

PEACE MACHINES – SCHOOL PROJECT

WAGING PEACE EXHIBITION

Teacher Resource Kit

April 2018



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INTRODUCTION TO MOD.

MOD. at the University of South Australia is Australia's leading future-focused museum, provoking new ideas at the intersection of science, art and innovation. MOD. aims to inspire young adults aged 15+ about science and technology with dynamic, changing exhibition programs, showcasing how research shapes our understanding of the world to inform future possibilities.

For visitors, it is a science experience like no other, a tourist icon bringing together the public, researchers, students and industry to interact, learn and be inspired - creating what is Australia's boldest, and South Australia's only, interactive public science and creativity space.

MOD. does this within seven purpose-built gallery spaces over two floors, our café, shop and lecture theatre, located on Adelaide's premier cultural boulevard, North Terrace. It also features Australia's first Science on a Sphere.

MOD. opens on 11 May 2018, with an ambitious annual program that features two exhibitions, each exploring themes at the intersection of science, art and innovation. More at www.mod.org.au.



ABOUT THE PEACE MACHINES PROJECT

MOD. is committed to fostering the participation of young people in each of our exhibitions. As part of our second exhibition, *Waging Peace* (opening November 2018), we are inviting school students to contribute to the content of this exhibition by creating either visual designs or artefacts for display in our gallery spaces, which answer the question:

What could a machine for peace look like?

Schools and/or individual students are invited to design and/or build a peace machine in response to this. Rather than being a competition, the project enables creative contributions from schools, educators and students to be featured within MOD.. The project won't be directly facilitated by MOD. but schools and individual students are welcome to choose the format of their submissions and the process they want to follow to create them.

THE OPPORTUNITY

Suitable designs and/or built peace machines will be showcased in MOD. as part of the Waging Peace exhibition.

SUBMISSION CATEGORIES:

- Secondary school team or individual student – peace machine design (2D digital or paper)
- Secondary school team or individual student – built peace machines (3D object)
- Primary school – peace machine design (2D digital or paper)
- Primary school – built peace machines (3D object)

This is not a competition but rather the MOD. team will select designs and objects for inclusion that work within our gallery space. A final decision on what is featured will be determined once designs and machines are received.

Schools are encouraged to share the design and build process on social media using the hashtag **#MODPeaceMachines** or send images directly to MOD. for sharing on our own digital channels.

THEME

Our exhibition *Waging Peace* asks the question: "Can you aggressively and proactively pursue peace?". The exhibition will explore questions like:

- What happens when we apply the frames of war to peace?
- Can you build a machine for peace?
- How do you make peace profitable?
- Can you fight for peace?

The exhibition will explore how to propagate peace by harnessing innovation and new technologies. It will explore areas commonly associated with defence and conflict including security and surveillance, defence industries, trade and robotics. *Waging Peace* will engage students in developing new ideas for a peace brand and the design of peace machines as means to inspire future possibilities.

The focus of this exhibitions is on systems, structures and technologies to drive peace rather than individual actions or personal perspectives. Areas of interest to explore include:

- Financial systems: Universal basic income, crypto-currencies, inequity, global peace index vs GDP
- Security: jobs, personal safety, state safety, cybersecurity, surveillance, big data, stability, defence, healthy futures. • Motivators: rewards, peace funds, positive news
- Science of peace: peace and conflict studies, peace scientists.
- Machines/Technologies: drones, surveillance technologies (submarines, CCTV), communication technologies, programming, collaborative robots, innovation.
- Politics and Equality: human rights, power, conflict

Waging Peace is designed to be deliberately provocative and invite young people to consider peace as an active process.



A useful starting point is the eight pillars of peace put forward by the Institute for Economics and Peace. It provides a systems approach for considering peace based on 22 qualitative and quantitative indicators from highly respected sources.

The eight pillars for peace are:



[You can read more about the pillars in this report.](#)

The exhibition will examine how peace could be imagined through a different frame, whether violence can ever be just and how we can innovate for peace.

We have provided some discussion questions and brainstorming prompts to assist students with exploring the problem. Find these tools on [MOD. website mod.org.au](http://MOD.website.mod.org.au).

WHAT SORTS OF MACHINES ARE WE AFTER?

We are interested in designs or machines that creatively explore this question through the form of a machine. Machines can be traditional mechanical objects or things that are 'machine-like'; presented as a 2-D visual design or a physical 3-D model or prototype. It might be a simple device that performs a single action, or it could be more complex.

Some examples of 'peace machines' we have been thinking of as part of this exhibition are:

- an algorithm that fights for peace,
- a student choir that is machine like in its parts and that brings people together to collaborate,
- a chair that brings you closer to someone else when you sit on it,
- a machine that forces you to look someone else in the eye to create empathy,
- a hug shirt that embraces you in someone else's virtual hug.

We are interested in ideas that move away from the normal consideration of peace (doves, flowers, peace of mind) and war (bombs, tanks, violence) to an investigation of systems and structures that create peace.



WHY GET INVOLVED?

Creating peace machines will engage students in authentic project-based learning: encouraging imaginative real-world problem-solving in a way that's fun, hands-on and can be tailored to individual students' interests.

FOR STUDENTS - PERSONAL & SKILLS DEVELOPMENT:

The project provides opportunities for students to develop many and varied skills, including:

- developing an original idea and researching information;
- developing team-work, time management and planning skills;
- considering available resources and constraints;
- testing ideas/prototypes and analysing and reflecting upon their effectiveness;
- communicating ideas through multiple modes, including written and visual/spatial modes;
- honing practical and/or technical skills through working with a particular medium or technology;
- using design thinking and processes to deliver a product.



The experience will also provide an opportunity for students to have their creative work exhibited in a public gallery space.

