

MINORS & MISSILES

WEAPONS COMPANIES IN SCHOOLS | 2022

Medical Association for Prevention of War (Australia)

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Medical Association for Prevention of War
(Australia) is a national organisation of health
professionals working to reduce the harm of
militarism and war. MAPW is the founder of
the 2017 Nobel Peace Prize Laureate, the
International Campaign to Abolish Nuclear
Weapons, and affiliate of the 1985 Nobel
Peace Prize Laureate, International Physicians
for the Prevention of Nuclear War.

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It is really hard to attract the best engineers at a defence firm.

Many fresh graduates wonder why they'd create technologies meant to kill and destroy when they can work for Apple and build really cool stuff...

Weapons industry recruiter¹



Summary

This is the second edition of *Minors and Missiles*, our report into the growing intrusion of the weapons industry into Australian STEM education.

In 2022, our researchers identified 35 STEM programs (up from 27 in 2021) associated with global weapons corporations including BAE Systems, Raytheon, and Lockheed Martin - a corporation that makes more revenue from warfare than any other weapons company in the world.

STEM programs sponsored by these companies continue to target girls and young women, young people in regional Australia, young people living near defence industry clusters, and children as young as four years old. We note a growing appropriation of climate and sustainability issues, and of creativity.

The proliferation of weapons is one of the greatest threats to peace and health in today's world. The development, trade, and use of armaments undermines human security across the globe; nuclear weapons pose a grave existential threat to all humanity. The global weapons industry profits from war and insecurity, and it is associated with corruption and human rights violations.

The intrusion of weapons companies into education is an **issue for educators**. Accepting a role for the weapons industry in schools contributes to the militarisation of our society - the belief that our political, economic, environmental and social issues can and should be resolved with military solutions.

Equally, when the commercial interests of weapons companies - and not pedagogy - shape educational policy and practice, our society suffers. The growing

influence of weapons companies, along with the Department of Defence, may also be driving a narrowing of the STEM education field at the expense of natural and physical sciences, and approaches like STEM for sustainable development.

The intrusion of weapons companies into education is a **public health issue**. Just like other harmful industries - such as tobacco, junk food, and soft drink - the weapons industry dilutes its association with harmful products, uses sophisticated strategies to influence children, and obscures the damaging effects of its products and corporate conduct.

In this year's report we analysed relevant policies of each Australian state and territory education department. While all education departments acknowledge children's vulnerability to corporate influence, and recognise a responsibility to protect children from harmful industries, Victoria and the ACT are the only jurisdictions to explicitly identify weapons or armament manufacturers as inappropriate partners for schools.

While the problem is significant, and growing, there are simple and powerful steps we can take to protect children from the influence of the weapons industry:

- Education policies can be updated to explicitly prohibit relationships with the weapons industry;
- Educators can choose not to participate in programs associated with the weapons industry;
- Public health interventions, like policies to protect children from advertising, can be extended to the weapons industry;
- Children can be empowered to understand the harms of the weapons industry, and exercise choice.

Key Facts

50%

The Australian Department of Defence is the lead agency in half of all national STEM initiatives.
Agencies responsible for the Great Barrier Reef and Agriculture lead just a fraction of all national STEM initiatives.

4

Children as young as four years old may be exposed to weapons company branding.
Programs and materials branded with weapons company logos use children's toys and characters to create positive association.

2021

Companies that make nuclear weapons - illegal since 2021 - target children through STEM.
Weapons companies involved in the production of illegal weapons of mass destruction sponsor major national STEM programs.

123 000

Australia is predicted to have a shortfall of 123 000 nurses by 2030.
Other sectors vital to society are not receiving equivalent support to engage young people.

\$2 000 000 000 000

Global military spending reached US\$2 trillion dollars in 2021.
Despite years of increased military spending, and soaring weapons company profits, global peace and security has not improved.

Weapons Companies and Influence

Major weapons companies seek to build positive brand recognition amongst Australian primary and secondary students in order to attract the 'best and brightest' young people to the weapons industry.

Engagement with very young students is the beginning of a comprehensive pipeline that extends through secondary and tertiary education.

Weapons companies recognise they have an image problem, and are competing with other industries for 'tech talent' as the pool dwindles: the number of Australian school students studying STEM in later secondary (Year 11 and 12) has flat-lined at around 10% or less, and students' science and maths results are declining or stagnating.²

Influencing young people to have a positive view of careers in the defence industry is consistently framed as a national security imperative. Without a pipeline of young people skilled to develop and produce lethal hardware and software, the defence industry argues, Australia's economy and sovereignty are at risk.

Shaping the science, technology, engineering and mathematics eco-system; promoting defence careers, and creating links between children and the weapons industry are explicit strategies of the defence industry, endorsed and frequently funded by state, territory, and federal governments.³ Students are targeted with education materials, com-

We can offer amazing career opportunities and a chance to work on very interesting projects. But young people – and young women especially – can have a negative view of the role of defence industry.

Head of HR, BAE Systems Australia⁴

petitions, exhibitions, mentorships, camps, tours, internships, subsidies, scholarships, and more.

There are no equivalent interventions in education by other industries, and little scrutiny of the effect of influence of weapons companies on children or on society. Indeed, most schools, families and children are likely not aware of the core, lethal business of the companies involved.



Illegal Weapons

Nuclear weapons are illegal under international law as of 22 January 2021.

The United Nations Treaty on the Prohibition of Nuclear Weapons became binding law for all signatories in January 2021, prohibiting the development, testing, production, acquisition, possession, stockpiling, use or threat to use nuclear weapons.

Some companies targeting children through STEM education are involved in the production of nuclear weapons components and systems.

