that all people think science.

For the past 15 years I have been building bridges between qualified scientists and all kinds of regular people who wouldn’t call themselves scientists. But I have observed that those regular people, who might be 6 or 60 years old and who have never stepped foot in a lab, are science thinkers. Sometimes the best questions, the ones that really make us think, come from someone with no degree, who says they hate science. You might call it curiosity or even creativity but those ways of thinking are the seeds of science.

You might apply your science thought to fixing the washing machine, putting together a nice meal or trying to figure out the best way to get the frost off your car. All these sorts of activities are using the same way of thinking as a scientist who is developing a new cancer treatment. A recent study published in a top journal – ‘Nature’ – suggested that students who nurture their curiosity do better in a research career. There is also evidence that curiosity makes you feel good and less helpless.

There are lots of opportunities for non-scientists to give their science brain a workout. I am not talking about boring lectures, the same ones that turned you off science in the first place. I am talking about getting in and having a go. You could try a citizen science project, where you can do practical things that actually contribute to real research. BashTheBug is one of my personal favourites – who wouldn’t want to help find new antibiotics!? You can have a bash at the University of Oxford Zooniverse website (zooniverse.org) which hosts loads of fun citizen science projects. Who knows, you could even end up with a star or new species named after you!

During lockdown a lot of the usual hands-on science events have unfortunately been cancelled, but there are some seriously cool virtual offerings for the whole family. If you are on Twitter then checking out #GlobalScienceShow and #ScienceFromHome will give you binge-worthy videos of at home science experiments. IF Oxford (if-oxford.com) is taking to the screens for a groundbreaking, pandemic-friendly interactive celebration of science. And of course, for science stories, experiment ideas and loads more curious fun, I am adding content constantly to curiosity-box.com
Material, Meaningful, Moving
THE PARALLELS BETWEEN POETRY AND SCIENCE

Sunayana Bhargava is both an astrophysicist and a poet. “It might seem an unusual combination,” she explains, “but I was always really interested in both physics and English literature and was torn as to which path to take. I ultimately chose physics as it felt like the more challenging option. Then, whilst I was a student at King’s College London, I started to write poems and was lucky enough to be accepted onto the Barbican Young Poets programme.

“Funny enough, there are real parallels between poetry and science. Both are about observation and watching how things change over time. You also, in both, need to determine what is relevant and meaningful in what you see, and then present it in a way that engages and moves people.

In this poem, which is inspired by the four laws of thermodynamics, I am going beyond a simple reproduction of those laws to imagine how the rules are relevant not just to objects and materials, but to people too, in the way we react to one another.”

A Rubric for Heat by Sunayana Bhargava

Staring aimlessly out of a crowded train,
I begin to wonder about the heat death of the Universe

That runaway descent into disorder,
like thread unspooling,
All work eventually undone

What is more romantic than labour
that fights the prophecy of its extinction?

Earlier I watched people assemble
like particles, charged
against a death less inevitable than heat

To read the Riot Act
to those who are already dispersed
is perhaps another kind of entropy

After we said goodbye,
I reimagined the city as a heat map

The train tracks melt,
spilling under slick blue buildings,
The residual warmth you left in my hands
given away by an infrared eye

What if heat, like language,
is not the firmness of ground
but the cracks that bloom under it?

There is a way to rescue order;
rake in the wasteland of energy and
bring it to rest: absolute zero

The wilderness of space is too warm.
The coldest place we have is here on Earth.

I question laws that speak of bodies
without first surviving in one
or stopping one from feeling illegal

On the cusp of equilibrium;
I can feel the incapacity of my hands
as you slip through them. The gentle stasis
of unrest under a darkening sky

An entire history of transfer, lost,
the moment two properties become equal.

Thermodynamics, from the Greek words therme (heat) and dynamics (force), is a branch of physics covering the energy exchange when the properties of heat, force and movement change in any system on Earth, or indeed anywhere in the Universe. The four laws of thermodynamics are the ‘great laws of nature’ and generations of scientists have dedicated, and will continue to dedicate, their careers to studying them; here are the pub quiz versions:

The first law says that energy can neither be created nor destroyed.

The second states that a system that is not in balance will over time gradually decline into random disorder and chaos or ‘entropy’.

Thirdly, a system’s decline into entropy settles or approaches equilibrium as the temperature approaches absolute zero – that’s a chilly -273.15°C.

And lastly, also known as law zero: if two systems are in thermal equilibrium with a third, then they are also in thermal equilibrium with each other.

Explore research from the Department of Materials that inspired this poem, commissioned by IF Oxford; Natalia Ares and colleagues from University of Oxford will present Information engines within Explorazone Digital on Saturday 17 October.
Veganism and plant-based diets are on the increase as we try to do our bit to protect the planet with our daily food choices. It’s commonly understood that eating beef is worse for the environment than eating bread, but did you know that rice, traditionally grown in flooded fields, is responsible for two percent of all greenhouse gas emissions?

Using a standardised measure – the CO2 emissions for each ingredient – shown in simple colourful charts, in *Food and Climate Change without the hot air*, Sarah Bridle calculates the relative environmental costs that commonly-consumed meals have on the world, enabling the reader to make more informed decisions in their own kitchens. Would you be best opting for spaghetti bolognese, fish and chips or chicken tikka masala, for example? You might not be happy to replace your morning toast and jam with margarine on bread, but could you forego a slice of Black Forest gateau? This book offers informed choices about what to eat on a purely ecological basis to bring down your individual contribution to greenhouse gases, and even holds your coffee addiction up (favourably) against a transatlantic flight.

In easily-digestible chapters focusing on breakfast, lunch, dinner and snacks too, Bridle follows the journey of every component from global farms and fields to kitchen prep with a glass of wine – asking also whether drinks other than tap water offer enough psychological benefits to justify their consequences for the environment. It’s a sobering thought.

Each section has detailed endnotes adding the underpinning science and contains a wealth of information to help you and whilst the facts and figures are frightening, this non-political analysis offers hope with tips to minimise food waste and ideas for the future. Not sure we are ready for ground insect flour but who’s joining us for aquafaba (a chickpea based egg substitute) pancakes?

Bridle follows the journey of every component from global farms and fields to kitchen prep with a glass of wine.

Sarah Bridle: Food and Climate Change without the hot air (UIT Cambridge, Sept 2020)

Food and Climate Change without the hot air, Friday 16 October
Welcome to the science and ideas Festival

Over 100 events this October, from pioneering performances to hands-on experiments: pick your Festival favourites, join in from home and Pay What You Decide (PWYD).

Wherever you are, IF Oxford brings you a whole month of science, ideas, creativity and a chance to meet people making innovations today to change your world tomorrow.

All activities, including how to book and more, are available at: www.if-oxford.com

Fri 2 October | 6 – 6.45pm
Teenage / Adult
A fusion future

What if we could harness the energy of stars to power our homes? Join researchers on this quest for securing safe and reliable electricity and learn how fusion, the process that keeps the sun shining, might soon help humanity transition to a low-carbon future. Meet scientists and engineers at the UK Atomic Energy Authority (UKAEA) and find out how world-class research in physics, materials science and innovative engineering is leading the way in developing fusion technologies. TALK

Thu 1 October | 4.30 – 6.30pm
7-12 yrs / Teenage
Young people’s poetry workshop: climate change

This poetry writing workshop on National Poetry Day has a focus on the consciousness and sensitivity surrounding climate change. Lisandro Gallardon of The Poet’s Lab will encourage parents and children to create poems of experience and imagination to encourage action in a creative way. WORKSHOP

Thu 1 October | 7 – 8pm
Teenage / Adult
Oxford then and now

Today’s pace of change seems fast, do even buildings stay the same? By exploring archives of the Historic Environment Image Resource (HEIR) and comparing with present-day pictures, this event will shed some light on how architecture develops over time. Take a new look at Oxford’s streets through the lens of 19th, 20th and 21st century photography. TALK

Sat 3 October | 2 – 2.45pm
Teenage / Adult
Digital Body

Pay What You Decide (PWYD) lets you choose how much to pay, with every donation supporting next year’s Festival

Sat 3 October | 2 – 2.45pm
Teenage / Adult
Digital Body

Created by choreographer Alexander Whitley, the Digital Body project is a platform for the creation of digital dance films in which artists are invited to explore the seemingly limitless ways in which motion capture technology can transform the moving body. Young disabled dancers from Oxford’s Parasol Project have created a film as part of this series inspired by conversations with scientists exploring how movement is coordinated within living beings. Their choreographies have been captured and edited together with 3D motion graphics. PERFORMANCE / DISCUSSION

Sat 3, 10, 18, 24, 31 October
On-demand
Teenage / Adult
Uncomfortable Oxford weekly scavenger hunts

Each week at 10am on Saturday, Uncomfortable Oxford will release a self-guided scavenger hunt, combining story-telling, puzzles and critical thinking. Participants will be given a riddle to solve which points towards an object hidden in Oxford’s built environment. Once you have found this object, you will be presented with a story of its provenance and questions that confront its place within the historical and physical landscape. SELF-GUIDED WALK
The art and science of coffee

This virtual tour combines the art and science of coffee roasting, using imported green beans. Join Witney-based Ue Coffee Roasters to explore sourcing ethical crops, relationships with small-estate farmers and harvest. Learn why fermentation affects taste and smell, and how flavour is locked into the beans making coffee so very special. Join in with an interactive taste test and compare your results with the experts.

Make an origami flapping bird

Discover the astonishing possibilities of paper-folding. Join Dr Lizzie Burns who will introduce the art and engineering of origami. Learn to make your own flapping bird, first described in an 1885 French publication on ‘scientific recreation’. Get focused, take time out and discover the creative pleasures of origami. This workshop is part of Made with gLove: Origami for Community. All you need is a piece of paper!

Oedipus, Antigone and the politics of emancipation

Discuss politics through Greek mythology with you in the role of the insightful chorus; 1 of 4: explore the pitfalls and promise of COVID politics, through the lenses of king Oedipus and his daughter Antigone. How does Oedipus’ banishment, a scapegoat from plague-ridden Thebes, relate to our post-pandemic politics? Can we distinguish between the righteous search for cause-and-effect and the wrongful attribution of blame? Can Antigone and her politics of counter sovereignty inspire us to resist and free ourselves from group-think and state power?

Every astronaut needs a good (space) suit

Any professional knows the value of a good suit, especially astronauts! On the first day of World Space Week, Andy Torbet and Mike Curtis-Rouse will take you through the features of a great spacesuit, why they are important and how you can make your very own spacesuit. Andy is an extreme adventurer and survival expert, and Mike Curtis-Rouse is a rocket and materials engineer.

Moving together – six online flashmob dance workshops

Want to join in an online dance flashmob to send your heart and body soaring? Moving Together uses dance and music to improve mental wellbeing and connectivity. Learn the flashmob moves in up to six workshops then dance them together with the rest of the crowd. Dance experience not necessarily required. The full list of workshop times and dates is available at www.if-oxford.com and the flashmob will take place on Saturday 24 October.

Behind the scenes at a primate lab

Join this discussion on why and how rhesus monkeys help answer some important research questions, including how we optimise learning. See how monkeys complete adapted computer-based tasks that assess learning in healthy humans and those who have experienced stroke. This event will highlight the latest findings on brain adaptation and learning after injury, with opportunities to ask your questions; funded by the Wellcome Trust.

Green witness – poetry workshop

How can we write about nature if we don’t live in the country? How can we best bear witness to climate change, pollution and other damage we humans are inflicting upon the environment? And just what is eco-poetry? In this workshop, we’ll consider these and other questions. We’ll also read and discuss some examples of contemporary eco-poems, attempt some writing exercises – and hopefully come away with ideas for poems of our own.

Sat 3 October | 5 – 5.45pm

7-12 yrs / Teenage / Adult

Sun 4 October | 5 – 5.45pm

Adult

Mon 5 October | 7.30 – 8.30pm

Teenage / Adult

Tue 6 October | 3.30 – 5.30pm

Adult

Mon 5 – Sat 10 October | Various times

Teenage / Adult
Two-thirds of adults in England are overweight. Being overweight is linked to a wide range of diseases, including diabetes and some cancers. Now it’s clear that being overweight can also increase the risk of serious COVID-19 complications. Professor Susan Jebb examines evidence for the health benefits of losing weight, why even short-term diets may be good in the long-term and how, if everyone loses just a small amount, together we can make a big difference to the nation’s health. **TALK**

You may love chocolate, but what actually is it? Sample the secrets of chocolate-making and the science behind our favourite confection. Dip into some complex simplicity, from the amazing art of crafting and ease of creating flavours, to discovering the microstructure that determines chocolate’s distinctive snap! Whatever your question, our simple explanations will satisfy your appetite for chocolate curiosity. **TALK**

Science and Art have been influencing each other for centuries, take Da Vinci’s iconic Vitruvian Man. So why are they often thought to be at such odds? Fusion energy powers our Sun, a feature of art for millennia, but only now are scientists getting close to generating electricity from a fusion star. We want to fire up your creativity and see your interpretation of fusion to show just how artistic science could be. **DISCUSSION**

Dancin’ Oxford’s Family Dance Week brings you exciting and entertaining digital workshops and activities. Have fun and be creative in Family Dance Workshops and get in the groove with live sessions from the Disco Shed with the in-house DJ. Why not energise your weekend with a morning Wake ’n’ Shake session whilst the youngest can enjoy a daily film made by Wild Boar TV which includes making sock goblins. More information at: www.dancinOxford.co.uk **WORKSHOPS / FILMS**

*Inspiring and life-affirming. “It’s great to watch collaboration with young people at a local level.”* **PERFORMANCE / DISCUSSION**
Teenage / Adult

Mental health in Oxford: what is happening?