FOR TEACHERS - CONNECTION WITH CURRICULUM:

This open-ended question could be addressed within a range of learning areas, including (but not limited to): Arts, Design & Technology, Digital Technologies, English, HASS, Health & PE, Mathematics and Science.

Subject-specific curriculum links and possible ideas for implementation can be found on [MOD. website mod.org.au](http://MOD.website.mod.org.au).

Peace Machines invites collaboration between students and can be embraced in your school as a cross-disciplinary project. It could, for example:

- work as a theme study in Year 6;
- bring together two learning areas such as HASS and Design;
- form the basis for a student's SACE Research Project, or serve as a precursor at lower years;
- be run within an extra-curricular program (e.g. Tournament of Minds, STEM club).

Peace Machines challenges students to develop general capabilities specified by ACARA: particularly critical and creative thinking, ethical understanding, personal and social capability, and literacy; and enable consideration of the cross-curricular perspectives.

FOR STUDENTS - HIGHER ORDER THINKING & SELF-REGULATED LEARNING:

The project offers a rich context for higher order thinking and self-regulated learning; however, opportunities for learning exist beyond the above brief.

Students could be asked to reflect on their finished product: what are the limitations of their design? How could it be improved? How could they market their design to a particular audience or consumer?

Or students may be invited to consider their own learning and ways of thinking through their participation in the project.

WHAT SORT OF PROCESS SHOULD YOU USE?

Schools and students can follow their own process to develop their peace machine design or object.

MOD. encourages cross-disciplinary teams and use of a design process to guide development.

For example, a simple design thinking model that could be applied would consist of the following stages:

1. **Identify and define the problem.** What are all the problems a peace machine could try and solve? Which is the one that resonates or feels the most important? What would it look like if that problem was solved?
2. **Research the problem.** What have other people said about it? Are there other solutions?
3. **Idea generation: create a long list of ideas.** What are all the creative ways you can solve that problem? What ideas are audacious and unexpected?
4. **Design a solution.** What ideas resonate? What ideas can you prototype?
5. **Test the solution.** What works for others? What questions do people have? Have you thought of everything?
6. **Build/ iterate.** How can you turn this into something tangible? Is it working well and if not, what can be fixed?

Useful existing models that replicate this sort of process include:

- [The British Design Council's *Double Diamond* design process](#)
- [6D's of Solution Fluency](#)

We have provided some helpful brainstorming and discussion questions to explore this particular problem, as well as links to some excellent online thinking tools, which you can access on [MOD. website mod.org.au](http://MOD.website.mod.org.au).

REGISTRATION, SUBMISSION DETAILS AND KEY DATES

REGISTRATION

The project is part of our second major exhibition at MOD., WAGING PEACE: opening November 2018.

Students or schools interested in designing or building a peace machine can REGISTER ONLINE on [MOD. website mod.org.au](http://MOD.website). There is no deadline to register.

Once you are registered, you can also keep us updated with what you are working on in two ways:

1. You can email us directly at mod@unisa.edu.au
2. You can share your work on social media and tag us using our handle @modatunisa or the hashtag #MODPeaceMachines

SUBMISSION DETAILS AND KEY DATES

- Teachers' Professional Development – Waging Peace Design Thinking workshop. **Wednesday 23 May 4.30pm – 6.45pm at MOD. Register by 18 May 2018** online at mod.org.au when registering participation.
- For ALL (2D and 3D) peace machines to be considered for potential exhibition at MOD., you need to have registered your participation AND submit photos of your proposed peace machine along with a written creative / design statement (up to 150 words) by **8 October 2018 (no late submissions will be considered)**.
- Submissions to be included in *Waging Peace* exhibition will be notified by **12 October 2018**.
- Final high resolution 2-D designs for peace machines should be submitted to MOD. by email: mod@unisa.edu.au by **16 October 2018**.
- 3D Peace Machines invited to exhibit at MOD. will need to be delivered, ready for installation by **22 October 2018**.
- Please note it is the schools or students responsibility to deliver designs and machines to MOD. by deadline.
- *Waging Peace* exhibition launches in November 2018.

MOD. SUPPORT

MOD. won't directly facilitate this project – schools are instead invited to design their own programs to respond to this brief.

TEACHERS' PROFESSIONAL DEVELOPMENT

Teachers are invited to attend a special professional learning workshop on Wednesday 23 May 4.30pm – 6.45pm, onsite at MOD., featuring design practitioners and educators, who will provide ideas for supporting students through the design process and incorporating design thinking into curriculum. This will conclude with an opportunity to share and discuss ideas with other professionals and a VIP tour of MOD.

MOD. can assist schools by providing members of our team to answer questions and/or provide feedback on designs to support your development process. MOD. will also be available via email to answer any questions you have. Email: mod@unisa.edu.au.

MOD. is unable to provide additional support related to curriculum links or learning outcomes as we don't have designated education or outreach resources within our team, however you can access ideas for incorporating the project into curriculum on [MOD. website mod.org.au](http://mod.org.au).

BRAINSTORMING IDEAS AND TOOLS

MOD. has provided some brainstorming ideas and tools to assist you in starting to think about how you can use this in your classroom.

CURRICULUM LINKS

MOD. has provided curriculum links to assist you in with lesson plans and adapting this project into your subject area or to consider how it can be used for cross-curriculum.

INTELLECTUAL PROPERTY AND PUBLICITY

Intellectual Property will be retained by the school or student; however, in signing our registration form, parents/caregivers, students and teachers are allowing us a perpetual and unrestricted licence to display the work in MOD. and show images and film of the work on MOD. and UniSA digital channels.

Peace Machines may also attract media interest and MOD. will pursue opportunities to publicise the project and exhibition. We may contact participating schools and ask if teachers or students are available for comment or photo opportunities.