Arms Trade and Harm

There is a direct link between human suffering and the development and trade of arms; the reduction of human suffering is a central object and purpose of the regulation of the global trade in arms.

When war breaks out, civilians account for the majority of deaths and injuries from the use of weapons. When explosive weapons - such as the laser-guided MK 82 bomb made by Lockheed Martin - are used in populated areas, up to 90% of those killed and injured are civilians.⁵

The weapons industry causes harm even without war breaking out. The weapons trade involves the sale of ammunition, drones, surveillance and tracking technology, data collection, armoured vehicles, crowd control technology, chemical agents, artificial intelligence, and more. These modern weapons serve modern, uneven, and 'hybrid' situations that don't always resemble traditional war.

Political instability and interference, disinformation, occupation, repression, coup, genocide, blockade, espionage, and military aggression are enabled by - and depend upon - the products of the arms trade, and cause harm to people.

The international trade in arms affects a wide range of human rights protected under international agreements and customary international law. These include: the rights to life; freedom from torture and other forms of cruel, inhuman or degrading treatment; liberty and security of person; freedom from slavery; freedom of thought, conscience and religion; freedom of assembly and of expression, as well as the rights to health, education, food and housing.⁶

The international arms trade is too often poorly regulated and irresponsibly managed...and contributes to human rights abuses and humanitarian harm around the world.

Stimson Center¹²

The Australian weapons industry has profited from its exports to Algeria, Angola, Burkina Faso, Burundi, Central African Republic, the Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Iran, Iraq, Libya, Mali, Myanmar, Nigeria, Saudi Arabia, Sierra Leone, Somalia, South Sudan, Sri Lanka, Sudan, Uganda, the United Arab Emirates and Zimbabwe.⁷ In each of these countries, ordinary people have variously suffered death, injury, illness, disability, displacement, trauma, and destruction of infrastructure essential to life as a result of the use of the products of the weapons industry.

There is a significant opportunity cost to society of over-investment in weapons and the weapons industry. Australia's increasing defence budget - \$575 billion over the next decade⁸ - and taxpayer subsidies for the development, manufacture, and export of weapons through state and national offsets, credit, grants, and investments diverts public money from the public good, and creates harm.

BAE SYSTEMS

BAE Systems is a major sponsor of STEM education programs, targeting children as young as four years old. Programs include FIRST LEGO League, Beacon, and Concept 2 Creation.

BAE makes fighter jets, combat vehicles, combat ships, naval guns, explosives, artillery, missile launchers, and more. BAE produces equipment for electronic warfare and is involved in the production of nuclear weapons.

Human rights groups have named BAE in a dossier submitted to the International Criminal Court. They seek an investigation into the contribution of BAE executives to serious violations of international humanitarian law in Yemen that may amount to war crimes.⁹

The dossier cites BAE's supply of arms that were used in 26 airstrikes - including attacks on schools and hospitals - which killed 135 people.

BAE is accused of facilitating exploitation of refugees in Libya through export of control and surveillance equipment.¹⁰

In 2017, parents at a Glasgow school were "horrified" by their children's participation in a BAE systems STEM workshop, telling media it was inappropriate for an arms manufacturer to be allowed into the classroom:

*"It was a glitzy and slick event...the children were mesmerised. But what [BAE] weren't showing was the true picture.. the death and misery they are causing."*¹¹

Peace and Security

Global military spending has risen every year since 2015, and in 2021 total global spending exceeded US\$2 trillion.¹³

The rise in spending has not increased peace and security.

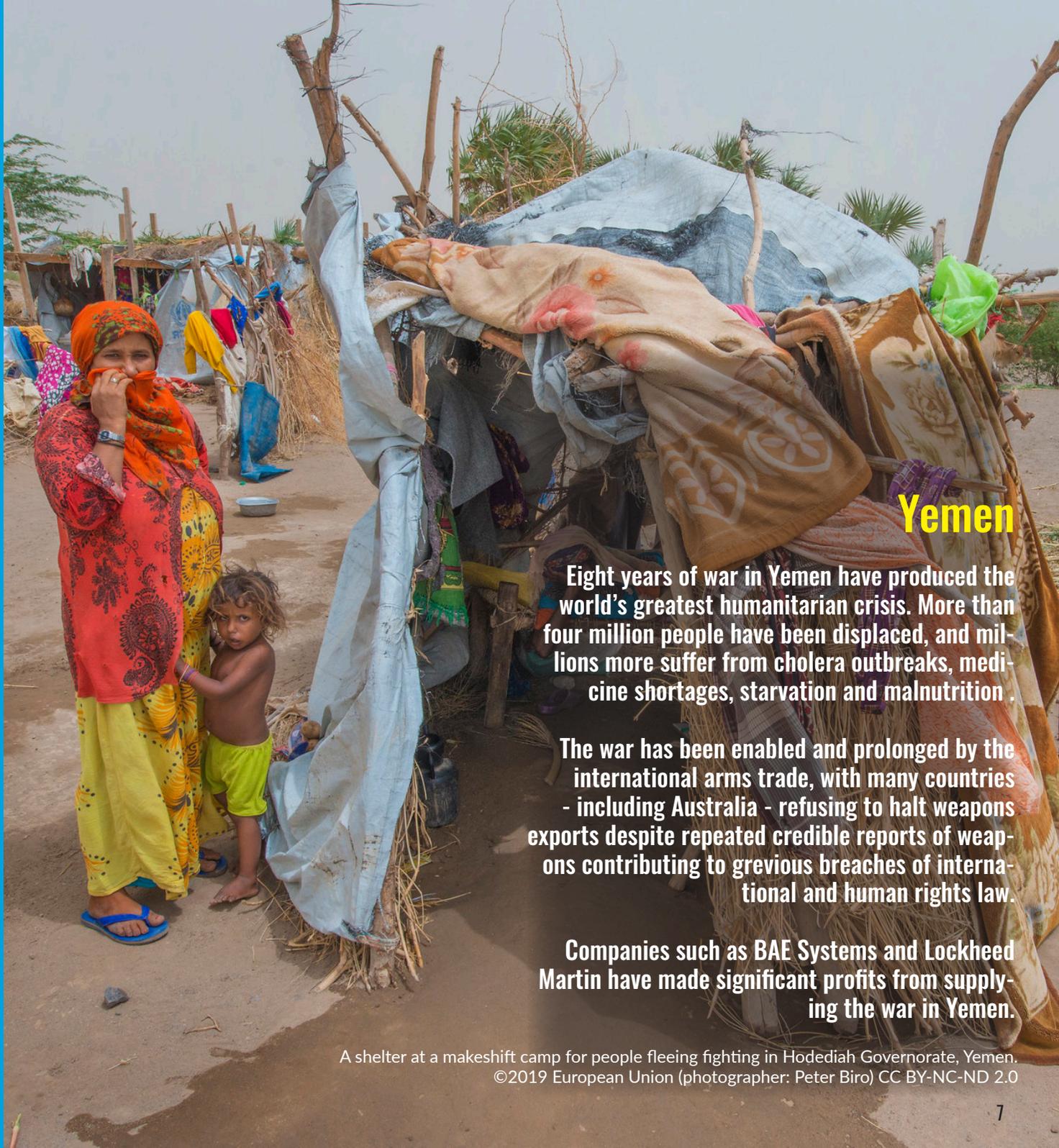
In 2021, active armed conflicts occurred in at least 46 states and most peace processes either stalled or suffered serious set-backs.

