

**World Science
Festival Brisbane**

9-13 March 2022

Curiosity Brisbane

9-20 March 2022

2022 Program

Large print

ACKNOWLEDGEMENT OF COUNTRY

In keeping with the spirit of reconciliation and on behalf of Queensland Museum Network, we acknowledge the First Peoples – the Traditional Owners of the lands where we live and work.

We recognise their continuing connection to land, water and community. We pay respect to Elders – past and present – and acknowledge the important role Aboriginal Peoples and Torres Strait Islanders continue to play within World Science Festival Brisbane and the Queensland community.

WORLD SCIENCE FESTIVAL BRISBANE 2022

Presented by Queensland Museum Network, World Science Festival Brisbane 2022 returns to South Bank, Brisbane and regional Queensland for a mind-blowing exploration of the truly phenomenal world we live in – from scientific challenges to technological solutions that inspire hope and wonder for our future existence.

This year, we are proud to feature Curiosity Brisbane as a key pillar of World Science Festival Brisbane programming. Over 12 days, visitors can let their imaginations roam free with installations from high-profile artists that celebrate the connection between science, art and technology.

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WORLD SCIENCE FESTIVAL QUEENSLAND

OUR PARTNERS

COVID-19 SAFETY

PLAN YOUR FESTIVAL EXPERIENCE

BOOK TICKETS

Book online at worldsciencefestival.com.au



WELCOME

Get ready for five exciting days that will see Brisbane’s cultural heart transform into a hub of delight and awe, where some of the world’s leading scientific and creative minds will explore the brave new ideas helping to shape the world of tomorrow.

Presented by Queensland Museum Network, the 2022 World Science Festival Brisbane and broader World Science Festival Queensland will deliver an inspiring program featuring some of the world’s greatest scientific and artistic innovators.

From 9–13 March, Brisbane will ignite with conversations that run the gamut from achieving a net zero future, embracing traditional science and understanding new medicine, to the expansion of the universe and the possibility of unlocking the mythical fountain of youth. Alongside these insightful discussions, Festival favourites will return to delight visitors of all ages including The Turtle Hatchery, City of Science, and the Festival’s centre of scientific excitement, The Nucleus.

For the first time this year, Curiosity Brisbane will be a key pillar of the World Science Festival Brisbane program, with public art installations bringing a creative synergy to the conversations, events and workshops spread throughout Brisbane’s cultural precinct.

Once again, the Festival will hit the road and expand beyond Brisbane, with World Science Festival Queensland bringing the wonder of science to regions in Chinchilla, Gladstone, Toowoomba, Townsville and Ipswich.

Queensland Museum Network is proud to inspire our next generation of scientists, innovators and creative thinkers. This would not be possible without the continued support of the Queensland Government and our generous partners.

Importantly, the Festival would not thrive without the drive and determination of the World Science Festival Brisbane team, our dedicated

staff across Queensland Museum Network and our friends and colleagues at World Science Festival in New York. It is an honour and a privilege to work collectively to deliver this important program, and I thank you for your support.

Now, I invite you all to enjoy the diverse offering of remarkable conversations, inspiring shows, exciting workshops and interactive creative experiences that make up World Science Festival Brisbane 2022.

Dr Jim Thompson PSM
Chief Executive Officer
Queensland Museum Network



Welcome to Queensland's most vibrant and dynamic celebration of discovery, innovation and creativity, World Science Festival Brisbane.

We encourage visitors to indulge in the diverse and rich offerings of entertaining and informative shows and engaging conversations with scientific visionaries, along with a range of immersive creative experiences presented through the inclusion of Curiosity Brisbane.

The Queensland Government has committed a further \$9 million for the World Science Festivals from 2022–2024, and it is encouraging to see this popular festival continue to grow and present creative solutions for our planet's present and future challenges.

Since its introduction in 2016, World Science Festival Brisbane has brought the thrill of science to more than 800,000 visitors across Brisbane, Toowoomba, Chinchilla, Townsville and Mackay, and generated more than \$36 million in economic return to the state.

From 9 March 2022, World Science Festival Brisbane and Curiosity Brisbane will once again boost the state's economic recovery, as it showcases the connection of arts and science.

This year's bold, contemporary program of more than 130 events will have almost 50 free shows including the much-loved turtle conservation experience, The Hatchery.

The 2022 program will explore the science behind solving some of our greatest medical and environmental issues, look back to the discoveries of Australia's first scientists and explore the vast expanse of space and beyond.

World Science Festival Brisbane 2022 delivers on the priorities of Creative Together 2020–2030, the Queensland Government's 10-year roadmap for arts, culture and creativity in Queensland by activating local places and digital spaces, driving social change and strengthening Queensland communities.

The Queensland Government supports Queensland Museum Network to present World Science Festival Brisbane and World Science Festival Queensland regional program through Arts Queensland and Tourism and Events Queensland, alongside the many valued Festival partners.

We invite you to fuel your mind and enjoy the informative, inspiring, playful and creative experiences at this year's World Science Festival Brisbane 2022.

The Honourable Anastacia Palaszczuk MP

Premier and Minister for the Olympics

The Honourable Leeanne Enoch MP

Minister for Communities and Housing,

Minister for Digital Economy and Minister for the Arts

The Honourable Stirling Hinchliffe MP

Minister for Tourism, Innovation and Sport

and Minister Assisting the Premier on Olympics and Paralympics
Sport and Engagement



Welcome to World Science Festival Brisbane 2022.

As an Asia Pacific hub for science and innovation, our city is proud to support the World Science Festival Brisbane for a seventh year.

Brisbane is one of the world's greatest cities. Our globally acclaimed research institutions and achievements in science and technology make Brisbane the perfect destination to host the brightest minds across Australia and internationally.

Brisbane will transform into the City of Science with interactive art and science installations, engaging conversations with leading scientists and experts, and a curated program of free and ticketed events.

A popular fixture on Brisbane's annual events calendar, residents and visitors are invited to explore the possibilities and mysteries of our existence in fun and inspiring ways.