What is mental illness and how common is it? This discussion will explore some causes of mental illness and how symptoms manifest, with reflections on stigma and how to overcome it. This event on World Mental Health Day will introduce two digital initiatives for encouraging discourse around mental illness: MindMap and Another Oxford – both launched this October.

DISCUSSION

Teenage / Adult

Flora Obscura — the botanical pub quiz

Join Oxford Botanic Garden & Arboretum for a pub-quiz style evening from the comfort of your own home, exploring the Plant Kingdom. Suitable for all levels, have some fun against the clock using the SpeedQuizzing app on your devices. If you need more encouragement, the top three teams will win some fabulous prizes! Cultivate your plant-based team name, grab your favourite beverage and come join in. We're rooting for you!

QUIZ

Teenage / Adult

The challenge of remote engineering

There are many places where humans can’t go! For engineers at the UK Atomic Energy Authority (UKAEA), the Centre for Remote Applications in Challenging Environments (RACE) is the place to design and test robotic systems that work in extreme situations. Whether repairing a nuclear reactor or upgrading particle physics experiments, skilled operators remotely control unique robotic tools to complete complex tasks. Learn about the challenges of designing and operating remote engineering tools as part of the pursuit of safe fusion energy.

TALK

Teenage / Adult

Why your body clock is important for health

What is the body clock, how does it work and what does it do to our metabolism? How does the timing of our meals and sleep impact on our health? In this talk, the University of Oxford’s Professor David Ray will show how you can hack your body clock in the 21st century to live a healthier life.

TALK

Teenage / Adult

Arachne, Prometheus and the politics of hubris

Discuss politics through Greek mythology with you in the role of the insightful chorus; 2 of 4: meet Arachne and Prometheus, then Icarus, Sisyphus and Tantalus, all punished by the gods for displaying hubris – violating the accepted order with recklessness and overconfidence. Is what they did necessarily wrong or justified? Should the chorus side with them, or with the gods? Who are we reminded of in contemporary politics? Is hubris a problem, or can it serve progress?

DISCUSSION

Teenage / Adult

The ultimate language quiz

There are currently 7,111 spoken languages in the world and babies are surprisingly good at learning them! Puzzle over infant language development, uncover bilingualism myths and learn an alien language! Come and join us to play the ultimate language quiz.

QUIZ
Are humans responsible for natural disasters?
How and why did an 18th century debate reappear this year? In 1755, the Lisbon earthquake killed thousands, causing philosophers, scientists, and priests to question who is to blame for natural disasters: humans, nature, or God? COVID-19 is global and more deadly, but raises the same question. Dr Joseph Cunningham and Dr Dafydd Mills Daniel recreate disagreement between two Enlightenment philosophers – Voltaire and Rousseau – and ask you which side you agree with.

From lab to lunch plate
A tantalising look into the future of food and the psychology of cuisine. What are your views on lab-grown ‘clean meat’ or putting cricket crunchies and mealworms on the menu? Insect-based protein is growing globally with smaller environmental impacts than meat. Pioneering the clean pet food revolution, Ryan Bethencourt explores the technical, social, economic and ethical questions with our panel. What's to your taste?

Miss Acland’s gaze and protest on camera
Photo Oxford 2020, in partnership with Arts at the Old Fire Station and Oxford Brookes University, presents outdoor projections in Gloucester Green of photographic images: Miss Acland’s Gaze and Protest on Camera. For more details see www.photooxford.org

Whichever you are in the world, transport yourself to Oxford and discover amazing science, experiment with creative technologies and chat with the people developing the most innovative research today, all from the comfort of your own home!

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Ulysses, Iphigenia and the politics of ambivalence
Discuss politics through Greek mythology with you in the role of the insightful chorus; 3 of 4: Ulysses and Iphigenia were both great heroic figures, but prone to ambivalence. Why were they ambivalent, what about and how? How about us? Is ambivalence a flaw or can it become a virtue? Can the chorus reflect on how to better bridge political divides, and whether this might depend on our capacity to tap into our ambivalence... underneath assertions of tribal loyalty?

Food and Climate Change without the hot air
Join Professor Sarah Bridle and former MP Julian Huppert on World Food Day, today, for a conversation about food and climate change. Out of concern for her children’s future, Bridle set out to understand how global food choices contribute to a quarter of the world’s greenhouse gas emissions. This discussion and Q&A accompanies her well-researched and accessible book, Food and Climate Change without the hot air.

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Sun 18 October | 6.30 – 7.15pm
Teenage / Adult
Super materials for extreme conditions
The UK Atomic Energy Authority (UKAEA) Materials Research Facility in Oxfordshire is a leading centre for studying the effects of extreme conditions. Fusion and fission reactors experience the ultracold temperatures of superconducting magnets to high-intensity radiation, so new materials are needed to withstand these harsh environments. Hear first-hand from materials scientists about the challenges they face in researching materials exposed to some of the most extreme conditions in existence. TALK

Mon 19 October | 6 – 6.45pm
Teenage / Adult
Childhood anxiety – helping parents help their children
Problems with anxiety are common, with roots often in childhood, however support for children and their families is all too rare. In this talk, University of Oxford Professor, Cathy Creswell, explores a range of evidence-based ways for parents to help their children overcome problems with anxiety. Individuals can achieve great results, and you can help researchers find new ways to make sure everyone gets support when they first need it. TALK

Mon 19 October | 7.30 – 9.15pm
Teenage / Adult
The Penultimate Curiosity: The Conflicts of Curiosity
The Penultimate Curiosity traces the story of curiosity throughout history — from cave painting to quantum physics. In this second of two events join the authors, Andrew Briggs and Roger Wagner who flew to some of the crucial locations in this story, and captured them in two documentaries. Watch the second film The Conflicts of Curiosity and explore how the material world can relate to ultimate questions like ‘Why am I here?’ FILM / DISCUSSION

Mon 19 – Sun 25 October | 7.30 – 8.30pm
Teenage / Adult
small hours
Why do we need sleep? What happens when we go without it? small hours probes the mysteries of human circadian rhythm, the daily pattern of wakefulness and sleep, and how this can be either disrupted or adjusted. Join this journey of self-exploration and see where it might lead you. Written by Ava Wong Davies. Co-Produced by IF Oxford and Oxford Playhouse with scientific advice from the University of Oxford Sleep & Circadian Neuroscience Institute. Performed by Mandala Theatre Company. Directed by Yasmin Sidhwa, Film by Ben Johnston. PERFORMANCE

Tue 20 October | 7.30 – 8.30pm
Teenage / Adult
NeuroTales
The brain is host to many mysteries. It controls so much of what we do and who we are, but how? In the first of two events, meet researchers who have dedicated their working lives to finding out the mysteries of the mind – join their personal stories that shine a light on the human element that influences science. TALKS

Wed 21 October | 3 – 3.45pm
Teenage / Adult
Stigmatisation of illness in sub-Saharan Africa
This event highlights the role stigmatisation of illness has on patients across sub-Saharan Africa and its impact on their recovery. People in resource-poor settings with long-term illness become vulnerable to stigma, causing exclusion and misplaced stereotypes like ‘very dangerous’ or ‘very contagious’. Explore how patients can become productive members of a community rather than being separated from it. DISCUSSION

Wed 21 October | 6 – 7pm
Teenage / Adult
Apple day with Ruskin College
Apple Day, an annual celebration of apples and orchards, contributes to the development of farmers’ markets and encourages people to look for more naturally-sourced food. This virtual tour will celebrate the Ruskin College walled garden and ancient orchard. Following this, a panel discussion will celebrate all things apple, including heritage varieties, looking after fruit trees, pressing apples to make juice and cider, preserving apples, apple recipes and weird and wonderful apple traditions. DISCUSSION
Thur 22 October | 6.30 – 7.30pm
Teenage / Adult
Chagan: nuclear testing in the USSR
Chagan is an abandoned town in north-east Kazakhstan, once home to the pilots who dropped nuclear weapons tested across the region. In summer 2019, Josh Steinert, Al Wakelin and Charles Macpherson visited this exclusion zone and recorded footage of Chagan’s remains, highlighting the horrifying humanitarian cost of the USSR nuclear testing programme. Watch their short film and discuss its challenging themes of public health and political cover-up.
FILM / DISCUSSION

Fri 23 October | 7 – 8.45pm
Adult only
The science of gin tasting
Oxford Botanic Garden & Arboretum and The Oxford Artisan Distillery invite you to an evening all about the wonders of gin. Join a special virtual tour of the gin botanicals at the Garden followed by an exclusive gin tasting session with the gin creators themselves all from the comfort of your own home. Taster packs will be available for purchase beforehand but are not essential, feel free to drink your own drinks instead.
TALK

Sat 24 October | 4 – 5pm
Teenage / Adult
Moving Together – online flashmob!
Moving Together uses dance and music to improve mental wellbeing and connectivity. Join this epic dance flashmob! Whether you learned the moves yourself, or in one of the workshops, or just want to watch, this online dance flashmob will send your heart and body soaring!
PERFORMANCE

Sat 24 October | 7 – 10pm
Teenage / Adult
Eternal Sunshine: The scientific possibility of a spotless mind
Join a film screening and discussion about the scientific possibility of erasing someone’s memories – the idea raised in the cult film Eternal Sunshine of the Spotless Mind. With an infectious curiosity for understanding the world around us, actor and science communicator Stephen McGann dissects the film’s premise and learns how memories are formed, what happens when we forget and what consciousness has to do with it.
FILM / DISCUSSION

Sat 24 October | 9.30am – 4.30pm
Adult
Discovering the work of female photographers
A day of talks on women’s contributions to photography. Key questions include the influence of the feminist movement on the careers of women in photography and the role of museums in shaping the legacies of women photographers. The final session focuses on strategies for new photographers to find themselves in a supportive network of ideas and practice.
More information at www.photooxford.org
TALKS

Sun 25 October | 5 – 5.45pm
Teenage / Adult
Helene, Europa and the politics of diversity
Discuss politics through Greek mythology with you in the role of the insightful chorus: 4 of 4: turn to Helene, the world’s most beautiful woman, and the cause of the most horrendous war in her world and Europa, a middle eastern princess who might teach us a thing or two about Europe’s multifaceted margins. As the chorus learns about these characters, it may reflect on what diversity, or rather its management, does for us. What about hybridity, marginality, non-normality?
DISCUSSION

Sun 25 October | 6 – 7pm
Teenage / Adult
The seven $1m maths problems
The seven greatest unsolved problems in mathematics are each worth a cool $1 million! Learn more about these problems as Dr Tom Crawford – creator of the award-winning website Tom Rocks Maths – takes you to the cutting edge of mathematical research. Don’t miss this engaging, interactive event, where you choose which problems to investigate by using a live voting system.
TALK
Around the world in stories

Join storyteller Sarah Law every weekday during half term as she takes you on a story-filled virtual trip around the world. Each day you will decide where you’ll go next. This event is open to all but the stories are best suited to children of 5-9 years.

How to imitate a pancreas

Next year marks the centenary of the discovery of insulin, revolutionising the care of people with type 1 diabetes. Explore how science has transformed what was once a rapidly fatal illness to a managed condition. Technological advances are helping people with diabetes mimic the action of their pancreas, from drugs to patches that deliver insulin via handheld devices. This talk examines how research has transformed lives.

NeuroTales

The brain is host to many mysteries. It controls so much of what we do and who we are, but how? In this second of two events, meet more researchers who have dedicated their working lives to finding out the mysteries of the mind – join their personal stories that shine a light on the human element that influences science.

Engineering stars

Big scientific projects rely on the skills of many different people. Being a fusion researcher means working towards one of the biggest goals in science and engineering of this century. In the hunt for harnessing the energy of stars, many types of skills and people are needed. Hear a discussion between scientists, engineers and technicians working on fusion and see the variety of people needed to make a big idea a reality – join them?

Pelvic pain: diagnosing endometriosis sooner

Pelvic pain and fertility problems can be symptoms of many issues. Endometriosis is a common condition where tissue similar to the womb’s lining grows in the ovaries and fallopian tubes. It can take 8 to 12 years for a proper diagnosis and few tests exist to distinguish it from other potential causes. University of Oxford Professor, Christian Becker, explains how researchers analyse blood, saliva, urine and tissue samples to better understand the condition and develop more effective tests.

Living library: medicine / health

Browse our bookshelf, then get a chance to borrow a real researcher for a small-group conversation. All of our ‘living books’ study or have a career connected to health or medicine. Whether they design medical equipment, create new drugs, research cures for diseases or promote healthy lifestyles, they all have fascinating stories to tell. Take this opportunity to chat to friendly experts – it’ll be good for body and soul!

Moving Together – meet the team

Moving Together is an inspirational collaboration between anthropology researcher Dr Bronwyn Tarr and physical theatre company Justice in Motion. It explores loneliness through dance, workshops and performances, music and film, and how shared experiences can bring connectivity. Watch the short film that was created as part of the project, and join a panel discussion with the creative team, researcher, and some of the participants.

Build your personal online Festival with IF Oxford

www.if-oxford.com
Fri 30 October | 2 – 3pm
7-12 yrs

Make your own pinhole camera

Have you ever wondered how photography was invented? In this online session with the History of Science Museum, learn how to build your own pinhole camera and how to adapt it into a camera obscura. Explore photographic images from the archives and find out how the camera obscura led to the invention of photography. Email events@hsm.ox.ac.uk to reserve your space.

Fri 30 October | 5 – 6pm
Teenage / Adult

Mental health in Oxford – how can you help?

What can you do for emergency mental illness? This discussion will cover some basic tips and techniques, as well as signposting resources, that you can use to help someone in both urgent and non-urgent contexts. Review some common psychological and pharmacological therapies work – as well as why they don’t always work for everyone.