Estimated global fatalities caused by conflicts rose sharply in 2021, and other impacts of conflict - including displacement, food insecurity, humanitarian needs and violations of international humanitarian law - increased in severity.

In 2021, nuclear armed states failed to reduce their reliance on nuclear weapons; Russia and the US embarked on programmes to modernise nuclear warheads, missile and aircraft delivery systems and nuclear weapon production facilities. The UK announced that it would increase its nuclear weapon stockpile.

The combined arms sales of the world's 100 largest arms-producing and military services companies were US\$592 billion in 2021. Companies in the top 100 include major sponsors of STEM programs targeting children, such as Raytheon, BAE Systems and Lockheed Martin.¹⁴

And while military spending and profits from weapons soar, critical human needs go unmet: the world's developed nations have spent 30 times more on their armed forces than on climate finance.¹⁵



Yemen

Eight years of war in Yemen have produced the world's greatest humanitarian crisis. More than four million people have been displaced, and millions more suffer from cholera outbreaks, medicine shortages, starvation and malnutrition.

The war has been enabled and prolonged by the international arms trade, with many countries - including Australia - refusing to halt weapons exports despite repeated credible reports of weapons contributing to grievous breaches of international and human rights law.

Companies such as BAE Systems and Lockheed Martin have made significant profits from supplying the war in Yemen.

A shelter at a makeshift camp for people fleeing fighting in Hodediah Governorate, Yemen.
©2019 European Union (photographer: Peter Biro) CC BY-NC-ND 2.0

Corporate Playbook

Just like other harmful industries - such as tobacco, junk food, and soft drink - the weapons industry dilutes its association with harmful products, uses sophisticated strategies to influence the public and obscures the damaging effects of its products and corporate conduct.

The arms industry is understood by researchers of corporate behaviour to be a stigmatised industry that is susceptible to public disapproval.¹⁶ The industry itself recognises this issue: a 2020 Ministry of Defence survey of the UK weapons industry found that businesses recognised a “perception problem” related to the “moral and ethical perceptions” of their industry.¹⁷ And in a 2012 study, researchers found people working in weapons companies routinely lied about their job or employer to avoid stigma:

“Now when I deal with strangers I don’t tell them anymore that I design weapon systems. I just say I am a mechanical engineer.”¹⁸

Stigmatised industries have been shown to use a range of sophisticated and coordinated corporate strategies - a ‘corporate playbook’ - to protect their interests and promote products detrimental to health.¹⁹

These strategies are known as commercial determinants of health, and include things like marketing, lobbying, influencing, and corporate responsibility strategies.²⁰

Influencing the knowledge and political environment, shaping educational and regulatory policies,

capturing civil society through think tanks, alignment with charitable causes are specific examples of strategies used by harmful industries to advance their interests at the expense of public health.

Weapons companies also use a common tactic to protect their brands from disapproval: diluting their association with weapons and their uses.

For example, companies will emphasise their non-lethal or non-military products, and promote secondary civilian applications. In 2016, Rheinmetall Defence - an arms manufacturer - announced its integration with Rheinmetall Automotive, “to pave the way for a new public perception of the enterprise as a whole.” A company representative told media that:

“In the past, Rheinmetall’s civilian operations especially, for instance, as a supplier of components for the automotive industry, have frequently been overshadowed by the public perception of the military equipment sector of Rheinmetall Defence.”²¹

And in 2022, financial news service Bloomberg reported that the CEO of Honeywell International - a US producer of nuclear weapons - “lamented” the way the company’s manufacturing of N95 masks in response to the pandemic was ‘overshadowed’ by its defence business.²²

In STEM education programs, weapons companies focus on socially acceptable applications of technology, like robots, AI, aerospace and the like, to avoid stigma and encourage positive brand association.