Our city's relaxed and welcoming vibe and clear blue skies makes for an inviting backdrop to explore this diverse program of events hosted across Brisbane's cultural precinct.

Complete your Festival experience by discovering all there is to see and do in Brisbane, from the thriving dining, retail and lifestyle precincts to the wonderful tourism experiences showcasing the city's natural beauty.

Adrian Schrinner

Lord Mayor of Brisbane

WORLD SCIENCE FESTIVAL

World Science Festival was founded in New York in 2008 by celebrated physicist and science author Professor Brian Greene and award-winning broadcast journalist, Tracy Day. In 2016 Queensland Museum established World Science Festival Brisbane, the only international extension of the New York event. In its seventh iteration, World Science Festival Brisbane 2022 continues the traditions of this internationally renowned Festival while curating an innovative program particular to the social, cultural and scientific environs of Brisbane.

ABOUT THE FESTIVAL

World Science Festival Brisbane encompasses experiences designed for everyone – from students to families and grown-ups, creators and designers, experimenters and the naturally curious, to STEM industry professionals.

These pages provide just a glimpse of what's in store. With more than 100 events on offer, you'll need to head to the website to find out where you fit into our scientific world.

Conversations

In the past two years, medical science has been at the forefront of our daily lives, environmental scientists have shared some startling discoveries, and advances in

technology have provided new challenges and opportunities for us to consider.

Our program of conversations and talks give voice to science, as our topical experts share the latest evidence, discoveries, theories and practical applications.

The Satellite Bar

Perfectly positioned at Riverside Green, South Bank, the Satellite Bar is this year's designated hang out spot. Grab a drink from the licensed bar and enjoy a variety of free all-day, family-friendly programming. From music, workshops and live-animal shows to curious conversations, there is something for everyone in the family to enjoy. Make sure the Satellite Bar is in your orbit when you visit World Science Festival Brisbane.

The Nucleus @ South Bank Piazza

Located in the South Bank Piazza, The Nucleus is the Festival's vibrant hub of science-tainment, teeming with fast and family-friendly fun and super science-y stuff for everyone.

Bring the kids during the day or gather the grown-ups at night for what promises to be a memorable mix of science, art and culture in the pulsing heart of South Bank Parklands.

Collections Up Close

Queensland Museum Network is home to a magnificent collection of 1.2 million cultural objects, natural history specimens and geological treasures, and more than 14 million research items, with only a fragment of the collection on public display at any time.

Our team of scientists, curators, researchers and conservators will delve into the Museum's vaults to showcase some fascinating specimens and share insights into Queensland's natural and cultural history.

The Hatchery

Wednesday 9 – Sunday 13 March | 9.30am–3pm daily | Level 4, Queensland Museum | Bookings essential

Catch a rare glimpse of Australia's precious loggerhead turtles hatching in their incubation chambers and the first moments of their ocean lives as they meet a seawater environment in specially designed tanks. After the Festival, the newborn turtles will be transported to the Sunshine Coast and released 20 km offshore.

The Hatchery is an important conservation initiative that has released almost 500 loggerhead turtles since it started. It has been designed in collaboration with internationally renowned herpetologist Colin Limpus and Queensland Museum Senior Curator of Reptiles and Amphibians, Biodiversity Program and Chair of the Animal Ethics Committee, Patrick Couper.

The Hatchery will be livestreamed on worldsciencefestival.com.au from Wednesday to Sunday with support from AARNET.

Holographics Exhibition

Wednesday 9 – Sunday 13 March | 30-minute sessions 10am–3pm daily | Level 3, Queensland Museum | Adult \$20, Concession \$15, Child \$10 (3–15 years), Family of 4 (2 adults, 2 children) \$50

Star Trek meets Jurassic Park in this world first holographic experience created by our friends at Axiom Holographics. Travel back in time and walk among some of the most breathtaking prehistoric animals imaginable.

Innovative new technologies, created here in Brisbane, will deliver a fully immersive encounter featuring a two-kilometre virtual landscape and fenced pens corralling these prehistoric giants.

Come face to face with ancient creatures made of light and imagination.

Get Green! Sustainability Market

8am–4pm Sunday 13 March | Flowstate Green, South Bank Parklands | Free, non-ticketed

Welcome to our very first Get Green! Sustainability Market, a collection of local sustainable and eco-conscious small businesses and workshops located on South Bank's

Flowstate Green on Sunday 13 March. Go green and discover how to live your best sustainable life with lovingly made eco-friendly products..

Films

**Friday 11 – Sunday 13 March | Australian Cinémathèque,
Gallery of Modern Art**

In partnership with Queensland Art Gallery | Gallery of Modern Art (QAGOMA), the film program 'Humans, Animals and the Natural World' considers humanity's relationship with plants and animals in stories of ground-breaking scientific discoveries, connection, and hope. From woolly mammoths, to pigs and fantastic fungi this documentary series will charm and inspire.

Visit worldsciencefestival.com.au for more information.

Explore the Brisbane Botanic Gardens

Mount Coot-tha

Featuring approximately 5,000 species from around the world, the Brisbane Botanic Gardens Mt Coot-tha aims to grow a plant-loving community dedicated to shaping a sustainable future and helping to put the plant back into planet. Visitors can investigate soil invertebrate biodiversity by digging for creepy critters, explore the possibilities of vegetable genetics, take a spotlight tour of the nocturnal species living in the gardens, or wander

through the Physic Garden learning about medicinal plants.

Discover the wonders of plant science at the Brisbane Botanic Gardens Mt Coot-tha.

Visit worldsciencefestival.com.au for full program details and bookings.

Explore the Sir Thomas Brisbane Planetarium

Take a celestial journey to the universe and beyond in the awe- inspiring Cosmic Skydome at the Sir Thomas Brisbane Planetarium. This stellar program will feature the Australian premiere of Path 99

– an art-science project revealing the astounding beauty of clouds. Combining the entrancing immersion of fulldome planetarium projection with a hypnotic electronic soundtrack. A fitting tribute to the very systems that shelter our world and distribute the essentials for life across the planet. On Saturday 12 March, First Nation’s astronomer Karlie Noon will take over the planetarium for the whole day to deliver live back-to-back shows of Take Me to the Moon with Karlie Noon.