Sat 31 October | 5 – 6.45pm
Teenage / Adult

IF Oxford – the best bits!

As IF Oxford draws to a close, we ask you to pick out your favourite Festival moments. Meet Dane and Cathy, the Festival’s Director and Manager, as they review an amazing month of science and ideas. Get a behind-the-scenes view of how this proudly independent Festival came together during such an unusual and challenging time. Raise a glass to the hundreds of people who joined our team of two to create this digital extravaganza!

Event updates and extras at
www.if-oxford.com
Computers and people compare things differently. Could a duck be mistaken for a cloud or a leaf?

This dot-to-dot gradually builds a familiar shape. When does your imagination complete each picture and guess the shape, in A, B or C? Do computers have imagination? How can they recognise shapes?
Do you think a computer might be able to fold an origami animal itself one day?

Following instructions for folding paper is like following a recipe. Instructions and recipes for computers are called algorithms. When you follow this maze, you can choose to go left or right. What causes this decision? Is it guesswork, or do you know where you’re going? Do you think a robot duck could work out the route to the centre and meet its friend the frog?
Explorazone Digital

SATURDAY 17 OCTOBER
8am – 9pm (then on-demand for 30 days)
7-12 yrs / Teenage / Adult

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Explorazone Digital is free to join and is a place for you to meet the scientists and engineers.

Booths in the Exhibition Hall

Blue sky science
Earth, air, and oceans... on a table. Watch with fascination as we ID some mystery river water samples, catch breath on our air monitors, and test how radioactive you or your home might be. The smoking ocean and microplastics environmental detective game are sure to surprise you!
Royal Society of Chemistry, Environmental Chemistry Group

Animal research: who, how and why?
Discover why animals remain a central part of modern biological science and all the work that is being done to replace them in research and protect their welfare. Test your knowledge, learn the law, explore animal labs with a virtual tour and challenge the experts on the rights and wrongs of using animals for testing and experimentation.
Understanding Animal Research

Lighting up life with colour
Learn how things change colour in response to light, acid or heat, and how coloured fluorescent dyes are used to see inside cells. Meet some chemists who invent new coloured molecules for studying living cells and discover experiments you can do at home relating to this bright science.
Department of Chemistry, University of Oxford

Superconducting magnets in MRI
In hospitals worldwide, MRI scanners help diagnose tumours, clots and tissue damage. Explore the heart of the MRI machine, a superconducting magnet surrounded by liquid nitrogen, where one in three of these magnets across the globe are made here in Oxford. Expect cool demonstrations with some super-fast freezing!
Siemens Healthineers Magnet Technology

Shake your bonds up!
Did you know that molecules love to dance? Their bonds stretch and bend as different melodies and rhythms are played, and scientists can recognise them by their distinctive dance moves. Come and learn about molecules and dance along with them.
Wellcome Centre for Integrative Neuroimaging, University of Oxford

Drug discoveries
How do researchers share their studies of human diseases? Proteins are complex molecules, which come in all shapes and sizes, making you ill or helping you recover. Learn how proteins collaborate inside your body, what happens when this goes wrong and how scientists are working to make new medicines to share with everyone.
Structural Genomics Consortium, University of Oxford

Diamond lights
At Diamond, the UK’s giant particle accelerator, amazingly bright X-ray light is used like a super-microscope, studying samples at an atomic level. Scientists use this to analyse everything from fossils to jet engines and viruses to vaccines. Come take a look, chat to our team and run your own synchrotron!
Diamond Light Source

The environment and your health
Learn about some everyday hazards that may be harmful to your health. What is ionising radiation, where is it and how do we measure it? What do we know about air pollution, inside the home and outside? How can we see invisible nanomaterials in ordinary products?
Public Health England

X-rays and how our bodies work
See how intense X-ray beams aren’t just for broken bones. Meet the biochemists using synchrotron light (check out the Diamond Light Source!) to see the shapes of molecules keeping you alive. Find out how disease and drug discovery are connected to crystals and what a jelly baby can tell you about your body.
Department of Biochemistry, University of Oxford

Vaccines: past, present and future
Learn about gurgling guts and blistering boils, and how vaccination has changed from Victorian times to the current COVID-19 pandemic, and what may be in store for the future. Take a tour of the Jenner Institute, home of the vaccine in the news, play games and meet the scientists working on keeping you healthy.
Jenner Institute and Oxford Vaccine Group, University of Oxford

Look what’s inside us
How is your body built, and how does it work? Come and explore the invisible inner workings of cells, embryos and organs, such as the heart. Researchers are ready to show you some of their latest images and videos, and take you through some fun hands-on activities to try at home.
Department of Physiology, Anatomy and Genetics / Micron Advanced Imaging Unit, University of Oxford

Beware: floods ahead!
Mix maths with poetry and climate science with geography: be the flood judge, create ‘climate stripes’, build a rain gauge and compose a weather poem. You’ll discover how research is helping predict tomorrow’s weather, today, so when floods are forecast, we can avert disaster.
Department of Geography and Environmental Science, University of Reading
Making a Sun on Earth

Ever wondered what powers the stars? Our Sun is hot and bright, but it needs a power source to make that heat and light. That power source is fusion energy. Meet the scientists and engineers working in Oxfordshire on how to harness star power and make a Sun on Earth.

United Kingdom Atomic Energy Authority

Making waves

Music may be the product of instruments that create it, but it is so much more! Sound is a wave, and the space in which we hear it has a profound impact on our sonic experience. Learn the link between spaces and sound, and how this connects to quantum chemistry.

Department of Materials, University of Oxford

Particle physics adventures

Explore a virtual model of the CERN laboratory, located on the Swiss-French border, and its ATLAS experiment in the Minecraft computer game. Learn how the most powerful particle accelerator in the world explores the fundamental building blocks of the universe.

Department of Physics, University of Oxford

Volcano!

Why do volcanoes erupt, and what happens when they do? Dive in to see how volcanologists are looking for answers. Watch as we squash rocks, fly drones over active volcanoes, and listen to eyewitness stories of eruptions. Check out some suggestions for volcano experiments you can try at home.

Department of Earth Sciences, University of Oxford

Brilliant bodies, marvellous medicine

Learn all about the micro-mysteries of the human body with scientists and clinicians from the University of Oxford. Explore the cutting edge of medical research. Join live chats with researchers, video demonstrations and a series of puzzles all related to the human body.

Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences / Nuffield Department of Surgical Sciences, University of Oxford

Seeing the invisible

You’ve heard of Hubble, now explore the invisible Universe with the amazing James Webb Space Telescope. Due to launch next year, it will peer out into deep space. Back on Earth, find out how the ISIS Neutron and Muon Source examines the world around us, from dinosaur eggs to samurai swords, and aeroplane wings to spider silk.

Science and Technology Facilities Council, Rutherford Appleton Laboratory

Information engines

Can information be used instead of fuel to power an engine? Play a new Maxwell game to find out how, and explore limitations on how engines work. Complete our dot-to-dot and guess the underlying picture with as few lines as possible, just like our machine accelerates scientific discoveries!

Department of Materials, University of Oxford

Memory and motivation

Try simple tasks that help understand memory and motivation in people with and without Alzheimer’s and Parkinson’s diseases. Learn how NHS researchers develop assessment and care procedures for patients.

Department of Experimental Psychology, University of Oxford

Diamond: the science of sparkle

We all know diamond as a sparkly gemstone, but this material also has some amazing properties and applications for you to investigate. From cutting and heat management, to optics and even quantum technologies. Come and join our scientists and ask them to show you some fabulous diamond demonstrations.

Element Six

Engineering a great smile

Your teeth can resist acid attack, mechanical wear and bacterial invasion. Scientists are learning how biological materials in your mouth can be damaged and better protected. Join some fun activities to explore how two minutes twice a day can help your smile last a lifetime.

Department of Engineering Science, University of Oxford

Pioneers and culinary reactions

Curious about the chemistry of cakes? Cook up some kitchen experiments and explore the science behind perfect patisseries. From pioneers of protein crystallography to innovators putting cleaner protein and seaweed superfoods on your plate, research is making progress towards better environmental sustainability. Meet people changing the future and hear their scientific inspirations today!

Sommerville College, University of Oxford

Presentations in the Auditorium

10 – 10.45am
Under 7s / 7-12 yrs / Teenage / Adult
Shake your bonds up and dance like water!

Water molecules are great at dancing and they want to share their favourite moves with you. Whether you’re a disco diva or have two left feet, join Maria and Lia, a chemist and a dancer, and learn the simple steps to create your own water-inspired dance routine.

Welcome Centre for Integrative Neuroimaging, University of Oxford

11 – 11.45am
Under 7s / 7-12 yrs / Teenage / Adult
Poetry of science

From acrostic and shape poems to sonnets and free verse, there are endless forms of poetry to suit the myriad topics in science. Join Theresa Lola, 2019 Young People’s Laureate for London and several young finalists from the IF Oxford Poetry of Science competition to hear some winning poems.

Sommerville College, University of Oxford
Engineering a great smile

Your bite is a complex piece of machinery, with powerful jaw muscles and exquisite materials able to withstand acid attack, mechanical wear and bacterial invasion. Find out what scientists are learning about the biological materials in your mouth and how to protect them. What can you do to care for your teeth?

Free dental kits are available in advance so you can take part in the interactive parts of this event.

Department of Engineering Science, University of Oxford

Diamond – an engineering gem

Diamond is an amazing material, and not only a fancy gemstone. You may be surprised to find out diamond’s role in shaping the world around you, from engineering your smart phone to focusing the lasers that cut sheet metal for cars. This presentation will describe how diamond can be made and engineered for many amazing applications.

Element Six

ARIEL: planetary science across light-years

From the first discovery of planets orbiting a dead star in 1992, we now know of over 4,000 exoplanets orbiting other stars. Our Universe is more diverse than we could imagine, with weird and wonderful celestial bodies, from hot Jupiters or worlds made of ice, lava and diamond, to rogue planets drifting alone in the vastness of space. The ARIEL space mission will reveal just what these exoplanets are made of.

Science and Technology Facilities Council, Rutherford Appleton Laboratory

Making a Sun on Earth: Live

What powers the Sun? Come and find out all about fusion energy, the ultimate power source, from the scientists and engineers trying to harness star power? You’ll learn about plasma, magnets, robotics, and more, and how all these things help create sustainable and safe fusion energy to power our homes in the future. There will be activities that you can join in from home to help you figure out what’s needed to make a Sun on Earth.

United Kingdom Atomic Energy Authority

LIVING with volcanoes

It is 40 years since the eruption of Mount St Helens in USA, 25 years since the Soufriere Hills Volcano began erupting on the Caribbean island of Montserrat and 10 years since ash from an Icelandic eruption shut down Europe’s airspace. This illustrated presentation shares the stories of eyewitnesses to understand how volcanoes erupt, how they affect people, and how communities can learn to live with volcanoes as their neighbours.

Department of Earth Sciences, University of Oxford

Routes into scientific research

Would you like to get involved in scientific research? You may be a budding scientist, looking for a career change or just want to help out in your spare time. The ongoing COVID-19 vaccine trial at the University of Oxford has a team of 300 researchers, doctors and nurses working alongside thousands of volunteers towards the common goal of a successful vaccine. Whatever your background and interests there are many different routes into science – explore them here and ask your questions.

Jenner Institute and Oxford Vaccine Group, University of Oxford

Inside the COVID brain

COVID-19 has been this year’s big disrupter and life might not return to normal for a long time to come. The Explorazone Digital finale takes you on a live tour with the help of a volunteer and a powerful brain scanner to understand the effects this coronavirus can have on the human body. There will be time to ask questions about the research and hear the experience of at least one COVID-19 survivor.

Nuffield Department of Clinical Neurosciences, University of Oxford
WHAT’S ON

4-6 September
The Merry Wives of WhatsApp

When greasy knight John Falstaff slides into their DMs with identical love messages, Meg and Alice turn to their local WhatsApp group to plan vengeance on him and their useless husbands. How like you these Merry Wives? Creation Theatre present a modern reimagining of Shakespeare’s The Merry Wives of Windsor, in this play of women, wine and wheelie bins.

creationtheatre.co.uk

12-13 September
Oxford Open Doors

Oxford Open Doors is an annual celebration of Oxford across all walks of life, its places and its people. It is a partnership with the University of Oxford, and is only made possible thanks to the members of Oxford Preservation Trust. This year it is likely to be very different to previous years; plans will be announced at the beginning of September.

oxfordpreservation.org.uk

10-17 October
The 19th Oxford Lieder Festival: Connections Across Time – A Brief History of Song

The Oxford Lieder Festival will go ahead this October, with a bold programme and trailblazing approach to the challenges currently facing the classical music industry. Over eight days and 35 events, the Festival will be fully live, ticketed, and presented from special venues in and around Oxford, completely online. With a roster of internationally renowned artists and the pick of the new generation, Oxford Lieder continues as a pioneering and innovative champion of the art of song, and addresses the difficult issue of paid online classical music head-on with a new, sustainable model.

oxfordlieder.co.uk

2 October-3 January
Mariana Castillo Deball: Between making and knowing something

Through a collage-like installation featuring pottery, photography and textiles, Mexican-born artist Mariana Castillo Deball works to uncover stories and individuals often hidden in traditional museum displays. Deball’s exhibition focuses on sharing the stories of a number of little-known female anthropologists and indigenous storytellers and makers. To do this, the artist recreates historical artefacts and reconfigures display cases to expose how museum collections both conceal and reveal historical narratives and shape our understanding of the world.