And just like tobacco companies, weapons companies minimise the facts about, and displace responsibility for, the harm their products cause: in 2022 the board of Lockheed Martin recommended share-

Many corporate actors invest extensive resources in influencing public policy-makers to make decisions which advance their immediate commercial and financial interests at the expense of the health and wellbeing of many people in society...

Public Health Association of Australia²⁴

holders vote against proposals for improved human rights due diligence, saying that governments are responsible for human rights and that increased diligence would affect its ability to do business.²³

Corporate Strategies

Weapons companies use a range of sophisticated and coordinated corporate strategies to protect their interests and promote products detrimental to health.

Influencing the policy environment	The ‘revolving door’ between weapons companies and government gives companies an advantage. For example, Brendan Nelson is a former education minister and defence minister, who had a leadership role at Boeing whilst on the Australian War Memorial council.
Shaping educational policies	Weapons companies have direct influence over STEM education programs, such as the Defence & Industry STEM Study Course in Victoria, a program developed by the defence industry, targeting Year 9 students and focussed on “Defence-themed problems”.
Capturing civil society	Think-tank the Australian Strategic Policy Institute (ASPI) provides ‘independent’ advice on defence spending and military strategy, and is part funded by major multinational weapons companies.
Alignment with charitable causes	Weapons giant BAE Systems partnered with children’s charity the Smith Family. The charity’s STEM programs and Christmas toy drive bore the BAE brand. Lockheed Martin sponsors the Australian War Memorial.
Extensive supply chains	Australian subsidiaries of weapons giants are wholly-owned by their multinational parent corporations. They receive money from the Australian government to increase the number of businesses, universities and research organisations in their local supply chains.



Lockheed Martin is a major sponsor of STEM education programs, including Code Quest and the National Youth Science Forum. Lockheed Martin is involved in the production of nuclear weapons, fighter jets, autonomous systems, laser weapons, missiles, and bombs.

Lockheed Martin has been involved in more instances of corporate misconduct in the US in recent decades than any other weapons contractor, including influence peddling and anti-competitive and fraudulent activity.²⁵

In August 2018, dozens of children were killed, and many more injured, in Yemen when a busload of school children was hit by a missile made by Lockheed Martin.²⁶ Lockheed Martin weapons have been used repeatedly by the Israeli military on densely populated civilian areas of Palestine, resulting in thousands of civilian casualties, large groups of them children, potentially amounting to war crimes.²⁷

A 2019 Amnesty International report found that Lockheed Martin lacks human rights due diligence procedures to effectively identify, assess, prevent, mitigate, and remediate its human rights impacts, in contravention of obligations under the UN Guiding Principles on Business and Human Rights (UNGPR).²⁸

Brands and Children

Adults need to protect children from exposure to harmful brands.

Children as young as three years old can recognise brands, and from about seven years of age they can form brand preferences.²⁹ But even into adolescence, children don't have the skills to critically assess the intentions behind persuasive marketing tactics, or understand what the brand really represents. This means that children can be strongly attached to a brand in spite of the actual product or services it provides.³⁰

A study into children's perceptions of unhealthy food brands found that brand exposure was related to positive perceptions. When children saw unhealthy food brand advertising, they perceived the brands to have positive attributes - even when they knew the food was unhealthy.³¹

Positive experiences with a brand - like a STEM workshop - are an important part of creating brand association. Frequent exposure to a brand, exposure at an early age, and exposure in influential contexts - like school - have also been shown to play a role in the development of positive brand association.³²

Positive brand association leads to the formation of attitudes, beliefs, and perceptions about a particular brand, and can influence behaviour in relation to the brand.

STEM programs sponsored by weapons companies expose children to weapons brands in a highly positive context, and use messages of achievement,

Children are an especially vulnerable group that require additional protection when it comes to advertising and marketing communications directed to them.

Australian Association of National Advertisers³⁴

self-fulfillment, creativity, inspiration, innovation and connection.

These positive messages and experiences are branded: advertising and recruitment for STEM programs may feature weapons company logos; participants may receive certificates or trophies branded by weapons companies.

Company logos may feature in event and exhibition spaces, or on collateral like program materials or staff or volunteer uniforms. In some programs, weapons company employees participate as coaches or mentors for students.

Young people may be photographed with weapons company logos, or with company representatives. Lockheed Martin maintains the personal data, names, and images of Code Quest participants for up to six years, and uses them to promote "event-related" material as well as any "promotional material published by Lockheed Martin".³³

Children and their families are likely not properly informed of the companies' core business, or the humanitarian impacts of their products, and so cannot give 'informed consent'.



Informed consent requires participants to have full understanding of *who* they are giving consent to, and any potential *consequences* of giving consent. For example, children photographed with a weapons company logo may inadvertently have their name and image associated with a company accused of war crimes, breaches of human rights law or international humanitarian law, corruption, corporate misconduct and other ethical issues.

Raytheon

Raytheon is the second biggest weapons company in the world.

Raytheon is involved in the production of illegal nuclear weapons, and makes missiles and precision-guided munitions, hypersonic and laser weapons, surveillance drones, armoured vehicles, and the Active Denial System, known as the 'pain ray'.

Raytheon is a sponsor of Maths Alive, and the Advanced Technology Industry School Pathways Program.

Raytheon missiles have been linked to over a dozen attacks on Yemeni civilians, including the 2016 bombing of a Sana funeral hall, and a 2022 attack described by the United Nations as the worst civilian-casualty incident in recent time.³⁵

Raytheon products have been used against Palestinian people, and are deployed by US border police to surveil and repel people seeking asylum.³⁶

Setting the Agenda

The weapons industry and Australian Department of Defence exert significant influence over the STEM education ecosystem.

