

A TEACHER'S GUIDE



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A guide to this guide

Welcome.

MOD. is Australia's leading future-focused museum, designing exhibitions and experiences for a 15-25 year old target audience.

We aim to engage our young audience in science, research, technology and art. Our exhibition themes look at STEM broadly, the way that it can impact our lives, our societies, and our futures.

We want to support teachers in their visits to MOD., enabling you to bring your classes in for visits that are filled with interesting conversations about important ideas that are relevant to them.

This teachers' guide has been made for you. It has exhibit text, additional contextual information, and suggested classroom activities. Anywhere you find text that looks <u>like</u> this, it links out to external resources.

We hope you find it helpful.

FLEX exhibition themes

Are limits made to be pushed? We dare you to find out.

This exhibition grapples with your mental and physical limits.

Our exhibition and programming will touch on a wide range of themes, with special attention paid to the following concepts.

- Repair and regeneration, body augmentation and the future of med tech, regenerative medicine
- Perception of pain and risk judgement
- Human capability in extreme environments, space, isolation with a focus on Mars
- Identity, creativity and play
- Ethics and how we set collective boundaries
- Resilience

The exhibits link to these themes. Feel free to use them however you wish.



Bodification

Provocation: Is this the future of your body? Gallery: Lecture Gallery Main themes: Body limits, repair and augmentation



Bodies are wild. For the most part, they breathe without you thinking, they fight disease, and they grow. But eventually, they start to expire.

Just like your car, your phone, or your favourite pair of jeans, your body might be due for a service. But in the process of repairing it, could it be enhanced? What is really possible?



Bodification

A fascinating and somewhat confronting collection of real and speculative exhibits related to repairing, regenerating and enhancing the human body.

Meet OSCAR, the Modular Body, a living organism built from human cells. Marvel at an organ-on-a-chip, spray-on-skin, wound healing injections, artificial blood, and 3D printed feet. What modifications will the future hold for the human body?

- Consider how the human body functions at a cellular level. How do we repair ourselves naturally, or unnaturally?
- Did you know that <u>fake blood</u> is used to test how well surgical masks perform in a hospital setting? Can you design your own quality testing experiment?
- Visit Cornelis Vlasman's <u>website</u> to get the full story about OSCAR.



Spacious Living

Provocation: Could home be 225 million km away? Gallery: Universal Gallery Main theme: Exploration of Mars



Hello, and welcome to the universe. When things seem like life and death down here on Earth, out further there's a lot going on that makes us pretty forgettable.

Plans to live on Mars are not new, it's something people have been thinking about for a while. As us tiny humans start venturing out to space, how should we go about it?

Spacious Living

"Rock Stars" shows a crew dressed in red flights suits and protective astronaut bubble-shaped helmets walking across an ancient riverbed of the Utah desert. They are picking up black boulders and sand stones, shifting them across the landscape to create land-art patterns.

"Bubbles on Mars" displays Analogue Astronauts of Mars Desert Research Station Crew 188 trying to understand the wind dancing through the ancient rock formations by holding up bubble wands.

Explore the solar system with World Wide Telescope and Science on the Sphere.

- How much do you know about the <u>red planet</u>? Why are so many people <u>racing to get there</u>?
- Not all cultures see constellations in the same way. Read these <u>Aboriginal stories</u> about the stars.
- Learn more about the universe using <u>WWT</u>.

Pushing Perception

Provocation: Want to test your limits? Gallery: Street Gallery Main themes: Risks, pain and the brain



Every day we get out of bed and we make decisions. We decide how risky things are based on our perception of the activity. And we decide how we feel based on the pain we are feeling.

We trust our brains to tell us if things are safe, or if something hurts. But perhaps all is not as it seems. How easily fooled are we?

Pushing Perception

We have around a 1 in a million chance of dying from an accident every day, and this acute risk is quantified as 1 MicroMort. A selection of risks are displayed on the station. Visitors can select a risk and pull the handle to see the risk as a length of cord so they are easily comparable.

The MIRAGE will modulate how your body feels by changing what it looks like to you. 3D printed pain models help to explain pain to others. And the pain chairs allow you to put your pain threshold to the test. Listen to lived experiences of chronic pain from researchers and Ngankari Healers in the sound chair.

- Delve into some <u>MicroMort research</u>, and consider the risks involved in certain activities.
- How can we express and visualise pain in creative ways?
- Which mental strategies can we use to change our perception of pain? (e.g. attention, distraction, placebo)



Traces of You

Provocation: Play with yourself Gallery: Arcade Gallery Main Themes: Creativity and confidence, virtual selves



By now you probably have a pretty good idea what you look like. We get used to thinking about ourselves appearing a certain way.

But in this gallery different versions of you exist. They might move as you move, or they might not. When representations of ourselves change, does this alter how we understand ourselves and our environment?



Traces of You

You enter a dark room. There are three 3m tall structures, each with a different projection on them. At the end of the gallery a large curved structure spans the width of the room. Each of the structures responds to your body differently, leaving traces of your body behind.

As well as the artwork developed by Alex Degaris, this display also showcases new projection mapping technology from UniSA's Australian Research Centre for Interactive and Virtual Environments (IVE).

- Are your online avatars a part of you?
- How do rules of virtual environments differ from here on Earth? Would you choose to live in a virtual world?
- Do you want to build creative confidence? In his <u>TEDtalk</u>, David Kelley offers ways to build the confidence to create.



Canopy

Provocation: What are your ethical boundaries? Gallery: Gould Gallery Main themes: Ethics and limit creation



How do we make decisions about what we consider right and wrong? These ethical boundaries may be a way to protect people, but for some the most important thing to do is to stop and listen.

