



AUSTRALIAN
SCIENCE &
MATHEMATICS
SCHOOL

ประกาศรับสมัครนักเรียนชั้น ม. 5
เข้าร่วมกิจกรรมทางวิชาการและการนำเสนอโครงการ
(ONLINE) The ASMS International Science Fair 2021
หัวข้อการจัดงาน “Change Your World”
จัดโดย Australian Science & Mathematics School เครือรัฐออสเตรเลีย

กำหนดการ

เข้าร่วมกิจกรรมรูปแบบ online วันละประมาณ 30 – 60 นาที
ระหว่างวันที่ 30 สิงหาคม – 3 กันยายน 2564

กิจกรรมสำหรับนักเรียน

กิจกรรมแลกเปลี่ยนเรียนรู้ทางวิชาการร่วมกับนักเรียนและครูต่างชาติ

Team Challenge Based Learning กิจกรรมแบ่งกลุ่มย่อยพูดคุยแลกเปลี่ยนและนำเสนอร่วมกัน

Research Sharing การนำเสนอโครงการ รูปแบบ Poster (ทุกโครงการ) และ
Oral Presentation (ตัวแทน 1 โครงการ)

Cultural Sharing กิจกรรมแลกเปลี่ยนวัฒนธรรม

คุณสมบัติของผู้สมัคร

- 1) เป็นนักเรียนชั้น ม. 5 ในปีการศึกษา 2563 (สมัครเดี่ยวหรือกลุ่มโครงการได้)
- 2) สื่อสารภาษาอังกฤษได้ดี
- 3) มีความสนใจและกระตือรือร้นในการเข้าร่วมกิจกรรมรูปแบบออนไลน์ เพื่อแลกเปลี่ยนเรียนรู้และนำเสนอการทำโครงการ และสามารถปฏิสัมพันธ์และสร้างความสัมพันธ์อันดีกับเพื่อนนักเรียนและครูต่างชาติได้
- 4) สามารถปรับตัวและแก้ไขปัญหาเฉพาะหน้าได้เป็นอย่างดี
- 5) มีผลการเรียนดี และความประพฤติดี
- 6) ผ่านกิจกรรมพัฒนาผู้เรียนตามที่โรงเรียนกำหนด ประจำภาคเรียนที่ 1/2563

วิธีการสมัครเข้าร่วมโครงการ ดังนี้

- 1) นักเรียนส่งใบสมัครโครงการ แยกเป็นรายบุคคล (CV และ proposal เสนอความตั้งใจในการเข้าร่วมโครงการ) โดยให้ดาวน์โหลดไฟล์ Word ได้จาก MWIT Website หัวข้อข่าวสำหรับนักเรียน
- 2) บทคัดย่อโครงการ เป็นภาษาอังกฤษ
- 3) คลิปวิดีโอภาษาอังกฤษ และมีนักเรียนปรากฏอยู่ในคลิป เพื่อนำเสนอความตั้งใจ/เป้าหมายในการเข้าร่วมโครงการ ประมาณ 5 นาที และโครงการ/ความก้าวหน้าล่าสุด ประมาณ 5 นาที

ส่งไฟล์เอกสาร/แชร์ไฟล์ มายัง ir@mwit.ac.th

หมดเขตสมัครภายในวันอาทิตย์ที่ 21 กุมภาพันธ์ 2564

นักเรียนที่สนใจสามารถอ่านข้อมูลงานของปี 2018 – 2019 เพิ่มเติมได้ที่

[HTTPS://WWW.ASMS.SA.EDU.AU/INTERNATIONAL-SCIENCEFAIR/](https://www.asms.sa.edu.au/international-sciencefair/)



Monday 30 August to Friday 3 September 2021
Australian Science and Mathematics School, Adelaide
Change Your World

Information Sheet

Venue

Australian Science and Mathematics School, Adelaide

Dates

Monday 30 August to Friday 3 September 2021

Theme & New Format

The International Science Fair 2021 theme will be **Change Your World**.

The program will be offered as both a face-to-face and an online experience as students from around the world join together to undertake Challenges that provide them with opportunities to look deeply at their own backyard and then compare and contrast it with others from around the world with similar passions.

The ISF will have five strands:

- Challenge Based Learning – Face-to-Face (by invitation only)
- Challenge Based Learning - Online (a small group or a class of students)
- Teacher Education
- Research Sharing
- Expert Sharing.