In the context of declining student engagement with and performance in STEM, the weapons industry claims to be at risk of being unable to meet workforce and skills demands, with knock-on risks for Australian security.

The defence department administers initiatives and programs such as the Defence Industry Skilling STEM Strategy, Defence Industry Skills Support, Skilling Australia's Defence Industry Grant Program, Defence Industry Internship Program, School Pathways Program, Defence Industry Pathway Program and National Defence Industry Skills Office.

The Australian Department of Defence is the lead agency in approximately 50% of STEM initiatives at the national level, including initiatives by Defence Science and Technology, the Department of Home Affairs, the Australian Security Intelligence Organisation and the Australian Signals Directorate.³⁷

By contrast, the Antarctic Division is the lead agency for 1.35% of STEM programs, the Great Barrier Reef Authority 2.7% of programs, and Department of Agriculture 8.11%.³⁸

Defence priorities therefore play an outsized role in setting the national STEM agenda.

The influence of defence priorities may play a role in the increasing emphasis, in the national STEM education agenda, on mathematics and digital technologies³⁹ at the expense of natural and physical sciences, agriculture and environmental science, and of approaches to science like Education for Sustainability or Education for Sustainable Development.⁴⁰

Data suggests that the demand for skills, including STEM skills, in the health sector could be greater than the demand in the weapons industry.⁴¹ Indeed, the federal Department of Health and Ageing predicts a shortfall of approximately 85,000 nurses by 2025, and 123,000 nurses by 2030.⁴² Yet there is no equivalent strategy to engage young people and foster interest in careers in health, or other fields critical to our survival and well-being – such as renewable energy, or water and food security.

Research by Brown University shows war-related spending in the US between 2001 - 2016 did not generate broader economic benefits, and was a poor lever for job creation.⁴³

A 2017 global study also showed that increased military spending has negative impacts on a country's economic growth. This was true over time, and across different countries with varying GDPs. Analysis of countries over a 20-year period showed that an increase of 1% in military spending caused a 9% fall in economic growth.⁴⁴





HANSEL & GRETEL ACTIVITY

TO DO:

Can you help finish our story? We need you to do two things:

1. To write step-by-step instructions to get Gretel home.
2. To build a parachute or similar contraption to drop the instructions onto a 'target' i.e. the witch's house.

ACTIVITY INSTRUCTIONS: WHAT WILL CHILDREN BE DOING?

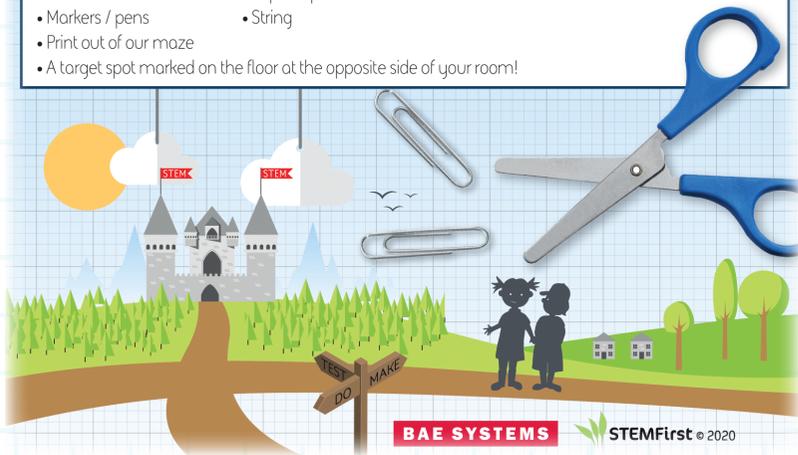
For this activity you need to do the following:

1. Use our maze to write step by step directions to get from the Witch's house back home. Test them and make sure they are right! You need directions and number of steps!
2. Mark a target or spot on the floor. This is the Witch's house where Hansel is trapped. Stand at the other side of the room and then work out how to get the instructions accurately to land on the target. You cannot just throw them! Think about how you could build a device to drop the directions onto the target. Maybe you could build a parachute or a catapult or something else?

Work with your children to design, build and test a solution. Allow your children to demonstrate how their solution works, telling you what they did and what they used. Writing instructions and communicating ideas is very important when you are an engineer!

RESOURCES IN HANSEL'S POCKET COULD INCLUDE:

- Tape
- Lolly sticks
- Tissue paper
- Elastic bands
- Markers / pens
- Print out of our maze
- A target spot marked on the floor at the opposite side of your room!
- Scissors
- Balloons
- Plastic / paper cups
- Paper clips
- String



JACK & THE BEANSTALK ACTIVITY

TO DO:

There are lots of STEM challenges you can undertake in this story! You could:

1. Make a contraption to pick up an egg from a distance
2. Make something to help Jack escape quickly
3. Make something that would help Jack protect the egg as he drops it down the beanstalk. He doesn't want it to smash on the ground.

Here are some suggestions for activity number 3.

ACTIVITY INSTRUCTIONS: WHAT WILL CHILDREN BE DOING?

In this activity, children will act as engineers in order to help Jack get his egg down the beanstalk.



RAPUNZEL ACTIVITY

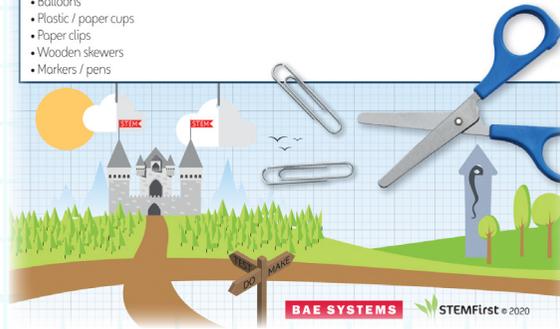
TO DO:

Rapunzel is stuck in the tower. She needs to escape. Can you use the items in Rapunzel's Tower to help her get down safely?