Visit worldsciencefestival.com.au for more information.

Night of the Nerds

7.30pm-8.45pm | Saturday 12 March | Playhouse QPAC | Adult \$60, Concession \$55

Hosted by comedian Mark Humphries, Night of the Nerds is the Festival's very own, very nerdy variety game show! Two all-star teams of scientists, tech heads and funny people will battle through a series of challenges in the ultimate nerd showdown.

The irrepressible Dr Karl, perched on the Throne of Knowledge, will keep everyone on their toes, while Clare Bowditch and the house superband keep things rocking along. Comedians Dan Ilic and Lawrence Leung join scientists Professor Hugh Possingham, Professor Tamara Davis, Professor Margaret Sheil and science communicator Angharad Yeo on stage to tackle the important questions: What is the 10th decimal place of Pi? Who was the best captain on the Starship Enterprise? And what is the meaning of life? Prepare to embrace your inner nerd and geek out!

The Super Smart Slightly Silly Seriously Sensational Science Spectacular

10am–11am and 2pm–3pm | Saturday 12 and Sunday 13 March | South Bank Piazza | Adult \$25, Concession \$20, Family of 4 (2 adults, 2 children) \$70

Jump into a weekend of family fun time entertainment with children's educator and entertainer Ranger Stacey

and a stellar cast of the smartest, funniest and cutest scientists ever assembled.

Griffith University's premier STEM program, Science on the GO! will perform wondrous scientific experiments and mind-blowing demonstrations. There will be loads of animal antics and other un-boring science stuff, all to the tune of kid's rock band Red Rocket 3. This stupendous science show is built for families looking for a fun day out with a side serving of all things science!

Schools program

In the classrooms of today you will find the Nobel Prize winners of the future. World Science Festival Brisbane's education program is for the inventors, explorers, creative thinkers and scientists of tomorrow.

Queensland Museum Network has a long tradition of working with Australia's leading academics and subject experts to educate and inspire generations of inquisitive young minds. Through World Science Festival Brisbane, we encourage teachers, students and parents to share in the transformational power of education, learning, creative thought and imagination.

Explore the full education program at worldsciencefestival.com.au/education-program-2022

The WSFB Education Program is in partnership with QPAC.

CITY OF SCIENCE

Brisbane will once again be transformed into a City of Science from the parklands and cultural precinct of South Bank and the heart of the CBD to the heights of Mt Coot-tha, the native bush of Oxley Creek, and a collective of local libraries called The Libratorium.

This free program for inquisitive minds of all ages includes celestial stargazing, lunchtime labs, treasure hunts, hands-on workshops, fascinating discussions, nature walks, sustainable markets, pop-up entertainment, curious installations, and an intriguing web of creepy crawlies and crazy critters.

Over five jam-packed days, World Science Festival Brisbane will paint the city red for Queensland's most vibrant and dynamic celebration of discovery, innovation and creativity.

All events are free. Some require bookings.

Lunchtime Labs

Don't eat lunch at your desk during World Science Festival Brisbane! Head to the Queen Street Mall at midday each day and get smarter while you take a break. Lunchtime Labs will feature Festival favourite, Dr Karl, bring you explosive science, teach you how to juggle and give you an excuse to dance. All in the name of science!

The Libratorium Presented with Brisbane City Council.

Over five days, five libraries will feature five popular strands of science, bringing together storytelling and science. Immerse yourself in the eight-legged world of spiders, scorpions and other arachnids, delve into the fascinating world of Australia's native snails and learn about the First Scientists and Indigenous Knowledge Systems.

Digi Dino Discovery Trail Presented with Project DIG

Ever wondered what a dinosaur would look like stomping through the Arbour at South Bank? Follow the trail of QR codes and walk in the footsteps of prehistoric creatures that roamed Australia millions of years ago. Meet life-size dinosaurs, megafauna and ancient creatures through augmented reality. If you stand still, you can even take a photo with them! Look out for the Digi Dino Discovery Trail signage when you visit City of Science. All you need is your phone and a sense of adventure.

Tours, Shows and Science Surprises!

Get energised while you stimulate your mind! On Saturday 12 and Sunday 13 March, City of Science takes visitors on a scientific journey (literally!) with a free program of tours, stage shows and surprising pop-up science activations.

Visit worldsciencefestival.com.au for more information.

DIGITAL PROGRAM

Science is everywhere. In our homes, at our workplace and in all manner of environments throughout our lives. Now audiences can engage with the wonders of science through the curated program of pre-recorded conversations available on the World Science Festival Brisbane website at worldsciencefestival.com.au

Lifespan Expanded: The Scientific Quest for a Fountain of Youth

We're born, we grow old, we die. It's a rhythm long considered inevitable. But is it? Or is ageing merely a disease awaiting a cure? Will science one day stave off ageing or even reverse it? Leading scientists explore the biology of aging and recent breakthroughs that some think could have people living healthily to 120 or beyond by the end of this century.

Moderated by Professor Brian Greene and featuring experts in ageing, David Sinclair, Laura Niedernhofer, Nir Barzilai and Elissa Epel.

The Elusive Darkness of the Universe

All we can see makes up just 5 per cent of the Universe. The rest of the vast darkness is not as empty as we once thought, but instead filled with dark matter and dark energy. How do we know they are there? Can we find

evidence for them? And what has all this got to do with Einstein?

The Rights of Nature

In 2021, the United Nations recognised that a clean, healthy and sustainable environment is a human right. First Nations Australians have known this for over 60,000 years. Can countries, companies and individuals be held accountable? Realising the rights of nature and Indigenous knowledge systems is key to combatting the threats from climate change.

Cybercrime Revolution

Technology is embedded in everything from communications to finance and health to education. It has enabled more aspects of our lives to move online and be interconnected. It has also enabled those who wish to exploit this cyber-world for nefarious purposes. An arms race is raging between those who build and protect our systems and those trying to break into it. Who is winning, and what is coming next?

