

ISSET PRESENTS

MISSIONTM

DISCOVERY

SPACE & STEM
STUDENT
EXPERIENCE

MEET

LEARN

DESIGN

LAUNCH

TEAM-UP WITH
STEVE SWANSON
- ASTRONAUT & ISS COMMANDER
AND LAUNCH YOUR IDEAS
INTO SPACE!



"I can say without doubt that Mission Discovery is the best thing I have ever taken part in."

Riya Khan
Student

// **WELCOME TO
MISSION DISCOVERY**
AN OPPORTUNITY FOR
ORDINARY STUDENTS
TO DO SOMETHING
EXTRAORDINARY

MEET

LEARN

DESIGN

LAUNCH

// YOUR MISSION

SPEND 5 DAYS AT CURTIN UNIVERSITY WORKING WITH A NASA ASTRONAUT, RENOWNED SCIENTISTS AND NASA LEADERS, IN AUSTRALIA'S MOST EXCITING STEM PROGRAM!

- In teams, take on the role of research scientists and design an experiment to be conducted in space
- The winning team will have their experiment launched and tested by astronauts aboard the International Space Station!
- This is a full immersion in Space and STEAM – with plenty of hands-on activities
- Develop leadership, teamwork and public speaking skills
- Learn about a range of exciting Space and STEM career paths

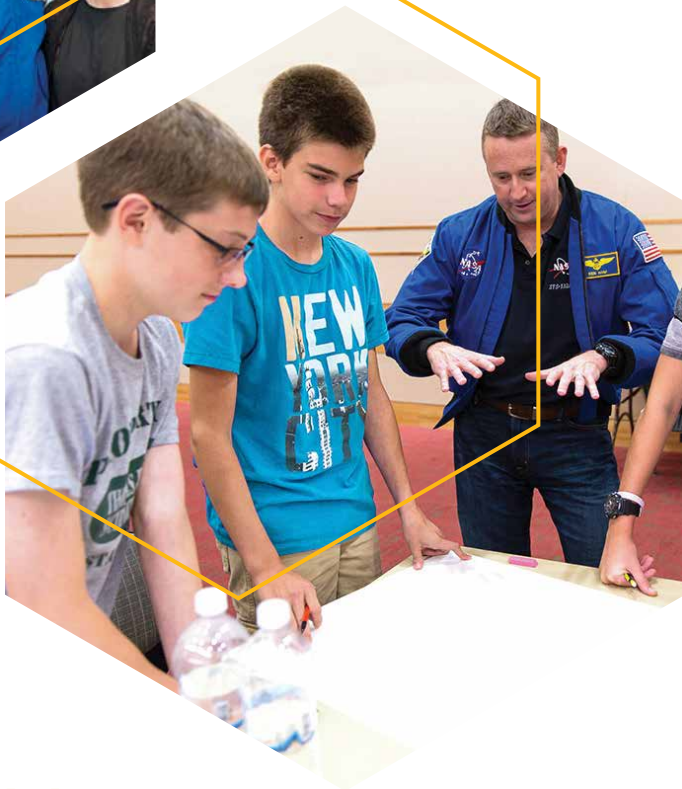
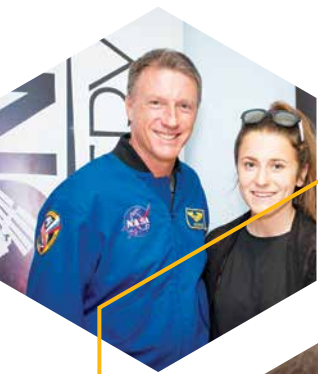
Are you Australia's next astronaut or STEM leader?



ISSET PRESENTS
MISSION
DISCOVERY

"It was great to learn from such inspirational astronauts and experts through Mission Discovery. I had a fantastic time"

Emily Yeomans
Student



// **INSPIRING STEM**

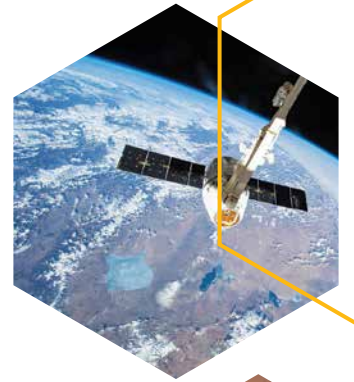
LEARN HOW TO

- Work successfully in a team
- Plan the execution of a project
- Achieve a goal
- Follow efficiently and lead effectively
- Deliver a persuasive presentation
- Confidently speak in public
- Make your CV stand out!