We will also enjoy social and personal opportunities that are a part of the week by meeting live once a day for 30 minutes to discuss Challenges and exchange excursion experiences of the week.

Scientists of the future must have a true understanding of the global significance of research and development in the world of science. This can be enhanced when people have personal understandings and relationships with others from all parts of the world. It is also important that people working in the field of science can communicate and collaborate with colleagues on a global basis. Such understandings and actions can grow from the opportunities you have this week.

2020 has shown us that it may not always be possible to meet face-to-face but we have the technology for the next best thing; live online meetings allow us to develop understandings and build friendships with the people who are gathered around the world in the same forum.

Working Language

The working language of **ISF 2021 – Change Your World** is English.

Challenge Based Learning Format

The event is open to all students between 16 and 18 years of age.

Selected schools will be invited for face-to-face participation. Schools can nominate 6 students and one accompanying teacher. We warmly welcome the school Principal to accompany the team throughout their stay in Adelaide.

Schools not selected for face-to-face or who are from their home school will be invited to participate online.

These schools can have as many students as they would like to join an online challenge with a teacher from that school.

We plan for all schools to join their ASMS Challenge Based Learning group online, using the Zoom platform, once a day for 30 minutes to discuss their objectives and share their work as it progresses. The lead teachers of each school group will co-design the challenges with their students. ASMS CBL leaders will assist teachers to do this.

Themed excursion opportunities that can be undertaken in different countries will be identified and students will investigate the challenge within their own context.

A sharing of all CBL outcomes will be face to face and online on Friday 3/9/2021.

Challenge Based Learning Activities

Challenge Based Learning Activities are scientifically based current global issues which teams need to explore and solve.

All visitors to ASMS will choose a first and second preference Challenge Based Learning Activity.

Each online school will select one Challenge Based Learning Activity for that group or class.

Student Event Contributions:

Research Sharing – Students who have undertaken research can share it by video / power point / poster uploaded to the ISF 2021 Webpage between 3/8/2021 and 20/8/2021. While this won't be live, each CBL group will look at 3 presentations and make comments / ask questions. Authors can see comments / questions and answer them after the allotted viewing time and answer.

Research Project Poster Sharing

All participating teams will present their research projects in the form of posters, in PDF format in portrait or landscape orientation.

Research Project Seminar Presentation

Each participating school will present **ONE** research project. Each presentation will last for 5 minutes. Presentations can be shared by video or power point.

Cultural Sharing

All teams will make a video of their school and CBL excursion to upload to the ISF 2021 Webpage on 2/9/2021 for sharing on 3/9/2021.

Teacher Education Event

Each participating school will present at least **ONE** Teacher Presentation to colleagues (either Face-to-Face or online) in a session of no more than 20 minutes so that best practice can be shared. Note that this may need to be repeated to cater for all participants.

Expert Sharing

Our colleagues at Flinders University will share pre-recorded insights into their world using our theme of Change Your World. These will be available on the ISF 2021 website for viewing. Topics for 2021 will include Paleontology, Mathematics, Art: Aboriginal and Paramedics.

Program Highlights

- Connecting with leading research in our changing world
- Students sharing their science research with peers from around the world
- Challenge Based Learning challenges face to face and online

Tentative Program Outline

Day	
29 August (Sunday)	Visitors arrive
30 August (Monday)	Online and Face-to-Face CBL Meeting Challenge Based Learning Activities
31 August (Tuesday)	Online and Face-to-Face CBL Meeting Challenge Based Learning Activities Excursions Educator Online session 1
1 September (Wednesday)	Online and Face-to-Face CBL Meeting Educator Online session 2 Research Project Videos and Poster Presentations Challenge Based Learning Activities
2 September (Thursday)	Online and Face-to-Face CBL Meeting Challenge Based Learning Activities
3 September (Friday)	Challenge Based Learning Activities Online and Face-to-Face CBL Presentations
4 September (Saturday)	Morning Departure for Visitors

Further Information

ISF 2021 Webpage will be open from 2 August 2021 (www.asms.sa.edu.au/isf2021).