Remaking the Coral Tree of Life

A coral reef in all its glory is quite a sight, teeming with life and home to many diverse species. Recent advances in technology have challenged our understanding of coral

family trees. So, what do we know now? What are the implications for the Great Barrier Reef? And will our new knowledge help save these precious ecosystems from the effects of climate change?

Cool Jobs

Science, technology, engineering and maths offer some of the coolest jobs on – and off – the planet. Share the inspiring stories of successful experts who use STEM in their daily jobs. Find out how they got their dream jobs and what you need to get yours. This is a great chance to hear from the experts about how to follow your passions and build an exciting future for yourself and the planet.

The Hatchery Livestream

If you can't get to Queensland Museum to see Australia's precious loggerhead turtles hatching live, you can always watch the livestream from the comfort of your own home (or office).

The Hatchery is an important conservation initiative that has released almost 500 loggerhead turtles since it started. After the Festival, the newborn turtles will be transported to the Sunshine Coast and released offshore.

The Hatchery will be livestreamed Wednesday 9 – Sunday 13 March on worldsciencefestival.com.au with support from AARNET.

CURIOCITY BRISBANE

Curiosity Brisbane returns in 2022 as a key pillar of World Science Festival Brisbane programming throughout Brisbane's Cultural Precinct.

Curated by Brisbane's own artist, curator and academic, Jay Younger, Curiosity Brisbane is a 12-day celebration of science, art and technology, where new possibilities play and big ideas collide.

A fascinating extension of art and science, Curiosity Brisbane installations will be on display 9–20 March 2022 and will be supported by a program of workshops, conversations and talks.

Visit the worldsciencefestival.com.au for artist profiles, programming and more information on Curiosity Brisbane 2022.

PROGRAM HIGHLIGHTS Wednesday 9 March

CONVERSATIONS

Einstein and the Quantum: Entanglement and Emergence

7.30pm–9pm | Conservatorium Theatre, Queensland
Conservatorium Griffith University | Adult \$40, Concession
\$30, Livestream \$10

With his General Theory of Relativity, Einstein illuminated the grand expanse of the cosmos, but he was also instrumental in developing quantum mechanics for describing the micro world. In Einstein's day, these advances were considered unrelated

but recent insights suggest that they may be secretly connected – significantly advancing our understanding of quantum threads that may stitch the fabric of spacetime. Streaming live from New York, Professor Brian Greene joins leading researchers to redefine the frontiers of Quantum Mechanics and Relativity. Astrophysicist Tamara Davis and ABC's Jonathan Webb will join us on stage to field your questions on the night.

CITY OF SCIENCE

South Bank Parklands

9.30am–2.30pm | Free, non-ticketed

City of Science kicks off at South Bank today with loads of fun, hands-on activities for the whole family.

Highlights include the fun and interactive Reef Creature Coding Challenge, where participants program an Ozobot to model a reef creature and guide it safely to its food source.

Lunchtime Labs – The Explosive Show

12pm–1pm | Queen Street Mall upper stage | Free, non-ticketed

Put a little bing, bang, boom into your lunchtime with a spectacular science show. Big Bang Education and Science on the GO! will take you to a strange world where fireballs and instant clouds appear from nowhere. Discover the magical world of chemistry and liquid nitrogen.

Libratorium – Amazing Arachnids!

3.30pm–4.40pm and 4.45pm–5.55pm | Inala Library, Corsair Avenue, Inala | Free, ticketed

Queensland Museum's very own spider man, Dr Owen Seeman, has some amazing arachnid specimens to show you, along with live spiders and scorpions to get your heart racing. Dr Seeman has been into the vaults of Queensland Museum's Arachnids

collection and hand-picked an array of eight-legged arthropods, snappy scorpions and other arachnids to showcase the variety and beauty of these much-maligned critters. **For Children aged 5–12 years. Bookings essential.**

PROGRAM HIGHLIGHTS Thursday 10 March

CONVERSATIONS

Hypothetical: WonderDrug™ Presented with The University of Queensland.

7.30pm–9pm | Conservatorium Theatre, Queensland
Conservatorium Griffith University | Adult \$35, Concession \$30, Livestream \$10

On average it takes 10 years for a new medicine to be approved. Along the way up to 85% of candidates fail and a lot of money is spent. Based on Geoffrey Robertson's classic Hypotheticals, Dr Norman Swan leads a panel of medical experts as they navigate the (clinical) trials and tribulations of a theoretical new WonderDrug™.

EXHIBITIONS

Holographics Exhibition

30 minute sessions 10am–3pm daily | Level 3, Queensland Museum | Adult \$20, Concession \$15, Child \$10 (3-15 years), Family of 4 (2 adults, 2 children) \$50

Star Trek meets Jurassic Park in this world first holographic experience created by our friends at Axiom Holographics. Travel back in time and walk among some of the most breathtaking prehistoric animals imaginable

THE NUCLEUS @ SOUTH BANK PIAZZA

Future Thinking: Life, the Metaverse and Everything in Between

7pm–9pm | South Bank Piazza | Adult \$25, Concession \$20, Family of 4 (2 adults, 2 children) \$70

If you had the chance to build a brave new world from scratch, what would you do differently? How would you ensure equality, opportunity, diversity and sustainability?

What would it take to make a world that is healthy, happy and harmonious? This

thought-provoking evening of conversations, debate and music will be sure to challenge how you see your future.

CITY OF SCIENCE

South Bank Parklands

9.30am–2.30pm | Free, non-ticketed

Thursday's City of Science highlights include your chance to experience the thrill of designing a virtual aircraft, learn about the forces of flight and discover what happens when you change control surfaces. In Stellar STEM, we'll showcase technological solutions to space junk, examine nasty microplastics through a microscope, and discuss essential leadership and communication skills.