Mission Discovery focuses on Science, Technology, Engineering and Maths...

THE FUTURE OF STEM STARTS WITH YOU!

MISSION AGENDA



DAY
.01

MONDAY 8TH JULY 2019

- NASA team building – NASA presentation
- Mission Patch Team Challenge
- The Journey to Mars – NASA presentation
- Mars Lander Team Challenge
- The Best Science Experiment – NASA presentation

DAY
.02

TUESDAY 9TH JULY 2019

- Becoming an Astronaut and The Story of a Space Mission – NASA presentation
- Headline Story Team Challenge
- How to design a space experiment – NASA presentation
- Presentation from a guest university professor or lecturer

DAY
.03

WEDNESDAY 10TH JULY 2019

- Budgeting and Planning Skills – NASA presentation
- The International Space Station Environment, Experiments and an Expedition – NASA presentation
- Work on experiments
- Space Experiments – NASA presentation

DAY
.04

THURSDAY 11TH JULY 2019

- Improve Your Presentation Skills – NASA presentation
- Work on experiments and presentation
- The Earth From Space – NASA presentation

DAY
.05

FRIDAY 12TH JULY 2019

- Presentation preparation
- First round presentations
- Finalists selected
- Final presentations
- Campus tour or visit to research lab at Curtin University
- Winners announced



THE MISSION TEAM

2019 PERTH MISSION DISCOVERY PROGRAM TEAM MEMBERS

Mission Discovery introduces you to the highest level of NASA Leadership, Space Exploration and Scientific Research



STEVE SWANSON

NASA ASTRONAUT & ISS COMMANDER

Steve Swanson is a NASA astronaut and an engineer. Steve has flown on two Space Shuttle flights, STS-117 and STS-119, and has been the Commander of the International Space Station, which involved launch and landing in the Russian Soyuz capsule. Steve has also served as a CAPCOM for ISS and Space Shuttle missions. He has logged over 6 months in space, travelled 83 million miles and completed 4 spacewalks. Steve has been awarded the NASA Exceptional Achievement Medal.



SARAH MURRAY

NASA'S DEPUTY OF ORION VEHICLE SYSTEMS PERFORMANCE AND ANALYSIS

Sarah is in the Orion Vehicle Integration Office, which is responsible for integrating all the vehicles: the Orion, the European Service Module being built in Germany, the abort system being built in Virginia, which all sits on top of the rocket, the Space Launch System (SLS) being built in Alabama. She has served on NASA's Mission Support Council as well as Assistant Division Chief for EVA, Robotics and Crew Systems, where she was responsible for the Neutral Buoyancy Laboratory Space Walking training facility. She has held roles in Astronaut Training and Mission Control. She has also been Deputy Chief of Space Flight Training Management, where she was the Chair of the International Training Control Board, responsible for training astronauts and cosmonauts.



DR HANNAH WILSON

POSTDOCTORAL RESEARCH ASSOCIATE,
KING'S COLLEGE LONDON

Dr Hannah Wilson obtained her BSc in Biomedical Science with Human Biology from Leeds Metropolitan University in 2013 and MSc in Pharmacology from King's College London in 2014. Dr Wilson obtained her PhD in Pain and Muscle Function from Leeds Beckett University in 2019 and is currently a Post-Doctoral Research Associate in the Centre for Human & Applied Physiological Sciences at King's College London. This appointment is in collaboration with ISSET.



GREGORY SMITH
MATHEMATICAL PHYSICS PHD, UNIVERSITY OF KENT

Gregory Smith is a Mathematical Physicist, in the area of mathematically knotted solutions to Maxwell's equations. He has recently had his research published in the Journal of Physics A: Mathematical and Theoretical - where he and his co-author describe the properties of a set of conserved quantities, named Zilches, in the knotted electromagnetic field context. He has also presented his research at the largest multidisciplinary international conference on photonics - held in San Francisco. Greg spends a lot of his working time delivering educational outreach to schools, ensuring the next generation are engaged in some level of STEM.



CHRIS BARBER
FOUNDER & DIRECTOR OF ISSET

Chris founded ISSET in 1998 with the aim of inculcating in young people the NASA 'you can do it' spirit. Chris has a long record of school leadership and transformation. Prior to his work in education he worked in finance in the City of London as an insolvency loss underwriter and corporate credit management specialist. His school leadership includes being Deputy Head Teacher in two large high schools. In his last school, he was instrumental in taking the school from below average to be the most successful school in England and Wales' at A level and in trebling the schools GCSE results. In that post Chris raised over £7 million to rebuild the school buildings. Since founding ISSET, Chris has worked with space centres, schools and young people in the UK, USA, Norway, India and Australia.