Modern Art Oxford modernartoxford.org.uk

An amazing experience whatever the weather

New Cuvier’s dwarf caiman exhibit now open

We have introduced a range of measures to ensure a safe and enjoyable visit for all visitors (See website for details https://livingrainforest.org)

Experience the thrill of our Rainforest Classroom

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Also a new fun and immersive outreach programme contact for details
Tel: 01635 202444 ext.205
education@livingrainforest.org

Choice of four tours:
Amazing Adaptations
Edible Forest
Sustainable Future
Rainforest Resources

Between Newbury & Reading Signposted from J13 M4 Motorway | RG18 0TN | Pre-Booked time slots only

Benjamin Appl, Ian Bostridge, Sarah Connolly, Lucy Crowe, James Gilchrist, Christoph Prégardien, Carolyn Sampson, Roderick Williams & many more

Live-streamed from the heart of Oxford

THE 19TH OXFORD LIEDER FESTIVAL
CONNECTIONS ACROSS TIME
A BRIEF HISTORY OF SONG
10 – 17 October 2020
Benjamin Appl, Ian Bostridge, Sarah Connolly, Lucy Crowe, James Gilchrist, Christoph Prégardien, Carolyn Sampson, Roderick Williams & many more

oxfordlieder.co.uk

14-24 October
Philippa James: 100 Women of Oxford
Oxford-based photographer Philippa James visited one hundred women, in their homes, and listened to experiences of love and loss, politics, motherhood, climate change, dreams, disability, murder, sexuality, mental health, fear, impostor syndrome, social justice, family conflict, abuse, feminism, war, joy, death, social inclusion and many more stories of humanity. In this exhibition you will have the opportunity to meet all one hundred brave, courageous, inspirational women, who are a part of Oxford’s community.
The North Wall Gallery, Oxford
thenorthwall.com

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The North Wall Gallery, Oxford
thenorthwall.com

Sunshine & Nostalgia of Summertime Exhibition
By Jack Free of Jack’s Gallery, Hart Street, Henley-on-Thames
This is the first exhibition to be held in the gallery since the Covid-19 lockdown and is a celebration of summer. The exhibition will run for four weeks and finishes on the 13th September 2020. After which please visit jack’s Gallery in Hart Street.
01491 576982
The Old Fire Station Gallery, 52 Market Place, Henley-on-Thames, Oxon, RG9 2AG
www.henleytowncouncil.gov.uk

Streaming Now
Arts at a Safe Distance
Oxford’s Old Fire Station picks the best shows for you to watch online, including the following:
Frisky & Mannish: School of Pop
The comedians break down pop songs into their component parts – joyous.

Richard II
The film version of the critically acclaimed first all women of colour Shakespeare on a UK stage, starring Adjoa Andoh.

BLUE
A sweet, funny, poignant and tremendously endearing show about feeling like you’re all by yourself.

Life Is A Circus
The documentary about the Old Fire Station’s Hidden Spire project: a unique group of people, some of them homeless, create a show together.

Crips Without Constraints
Monologues written and recorded in isolation by Deaf and disabled artists.

Wasted
A rock musical that puts microphones in the hands of the Brontë sisters and lets them fly.

Until 1 November
Young Rembrandt
Witness the meteoric rise of Rembrandt, from his first tentative works as a teenager in his home town of Leiden, to the sublime masterpieces he produced in Amsterdam ten years later. Beginning with his earliest known paintings, prints and drawings made in the mid-1620s, and ending at the moment he rockets to stardom in Amsterdam in the mid-1630s, this exhibition charts an astonishing transformation.
ashmolean.org

Other Dates
1-30 September | Organic September
13 – 19 September | World Mitochondrial Disease Week
28 September-2 October | Bike to School Week
28 September-4 October | BNF Healthy Eating Week
29 September | World Heart Day

SEPTMBER 2020 OX MAGAZINE
It seemed to be getting there in the early 19th century,” he says, “and then it just stultified. A lot of the rest of the country became massively driven by technology, the railways and the way in which industrialisation was changing the world. People were learning about geology, mainly driven by industry, I guess; building, manufacturing and mining. Then there were all the things chemists were doing. Places like London were setting up museums and laboratories and what have you, but Oxford came to be quite left behind by the 1840s or so."

And then some Oxford scientists went about convincing the university to get more involved via the building of a museum dedicated to science. That’s a somewhat simplified version of the events in your lovely book. That is essentially what happened, except we need to remember that, for us, a museum means a place where the public can visit and look at things. The Museum of Natural History was always going to be that, but when they had it built, they were calling it a museum but what they had in mind was what we would think of now as a total science faculty; lecture rooms, laboratories, dissection rooms. It was a museum to celebrate science but it was also a building in which the university could start teaching science properly.

What’s the link between the Oxford scientists and the Pre-Raphaelites in terms of the museum?
You’ve got two things happening at the same time. You’ve got the Oxford scientists deciding in 1847 that they want to push for this new museum, and also the Pre-Raphaelite brotherhood – a bunch of young art students at London’s Royal Academy, deciding to gang together in 1848 to launch effectively a rebellion against the way art was being taught and created. The Pre-Raphaelites were motivated by a rejection of the idea that the way to create great art was just to copy the great art of the past. They felt instead that as an artist you should look for yourself. They meant that in two ways: both literally looking and studying very closely the thing in front of you, and also using your own imagination. They had two models for doing that. One
Henley Town Hall is an ideal town centre venue for civil ceremonies positioned in Market Place close to the two main car parks.

Standing out from the surrounding buildings, this iconic Grade 2 Listed Building was opened in 1901. Four rooms are available according to the size of your ceremony; the main chambers are panelled in oak from floor to ceiling. Its main features include a fine fireplace and brass chandeliers. This room can accommodate up to 210 people for the ceremony or may be used for the reception after the ceremony.

For further details please contact us
01491 576982 | enquiries@henleytowncouncil.gov.uk | www.henleytowncouncil.gov.uk
which we have created for ourselves. At the same time we need art, in all its forms, to bring this need to the forefront of people’s imaginations, to realise what it means to us as human animals to be living through this moment, and to move us to act.” How optimistic are you about all that?

I’m not politically optimistic – the track record of human political action is not promising. But with science we can address the environmental problems that we’ve created. We know how to do it for the most part, it’s just a matter of finding the political will and mobilising people to do it. So in that sense, science does give us hope. Art also gives us hope because it can transform your sense of what matters in the world and galvanise you into a different way of thinking about value. We have to be able to imagine our lives differently if we are to make human civilisation sustainable and avoid the destruction we’re wreaking on the natural world. I think art has an absolutely vital role to play in that imaginative leap. Science can tell us what we need to do but art – it might be cinema, science fiction, poetry, the Pre-Raphaelites at the museum – can enable us to imagine a world that is different from the one we live in, and therefore get to that world. I wouldn’t say I’m optimistic, but I would say that both science and art together can give us grounds for hope.

I first visited Oxford University Museum of Natural History in 2004, a year after I started my history degree at Oxford. I have to admit that I am not intuitively drawn to science. It was actually the subject I disliked the most at school.

But it is the accessibility of this museum – and its exceptional collections – which make it so unique. I was entranced by the building, the seemingly fantastical objects on display, as well as their presentation.

For this column I am going to focus on one item which really captured my imagination – Mary Anning’s ichthyosaur. Ichthysosaurs are not strictly speaking dinosaurs, but large marine reptiles. They are first found at the beginning of the Mesozoic Era, approximately 250 million years ago, and died out during the Late Cretaceous, approximately 90 million years ago.

Ichthyosaurs coexisted with the dinosaurs and were for millions of years the largest predators in the sea. Species varied in length, but some grew to be 20 metres – imagine a gigantic dolphin with rows of razor sharp teeth.

Mary Anning was an early fossil hunter and palaeontologist, who lived at the beginning of the 19th century. She lived in Lyme Regis and achieved some fame during her lifetime as the woman who kept digging up monstrous giant lizards, although she only partially participated in the male-dominated scientific community.

One of her finds, an ichthyosaur, discovered before 1836, is on display at the Museum of Natural History. It is approximately 195 million years old and is so well preserved that fish bones and scales from its last meal can still be seen in its rib cage.

The fossil has recently been re-identified as a juvenile of Ichthyosaurus anningae, named after Anning.

In 2010 I spent a weekend in Lyme Regis with a friend. We hired a fossil guide for the day, who taught us about the Jurassic coastline, and went fossil hunting. We may not have had as much success as Anning, but we filled both our rucksacks with fossils.

The experience has inspired me to look more closely at the fossils in the museum, and to think more about the science behind them. I encourage you to visit the Natural History Museum, which aims to reopen this month.

@philipcbaldwin
SHAPING THE FUTURE

Science and Technology in Film

JAMES PIKE

Science and Hollywood’s relationship has always been a dubious affair. Where science is based on fact and thought-out research the film industry’s sci-fi genre tends to (at least at first glance) lean more towards its more fantastical elements than anything seemingly tangible. With innovative strides taken in science and technology over many decades, how much of humankind’s development can actually be attributed to the ideas sought in science fiction films?

While visiting the sublime Stanley Kubrick exhibit at the Design Museum, I kind of had a mini revelation. In 2001: A Space Odyssey (1968) there is one scene where the crew are going about their daily routine; a morning jog, breakfast, catching up with current affairs on their iPads – yes, iPads – this film was made in the 60s! I couldn’t believe the accuracy, I was almost embarrassed to acknowledge how prophetic 2001 was when I realised that although it was predicting what the future may hold for mankind, there was also a strong case for life imitating art.

How many graduates within the science and technology fields saw 2001 (amongst others) and used the ideas and themes to form the basis of their own projects? Now we’re actually discussing ways in which humans can take a weekend break on the moon, something I firmly believe was inspired by Kubrick’s masterpiece, inspired by Arthur C. Clarke’s (also co-writer) short story The Sentinel from 1951. Not content with descriptions alone, Kubrick and his team sought counsel from MIT (Massachusetts Institute of Technology) faculty/students to ensure the accuracy of 2001’s science and technology was on point and something that was realistically achievable. Of course not every film production engages in this level of research, taking liberties to create a more dramatic, dare I say palatable presence (see any sci-fi film by Michael Bay).

And there is nothing wrong with that – film is as much about recreating a world we are yet to see as it is about complete escape; be it accurately or inaccurately. I for one relish a fantastical sci-fi where the technology and science of that world just happens to exist, whether accurately or inaccurately. I for one believe that science fiction is as much about recreating a world we are engaged in, as much as our view of the real world.

The VFX team Double Negative collaborated with physicist Kip Thorne to develop the look and feel of the black hole depicted. For Minority Report (2002), Steven Spielberg invited 15 experts from the fields of architecture, technology and science to make predictions for the year 2054 when the film was set – gesture control was heavily utilised and is starting to become a prominent technology feature within consoles, smartphones and conferencing technology. In some cases, some of the most unlikely visions of the future within film have predicted real-world technological advances. Back to the Future Pt II (1989) predicted hoverboards and the use of drones for media coverage, Total Recall (1990) had self-driving cars, and The Matrix (1999) shows a vision of an advanced take on VR and what the potential for computer games could be in the future. All would have had input from the science and technology community to some extent, and in some sort of reverse quid pro quo companies such as Apple, Nike and Microsoft have hired sci-fi writers to discuss ideas with their developers all the while predicting current social and scientific trends.

The Day After Tomorrow (2004), despite its outlandish premise and being called out by the scientific community for its inaccurate, actually raised environmental and climate change awareness amongst the world’s populace (in particular the US) according to Yale researchers. Films such as Children of Men (2006) set in the year 2027 shows a bleak future where children haven’t been born in over 18 years, society has broken down and governments have declared a totalitarian state as immigration, euthanasia and control are heavily explored – not a world away from what we are experiencing right now.

FILM
These types of themes within film can accurately depict the manner in which people behave in society at that time and can influence the world around us. The progression of science and technology are advancing at an astronomical rate so even the more eccentric visions of the future – whether it’s science and technology or even the social politics – aren’t a far cry from where mankind could end up. The fact remains however, film productions with sci-fi leanings generally tend to collaborate with the scientific and technological communities, so when you are watching something that seems almost impossible to comprehend, just remember that this could be an accurately depicted vision of the not too distant future.

The Matrix (1999) shows a vision of an advanced take on VR and what the potential for computer games could be in the future.
Beachborough’s STEM Programme shines during COVID-19

Beachborough Prep School’s continued development and investment in Science, Technology, Engineering and Mathematics (STEM) has been a great help to its pupils and the wider community, especially this year.

The closure of schools during COVID-19 created many challenges for the education sector, but Beachborough was able to move to its online learning platform quickly and effectively, supporting all of their children from 2 ½ to 13 years of age. The school’s ongoing commitment to the development of STEM subjects and facilities, meant that teachers and pupils were digital-ready when time came. The independent school, on the Northamptonshire, Oxfordshire and Buckinghamshire border implemented three online learning platforms to accommodate all age groups. Their children were able to benefit from live 1:1 teaching and learning opportunities during the school closure, a key focus which was to ensure that their wellbeing was supported through real-time interaction. Beachborough’s children and parents enjoyed the experience and, although it was not the same as being in school, felt that Beachborough was doing all it could to help and support learning, from a distance.

In support of their local community, the school fired up its laser cutters and 3D printers in its Technology, Engineering and Design Suite. They manufactured over 1000 visors for local hospitals and the NHS service. Headmaster, Mr Christian Pritchard, was delighted that Beachborough could support the local community in this way. He commented, “Using the latest technology, we were able to support our children and our local community during the COVID-19 pandemic. This was an excellent opportunity for us to ‘give back’. We were also able to share our digital learning platform developments and ideas with our local Primary schools as we continue to forge strong links with schools in the region and beyond.”