Lunchtime Labs – The Science of Happiness

12pm–1pm | Queen Street Mall upper stage | Free, non-ticketed

What puts a smile on your dial? From chocolate and music to cute videos of kittens, some things just make us happy. But why? And what is going on inside our brains when we experience such joy? We've paired a dancer and a scientist to unravel all of this in a fun-filled lunchtime that is sure to leave you smiling.

Libratorium – An Afternoon with The Snail Whisperer

3.30pm–4.40pm and 4.45pm–5.55pm | Mitchelton Library, 37 Heliopolis Parade, Mitchelton | Free, ticketed

Ever wondered if snails have teeth? Ask Dr John Stanisic, Australia's foremost authority on land snails and a very smart Snail Whisperer to boot. Dr Stanisic will guide you through the fascinating world of Australia's native snails and tell you all about the different types of snails, their shells, slime and much more. Explore the hands-on displays of shells and terrariums containing live local snail species.

Suitable for children aged 5–12 years. Bookings essential.

PROGRAM HIGHLIGHTS Friday 11 March

CONVERSATIONS

Net Zero: Investing in the Future

7.30pm–9pm | Conservatorium Theatre, Queensland
Conservatorium Griffith University | Adult \$35, Concession
\$30, Livestream \$10

Achieving net zero any time soon will take a considerable effort. Australia's Chief Scientist, Cathy Foley, Fortescue Future Industries Founder, Andrew 'Twiggy' Forrest, humourist, Dan Ilic and others discuss how science, private enterprise and activism are stepping up with big ideas and large investments in technology to accelerate the pace of change.

Everything You Need to Know About: Maritime Archaeology

5.30pm–6.30pm | Cremorne Theatre, QPAC | Adult \$20,
Concession \$15

A shipwreck is like a time capsule, providing valuable insights into different eras.

However, time and the ocean don't preserve a wreck in the same condition as it came to rest. How does a Maritime Archaeologist find, document and re-tell the fascinating stories of Australian shipwrecks? Discover the rich history that lies beneath the water.

THE NUCLEUS @ SOUTH BANK PIAZZA

Fantastic Science X Pecha Kucha

7.30pm–9.30pm | South Bank Piazza | Adult \$25, Concession \$20, Family of 4 (2 adults, 2 children) \$70

Imagine if you had to explain your weird and wonderful scientific passion with only 20 slides shown for 20 seconds each.

World Science Festival Brisbane has laid the Pecha Kucha challenge to a stellar line up of fantastic science types, including Australian music legend and passionate science lover Paul Dempsey, psycho-sexologist and Lovehoney ambassador Chantelle Otten and award-winning pain specialist Professor Tasha Stanton.

THE SATELLITE BAR

Ockham's Razor Presented with ABC Science

5.30pm–7pm | Riverside Green, South Bank Parklands | Free, non-ticketed

Be part of the live audience as ABC Science returns to Brisbane for a special recording of Ockham's Razor – a weekly podcast and program on ABC Radio National. Ockham's Razor is a soapbox for all things scientific: stories, insights, arguments or tributes – anything that can be packed into an entertaining ten minutes.

Featuring a hand-picked roster of superb speakers, including ABC's own health and science journalist, and

award-winning co- host of Coronacast, Tegan Taylor, Ockham's Razor offers a jam-packed evening of short talks that will intrigue, excite and inspire!

CITY OF SCIENCE

Libratorium – Dinosaurs are BIG!

3.30pm–4.40pm and 4.45pm–5.55pm | Mitchelton Library, 37 Heliopolis Parade, Mitchelton | Free, ticketed

Imagine having dinosaurs in your own back yard. 230 million years ago, dinosaurs roamed across Queensland, swam in our rivers and filled our skies. Dinosaur expert and Palaeontologist Dr Jonathan Cramb will share the secrets of our distant past, show you real fossils from millions of years ago, and answer all your tricky questions about the giant reptiles of the Mesozoic era.

Suitable for children aged 5–12 years. Bookings essential.

Lunchtime Labs – Smart Snacks

12pm–1pm | Queen Street Mall upper stage | Free, non-ticketed

What if eating made you smarter? That dream can come true if you spend your lunchtime listening to Dr Karl. Australia's most loved scientist will be on hand to answer your burning questions about life, the universe and... anything really. Bring a sandwich and a question (and maybe one of his books if you'd like it signed).

PROGRAM HIGHLIGHTS Saturday 12 March

CONVERSATIONS

End of Pain

10.30am–11.30am | Conservatorium Theatre, Queensland
Conservatorium Griffith University | Adult \$35, Concession
\$30, Livestream \$10

Doctors cannot see pain. There is no scan available and it's impossible to tell if people experience pain in the same way. Pain is in the brain of the beholder. Why do we feel pain, and what causes it? Can the brain unlearn the pathways of pain? And could a venom be used as a medicine to target pain?

Space Race 2.0 Presented with QUT

2pm–3.30pm | Conservatorium Theatre, Queensland
Conservatorium Griffith University | Adult \$35, Concession
\$30, Livestream \$10

More rockets were launched into space in 2021 than any year before, taking with them hundreds of satellites as well as the odd first-time astronaut.

Space commercialisation is taking off as technology advances and costs come down. As this new frontier becomes increasingly crowded, our expert panel questions how we will navigate this brave new world without Captain Kirk.

Night of the Nerds

7.30pm–8.45pm | Playhouse QPAC | Adult \$60, Concession \$55

Night of the Nerds is the Festival's very own, very nerdy, variety game show!

Comedians Mark Humphries, Dan Ilic and Lawrence Leung, songwriter Clare Bowditch, scientists Professor Hugh Possingham, Professor Tamara Davis, Professor Margaret Sheil, the irrepressible Dr Karl and science communicator Angharad Yeo are on stage to celebrate all things science.

The Future of Conservation: The Complexity of Assisted Species Migration

2pm–3pm | Cremorne Theatre, QPAC | Adult \$20, Concession \$15

As the environment continues to change due to a warming planet, what effect is this having on conservation areas and if species need to be moved to safeguard survival, what needs to be considered? Rhianna Patrick discusses the complexity of conservation and assisted species migration with Queensland Chief Scientist and respected conservationist, Professor Hugh Possingham and others.