EXPERT SPEAKERS
SPACE SCIENCE AND TECHNOLOGY CENTRE (SSTC),
CURTIN UNIVERSITY

With an established partnership with NASA and Lockheed Martin, the Space Science and Technology Centre at Curtin University is home to the largest planetary research group in the Southern Hemisphere. Exploring the origins and evolution of our Solar System and research fundamental to space exploration, we are unique in combining blue sky science with engineering and industry engagement.



MENTORS

Team mentors will consist of senior Science and Engineering students from Curtin University and pre-service teachers.

* Team members subject to change



EXPERT GROUND CREW EDUCATION PROGRAMS



The International Space School Educational Trust (ISSET) works in partnership with some of the world's leading space organisations to deliver unique learning opportunities for students of all ages.

Each of our programs offer something unique, whether it be on an international excursion learning from some of the greatest minds in the world, or our unique Mission Discovery challenge where you can send your experiment into space. Through close working relationships with different aerospace organisations, ISSET lets you team up with astronauts, rocket scientists and leading business professionals at the highest level.

At ISSET we categorise all participants as students, undertaking programs from which they can gather new knowledge. ISSET is a registered UK charity founded in 1998.

ISSET'S GOALS

- Inspire and motivate young people through STEM and space exploration
- Give ordinary people the opportunity to achieve something extraordinary
- Recognising what humans can achieve
- Instilling the NASA 'you can do it' spirit!

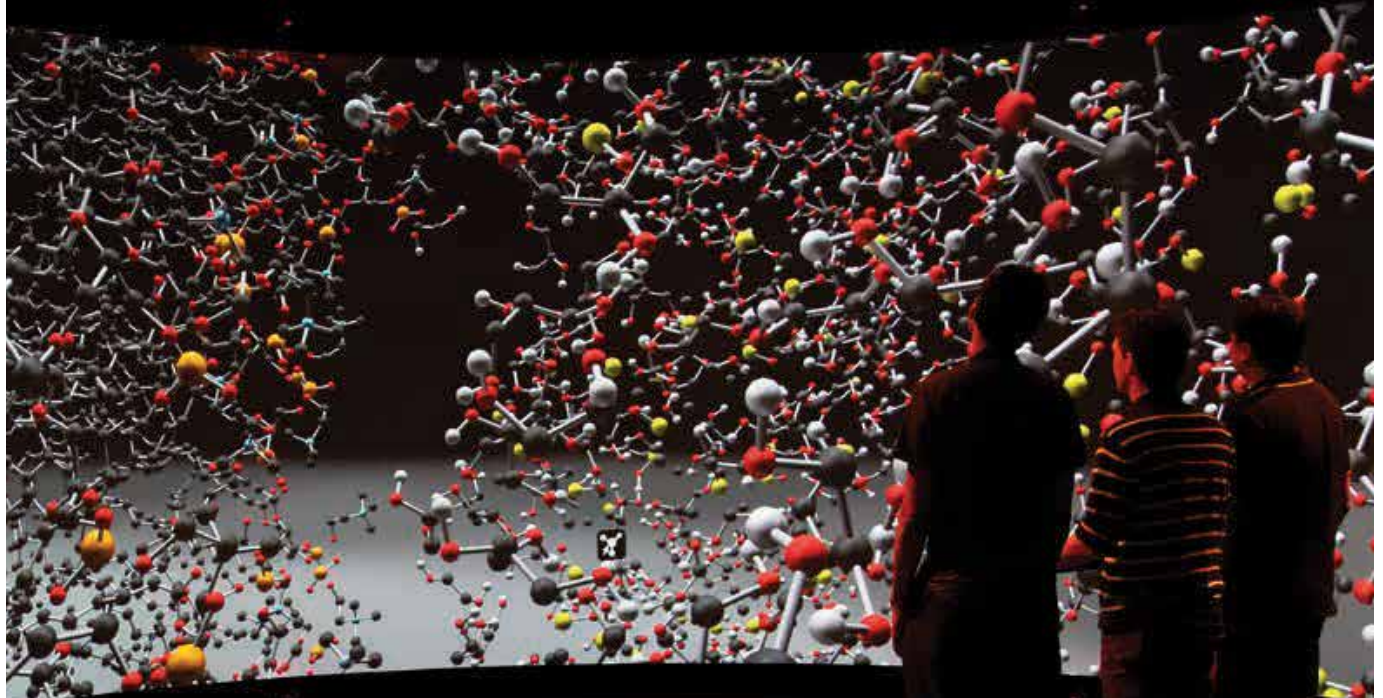
Latitude Group Travel offers custom designed, curriculum linked, educational tours and programs unlike any other organisation. In fact, we are completely unique in our approach.