Beachborough are very proud of their Science, Technology, Engineering and Mathematics programme, and rightly so, as they were awarded ‘Best Prep School in the Country for STEM’ last year, by ‘The Independent Schools Guide’. Not satisfied with standing still, Beachborough is continuing to develop its programme. As a result, they will be launching their new Digital Audio and Visual Suite for all children later in the year. Looking forward, this new facility will add a new layer of excitement to an already challenging curriculum that is fit for the future.
About A Look: Time for a Reset

After the brights and prints of the last few months, there’s something ineffably appealing about a reset to neutral. Mix up tone and texture and whether you’re after classy or classic, you’ll find something to suit.

Japanese fashion brand Uniqlo excel at basics and frequently collaborate with other designers to keep the collection dynamic. This autumn they are working with designer Hana Tajima to produce a selection of pieces inspired by personal histories and feminine energy.

Hana Tajima AIRism high neck £12.90
Hana Tajima Blouse £29.90 uniqlo.com
A chocolate bar on the fashion pages? This mouthwatering mash-up of Biscoff, salted caramel and white chocolate is courtesy of Manchester chocolatiers Black Milk and absolutely encapsulates the season! £4.50
blackmilkcereal.com

Sensual silk, this ivory camisole forms part of the wildly popular Rosie for Autograph collection. £39.50
marksandspencer.com

All shades of brown leather are correct this autumn and this cognac-toned skirt from Violeta by Mango is no exception. £119.99
mango.com for main site, then navigate to plus size

This month heralds the official start of The Cashmere Months. Celebrate with a trip to Brora. Plaid scarf £139
brora.com

Co-ord your mask with your fit. River Island’s stone-ruled monogram comes with a cheeky little leopard number as part of a two pack. £12
riverisland.com

This studded, clog hybrid from Zara feels like several shoes in one and we are living for it. £129
zara.com

The cut of these Marc Cain trousers and the lustre of the 100% virgin wool elevate them from the norm. £259
marccain.com

The Utility Jumpsuit from Levis is from their most sustainable collection to date. Reduced water usage, rain-fed hemp, worker wellbeing and style for miles. £95
levi.com

Filippa K specialises in modern, practical shapes that will really earn their place in your wardrobe and on a cost-per-wear basis work out to be sound investment pieces. Viscose dress £260
filippa-k.com

Debenhams inhouse brand, Kley is all about contemporary neutrals, as seen here. Trousers and shirt £49, with jacket by Principles £28
debenhams.com

Lumberjack check ducket to be thrown over anything and everything. £144
anthropologie.com

Originally designed for Dakota’s miners, loggers and farmers, Red Wing’s Moc Toe Boots might seem spendy but the brand promise that the boots will outlive the owner. £269
redwinglondon.com

Eco-luxe label JPL Atelier’s new Bamboo Silk collection uses certified bamboo, woven into an splendently heavy and sinuously flattering drape. The Button Down Green Graphite Bamboo Silk Shirt £395
jplatelier.com

Each season AND/OR by John Lewis come up with a wear-anywhere dress and we suspect this may be autumn’s contender. £89
johnlewis.com

The Utility Jumpsuit from Levis is from their most sustainable collection to date. Reduced water usage, rain-fed hemp, worker wellbeing and style for miles. £95
levi.com

This toffee-toned puffa from Scandi brand Lindex has us thinking ahead to Bonfire Night. £69.99
lindex.com

Debenhams inhouse brand, Kley is all about contemporary neutrals, as seen here. Trousers and shirt £49, with jacket by Principles £28
debenhams.com

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Filippa K specialises in modern, practical shapes that will really earn their place in your wardrobe and on a cost-per-wear basis work out to be sound investment pieces. Viscose dress £260
filippa-k.com
Oh, how I love a natural fabric – they just seem to get it, don’t they? Cossetting warmth when you’re feeling the chill and then magically switching to cooling mode when things get a little sultry. The weight of the cotton used in the Cyberjammies Alexa dressing gown is pitch-perfect for this unpredictable time of year. Swishing downstairs to put the morning coffee on whilst wearing this will be to start my day with equal measures of glam, cool and cosy. £45 cyberjammies.co.uk

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DIFFERENT WAYS TO WEAR
WIDE LEG TROUSERS

Let’s take a moment to mourn (or celebrate – delete as you feel appropriate) the eventual demise of the skinny jean. When Kate Moss first styled hers with ballet pumps and a fag the look was so wrong it was instantly right. Their popularity rose exponentially and pretty soon, no matter our dimensions we were skinny all the way. Then fashion did what it does best: moved on. Now bigger is better but how to wear it and make it styled rather than swamped?

We all have a friend – whether real or online – who always manages to look chic but uncomplicated; easy and effortless. Is it her figure? Her eyes? Her hair? Clothes simply look right on her, whether it’s the perfect laid-back dress, a witty print or even basic black. Chances are her online go-to is Saint + Sofia. Here you will find perfect fashion pieces in sizes 6-22 that nod to trend but keep comfort and quality as key: a rare beast indeed. Their wide-leg Camden Pant is made from organic cotton, front pleats make it tailored, side pockets make it practical. £50 saintandsofia.com

Basic fashion maths: wide bottoms + fitted top = balance. The statement sleeves which are dominant this year will work beautifully to accentuate the close fit of this latte-coloured rib top from Zara £25.99 zara.com

Die-hard fashion mavens are working the tuck this season by gathering that wide hem up and slipping it into a calf-length boot. If you’re going down this route, make it uber-fabulous with these autumn-toned beauties. Ecel boot by Chie Mihara £451 chiemihara.com

This blouson zip-up is perfect for September weather; an extra layer is required but it is still largely dry. Any opportunity to wear deep, plummy velvet as a jacket should be fully exploited. £145 hanro.com

Think of any iconic hat-related figure of the past 500 years and you will find Lock & Co as maker. A scroll down the timeline on their website is highly recommended. Fedora Liza Drop Brim £435 lockhatters.co.uk

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**FASHION & BEAUTY**

Is laboratory-chic a thing? Now it is. Crystal Optical glasses frames by Ace & Tate, £98 aceandtate.com or High Street, Oxford.

Finish the romance beating with anatomical accuracy at its finest – Heart Necklace £65 tattydevine.com

Acutely chic and obtusely pleasing, this geometrical folded clutch is from a selection at cosstores.com

Diverse ecosystems on show with Finisterre’s packaway backpack, designed in collaboration with the Natural History Museum £40 finisterre.com

Botanical blooms abound in this lightweight scarf from One Hundred Stars featuring artwork from the archives of The Royal Botanic Gardens, Kew £30 onehundredstars.co.uk

Astronomical levels of delight at these socks from Monki £3 monki.com

Make like a petrologist and study this rock intently as it adorns your finger. £42 yaayaalondon.com

With science dominating this issue, it seems only right that Finishing Touches should follow suit.

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BLITZ THOSE ZITS

It’s not just teens who suffer with blemish-prone skin; from adolescent to adult, we are all at the mercy of our hormones. And, even if you thought you’d left the zits behind, a sultry summer plus the need to wear a face covering may well be wreaking havoc on your complexion. Indeed, the term ‘maskne’ has been this year’s entry into the beauty lexicon, describing the tendency for covered skin to break out. Despite this, the need to keep skin cleansed, exfoliated and moisturised remains true for all of us. (NB: if the spots are taking over, or causing real suffering, it might be wise to get an appointment with the GP.)

La Roche-Posay have been working with dermatologists for over 30 years on their line of sensitive-skin friendly products. Their Effaclar Micro-Peeling Purifying Gel is suitable for use all over the body, including the face, making it great not just for acne, or maskne, but also backne. Salicylic acid helps exfoliate, zinc soothes inflammation. Our tester tried it in tandem with the Toleriane Ultra Dermallergo Serum which calms redness and irritation, and she states, “After applying these products my skin is left feeling very soft and supple. I have seen a huge difference in the way it looks and feels after using twice a day every day. The redness and appearance of spots have decreased dramatically and rapidly.” £14.50/£28 boots.com

Before exfoliating, any makeup needs to be removed, and Bioderma’s Sebiom H2O is designed for oily/combination skin. Our tester stated that this gentle micellar water “removes makeup thoroughly as well as cleansing my skin and leaving it feeling refreshed.” £10.80 naos-store.co.uk

For a more thorough cleanse, we love an oil-based cleansing balm. It’s something of a myth that oil should be avoided by the blemish-prone, and a balm cleanser will help the skin retain its natural oils, vital for skin health. Massage into dry skin to lift dirt and makeup and then run a flannel or cloth under the hot tap. Wring out and press the cloth against your face, inhaling those beneficial essential oils as you do so. Gently wipe off the balm to leave beautifully soft clean skin. Lyons Leaf Beauty Balm is both ethical and well-priced at £14.99 lovelula.com

If a breakout has occurred, topical treatment is needed: Avène’s latest drop, Cleanance Comedomed, should be dabbed on the skin after cleansing, both morning and evening. It mattifies, soothes and minimises inflammation. Be aware, this has quite a strong smell at first, but that disappears after a minute or so, once the active ingredients have been absorbed. £16.50 boots.com

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One of the challenges of wearing an additional layer of covering over the face must be the inevitable claggy feeling. Our skin is the body’s largest organ and its natural shedding cycle is interrupted. Eve Lom’s Rescue Peel Pads are suffused with natural, skin-friendly acids to exfoliate and hydrate. The woven fabric is biodegradable and they are designed to be used at night, after cleansing. It doesn’t take much effort to swipe these over your face and the benefits are manifest. £60 evelom.com

Finally, but crucially, keep moisturising. Look for something lightweight and calming. Most of the brands mentioned will have something suitable in their ranges, but also worth mentioning is Codex Bia’s range which combines the best in science, dermatology, botany and biotechnology. The Day Cream melts effortlessly into skin and the sustainably sourced calendula and serrated wrack give it a refreshing, herbaceous and natural scent. £67 uk.codexbeauty.com
TABULA RASA

In computer science, artificial intelligence experts refer to tabula rasa as the ‘blank slate’. In beauty terms, this equates to a nude face. What is the difference between naked and nude? One suggests stripped, unadorned, as nature intended.

The other has more of a sense of the artful or posed. With the rise in virtual meetings and maskwearing a necessity, a switch-up to the old routines might be required. Nude face may well be enhanced by natural-seeming artistry either to create an idealised starting point, or to simply augment the natural face.

Blush is the quickest way of adding dimension, brightness and contrast to your face. The choice between a subtle flush and a full-on blush is all yours in a spectrum of colours ranging from pepping pinks to darker, taupey shades. The only thing to be aware of is placement: blush is designed for the apple of the cheek, not all over and not on the nose – in our book Pinocchio is a legend, not a style icon.

Even though the desired outcome is ‘enhanced natural’, we might suggest a modicum of artifice when it comes to the highlighter! Tradition dictates a sweep of shimmer across the cheekbone, along the brow bones, a smidgeon on the tip of the nose and perhaps a swoop down the centre of the face and for this, powder formulations are great. More controlled swipes of gleam can be managed with a stubby stick – something like the glem can be managed with a stubby stick – something like the Kevyn Aucoin's Stripped Nude Skin Tint is truly a product for our times. Placed somewhere between a tinted moisturiser and a foundation, it sits lightly on the face and yet magically manages to even out the complexion and plump out the skin. Let it settle in properly and your mask will be safe from stains as you take it on and off throughout the day. Budleia extract promises to help protect your skin against the free radicals caused by blue light (such as that emitted from your device) but what we particularly love is the range of shades which are divided into an easily comprehensible Light, Medium and Dark and then sub-sectioned by undertone (yellow, pink or neutral). If you’re unsure, check your veins – greenish tones will be yellow, blue should opt for pink and if your veins don’t really stand out, try neutral.

Really angry blemishes will need more personalized attention: a dab-on concealer to be applied after foundation is the most straightforward remedy. We recommend using fingertips rather than applicators for optimal precision and hygiene, and take the time to find one which will help address not just the look, but the health of your skin. Look for something longwear and sweat-resistant. Too Faced’s Peach Perfect Instant Coverage concealer fits the bill very well.

If even a nude-toned lip feels like too much of a statement and you have fallen foul of a lip-print inside of your mouth one too many times to bother with colour, a sweep of gloss or even balm will help with the look of ‘natural perfection’. Carmex’s vintage packaging always looks good. (£2.99 superdrug.com). And don’t forget nails – neutral toned polish helps nails look groomed without making a bold statement. There are more versions to choose from than we have room to list, but we will just make mention of LaPeller Green’s Naked Nails collection, not just because it fits the brief so well, but its breathable vegan formulation helps keep nails in great condition by allowing air and water to pass through the glossy surface. £15.99 lapellergreen.com

To enhance the eye, look no further than a neutral-toned palette. We can’t remember if such a concept existed before Urban Decay’s original Naked collection launched just 10 years ago, but they have rapidly become the new normal (well, a new normal, at any rate).

A good choice will mix up matte and shimmer shades, and a really generous one will have something glittery for amping up the effect should the occasion demand it. Massive props to LA Girl – their The Nudist palette is priced at an incredible £12 and – believe us – the quality belies the price.

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NEW BEGINNINGS

We are currently and consciously living through a paradigm shift, grappling with a ‘new normal’ which looks set to evolve once more, and yield up new change once the season changes. The Jewish calendar has the New Year scheduled in September and this has always made intuitive sense to me. On the one hand nature is readying itself for the big sleep, on the other, a fresh determination sweeps us all to crack on with real life after the hazy days of summer have dwindled to a close.