RESOURCES IN HER TOWER COULD INCLUDE:

Use the following to build something to help her get out of the tower. These are just suggestions – just use items you have available.

- Paper or card
- Tape
- Scissors
- Lolly sticks
- Balloons
- Plastic / paper cups
- Paper clips
- Wooden skewers
- Markers / pens



ACTIVITY EXAMPLE

TO DO:

The Gingerbread Man needs a boat, help build one for him?

Design 1

Design 2

30 x 1p

Still floating!

Sunk!

Winner!!!

Sunk!

Work in pairs and have a competition.

TIP: Think about....how sturdy and watertight your boat is. Can it take passengers?

TAKE CARE:

In all of these activities please make sure you are working safely. Please have fun but supervise your children to make sure your environment is safe and you take care with any craft equipment or materials you are using. Engineers and Scientists always do!

BAE Systems has developed branded education materials targeting very young children.

‘Engineering Fairy Tales’ appropriates familiar characters to deliver STEM stories and challenges. Hansel and Gretel, Jack and the Beanstalk, and the Gingerbread Man are just some of the children’s characters to feature in BAE -branded materials.

Accompanying videos are voiced by “STEM Ambassadors from BAE Systems, the Royal Navy, British Army and RAF.”

A 2022 program called Beacon, developed by BAE in association with Australian company Lumination, appropriates the issue of sustainability to appeal to students in years 4-6. A Lumination spokesperson claimed that the program content “links directly to ...the United Nations Sustainable Development Goals.”

Launching the Beacon program, BAE Systems Australia CEO, Ben Hudson said that the goal of Beacon was to “keep students engaged in their education and raise awareness of future career opportunities.”⁴⁵

And like many STEM programs associated with weapons companies, Beacon has appropriated both substantive and emotive issues to promote itself, claiming to be focussed on “diversity and inclusion” and to develop skills in “inclusivity, honesty... boldness and goal-setting”.

Education Policy

Australian state and territory education departments provide some guidance to schools about partnerships with harmful industries.⁴⁶

States and territories generally require public schools to only enter into partnerships with organisations that reflect “educational values”.

Education departments also acknowledge children’s vulnerability to corporate influence, and recognise a responsibility to protect children from harmful industries, but Victoria and the ACT are the only jurisdictions to explicitly identify weapons or armament manufacturers as inappropriate partners for schools.

However, it is not clear how closely partnerships are monitored by education departments, and how well existing policies protect children in practice. For example, despite the prohibition on partnerships with armament manufacturers, ACT schools appear to participate in STEM programs sponsored by weapons companies.

Some education departments prohibit association with companies that make illegal products, but companies that produce nuclear weapons - which are illegal under international law - continue to be able to influence children.

Overall, education departments can best fulfill their duty of care to children by explicitly prohibiting association with companies that make weapons, and more closely monitoring corporate interference.

AUSTRALIAN CAPITAL TERRITORY

Existing Australian Capital Territory education policy should prevent weapons companies from targeting children.

The Corporate Sponsorship procedure states that any “company or organisation whose name is associated with the manufacture, distribution or sale of tobacco products, alcoholic beverages, pornography or armaments is not regarded as an appropriate sponsor.” It appears that this policy is being breached as a matter of course.

The Australian Capital Territory education department collects some information about which companies have access to children in schools, and how often, but overall does not adequately protect children.

NEW SOUTH WALES

Existing New South Wales education policy should prevent some weapons companies from influencing children.

New South Wales policy does not permit “collaborations with organisations that promote unhealthy food, tobacco, alcohol products, gambling products, or anything illegal.” Given that nuclear weapons are illegal under international law as of January 2021, companies involved in the production of nuclear weapons should rightly be prevented from targeting children in New South Wales. It appears that this policy is being breached as a matter of course.

The New South Wales education department does not have any information about which companies have access to children in schools, or how often, and overall does not adequately protect children.

In correspondence, the education department said it took breaches of policy “seriously” and would consider the recommendation to add weapons, armaments, and munitions to the list of harmful products “in the next review of the policy in 2023.”⁴⁷

NORTHERN TERRITORY

The Northern Territory education department “does not support sponsorship from certain groups which includes lobby groups” and schools must not “facilitate the promotion of political activities.”

There is no specific prohibition on association with harmful industries, no policy to prevent weapons companies from influencing children, and the department does not have any information about which companies have access to children in schools, and how often. Northern Territory policies overall do not adequately protect children from harmful influence.

QUEENSLAND

The Queensland education department prohibits partnerships with the sex industry, gaming or gambling, tobacco products, alcohol, drugs, or religion.

The department doesn’t monitor partnerships, and has no information about which companies have access to children in schools. Overall, Queensland policies do not adequately protect children from harmful influence.

SOUTH AUSTRALIA

South Australia endorses the interference of weapons companies in education and receives funding from the School Pathways Program.

The South Australia education department requires schools to avoid educational materials that are “likely to be regarded as offensive or obscene by the school community.” The department advises

schools to consider if educational materials may be controversial, and offer alternatives, but does not say what controversial materials are.

South Australia has no policy to prevent weapons companies from influencing children, and does not have any information about which companies have access to children in schools, and how often. Overall, South Australian policies do not adequately protect children from harmful influence.

TASMANIA

Existing Tasmanian education department policy implicitly recognises the risk of normalisation of violence and desensitisation to weapons, but does not fully protect children from being targeted by weapons companies.