Here you sit beneath the canopy of a data sculpture, shaped by your answers to questions about the future. What does it mean to live an ethical life?

Canopy

An interactive data sculpture created with creative technology studio Junior Major. Visitors are invited to contribute to a research data set on community attitudes to ethical questions by filling in the surveys at the survey kiosk (touchscreen).

As visitors enter data, the sculpture constructed of a series of blinds will move in response to changes in input data, showing how individual responses (dark blinds) compare to overall responses (light blinds).

- Have students think about the following questions:
- 1. Should people be allowed to modify their bodies to enhance basic human traits such as intelligence?
- 2. Should we move away from farming animals and only eat lab grown meat in the future?
- 3. Do you think we should encourage high-pressure work environments to help people to excel?
- 4. Is a blissful existence lived in a virtual world of equal value to a more difficult life in the physical world? Why?
- As part of the discussion, students should consider what information they need to find out, and what their underlying moral principles are.

BREATHE

Provocation: Are you responsible for your own resilience? Gallery: Futures Gallery Main theme: Resilience



Breath has been proven as an effective method to teach ourselves how to manage stressful situations and learn how to move through them.

But you can't do it on your own. The systems and structures around you impact your ability to move through stressful situations. In Breathe, take note of the environment you are in.

Are you responsible for your own resilience?

BREATHE

BREATHE consists of a winding path through a deconstructed landscape, consisting of three main sections.

As you enter the installation, you are faced with disarray. Mouths that show signs of distress and heavy breathing help to bring focus to the breathing as part of the journey, and is reflected in the music, lights and changing landscape.

A literal turn is taken; the music and imagery change and begin to evolve, leaving adversity towards building resilience.

After another turn, you are greeted by calming sounds, including exhaling breaths, and warm lights that signify the 'release' and 'deliverance'.

- Breathing is one of the ways we self-regulate. Practice deep breathing <u>exercises</u>.
- How can <u>simulated situations</u> help build resilience?
- Look at the resources on <u>Reach Out</u> for building resilience in students.
- Map your own community support network.



Beyond Boundaries

Provocation: Where can you make a difference? Gallery: Level 1 Corridor Main themes: Research and teaching



Learning in new environments, applying hands-on techniques to education and emerging into a changed landscape with a changed mindset.

Sometimes the work we do pushes mental and physical boundaries, transforming ideas into innovative realities. Submitted as part of The University of South Australia's Images of Research and Teaching competition, these images encapsulate the different ways this is happening across the University, and the people who make it happen.



Images of Research

The University of South Australia's Images of Research and Teaching competition celebrates the breadth and diversity of our innovation, and the people who make it happen. This is a selection of images from the submissions which reflected the theme of FLEX, pushing boundaries.

- How can we use other <u>Aboriginal knowledge of systems</u> to teach for the future?
- Explore the <u>Images of Research and Teaching</u> online. "A picture is worth a thousand words." What do these images tell you?
- Run your own Images of Research competition, capturing the work that you're doing at school.



Miny'tji immersive Mapping

Gallery: Level 1 Balustrade Main themes: art outside boundaries, AR, cultural engagement



Use your own device to reveal hidden layers of Freshwatersaltwater stories from Yolŋu Homelands in North Eastern Arnhem Land using AR.



Images of Research

Building on ten years of collaborative cultural activities on Yolŋu Homelands, this work-in-progress presentation offers glimpses of current, past and future educational and immersive curatorial experiences. The project highlights the infrastructural developments required to better equip communities with the requisite skills and training for curating 'Metaverse Mala' – the transmission of immersive interactive cultural events and engagements direct, from Homeland to Exhibition.

- Can you create your own animation or augmented reality experience?
- What kind of stories can you tell about the nature that surrounds you?
- Create your own artwork, how can you incorporate hidden stories and layers within the piece you make?



Engaging with MOD.: For classes

We have several options for visiting school groups that offer different levels of engagement.



Self-Guided Visit

Schools are welcome to visit and show themselves around. Gallery staff are always on hand for support.

Guided Tour

Visit with a dedicated tour guide showing you through the galleries. These are limited to 30 participants and cost \$220 for one hour.

Science on the Streets

Explore the science behind our city with a self-guided walking tour of the significant sites of North Terrace.



Engaging with MOD.: For classes

Navigating the Future presentation

A presentation by MOD. Director and Futurist, Dr Kristin Alford, which unpacks critical skills and competencies that are required for young people to take advantage of opportunities posed by shifting work futures.

This is recommended for year 10-12 students and costs \$440. The presentation can take place at your school or at MOD. and runs for one hour.

More school visit information can be found here.



Engaging with MOD.: For educators



Educator Newsletter

We have a quarterly email newsletter for educators, providing information about activity for classes and professional development. If you'd like to receive it, please email us at mod@mod.org.au

Introducing: FLEX

A 1.5 hour introduction to the current exhibition, held either online (Jan 23), or in the galleries at MOD. (Feb 8).

This introduction includes a guided tour and provides you the opportunity to talk with MOD. staff and other teachers about classroom activities related to the exhibition.



Accessibility and inclusion at MOD.

We want all MOD. visitors to have a welcoming and inclusive experience. This is one of our <u>key design principles</u>, and something we consider in the design of each of our exhibitions.

There are a range of <u>resources available online</u> to help with planning your visit. This includes a sensory map and social story of each of our exhibitions.

MOD. is a member of the Autism Friendly Charter, as awarded by Autism SA.

Our galleries are equipped with access to a Hearing Loop or an IR Receiver. The latter we can provide if needed. All of our video footage is captioned.

We have accessible and all-gender toilets on both levels, as well as access via both stairs and lifts.

If you have any other questions or feedback, please contact us at <u>mod@mod.org.au</u>