No doubt this is largely informed by the dual experiences of having been at school and having a child who is currently at school. And – no surprise for an Oxford-based writer – having a husband who works in academia. Our annual cycle starts in September with the prolific purchasing of new stationery, correctly sized shoes and the endless search for a perfect winter coat notches up a gear once again. Which brings me to the other big marker of newness: the fashion season. There’s nothing #sustainable about buying new each season, and claims to the contrary made by big brands attempting to piggyback onto social movements are deplorable. But this needn’t mean an endless slurry of sameness. Isn’t there a little exploitation of creativity, art and design so yes, let’s inform ourselves by its expertise.

We say this with inspired, covetable and above all new pieces to consider and reflect upon. What we’re aiming for, though, is to inspire, not dictate. The UK fashion industry is worth £25 billion and, at its finest, it represents the global acme of creativity, art and design so yes, let’s inform ourselves by its expertise.

So, I’ll dig out last year’s winter coat which isn’t perfect but it will do. It keeps the cold out and a trip to an (ethical) dry cleaner will freshen it up for its Fall 2020 debut. And whilst it might not excite me, my inner-Tigger will be satisfied with my plan to add a large leather belt and slip in a couple of shoulder pads thus redefining the whole silhouette, in line with the best of the new season trends.

Keven Aucoin's Stripped Nude Skin Tint is truly a product for our times. Placed somewhere between a tinted moisturiser and a foundation, it sits lightly on the face and yet magically manages to even out the complexion and plump out the skin.
SEPTEMBER SORTED

SOPHIE ELKAN

SPOTLIGHT ON: MIO

We're not the only ones feeling the urge to refresh this month, Mio Skincare have had a glow up and relaunched with a pick of products, each bursting with feel-good. Making full use of a variety of plant-based actives, the range has been subdivided by need state – ‘Workout Wonders’ to cater for the gym bunnies (whether wannabe or in training), ‘Liquid Yoga’ for those in search of inner peace, ‘Glow Getters’ for good mornings every day, and the ‘Detox Squad’ for those needing a reset. There’s a tremendous sense of fun across the whole collection, the packaging is slick, modern and gender-neutral and the products are gorgeous to use. The Liquid Yoga Space Spray has helped keep both working from home concentration and stress levels in check, and the Muscle Motivator Revitalising Gel has cooled and hydrated tired legs striving to keep up the daily exercise walk. Credit to Mio for also extending the enhancements to their environmental impact: packaging is sugarcane derived, cardboard, FSC certified and the fragrances natural. In terms of innovation, perhaps the hero product is the Sleeping Smoothie Overnight Serum, a light creamy lotion to apply before sleep. Our Three of the Best this month focuses on overnight facials, but this is designed for the body: Aha’s to resurface the skin and restore glow (I’ve been layering it on to reduce the roadmap of lines starting to criss-cross my chest), moisturisers to smooth and hydrate, and a pleasant citrusy scent to enhance your feeling of wellbeing prior to hitting the pillow. I haven’t come across anything else quite like it. From £19 mioskincare.co.uk

September is a good news month, in that it sees the launch of fragrance newness from the splendiferous Jo Malone. Inspired by the hanging gardens of Babylon – think lush, verdant, botanicals – Fig and Lotus Flower Cologne and Cypress and Grapevine Cologne Intense debut this month to comprise ‘Lost In Wonder’, to be worn separately or paired with each other – or others in the repertoire. I adore fig-based scents, so green and juicy, fruity without being overly ripe. Blended with lotus flower, and the effect is as if it has been seasoned; still green, but finely tuned to be more delicate and sweeter. If single-note fig doesn’t do it for you, try this. Autumn’s bounty is further referenced in the headier cypress and grapevine, where it becomes earthy and exotic. There’s something herbaceous and enduring going on with woody base notes, and a definable sense of intrigue – this is deep into the forest, altogether darker and more dangerous. The two together create an intoxicatingly rich and special magic. From £50 in store or at jomalones.co.uk

Of all the facial hair removal options on offer, the quickest fix is to nip the little buggers in the bud and scythe them off. Flawless Facial Hair Removers are essentially shaving devices although bouji enough for display. Flawless Brows has a small head, tiny enough to shape brows rather than obliterate, or the original, Flawless will tackle larger areas such as the upper lip or chin. From £19.99, Superdrug, Boots, Tesco and other stores.

On the off-chance you haven’t yet discovered it for yourself, allow me to share with you a personal favourite: Charlotte Tilbury’s Hollywood Flawless Filter came out a couple of years ago and remains unique. It illuminates, it highlights, it blurs, and even has some coverage. For mega-watt glow use it all over straight up or mixed with foundation. I like to dab mine on cheekbones, nose and chin and any excess on the wand applicator goes over my eyelids as a softly shimmering primer. The choice of shades is inclusive, and one bottle lasts long enough to make the £34 price tag feel like a bargain. charlottetilbury.com

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The buzz around powder cleansers is growing, and not only for the pure effusiveness with which they can be used whilst travelling. Cleanser in powder form contains no liquid but there’s more to that than mere portability – active ingredients remain potent until mixed with water, and they are handily customisable. A more granular, exfoliating effect can be achieved by adding just a wee drop of water or a generous splash will transform powder to milky liquid cleanser. Moxi Love’s Powder Pod Cleansers are a great introduction into the arts of the powder cleanse. £7.50 for a pack of 14 boots.com

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La Roche-Posay Retinol B3 £38
boots.co.uk
With 0.3 retinol, this serum should only ever be used at night as the skin’s sensitivity to light will be affected, and in the morning make sure you use an SPF face cream before stepping out of the house. Warnings affected, retinol products are coming at us thick and fast and with good reason: it is a clinically-proven skin rejuvenator but requires perseverance. In short, its powerful effect on the skin means you need to work up to regular usage in order to avoid the dreaded retinol flake-effect. Start off with three drops, massaged into clean skin 2-3 times a week before increasing to daily use. Once you’ve achieved this nirvana state, enjoy the firmer, fuller face you will wake up to each morning.

THREE OF THE BEST:
Overnight Facials

The guiding principle behind an overnight face cream is like Perrault’s fairy tale but in reverse. Instead of a beauty sleeping for one hundred years, a normal person sleeps for one night and wakes up a beauty.

Algenist Power Recharging-Night Pressed Serum £68 cultbeauty.co.uk
I’m a big fan of Algenist’s exemplary range of algae-based products and this serum is no exception. From its consistency you might be tempted to classify this as cream, but the thickness is deceiving as it quickly absorbs into skin with no tackiness, readying it for a further layer of moisturiser or night oil if desired. The active ingredients include moisturising coconut water and nutrient-rich algae which combine together to create a light layer of support for overnight skin renewal. Even if you’re ready to drop, taking a few seconds to massage this over your face before lights out will be richly rewarded come the call of the alarm.

Jane Scrivner Circadian Vit C Encapsulated Optimised Overnight Repair £67 janescrivner.com
The first run of this paste achieved unprecedented sales and sold out super quickly. Now restocked online and well worth using if brighter, fresher skin is your goal. A single pump dispenses enough to cover the face and neck, and the slow-release Vitamin C (encapsulated into the ointment) will work in conjunction with your natural circadian skin-repair cycle. Be aware that the ointment will need to be worked into the skin until the ‘stickiness’ subsides but once it does, your white pillows are safe. 100% plant-derived, this also contains a dose of vitamins B and E and softening natural oils.

GIVEAWAY

We love everything about this Les Georgettes cuff from Paris jewellers, Altesse. The blush coloured leather strip enhanced by the rose-gold coloured metal-wear works wonderfully well with this season’s neutral aesthetic. Measuring in at a statement-making 40mm width, the sleek, linear Pure design is one of a selection of customisable pieces – switch up the leather insert and the whole look can be reworked for any occasion.

Worth £99, we have one to give away! Enter at oxmag.co.uk/competitions
lesgeorgettes.com
What Does it Take to Create a Truly Stunning Rose?

Whatever your style of garden – contemporary or traditional – roses can be the ideal plant. With a diverse range of colours, forms, heights and sizes, many roses are wonderfully fragrant and will repeat flower all summer long. But what does it take to create a new variety which will stand up to the weather and growing conditions available in this country? We spoke to Michael Marriott, senior rosarian from David Austin Roses in Albrighton to find out.

Breeding a new rose variety is a lengthy process,” Michael explains. “The company operates one of the largest rose breeding programmes in the world and we conduct 75,000 to 100,000 individual crosses annually. We take two roses of different varieties selecting these based on their own individual characteristics. We cross these ‘parent’ plants in the same way mother nature would do, collecting pollen from the ‘pollen’ parent placing it onto the stigma of the ‘seed’ parent, using an ordinary artist’s brush. Each time this is done, it is recorded as one ‘cross’ with a tag put on each ‘seed’ parent. Done by hand, the work needs to be very precise to ensure accidental crosses do not result. The process continues when after several months the ‘seed’ parent forms hips (the bright orange berries often seen on roses towards the end of the year). The hips contain the rose seeds formed by the cross pollination. The ripe hips are carefully opened, the seeds extracted and placed into jars with notes tracking their parentage. The annual crosses yield around 450,000 rose seeds. Our strict record keeping helps our company to give direction and focus to our breeding programme.

“The carefully monitored rose seeds are sown in flats with some 150,000 to 200,000 seedlings emerging after 2 or 3 weeks. The best of these baby rose plants are then shortlisted and grown out into the field for further observation. Roses are selected for their characteristics such as disease resistance, fragrance, petal count, colour and most importantly overall beauty. In the first year, from the 150,000 to 200,000 seedlings, 15,000 are selected to continue in our test programme. During the next seven or eight years, the roses are evaluated as they grow and mature with outstanding plants being noted. We then select candidates for release to the public and these undergo further testing in a ‘production setting’ to see how easily they propagate to make a nice multi-stemmed plant to sell to the public. We aim to produce Grade 1 roses in order that they become commercially viable.

“The rose production phase takes a further two years or so to build up enough stock to release to the public to meet demand. After a period of eight to nine years, from the original high numbers of crosses and seedlings, usually only two to four varieties make it through to be sold by David Austin Roses. Our two new roses for 2020 are literary-inspired repeat flowering English Roses. Silas Marner, named after George Eliot’s classic novel Silas Marner: The Weaver of Raveloe (1861) and The Country Parson, which pays tribute to James Woodforde’s The Diary of a Country Parson (1759-1802).

“Silas Marner is a soft mid-pink with relaxed, almost ruffled petals set around an attractive button eye with a medium-strong Old Rose fragrance with accents of fruity lemon, green banana and apricot. Forming a healthy, medium-sized shrub with arching growth, it is shade tolerant, still growing and flowering well as long as it gets four or five hours of sun a day. The Country Parson, a robust rose of Scottish Rose descent, bears fully open, medium-large, pure yellow, almost flat rosettes with a medium-strong fragrance. This tough little rose has greyish-green leaves and modest spiny thorns, with its petals creating a ‘halo’ effect. It has a variety of uses and planted en-masse, it makes a good hedge. It grows into a rounded small- to medium-sized shrub with a profusion of blooms from June to the first frost.”
Tips on How to Make Your Garden Hedgehog Friendly

Many people are first introduced to hedgehogs in their childhood when they discover the delights of Beatrix Potter’s ‘The Tale of Mrs. Tiggy-Winkle’. Sadly, the population of these creatures has declined significantly over the years since this world-renowned children’s book was written, with numbers of hedgehogs living in rural areas falling by 50% in the year 2000 and the urban population dropping by 30%. Gardeners and wildlife enthusiasts can, however, play a significant part in helping hedgehogs to survive. There are things we can all do to ensure their safety in our own gardens and encourage hedgehogs to feel safe in our local environment.

Hugh Warwick – Author, ecologist, spokesperson for the BHPS and Visiting Fellow at Oxford Brookes University – has been campaigning for several years to encourage new property developers to leave a gap some 13cm square in the fencing they put around new properties. This ‘hedgehog highway’ helps hedgehogs to travel through the night across land in pursuit of food and nesting materials. We too can do the same thing to boundary fences in our own gardens. “If people in a road all create hedgehog holes in their fences,” says Hugh, “you can all help to enable hedgehogs to travel from one garden to another. Each night, the females can roam up to a kilometer with the males travelling further afield up to two kilometers, especially in the breeding season. Take a look at hedgehogstreet.org for more information on how to create and extend a hedgehog highway in your community.”

Hugh is also keen for us to keep a corner of our gardens wild to offer shelter, protection and natural food for hedgehogs and other wildlife. “With the autumnal leaf fall fast approaching, gardeners can be too keen to tidy up their gardens and put them to bed for the winter. Piles of leaves however, can provide ideal shelter for hedgehogs to hibernate in from November to March, but hibernating hedgehogs should be left undisturbed. If you are planning to have a bonfire, especially for Guy Fawkes night, please don’t build the bonfire too early as piles of wood and other garden waste can attract hedgehogs and other wildlife. To keep them safe, collected materials should be re-sited just before the fire is lit. If that is not possible, the base should be lifted with poles or broom handles (never a garden fork) and a torch shone in to look for any wildlife or pets in need of rescue before lighting.”

Gardeners must also remember that using slug pellets in the garden can be deadly to hedgehogs and other wildlife. Let the hedgehogs eat the slugs and snails and create a natural eco-system instead. Garden netting is another hazard for hedgehogs. If you want to keep your vegetable and fruit protected, ensure that the netting is high enough off the ground to ensure that hedgehogs cannot become trapped in it and are able to walk freely underneath. Before using garden machinery such as strimmers, hedge cutters or leaf vacuums, be sure to double check hedgehogs are not living in the area where you are clearing or working.