Everything You Need to Know About: Weather

10.30am–11.30am | Cremorne Theatre, QPAC | Adult \$20, Concession \$15

The sheer quantity of data and computing power that goes into processing and predicting the weather is amazing. In much of Australia, summer is the season the weather turns from delightful to destructive. Fires, floods, storms, cyclones and occasionally tornadoes have devastating impacts on many Australian communities. What causes these events and what is the science that sustains them?

Reading the Earth

12pm–1pm | Auditorium 1, State Library of Queensland | Adult \$35, Concession \$30

Indigenous science is unequivocally spiritual, personal, visionary, pragmatic, rigorous and, consequently, has underpinned millennia of Indigenous prosperity and survival. Prominent Aboriginal, Māori and Pacific scholars discuss the validity of Indigenous scientific knowledge derived from hundreds and thousands of years of engaging physically and metaphysically with the earth, cosmos and ocean.

THE NUCLEUS @ SOUTH BANK PIAZZA

The Super Smart Slightly Silly Seriously Sensational Science Spectacular

10am–11am and 2pm–3pm | South Bank Piazza | Adult \$25, Concession \$20, Family of 4 (2 adults, 2 children) \$70

Jump into a weekend of family fun entertainment with children's educator and entertainer Ranger Stacey and a stellar cast of the smartest, funniest and cutest scientists ever assembled.

Griffith University's premier STEM program, Science on the GO! will perform wondrous scientific experiments and mind-blowing demonstrations. Also featuring First Nations artist Tjupurru with his Didgeribone and Nerida Waters teaching you the science of happiness through dance, there will be loads of animal antics and other un-boring science stuff—all to the tune of kid's rock band Red Rocket 3. This stupendous science show is built for families looking for a fun day out with a side serving of all things science!

Queer Science!

7.30pm–9.30pm | South Bank Piazza | Adult \$25, Concession \$20, Family of 4 (2 adults, 2 children) \$70

A rainbow is a meteorological phenomenon resulting in a thing of beauty. Beyond that rainbow is a colourful community of queer scientists ready to prove that diversity drives innovation.

Join us for an evening of celebration featuring queer scientists who share their insights into working in STEM along with conversations about visibility, opportunity, and the queer perspective.

Guests include award-winning science writer and presenter Bernie Hobbs and transgender Neuroscientist Alison Wright with entertainment from Brisbane drag icon Richie LeStrange. Plus an exclusive musical collaboration with upcoming queer icon Hope D and special guests.

COLLECTIONS UP CLOSE

The Weird and Wonderful World of Molluscs with Dr John Healy

10am–11am | Level 2 Theatre, Queensland Museum | Adult \$18, Concession \$15

It may be hard to believe that a snail could be related to a clam or a squid, but all these animals have a common ancestor!

Queensland Museum Curator of Molluscs Dr John Healy will take you on a journey to uncover the enchanting world of these fascinating creatures.

Digitising Our Ancient Dinosaurs: Museums In The 21st Century

2pm–3pm | Level 2 Theatre, Queensland Museum | Adult \$18, Concession \$15

Combining state of the art technology with ancient artefacts, Queensland Museum's digital initiative Project DIG brings to life some of the magnificent creatures that roamed Queensland nearly 40,000 years ago.

Queensland Museum's Senior Curator of Palaeontology Dr Scott Hocknull, Digital Initiatives Manager David Pyle, and Digital Asset expert Donna Miller will share their unparalleled expertise in preserving ancient knowledge using modern technology.

SPECIAL EVENT

Discover the Scottish Prince on a Scuba Dive with a Maritime Archaeologist

6.30am–1pm | Gold Coast | Bookings through OzDive at ozdive.com

In 1887, the Scottish Prince, a three-masted, iron hulled sailing ship, hit a sandbank on the southern end of Stradbroke Island. Today, it is an underwater museum and spectacular dive site. Join Queensland Museum's Maritime Archaeologist, Dr Maddy McAllister on a once in a lifetime dive experience to explore and learn about the shipwreck and wonder at the colourful underwater habitat it has since become.

CITY OF SCIENCE

Bird Walk with the Queensland Chief Scientist

6.30am–7.30am Oxley Creek Common | Free, ticketed. Tickets are limited – book fast

Bird Lovers Unite! Back by popular demand, join Queensland Chief Scientist and passionate bird watcher Professor Hugh Possingham on a guided tour

of the Oxley Creek Common. Professor Possingham will help you spot the native birds who call this place home. Learn about what species live here, how they nest, breed and persist in the native bush.

Meet at the Red Shed on Sherwood Road, 100m east of where Sherwood Road crosses Oxley Creek. Bookings essential.

South Bank Parklands

8am–4pm | Free, non-ticketed

City of Science becomes a playground of discovery this weekend with fascinating tours from the QuestaGame team, the Geological Society of Australia and BlackCard. Or sit back, relax and develop your mindfulness skills with Sound Off for Schools developed by Matters of the Mind.

Dr Chris' STEAM Library and STEAM Lab

Grange Library, 79 Evelyn Street, Grange | Free, ticketed

STEAM Library

10am–10.45am

Children's science author, Dr Chris Ferrie will read from his best-selling books, including *There Was a Black Hole that Swallowed the Universe*. For children aged 0–5.

STEAM Lab

11am–2pm and 12.30pm–1.30pm

Discover amazing scientific concepts through the art of storytelling. For children aged 5–12.

Stargazing with Brisbane Astronomical Society

6pm–9pm | Riverside Green, South Bank Parklands | Free, non- ticketed

Do you ever wonder about the stars twinkling above you? Stargazing is the perfect opportunity to explore Brisbane's beautiful night sky.

Brisbane Astronomical Society will provide telescopes for you to explore and identify the stars to unlock the secrets of our observable universe.

City of Science BOP

The Edge, State Library of Queensland | \$10 per ticket

The Edge at the State Library is the place to be for a weekend of informative and interactive workshops that examine the exciting possibilities for the future of design, ethics and decision making. Find out how you can be a future leader in your community in fun and creative ways.