All our programs and tours include experiential learning activities to engage students and engender real educational outcomes. We are thought leaders, providing cutting edge programs that reflect the innovation and change occurring in education and educational institutions.

Our itineraries, programs, service and delivery are world class. The research and focus on experiential learning that underpins everything we do, ensures that each itinerary is unique. We actually understand what you teach and the electives/strands you have chosen for your subject/s and focus our efforts on delivering a tour that is truly linked to the curriculum you teach. Our range of 5 day programs, which includes Mission Discovery, are intended as a real adjunct to classroom education, by providing experiential learning that is so essential to student development.

In short – what we do and how we do it really matters to us. All of us at Latitude Group Travel genuinely care about delivering the best possible service and the most engaging, life-changing programs and tours. We genuinely want to ensure that we positively impact student learning and that our partner schools are investing in authentic educational programs of tangible merit.

Explore your passion for STEM



If you're curious about the forces that make our world work, then Curtin is the place to start exploring your passion for STEM.

We're a truly global university, welcoming a diverse student cohort of more than 56,000 students to our campuses in Western Australia, Malaysia, Singapore, Dubai and Mauritius. Since our inception, we have taken an innovative approach towards teaching and research.

Our science courses immerse you in a vibrant and collaborative environment where ideas, skills and facilities prepare you for the jobs of the future. With more than 21 disciplines to choose from, there is a course to suit all passions.

scieng.curtin.edu.au

BE THE INNOVATOR



PROGRAM INFORMATION

LOCATION

The program will be held in the Haydn Williams lecture theatre, Curtin University. Enter on Brand Drive, Bentley.

Parents/guardians can park in PF1 short term for free when dropping off and picking up their children.

REGISTRATION

Daily registration will be made in the foyer to the Haydn Williams lecture theatre. Please print and bring your ticket to register.

The program will run daily from 9.30am to 4.30pm. Please arrive by 8.45am on the 8th July and by 9.15am other days, to ensure a prompt start at 9:30am.

WHAT TO BRING

- Your lunch, all snacks and a refillable drink bottle
- A notepad and pen to take notes during the program
- Students who have their own iPad or laptop would benefit by bringing it to the program each day. It will not be required on day 1.

CONDUCT

- You will be in a professional environment, with some of the world's elite in the fields of space and science
- You will be expected to behave in an appropriate manner - politely, attentively and with tolerance towards everyone
- There will be photo opportunities, so dress smart-casual
- Consumption of alcohol, drugs and cigarettes is not permitted
- Parents will be contacted if their child has failed to register before 9.30am each day, without giving prior notice



“Mission Discovery is the most complete and exciting educational program I have worked with. I’m always excited to see where the students imagination takes them and watch them develop throughout the week. When I was young, I would have loved the chance to have an experiment flown in space”

Astronaut Dr. Michael Foale CBE

YOUR NEXT MISSION?

COSMONAUT TRAINING EXPERIENCE RUSSIA

A unique opportunity to train like the real cosmonauts and astronauts, on the same equipment and facilities at the Yuri Gagarin Cosmonaut Training Centre, in Star City, near Moscow.

- Stay in Star City, the world training centre for cosmonauts and astronauts who are about to venture into space.
- Develop the exceptional team building and communication skills acquired by astronauts, using the same scenarios, equipment and challenges that enable human space flight.
- Mir training: Learn how to operate the Mir Space Station
- Undertake wilderness survival training - Russian style
- See the sights of Moscow, including Red Square and the extraordinary Kremlin

**CONTACT LATITUDE
GROUP TRAVEL
TO FIND OUT MORE
ABOUT THIS AND ALL
OUR OTHER TOURS
AND PROGRAMS!**



ISSET PRESENTS

MISSION DISCOVERY

**FROM ALL THE TEAM
AT LATITUDE GROUP
TRAVEL AND ISSET,
WE HOPE YOU ENJOY
THE PERTH MISSION
DISCOVERY PROGRAM
HOSTED BY OUR
EDUCATION PARTNER,
CURTIN UNIVERSITY.**



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www.latitudegrouptravel.com.au