The education department has the expectation that schools “reflect community expectations about exposure to violence and aggression” and policies give reference to avoiding harm. Policy prohibits primary school students from engaging in simulated violence and weapons-based games such as paintball and laser tag. Older children can participate in these activities where there is educational value, but must not be photographed holding weapons.

In correspondence, the Minister for Education expressed an understanding of the importance of “protecting children from influence of weapons companies”, and wrote that Tasmanian government schools would not “knowingly engage with companies associated with the production of weapons or nuclear weapons”.⁴⁸

Tasmanian education policy can be strengthened by explicit prohibitions on association with weapons companies to better protect children from harmful influence.

VICTORIA

After advocacy from the Medical Association for Prevention of War, the Victorian education department amended its sponsorship policy to state that schools must not use teaching and learning resources created by “inappropriate organisations” for classroom use, and to include companies involved in the sale or promotion of weapons on its list of inappropriate organisations.

WESTERN AUSTRALIA

The Western Australian education department endorses the interference of weapons companies in education.

The department receives \$600 000 per year for the Marine Industry Schools Pathway Program, whose purpose is to “increase the pool of young people” pursuing defence industry careers. Thales, BAE Systems and SAAB participate in the program.

However, the Incoming Sponsorship policy explicitly recognises the risk of brand association to children in that it does not permit sponsors “to require students to personally market, promote or display products, brand names and/or logos as part of sponsorship arrangements between schools and corporate and other enterprises”, including prohibiting students being required to wear “sponsor logos/brands on clothing”.

The department collects some information about which companies have access to children in schools, and how often. Overall, Western Australia policies do not adequately protect children from harmful influence.



Merchants of Death

The epithet ‘Merchants of Death’ originated in the 1930’s. It was the title of an article about WW1 arms dealer Sir Basil Zaharoff, and of a 1934 book exposing the arms industry written by H. C. Engelbrecht and F. C. Hanighen.

The book is an “attack on those who would use government to profit themselves at the expense of other people’s lives and property.”

The phrase is now commonly used to refer to arms dealers in general, as well as other industries - like tobacco and fossil fuels - that profit from harmful products while withholding information from the public.



Change Happens

Speaking up about weapons companies and their influence does make a difference.

In December 2020, Medical Association for Prevention of War brought national media attention to BAE System's partnership with children's charity The Smith Family: the charity soon announced the partnership had "concluded."

And in 2018, BAE was forced to withdraw its sponsorship of a UK arts festival after featured artists quit in protest over the association.⁴⁹ An Italian weapons company terminated its sponsorship of the UK National Gallery a year early following protests.⁵⁰

After prolonged pressure and a public campaign, the Australian War Memorial removed BAE Systems branding from a public theatre in the memorial. MAPW's work has also successfully brought the issue of weapons companies and influence to the Australian parliament, and is changing education policies on the issue.

Solutions and Actions

SPREAD THE WORD

Most schools, families, and students are likely not aware of the core business of the companies that sponsor STEM programs. These companies obscure their core business, dilute their association with weapons, focus on socially acceptable uses of STEM, and use a 'corporate playbook' to influence the public.

But by sharing information about the issue of weapons companies and their attempts to influence children, we can prevent harm. Share this report with your school, school council, or education union, with your fellow students or parents, local politician, or education department and ask for a commitment to action for the protection of children, and to reduce the role of harmful influences in education.

UPDATE POLICIES

Most Australian education departments recognise they have a duty of care to protect children from exposure to harmful industries. By updating state and territory policies on sponsorship, corporate partnerships, and learning materials to explicitly prohibit association with or exposure to weapons companies, children can be better protected. Policies are regularly reviewed and updated, and advocacy from teacher unions, school councils, parent groups, and students can produce real results.

Because schools can also have discretion over engagement with external providers, schools may adopt their own internal policies or procedures to

protect children from harmful exposure to weapons companies.

EXERCISE CHOICE

While some of the big-name STEM programs have been captured by weapons companies, there are many STEM programs that are focussed on 'tech for good', and that *don't* have associations with harmful industries. Search starportal.edu.au for alternative programs near you.

Schools can exercise choice, and opt to participate in programs that don't cause harm to students, or serve weapons companies' self-interest. Even better, schools can let their favourite STEM programs know that any association with harmful industries is a big problem.

EXTEND PROTECTION

Rejecting corporate influence plays an important role in the prevention of harm to children.

In Australia, there is broad public support for public health interventions to protect children, like legislation to limit children's exposure to junk food or alcohol advertising. Similar protective interventions can be applied, society-wide, to weapons companies. For example, preventing weapons companies from partnering with charities or sponsoring public institutions, like the Australian War Memorial, may help to limit their influence.

EMPOWER STUDENTS

Children want to have a say in the issues that affect them, and exercise control over their lives. Allowing children to be fully informed, asking for their informed consent, and permitting children to exercise choice about their own exposure to influence is important.

List of Programs

The following programs had one or more weapons or defence industry companies listed as a sponsor or partner between February and May 2022. The list is not exhaustive, as new programs are regularly launched, and sponsorship arrangements can change. We recommend checking program websites carefully, and inquiring with organisers about partnership arrangements.