Presented with BOP, these workshops are suitable for students from grade 4 to 8. Supervising parents and caregivers will not require a ticket.

- Space Designers 9am–10.15am
- Homes of the Future 10.45am–12pm
- Ethical Innovations 1pm–2.15pm
- Community Leaders 2.45pm–4pm

Lunchtime Labs – Didjeribone

Sat 12 March 12pm–1pm | Queen Street Mall upper stage

Cross a didgeridoo with a trombone, add the Face Bass seismic sensor and looping technology for a highly interactive and energetic musical performance.

In this spectacular and engaging performance, artist Tjupurru creates ingenious and innovative songs and soundscapes that blend elements of the traditional with the contemporary.

PROGRAM HIGHLIGHTS Sunday 13 March

CONVERSATIONS

What on Earth is so Good About Mars? Presented with Griffith University

2pm–3.30pm | Conservatorium Theatre, Queensland
Conservatorium Griffith University | Adult \$35, Concession \$30, Livestream \$10

Governments and corporations are investing more than ever in technology aimed at the exploration of Mars. Griffith University's Paulo de Souza and a panel of experts discuss what has been found out so far, and what is still to be discovered. Is it all a mission of curiosity, or are there deeper implications for humanity?

Palaeontology Reimagined

10.30am–11.30am | Conservatorium Theatre, Queensland
Conservatorium Griffith University | Adult \$35, Concession \$30, Livestream \$10

Ground-breaking technology is changing the way fossils are discovered, analysed and visualised with the results giving us so much more information about these ancient creatures and early earth.

Join Dr Scott Hocknull and fellow palaeontologists and discover the new palaeontological tools. these ancient creatures and the early Earth.

Everything You Need to Know About: Comedy with Dr Karl

10.30am–11.30am | Cremorne Theatre, QPAC | Adult \$20, Concession \$15

We all love a good laugh, but why do we make these spontaneous vocal eruptions and what makes them so enjoyable and infectious? Join Dr Karl and Dr Niraj Lal as they unravel what tickles your funny bone and if it really is humerus.

Everything You Need to Know About: Fungi

2pm–3pm | Cremorne Theatre, QPAC | Adult \$20, Concession \$15

They are the decomposers and recyclers, the brewers and the bakers. We put them on pizza, and we shave them over gnocchi. They can be poison as well as medicine. Our experts share the mystery of the fungi revolution, their potential role in medicine and some of the more interesting local varieties.

THE NUCLEUS @ SOUTH BANK PIAZZA

The Super Smart Slightly Silly Seriously Sensational Science Spectacular

10am–11am and 2pm–3pm | South Bank Piazza | Adult \$25, Concession \$20, Family of 4 (2 adults, 2 children) \$70

Everyone's favourite children's entertainer Ranger Stacey headlines a stellar cast of the smartest, funniest

and cutest science entertainers ever assembled. Griffith University's premier STEM program, Science on the GO! will take to the stage with a dynamic feast of scientific experiment and mind-blowing demonstrations. Plus, there's live entertainment from First Nations artist Tjupurru with his Didgeribone, the science of happiness through dance with Nerida Waters and crazy rock band for kids, Red Rocket 3 performing their hit song Musical Statues. To top it all off, there will be amazing animal antics and loads more informative fun for all ages.

MARKETS

Get Green! Sustainability Market

8am–4pm | Flowstate Green, South Bank Parklands | Free, non-ticketed

Welcome to our very first Get Green! Sustainability Market, a collection of local sustainable and eco-conscious small businesses and workshops located on South Bank's Flowstate Green on Sunday 13 March. Go green and discover how to live your best sustainable life with lovingly made sustainable products.

CITY OF SCIENCE

South Bank Parklands

8am–4pm | Free, non-ticketed

The final day of City of Science at South Bank will be jam packed with activities, including the interactive and collaborative outdoor marble run experience Make and Meld Marble Run Madness, Sound Off for Schools mindfulness exercises, and a demonstration to reveal the science of juggling with the brilliant minds of STEAM Circus.

City of Science BOP

The Edge, State Library of Queensland | \$10 per ticket (Ages 9–12)

The Edge at the State Library is the place to be for a weekend of informative and interactive workshops that examine the exciting possibilities for the future. Explore the amazing opportunities and the inherent challenges of our future food, work, sport, home and transport.

Presented with BOP, these workshops are suitable for students from grade 4 to 8. Supervising parents and caregivers will not require a ticket.

- Future of Sport 9am–10.15am
- Future Foods 10.45am–12pm
- Future of Work 1pm–2.15pm
- Future of Transport 2.45pm–4pm

Lunchtime Labs – Juggling Science

12pm–1pm | Queen Street Mall upper stage | Free, non-ticketed

Although technically not scientists, did you know jugglers work with science every day? Join STEAM Circus to learn about juggling patterns, shapes, angles and how to predict where your juggling ball will land.

Libratorium – The First Scientists

10am–11.15am and 11.30am– 12.45pm | Chermside Library, 375 Hamilton Road, Chermside | Free, ticketed bookings essential

Australia’s First Peoples have the longest continuing culture on Earth and have been practicing astronomy, engineering, chemistry, land management and ecology for more than 50,000 years.

Perfect for families. Bookings essential.

COLLECTIONS UP CLOSE

Queensland’s Birdlife with Professor Hugh Possingham

9.45am–10.45am | Level 2 Theatre, Queensland Museum | Adult \$18, Concession \$15

Join Queensland Chief Scientist and passionate bird watcher Professor Hugh Possingham along with Dr Will Goulding and Queensland Museum Librarian Shannon Robinson as they take you on a fascinating journey to showcase the beautiful and rare birds of Australia.

Preserving our Archaeological Past

12pm–1pm | Level 2 Theatre, Queensland Museum | Adult \$18, Concession \$15

Precious biodegradable materials from archaeological collections require strict conditions to properly care for and preserve these priceless objects.