If you have a garden pond, it should be accessible for hedgehogs and other wildlife. While hedgehogs can swim, they struggle to get over steep walls so build a small ramp or sloping mound to give them safe access in and out of it and keep water levels topped up. If you want to make your garden really hedgehog friendly, build or buy a hedgehog house. This will offer a safe place away from predators for the hedgehogs to hibernate in over winter and will act as a nesting box for a mother and her hoglets in warmer months. Visit the British Hedgehog Preservation Society for further information or buy one online from them at britishhedgehogs.org.uk. You can also create a more makeshift option using a pile of...
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logs placed in an unordered fashion, filling the gaps with fallen leaves. Hugh explains just how helpful this can be to hedgehogs: “Log piles provide shelter and the insects and bugs they attract also act as a food source for hedgehogs. Don’t forget to leave clean water in small dishes, even in winter, close to your hedgehog house. You can also make a hedgehog feeding station by cutting a hedgehog-size hole in the side of a large plastic container turned upside down. Put the food underneath late afternoon and secure the top of the container with a weight or tent pegs. Whilst you can buy dedicated hedgehog food, they can also eat meaty dog food or cat biscuits – never give them bread and milk as hedgehogs are lactose intolerant! Please also ensure that you don’t drop litter as this can cause hedgehogs untold problems. McDonald’s even had to change the shape of the cup they serve McFlurry ice-creams in as hedgehogs could get their heads stuck in the original shape containers.”

As hedgehogs are nocturnal, car drivers should take care at night as these creatures will often walk across roads, even busy ones.
So, let’s talk about the six main types of topsoil that you may have to deal with and how you can identify what soil is in your garden or allotment.

Although sandy soil warms up fast in spring and is easy to work, it does not hold moisture or retain nutrients as they can be washed away during periods of heavy rain. Unattended, it can become very dry and light. When a small amount of moist soil is rubbed between your fingers to form a ball, the grains are gritty and will not stick together.

Chalk soil is moderately fertile mainly due to the numerous stones it contains. Like sandy soil, it is free draining and will often overlay limestone or chalk bedrock. Its alkaline nature, however, can lead to stunted growth and yellowish leaves in many plants if suitable fertilisers are not added.

Silty soil – which feels soft and soapy – is reasonably moisture-retentive and fertile as it is rich in nutrients, but it does compact easily when walked on. When rubbed between your fingers, the silty loam may show finger imprints when pressed.

Clay soil feels sticky and lumpy when wet; it compacts easily and goes rock hard when it dries out. Due to lack of air space between soil granules, it has poor drainage and is slow to warm up in spring, making it heavy and hard work to cultivate. It is however rich in nutrients. Depending on the amount of clay contained in your soil, a loamy clay soil holds together well and can be rolled into a cylinder shape. Heavy clay can be rolled more thinly and will feel very sticky and heavy.

Loamy soil, made up of an even mix of sand, silt, and clay, has a fine texture, and feels slightly damp. With its good structure, loam soil has good drainage but also retains moisture and is full of nutrients. Whilst it warms up quickly in spring, it does not dry out too quickly as the temperatures rise and it is therefore easily cultivated.

Sandy soil is dark and feels spongy and damp due to the high peat content. Although this acidic soil heats up quickly in spring, it can hold a lot of water often requiring drainage channels to be dug. If you need to reduce the soil’s acidity, the addition of lime and glacial rock dust will help raise the soil’s pH level.

Sometimes you can gauge your soil’s pH type by what is growing in it. Rhododendrons, Gorse, and summer flowering Callunas (heathers) will indicate your soil is acidic. Beech (Fagus) and Ash (Fraxinus) like alkaline soils. Where you find numerous nettles and dock leaves growing indicates a rich, fertile soil rich in phosphorous.

Whatever your garden or allotment’s soil type, there is something that they all have in common and that is the addition of well-rotted organic material will enhance them and make them more fertile. You can make your own garden compost from garden and household kitchen waste adding shredded or torn up newspaper and eggshells. Made properly, the finished product is a rich, dark, crumbly, and sweet-smelling addition to your garden soil.

You can also collect the leaf fall in the autumn. If you use your mower or leaf vacuum to collect the fallen leaves, put the torn leaves into large black plastic bin bags. Tie them and poke a few holes in the bottom. Store them over winter in an unused part of the garden – by early next summer you will have leaf mould which can be incorporated in the soil or used as a mulch.

Finally, the addition of well-rotted farmyard manure is a must. It can be the gardener’s salvation, particularly if you have heavy clay soil or poor free-draining sandy soil. Not only does it help improve the soil’s structure, but it helps retain moisture. Dig it in or use as a mulch in the autumn and let the earthworms incorporate it over winter. You can also add some sharp sand or grit to help break up heavy clay soils to improve its drainage.

Whilst the addition of spent mushroom compost can aid the soil’s structure, it is very alkaline in nature and can alter the soil’s pH value.

Every time we throw vegetable peelings, fruit peel or cores, coffee grounds or eggshells into our kitchen waste bin, we could be helping – not only our environment – but also our garden, by adding these materials to a compost bin or wormery instead.

If you have the space in your garden, by combining garden waste, vegetable kitchen waste, coffee grounds and shredded paper, you can produce home-made compost which becomes a valuable soil improver. You can add items to your compost heap/bin all year round however late summer to early winter can often be a good time for composting.

SO WHERE DO YOU START?

Finding the right site and container is key. You need to locate your compost bin in light shade or shade as extremes of heat and moisture affect the micro-organisms (bacteria and fungi); they like constant conditions to enable them to convert the waste to compost. Once you have found a suitable site, you need to decide on your compost bin. It is preferable to place the bin on an earth base which allows drainage and access to soil organisms. However, if you need to place it on a hard surface, simply add a couple of inches of garden soil to the bottom of the bin.

Whilst plastic compost bins make good quality compost more quickly as they retain some warmth and moisture, an open heap will work over a longer period of time. If you opt for a plastic compost bin, it needs to exclude rain.
Making home-made compost is a slow process, it can take anything from six months to two years to decompose completely. However, the result will be a dark brown, crumbly soil-like texture that smells of damp woodland. It is worth the work as your garden soil and plants will benefit from this rich organic compost.

WHAT TO PUT INTO YOUR COMPOST BIN
You need to use a layering technique to avoid it becoming compacted. Aim for up to half of the materials to be a mix of green waste: grass clippings, vegetable and fruit kitchen waste including crushed eggshells, coffee grounds and annual weeds. Avoid using weeds such as bindweed, mare’s tail and ground elder as small quantities of these plants can lay dormant in the compost and be easily incorporated back into your garden, creating untold problems. The remaining mix needs to be woody brown materials ranging from torn up newspaper, cardboard, straw, dead leaves, woody prunings and hedge trimmings which have been cut into smaller pieces. It is particularly important not to let your grass clippings dominate the heap otherwise you will end up with a slimy, foul smelling mess.

You can accelerate the rotting process by adding products high in nitrogen such as blood meal or nitro-plus. Add one bucket of these to your heap every 10 days.

ENSURE YOUR COMPOSTING OCCURS AS QUICKLY AS POSSIBLE BY TURNING YOUR HEAP.
This adds air which helps the composting process occur. If the heap is too wet or is compacted, the composting process slows down. If possible, place a load of composting materials on the heap or in your bin. Turn it once a month to introduce air. Failure to do so can be one of the reasons why home-made compost may not be as good as soil conditioner which is produced commercially. During periods of prolonged dry weather, keep the heap moist. Regular turning will enable you to assess how the composting process occur. If the heap is too wet or is compacted, the composting process slows down. If possible, place a load of composting materials on the heap or in your bin. Turn it once a month to introduce air. Failure to do so can be one of the reasons why home-made compost may not be as good as soil conditioner which is produced commercially. During periods of prolonged dry weather, keep the heap moist. Regular turning will enable you to assess how the composting process occur. If the heap is too wet or is compacted, the composting process slows down. If possible, place a load of composting materials on the heap or in your bin. Turn it once a month to introduce air. Failure to do so can be one of the reasons why home-made compost may not be as good as soil conditioner which is produced commercially. During periods of prolonged dry weather, keep the heap moist. Regular turning will enable you to assess how the composting process occur. If the heap is too wet or is compacted, the composting process slows down. If possible, place a load of composting materials on the heap or in your bin. Turn it once a month to introduce air. Failure to do so can be one of the reasons why home-made compost may not be as good as soil conditioner which is produced commercially. During periods of prolonged dry weather, keep the heap moist. Regular turning will enable you to assess how the composting process occur. If the heap is too wet or is compacted, the composting process slows down. If possible, place a load of composting materials on the heap or in your bin. Turn it once a month to introduce air. Failure to do so can be one of the reasons why home-made compost may not be as good as soil conditioner which is produced commerci...
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STYLISH NEW HOMES in Beautiful Locations

Home hunters looking for green open space with strong commuter links should look no further than Bovis Homes’ impressive new collection in West Oxfordshire.

Bovis Homes is offering stunning two-, three-, four- and five-bedroom homes at East Hanney, Minster Lovell and Witney with some ready to move into. There is also a range of home-buying options and special offers to make that move easier, whether you’re looking for your first home, downsizing to a stylish new bungalow or just need more space. Prices range from £274,995 to £740,000.

Many of these spacious homes offer open-plan kitchens with family areas and plenty of room to work from home. The homes are light and airy with stunning French or bi-fold doors leading to the rear garden, and master bedrooms with en suite add that little bit of luxury. These characterful homes are traditional in design to suit the local environment.

The Silk Mill in the picturesque village of East Hanney is an exclusive small development with homes that are bespoke in their design. The village, located in the scenic Vale of the White Horse, offers a local store, farm shop, pub, restaurant, primary school, sports and social clubs and countryside walks. Just a few minutes’ drive away are the market towns of Abingdon and Wantage and a mainline train to London.

Dovecote Park is in the quaint village of Minster Lovell in the Cotswolds Area of Outstanding Natural Beauty. The pretty River Windrush is a perfect backdrop for this historic Cotswold village with its 12th-century church, cottages and pubs. There’s also a village shop, a butcher’s, post office and primary school with further amenities just a few minutes’ drive away in Witney and Burford.

Bovis Homes’ development at Windrush Place is less than two miles from Witney, with its historic, Cotswold stone buildings. The town centre offers great shopping and there are local schools, health and leisure facilities, as well as easy access to nearby Oxford and the M40. Walking and cycle paths from the development take you directly into Witney, and buses run regularly to the town and into Oxford. Windrush Place also offers playing fields, sports pitches and allotments for everyone to enjoy.

With the Bovis Homes’ Home Exchange scheme, existing homeowners can exchange their current property for a brand new Bovis Home. The company will buy your property at market value, therefore

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The Grenadier living room

The Grenadier open plan kitchen

The Silk Mill in the picturesque village of East Hanney is an exclusive small development with homes that are bespoke in their design.
there are no last minute ‘drop-outs’, you avoid estate agents’ fees, and there are no price renegotiations late in the day. First-time buyers just starting out in life can purchase a new Bovis Home with the Help to Buy: Equity Loan scheme. Using the scheme homebuyers need just a five percent cash deposit, with the Government providing an equity loan of up to 20 percent of the value of the property being bought. Purchasers then need to secure up to a 75 percent mortgage.

Bovis Homes has a range of other purchase assistance schemes to help homebuyers move including key worker and armed forces special discount schemes. The housebuilder already runs an attractive purchasing package for key workers, which has now been extended to include all those who have signed up for the recent NHS volunteer scheme – as well as those newly classified by the Government as key workers in the battle against the coronavirus. The extended scheme is in place for the rest of 2020.

A range of incentives for homebuyers are also currently being offered by Bovis Homes on selected homes, including help towards mortgage payments for the first six months on selected two- and three-bedroom homes and a deposit contribution on selected four- and five-bedroom homes. And with the Government’s announcement that homebuyers currently don’t have to pay stamp duty on any Bovis Home up to the value of £500,000, there’s no better time to make that move!

Bovis Homes’ sales centres are open for private viewings with extra measures in place to keep everyone safe. To book a private viewing call 01993 624000 or visit bovishomes.co.uk.

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With the summer months coming to an end and the new season just around the corner, September is the perfect time for new beginnings. Whether you’re a student getting ready to move to University or you simply feel like giving your home accessories a shake up, we say out with the old and in with the new!

One of the rooms we spend most of our time in, whether at home or at University, is the bedroom, and there really is nothing as comforting as getting into a freshly made bed. What makes this duvet set from H&M even more special than normal though is the rainbow pattern. Over the past few months the rainbow has been a prominent symbol in society signifying hope and positivity, so what better way to bring some colour back into your life than by waking up and going to sleep each day with rainbow bedding!

If you’re all about the positive vibes then you NEED this ‘smile’ cushion from Robert Dyas. Not only will it make an instant impact in your room but it will also act as a gentle reminder that even on your bad days, everything will be ok if you just smile. Smiling really is infectious, and a sure way to make your guests grin is by giving this wooden prosecco crate from TK Maxx centre stage in your home. Forget plain boring storage boxes, this season it’s all about what not only looks good but makes you feel good too!

The same goes with your notebook or diary. If you’re a student, your notebook will be your Holy Grail for well, pretty much everything! And the same goes with a person and their diary. If you like to write things down and be organised, you’ll most likely take this with you everywhere you go. Just in case something new pops up. So, for a little book that plays such a big part in your day-to-day life, make sure you get your hands on this eye-catching one from The Works, guaranteed to brighten up your day.

If you feel like you need a little extra pick-me-up from the early-morning blues, we have you covered! The MenKind Folding Book Shaped Light is perfect for this very occasion. For those who are more driven by their workspace, the TK Maxx Brown Wooden Prosecco Crate will definitely add a touch of luxury to your home. This is perfect for those who enjoy a bit of indulgence when it comes to their drink.