- ASC Robot Rumble
- Beacon
- Creativity in Research Engineering, Science and Technology (CREST)
- Code Quest
- Concept 2 Creation
- Cyber Taipan
- Engineering Is Elementary
- Engquest
- First Lego League
- First Robotics Competition
- iSTEM (Regional Development Australia)
- Lockheed Martin Australia (LMA) Engineers in the Classroom
- ME Program
- National Engineering and Science Challenge
- National Youth Science Forum
- Port Adelaide Football Club Power Of STEM Program
- Port Adelaide Football Club Community Youth Program
- Raytheon Australia Playford International College STEM Academy Scholarship
- Regional Development Australia (RDA)/Hunter ME Program

- Robo Cats
- Robo Girls
- Science Alive
- Science Assist
- Space Camp
- STEM Camp
- STEM Day Out
- Thales And Tech Schools Design Competition
- The Ultimate STEM Event 2022
- World Solar Challenge
- YMCA Space Squad
- World Solar Challenge
- YMCA Space Squad
- Young Space Explorers

STEM programs delivered under the following initiatives are also associated with weapons companies:

- Defence Industry Skilling STEM Strategy
- Defence Industry Skills Support
- Defence Industry Internship Program
- Defence Industry Pathway Program
- National Defence Industry Skills Office
- Pathways in Technology
- School Pathways Program
- Skilling Australia's Defence Industry Grant Program
- STEM Professionals in Schools

FIRST LEGO League

In Australia, First LEGO League is run in partnership with Macquarie University, and is sponsored by Boeing and BAE Systems.

Boeing is the third largest arms company in the world, making more than \$33 billion from weapons in 2021. Boeing makes bombs, munitions, attack aircraft, bombers, drone subs, autonomous systems and surveillance technology.

First LEGO League targets children from 4 to 16 years old. The program offers “playful introduction” to STEM through LEGO products, progressively providing more complex engineering and coding competitions.

In 2021-2022, Boeing had naming rights over the competition theme, known as *Rapid React presented by The Boeing Company*.



List of Companies

The following companies were associated with STEM education programs between February and May 2022. The list of companies is not exhaustive, as new programs are regularly launched, and sponsorship arrangements can change. We recommend checking program websites carefully, and inquiring with organisers about partnership arrangements.

AIRBUS

Airbus, headquartered in the Netherlands, is involved in the commercial aircraft, helicopter, defence, security and space sectors. Airbus is the exclusive provider of ballistic missiles used in the French nuclear arsenal. Airbus is the main contractor for M51 submarine launched ballistic missiles.

In 2020 Airbus was ordered to pay US\$3.9 billion in penalties to regulators in France, the UK and the US after being found guilty of “systematic and deliberate conspiracy”, admitting to bribery and a “years-long campaign of corruption around the world”, as well as breaches of disclosure regulations on US arms export reports.⁵⁶

Involved in: Australian Youth Aerospace Association

ASC

ASC Pty Ltd is wholly-owned by the Commonwealth and delivers shipbuilding and sustainment for Australian submarines and warships.

Involved in: ASC Robot Rumble, Subs in Schools

BAE SYSTEMS

See page 5

Involved in: Schools Pathway Program, ME Program, STEM day Out, Beacon, First Lego League First Robotics Competition, Concept 2 Creation

BOEING

See page 14

Involved in: ME program, YMCA Space Squad First Lego League, First Robotics Competition Above and Beyond, Aerospace Gateway Program, Regional Development Australia

LOCKHEED MARTIN

See page 8

Involved in: STEM Day Out, ME Program National Youth Science Forum, Code Quest, School Pathways Program, LMA Engineers in the Classroom, Science Alive, Young Space Explorers, National Engineering and Science Challenge

NAVAL GROUP

Naval Group is headquartered in France and produces warships, submarines, nuclear submarines and underwater weapons.

Involved in: Port Adelaide FC Power of STEM, Port Adelaide FC Community Youth Program Science Alive, STEM Day Out



Thales and Tech Schools Design Competition

Thales is headquartered in France with a footprint in every Australian state and territory. Thales is involved in the production of illegal nuclear weapons, as well as munitions, weapons, surveillance technology, and armoured vehicles.

Thales targets young people in Victoria in a design competition “linked to the Thales vision to ‘make life better and keep us safer.’”⁵¹

In 2022, Thales was linked to the exploitation of refugees in Libya through export of control and surveillance equipment.⁵² The company is also named in a 2019 complaint submitted to the International Criminal Court, alleging Thales’ criminal responsibility for supplying arms used in potential war crimes in Yemen.⁵³

In July 2018, a group of international, French, and Egyptian NGOs published a report accusing Thales of profiting from Egypt’s military crackdown on dissent through its supply of technology capable of implementing mass surveillance.⁵⁴

Thales products are sold to Indonesia and are alleged to have been used to repress and target West Papuan people.⁵⁵

NORTHROP GRUMMAN

In 2020 Northrop Grumman sold US\$30.4 billion worth of weapons. Northrop Grumman is involved in the controversial arms trade, military training, and border surveillance systems. The company supplies weapons to Saudi Arabia, the United Arab Emirates, India, Israel, Morocco, and Colombia.

Northrop Grumman is involved in the production of illegal nuclear weapons, and is the largest single nuclear weapons profiteer, with at least US\$24.3 billion in contracts, not including consortium and joint venture revenues.⁵⁷

Involved in: Northrup Grumman Foundation Teachers Academy, Space Camp, STEM Camp, Cyber Taipan

RAYTHEON

See page 10

Involved in: Maths Alive, Engineering is Elementary School Pathways Program, Raytheon Australia Playford Scholarship

SAAB

SAAB is involved in the ongoing maintenance and development of nuclear armed missiles for the French nuclear arsenal. Produces submarines, military subsystems, weapons and next-generation aircraft.

Involved in: Port Adelaide FC Power of STEM, Subs In schools, Science Alive.

THALES

See page 16

Involved in: ME Program, Creativity in Research, Engineering, Science and Technology, Schools Pathway Program, Thales and Tech Schools Design Competition

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