Queensland Museum Senior Curator of Archaeology Dr Brit Asmussen and Senior Conservator Cathy ter Bogt will share the science and the art of preserving archaeological materials from Queensland Museum's rare collections.

Shipwrecks and Underwater Worlds with Maddy McAllister

2.30pm–3.30pm | Level 2 Theatre, Queensland Museum | Adult \$18, Concession \$15

Unlocking the mysteries of the ocean is a fascinating art. From shipwrecks to marine ecosystems, Queensland Museum's Senior Curator of Maritime Archaeology Dr Maddy McAllister will share some of her remarkable diving adventures, as well as the challenges and rewards of caring for more than 8,000 artefacts that are currently in the Queensland Museum collection.

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Phone: Queensland Museum +61 7 3153 3000

Email: wsfbrisbane@qm.qld.gov.au

Website: www.worldsciencefestival.com.au

Early bird special

You know what they say, the early bird gets a discount! Make the most of our early bird special and book your tickets between 28 and 30 January 2022 to receive up to 30% off.

Early bird special only available for tickets booked before 30 January 2022.

Bundle 4+ tickets and save

It's good to share the wonder of science with friends and family. Buy a bundle of 4 or more tickets to selected events in one transaction and receive 20% off!

Please note, this discount applies only to selected events. Visit worldsciencefestival.com.au to find out more.

Ticket sales

Book online at worldsciencefestival.com.au

QTIX Ticket Sales

Phone: 136 246

+61 7 3842 9505 AEST (Outside Australia)

Queensland Performing Arts Centre (QPAC) Box Office

Level M, Corner Grey & Melbourne Streets South
Brisbane, QLD, 4101

9am–8:30pm, Monday to Saturday (AEST) Email:
info@qtix.com.au

Please note the Box Office is open two hours prior to a scheduled performance on Sundays.

Queensland Museum Box Office

Level 2, Corner Grey & Melbourne Streets South
Brisbane, QLD, 4101

9.30am–4pm, Monday to Sunday (AEST)

Queensland Conservatorium Griffith University Box Office

140 Grey Street, South Brisbane, QLD, 4101

Please note the Box Office is open one hour prior to the start of performances. Tickets are available for purchase online at worldsciencefestival.com.au

Don't delay, book your tickets today!

Tickets sell out quickly and we don't want you to miss out. All tickets purchased for World Science Festival

Brisbane 2022 events can be refunded as per the QTIX Ticketing Terms and Conditions. This includes COVID-19 impacts.

Patrons are encouraged to purchase tickets online to avoid queues.

The safest way to buy

QTIX is the official ticketing service for World Science Festival Brisbane 2022.

Any tickets purchased through unauthorised sales channels may be seized or cancelled without refund or exchange and the bearer of the ticket may be denied admission.

Unauthorised sales channels include Viagogo, eBay and Gumtree. For more information visit the QTIX page on The Facts About Purchasing Tickets Online.

Getting to QM

The following information is to assist you in getting to and from Queensland Museum and the Queensland Cultural Centre Precinct. Should you require information on travelling on public transport to and from other venues call TransLink on 13 12 30 or visit translink.com.au

Bus: to Cultural Centre Busway Station

Train: to South Brisbane Station, opposite QPAC on Grey Street

CityCat/Ferry: to South Bank Ferry Terminal in South Bank Parklands. For bus, train and CityCat/ferry timetable information, call TransLink on 13 12 30 or visit translink.com.au

Please note: Victoria Bridge is permanently closed to general traffic to facilitate both the Brisbane Metro project and CityLink Cycleway trial. For more information visit www.brisbane.qld.gov.au

Taxi/Ride Share: to the taxi set-down and pick-up area on either the Grey Street side of QPAC or Stanley Place outside The State Library of Queensland.

Car: via Melbourne Street, Victoria Bridge or Grey Street

Parking:

- Art Gallery/Museum Carpark and State Library of Queensland Carpark: enter from Stanley Place
- Riverside Carpark, QPAC: enter from Stanley Street
- Brisbane Convention and Exhibition Centre: enter from Merivale Street or Grey Street
- South Bank Parklands Carpark: enter from Little Stanley Street

Accessibility

World Science Festival Brisbane is dedicated to being as welcoming and inclusive for the widest audience possible. For more information visit worldsciencefestival.com.au/festivalinformation/brisbane/accessibility

COVID-19 safety

The health and wellbeing of our visitors, staff and volunteers to the Festival and Queensland Museum is our priority. Visitors will be required to register via the Check In Qld app on arrival at all events and have your vaccination certificate linked in the app.

If you have a certified medical exemption for the vaccination this can be also added in the app, or you can bring a printed copy along as evidence for entry.

If you don't have a phone, you can also use a printed copy of your COVID-19 digital vaccination certificate, your immunisation history statement, or your international COVID-19 vaccination certificate.

We have increased cleaning frequency, handwashing and sanitiser facilities and have installed distance markers for queuing to help keep you safe.

You can play your part by keeping the following in mind:

- Make sure you have updated the Check In Qld app on your phone and have added your vaccination certificate
- Stay at home if you are unwell
- Stay 1.5 metres apart from others
- Wash your hands regularly or use our sanitisation stations
- Avoid touching your face
- Cover coughs and sneezes
- Visitor capacity limits apply

Tips for a sustainable day out

At World Science Festival Brisbane, we are committed to continuous improvement. We have big goals for the future – and we're taking steps each year to make sure we reach our sustainability targets. Head to our website to learn about our plans and what we're doing – for example, did you know we're a plastic free event?

We hope you can join in, and if we all do a little bit more each year, the future will be bright! You can help us reduce the environmental impacts of the event with a bit of pre-planning.

- Leave the car at home
- Bring a cup or a water refill bottle
- Use the right bin
- Learn about the sustainable development goals via the website at worldsciencefestival.com.au

Join the conversation

- Twitter: @WSFBrisbane
- Facebook: @WorldScienceFestivalBrisbane
- Instagram: @WorldScienceFestivalBrisbane
- YouTube: @WorldScienceFestivalBrisbane

Share your festival memories using: #WSFB2022