For more home styling inspiration, follow Clarendon Oxford on Instagram: @clarendoncentrefoxford and Pinterest: @clarendonshops.

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Since the lifting of the property market lockdown in May, the upturn in market activity has been quite remarkable. Since launching my property finding business in 2011, I have never received as many enquiries from people wanting to find their next property in what is traditionally the quietest period for the property market. The stamp duty holiday has certainly created a bubble with activity has been quite remarkable. Since launching my property finding business in 2011, I have never received as many enquiries from people wanting to find their next property in what is traditionally the quietest period for the property market. The stamp duty holiday has certainly created a bubble with

The first property which I viewed on behalf of clients received five offers above the asking price on the very first day of viewings, and this has been repeated elsewhere. All agents that I have dealt with since then have been overwhelmed with new property enquiries.

Further, the reasons for people wanting to move seem to have changed dramatically. My clients’ new priorities are as follows:

1. I must have an office to allow me to work from home.
2. Outside space for me and my family is essential.
3. We must have access to local shops and the countryside.
4. I now only want to travel to my office in London one day per week.
5. I want to downsize and retire. And perhaps more surprisingly:
6. I want to move to the UK.

In the last month, I have received several new enquiries from South Africa, Australia, Florida, Canada, New York, Chicago, and Saudi Arabia. There is no doubt that people do want to move as soon as possible. There is also no doubt that Oxfordshire and the Cotswolds are more popular than ever before because of access to beautiful countryside, established towns, excellent education, and the many transport options to London.

But is now the right time to move? Is now the right time to buy a house? There are contradictory messages throughout the media.

On the positive side, in August Rightmove reported that July was its busiest month for sales in more than 10 years, with sales up 38% on the previous year. The increase on their portal in sales of the most expensive of homes was up by 59%. Analysts believe that this activity is being driven by buyers who have brought forward their plans to move by months or even years whilst mortgage rates are at record lows and there are also savings to be made on stamp duty.

On the other side of the coin. The economy is now clearly in recession, with possibly worse to come with the likely recession, total cost of moving, legal fees, estate agent fees and taxation, a profit on a property bought possibly not the time to buy, especially if you’re considering buying a second home or holiday property. The average price for a detached house in Oxfordshire is currently £620,000. Currently, for a normal buyer stamp duty payable on such a property would be £6,000 pounds. This will rise to £21,000 in April 2021. If buying the same property as a second home, the current stamp duty rate is £24,600 and this will rise to £39,600.

For questions 1, 2, and 3, if they are unsure, I will often suggest that they ‘try before they buy’ and find a property to rent in their chosen location – to really understand whether this is the place they would like to live. Several of my clients are now choosing this option, which can also put them in an excellent position to buy when the right property comes along.

If the answer to question 4 is under five years, now is possibly not the time to buy, especially if you’re considering buying a second home or holiday property. The average price for a detached house in Oxfordshire is currently £620,000. Currently, for a normal buyer stamp duty payable on such a property would be £6,000 pounds. This will rise to £21,000 in April 2021. If buying the same property as a second home, the current stamp duty rate is £24,600 and this will rise to £39,600.

If you wish to sell within five years, and anticipate a substantial increase in value, this is not going to be very likely unless you purchase a property which requires substantial improvement. It is doubtful the property market will increase dramatically over this period and taking into account the likely recession, total cost of moving, legal fees, estate agent fees and taxation, a profit on a property bought today is highly unlikely within the next five years.

That said, if you are thinking of moving home now, the short-term return on your investment isn’t always the main criteria. Your next purchase could provide the change of lifestyle to which you now aspire. It could be the perfect home for your retirement, for your family, for the rest of your life. And if you find such a property, with the right advice from your property advisors and solicitor, there is currently no need to delay your purchase at all.
Colour trends come and go, but others are undeniably classics and defy the test of time. Blue, in all its hues, brings calm, cool freshness to our homes, creating an effortlessly stylish look. Ranging from dramatic, deep, dark navy to soft and gentle pastels, blue is a versatile colour that can be used in a wide range of homes, from the ultra-modern to the country classic, in any room of the house. In its many shades, it can be layered up and mixed like no other colour.

Blue is Definitely Having a Moment

CREATING BALANCE
If your colour palette is really drawn to blue, but you find it a little cold to live with, try balancing it with some warmer elements in a room; a complementary colour such as orange, yellow, coral, pink or red for a striking look. A predominantly blue room will often benefit from an accent. There is no need to be heavy handed with this – less is more – and the accent may only appear in one, or a small number of objects. The key to success when adding a complementary colour is to choose a shade of equal tonal weight i.e. pastel with pastel and strong with strong.

As well as colours that are opposite on the colour wheel, blue also marries well with secondary colour combinations (colours that are next to it on the colour wheel/rainbow), such as uplifting green or pretty purple.

If this is too bold, try adding in gentle natural textures and warming woods. Put beautiful natural oak next to blue and it suddenly comes to life, preventing your scheme from looking flat. Also try adding in plants, wicker and baskets, furs and tan leather. A fashionable combination that also serves the same function is to pair blue with gold for a seductive, dramatic and glamorous space. Mixing up the tones of blue in a room, and layering pattern will add interest, depth and character, allowing for a more subtle variation and a less forced feel.
ARGuably the most classic and timeless partnership when it comes to blue schemes is blue and white. The clean contrast can be used in different ways, from a dynamic statement to a pretty and airy feel.

Put white against darker shades of blue and it accentuates details giving crispness and definition. A white fireplace, shelving or fitted cupboards painted white against a blue backdrop is a beautiful way to give depth and contrast. Conversely, blue pieces against a white background create a crisp feel, and can look contemporary or classic, depending on the style of the room.

ABOUT AMANDA HANLEY

A friendly, Burford-based interior designer offering a long-established and highly regarded service. Amanda works across London to the Cotswolds and has built relationships with an enviable network of suppliers and craftsmen, giving her clients access to the very best services and home décor. Amanda Hanley by Design at The Gallery, Burford, is a unique space packed with an unrivalled collection of hand-picked fabrics, wallpapers, lighting, mirrors, flooring, furniture and objet d’art to suit all budgets.

Amanda Hanley sources her exclusive furniture stock on frequent buying trips to Belgium and France, as well as from prestigious brands like Mulberry Home, GP & J Baker, Colefax & Fowler, Romo, Designers Guild, Andrew Martin and Lewis & Wood.

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Amanda’s showroom: The Gallery, 69 High Street, Burford OX18 4QA

A TIMELESS COMBINATION

SETTING THE MOOD

Calming, romantic, uplifting or dramatic?

CALMING/PEACEFUL

For a soft and gentle scheme, choose soft and silvery blues for a restful space to soothe the soul. The palette of blues are perfect to create calm, as they are often associated with the natural world, faded skies and seas. Pale blue is a great choice for bedrooms because it recedes to the eye, rather than grabs our attention, making it restful to look at. Always consider the natural light of the room, as very pale shades of blue can look dull and flat when light is low, such as in a north facing room.

POSITIVE/UPLIFTING

Unashamedly, confident, bright and fresh sky blues can give a room energy and feel uplifting. However, under lamp light or low light, they have the opposite effect of feeling deeply peaceful – also a positive attribute – making sky blue a versatile colour that is suitable in most rooms, from bathroom to living room.

When used in botanical/floral prints and toiles, any shade of blue can take on a romantic but sophisticated quality.

DRAMATIC AND ARTISTIC

Dramatic can be achieved with electric shades as well as deep and dark. Think ‘impact’ and look for deeply saturated tones. Closeting yourself in a rich colour feels sumptuous and historically is associated with luxury. Try using it on woodwork as well as walls and soft furnishings for a really contemporary finish, or with crisp white for a high contrast statement. Cobalt can be a good choice for adding drama without getting too dark. Turquoise and bright aqua work well alongside deep and dark.

PRETTY/ROMANTIC

Powder blue has a delicate beauty, and is a more subtle way to create a pretty atmosphere other than the more obvious pastel shades. However, when used in botanical/floral prints and toiles, any shade of blue can take on a romantic but sophisticated quality.

To successfully build up a pretty scheme, these patterns should be used alongside natural textures. Combining and mixing the textures adds layering and a smart formality.

picture courtesy of Anna French
Linwood
William Howard
With a focus on land management efficiency and enabling less human disturbance in wildlife areas, we spoke to regular OX contributor James Gillies about how drone technology is helping him with conservation projects across the region.

**“Drones had been getting a bad time in the media – largely due to misuse around airports – however their usage in an assessment capacity cannot be understated. Drone surveying means the process is far less time consuming and previously inaccessible areas can be surveyed very quickly. Using drones has enabled us to complete surveying of large woodlands and lakes which once would have been undertaken in teams, sometimes taking weeks. It can now be completed in a matter of days. Allowing us to assess the situation in inaccessible areas of rivers, wildlife preservation areas etc. means that we are able to keep a close eye on projects without needing to disturb the wildlife itself.**

We have previously spoken a lot about Ash dieback and the effect it can have when spreading through woodlands; we are now able to survey suspected outbreaks and susceptible areas aurally which means the identification process is much swifter and the landowner is able to take action much sooner than may otherwise have been the case.

At the beginning of the year, high winds and storms presented a lot of landowners and farmers with issues, damage being widespread to trees, roofs and outbuildings. We were able to do surveys quickly and efficiently with our drones ensuring landowners weren’t left for long with storm damage and dangerous unresolved situations. There were many trees blown into roads, buildings and rivers and the effect in woodlands was equally damaging. Using our drones to survey land ensured that the issues were dealt with safely and swiftly.

We also use drones regularly to assess the situation with roofs, especially in inaccessible areas and large industrial buildings. Without the use of drones, your options would be to hire a cherry picker or to put a person on the damaged surface. The much less dangerous solution, however, is to perform a roof survey with a drone, ensuring safety to people and property, not only saving money and time but providing an up-close view of the damage with high-resolution video footage and photographs."

James achieved his PfCO (Permission for Commercial Operations) from the Civil Aviation Authority in October 2019 having passed all the relevant checks and tests.

“There is much talk about drone licenses and licensed drones. Neither actually exist. Drones (alternatively called UAV’s or Unmanned Ariel Vehicles) are not themselves registered. The operator and the pilot of the drone must be registered with the CAA and have been trained with PfCO for flying commercially. Drone pilots have protocols and rules to obey such as not flying in restricted airspace and ensuring you have landowner permission prior to flying. Anyone undertaking commercial drone work must be fully registered and insured."
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Long Term Care
FUNDING OPTIONS AND THE FAMILY HOME

Many clients who need to pay for care cannot afford to do so because they are “ASSET RICH AND CASH POOR”

Such people are often living alone in an expensive property whilst living on an ever-decreasing income. This is an overview of how capital tied up in the home can be utilised.

Paying for Care at Home
Problem: Many clients wish to receive care in their own homes but cannot pay for the care they need
Solution: Arrange an Equity Release plan to release funds and stay in your own home.

Financing a Proposed Move into Residential Care
Problem: Care Homes require evidence that you can afford to pay for at least two years’ care
Solution: A Bridging Loan will allow a homeowner to receive an advance of up to 65% of the property value which is repaid from the sale proceeds of the home within 12 months.

Once your residence has been approved, this capital can be used to arrange the ongoing funding arrangements.

Options that Guarantee Increasing Lifetime Care Funding
Problem: Funding life-long care costs
Solution: Use Cash, Use Investments or Arrange an Immediate Care Plan; or a combination of all three? Using cash or investment income alone is unlikely to provide a sustainable long-term plan.

Buying an Immediate Care Plan (ICP) provides a tax-free annuity that is paid direct to the care provider. These payments increase annually, and they are guaranteed for life. Capital protection can be arranged so your family are protected in the event of your early death. Any remaining capital can be retained for other purposes such as inheritances.

Further information: Helpline: 0800 0699 784  Email: ted.yeates@thenationalcareline.org

Here to Make Life Easier for the Over 60s

Are you affected by any of the following?

- Feeling lonely or isolated in your own home
- Surviving on less income as time goes on
- Getting bored and forgetful
- Experiencing a lack of mobility
- Noticing sight or hearing loss
- Unwilling to spend money on yourself

If you are experiencing any or all of the above, help is at hand! We can help you release capital from the value of your home so you can live the remainder of your life in a happier and more fulfilling way.

For more information please contact our Helpline:
0800 0699 784
or contact me direct
07539 645514
or Email: ted.yeates@thenationalcareline.org
The Lodge at Freeland House

The Lodge at Freeland is a 45-bedded dementia residential home, located beside the existing Freeland Nursing Home.

The purpose-built extension complements our existing service and will allow the highest quality of dementia care environment. The unique design gives residents access to both outside and inside spaces.

So much to look forward to...

The building sits beautifully within the stunning surroundings with each bedroom getting to enjoy country views.

Do you have a spine, joint, soft tissue or injury problem?

Contact us to see if we can help

Self pay prices:
- Joint or soft tissue - Consultation + ultrasound: £170
- Consultation + ultrasound guided injection of steroid (one area): £220
- Consultation with spine intervention consultant: £210
- Facet joint injection: £205 (requires recent relevant MRI scan)
- Nerve root block: £250 (requires recent relevant MRI scan)
- Conventional radiograph (X-ray) per area of the body: £95
- Extremity cone beam CT: £250

Due to the Coronavirus pandemic, all patients are required to have an initial telephone consultation with the radiologist prior to an appointment being booked - £25

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Our doctors have admitting rights for MRI and other procedures at the Manor Hospital (Oxford), Cobalt Health (Cheltenham) or European Scanning (Harley Street London). Prices depend on the examination and location of the facility. The majority of procedures are at the lower end of this range. For other procedures and prices please see our website

www.stlukesradiology.org.uk

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