Form	Deadline
School Registration Form F1	12 February 2021
Participant Information Visitors F2	26 March 2021
Participant Information - Online F2	26 March 2021
Student Event Contributions F3	30 April 2021
Teacher Event Contribution F4	30 April 2021
Photo Consent Form F5	30 April 2021
Participant Flight Details F6	18 June 2021
CBL Activity Selection Form F7	30 April 2021
Event Contribution Upload to Website	2 to 20 August 2021

Contact Us

Mailing Address

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Flinders University
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South Australia
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Government of South Australia
Department for Education



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Change Your World

Challenge Based Learning Activities

The descriptions of the draft Challenge Based Learning activities are listed below.

Change Your World: Artificial intelligence – In this Challenge you will have the opportunity to use new technologies and consider the ethical implications of the use of these. Should we be able to use drones to observe others? Should robots be taking over our jobs? Do we need to go overseas for holidays if we can experience it virtually? Enjoy a real debate about the pros and cons of the use of technology in our lives.

Change Your World: Astronomy – The universe is a big place. In fact, it's very, very big! In this Challenge, you will have the opportunity to investigate an area of cosmology that you find really interesting.

Change Your World: Your own adventure– There are many different issues that can be influenced by the 'think global, act local' approach when you "Look forward, Look back". In this Challenge, you will identify the change you want to see in your world and make it happen.

Change Your World: Containing disease in a hyperconnected world – What's the difference between a plague, an epidemic and a pandemic? How can we wage war against infections in a hyper-connected world? What do viruses look like under a microscope?

Change Your World: Palaeontology/Archaeology – What do dinosaur bones tell us about the future?? How have plants adapted to cope with the evolving earth and what can we learn from that? What can we learn from digs on ancient (and not so ancient) sites?

Change Your World: Microscopy – What is CRISPR? What gene technologies will improve our futures? Should a human embryo ever be altered before implantation?

Change Your World: Biomedical engineering - Biomedical engineers design the advances in equipment, devices, computer systems, and/or software used to improve human health. They are the professionals behind improving prosthetic limbs, medicine delivery technology, tissue and stem cell research, biomedical signal processing, and a wide range of other technologies that improve human health. In this Challenge, you will attempt to create an exoskeleton that allows people to lift a greater weight than they could otherwise manage.

Change Your World: Adelaide's new airport – The airport in Adelaide was established quite close to the city centre well before our population became so large. There are frequent complaints about noise pollution, especially from those living near the airport or under a flight path. So, where should we move it to? What's the best solution when we take everything (and we mean everything!) into account?

Change Your World: Indigenous art – Take a deep dive into indigenous art. Learn how to critically analyse and understand art. With the help of experts, learn how to interpret and understand a range of artworks to make sense of them. After you have learnt some critical skills, make something of your own and display it.



Change Your World: Ecosystem regeneration after the bushfires – The recent bushfires in South Australia have brought destruction to wildlife, plant life and the economies of many local areas. In this Challenge you will see firsthand how the Adelaide Hills area is recovering and investigate regeneration, conservation, adaptation and rehabilitation of these areas.

Change Your World: Forensic Science – Can we get away with murder? What are the techniques that are used to identify criminals? Join with your colleagues to learn about contemporary policing techniques and the intersection with science in uncovering 'Who dunnit'.

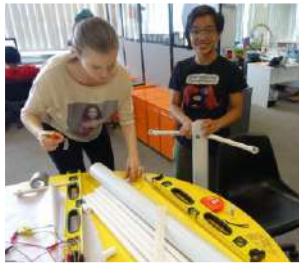
Change Your World: Communicating the message – How do we capture the public's interest in knowing what they can do to be part of the change? In this challenge, you will be documenting the International Science Fair through stories, photos, social media and film.



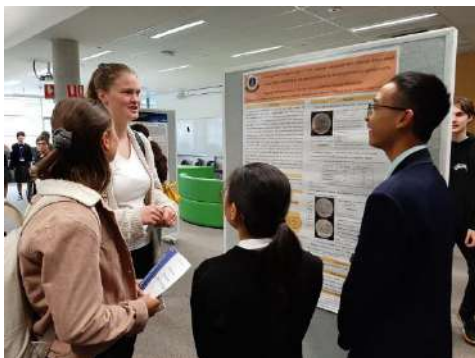
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TEAM CHALLENGE-BASED ACTIVITY



POSTER EXHIBITION & RESEARCH SHARING



EXCURSIONS: UNIVERSITY/WILDLIFE PARK...



SOCIAL PROGRAM

