

# APPENDIX 1 MOD. Peace Machines Schools Project

## TOOLS FOR APPROACHING THE PROBLEM

Below is a range of question prompts and ideas designed to help students explore the problem.

### 1: Thinking about peace

**AIM:** *Identify problems associated with peace*

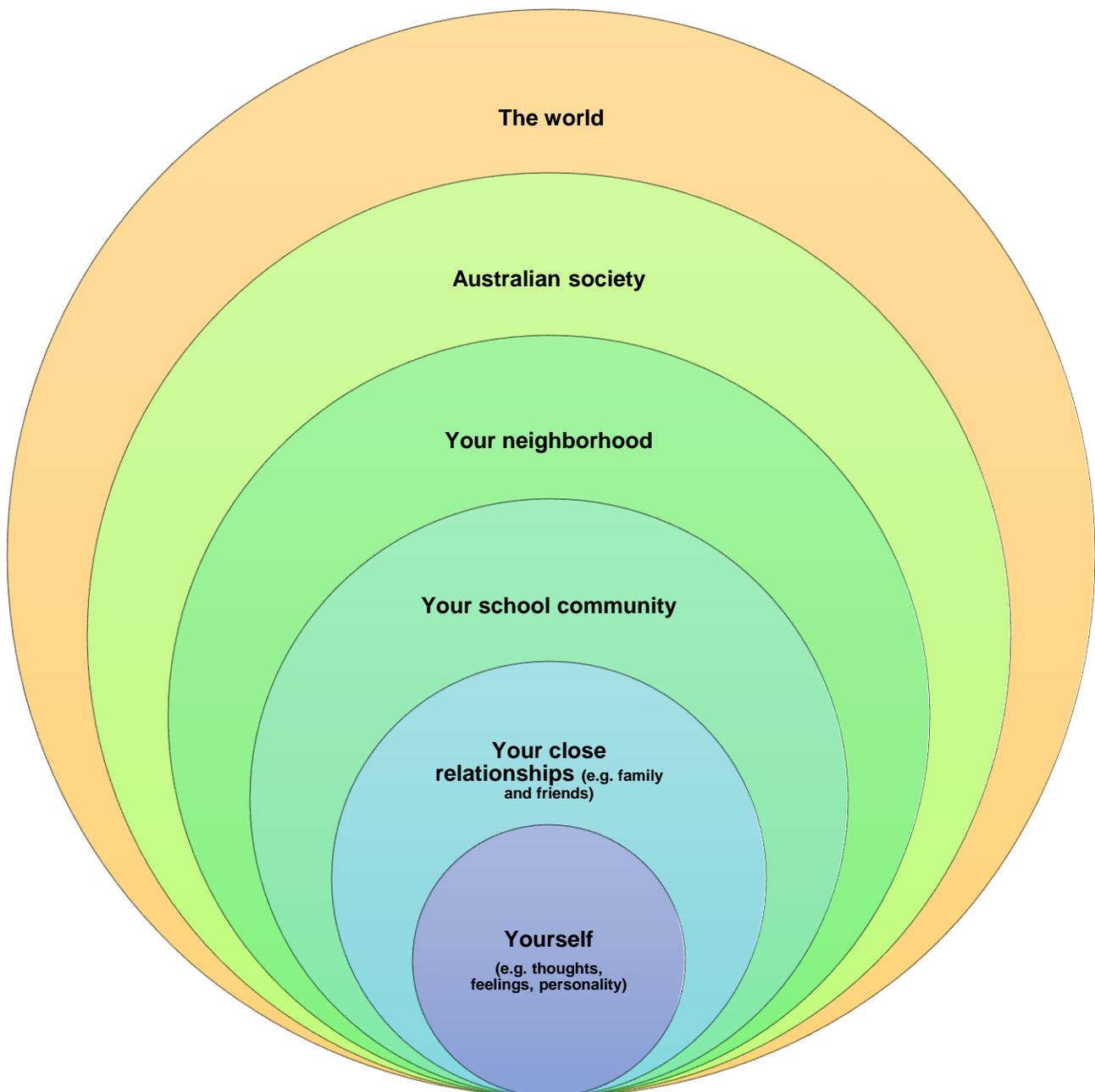
**For all year levels (primary and secondary):**

Possible prompt questions for brainstorming/discussion.

- Come up with as many synonyms (alternate words) for peace as you can. What about antonyms (words meaning the opposite) of peace?
- If peace is more than just the absence of war, what other things could it be?
- Does everyone need to agree with each other for peace to exist? Why/why not? (Consider conflicting values, opinions)
- Is economic prosperity (being wealthy) necessary for peace?
- Is equality necessary for peace? Why/why not?
- Are common goals necessary for peace? Why/why not?
- Come up with a list of basic statements that all parties would agree on in a given conflict.
- What are the likely barriers to peace in any given conflict?
- How has technology either enabled or inhibited peace? Think about technology throughout history and more recent advances.

The diagram below could be used to help individuals or student groups to map their various ideas about peace and/or problems identified.

**What does peace look like and/or what barriers to peace can you identify in:**  
yourself, your close relationships, your school community,  
your neighbourhood, Australian society, the world?



**For middle school/secondary students:**

- The eight pillars of peace, put forward by the Institute for Economics and Peace provides a systems approach for considering peace based on 22 qualitative and quantitative indicators from highly respected sources.

You can read more about the pillars in this report.



- Select one of the pillars, and suggest ways that a society brings about the desired outcome. What can you identify as barriers to these?
  - Rank each of the eight pillars in order of what you believe is most important to the creation or development of peace.
  - What are the things you believe our society achieves? Where do you believe society falls short?
- For use within various subject domains...
    - How does the work of prominent figures in your discipline (e.g. scientists, artists, historians, writers, designers, sports people) help bring about peace?
    - How have discoveries, creations or ideas in your discipline helped bring about peace? How might they have aided discord, hatred, violence, conflict?
  - French poet and diplomat Paul Claudel (1868-1955) said "We must not seek happiness in peace, but in conflict." What does this mean to you? What forms of conflict support peace?

## 2. Conceptualising machines

**AIM: Establish what a machine is, or could be.**

**For all year levels (primary and secondary):**

- List as many different machines as you can.

What, essentially, do various machines do? You could consider the primary function of a machine as it's main job, and secondary functions as those smaller actions which contribute to the primary function.

e.g. A dishwasher

Primary Function	Secondary Function(s)
<b>Restore</b> dirty dishes to original, clean condition	heating water, filling machine, dispensing detergent, agitating or moving water about the machine, draining, drying.

Can a machine have more than one primary function? E.g. a sewing machine **repairs** damaged clothing and **creates** new clothing from new or used material.

Think of as many machines as you can: in the kitchen, bathroom, office, on the road, building sites, garden, sporting field, hospitals, schools, airports....

What are their primary and secondary functions?

- How would you define a machine?

Now look up a dictionary definition of the word "machine.

*e.g. Oxford English Dictionary defines a machine as: "An apparatus using mechanical power and having several parts, each with a definite function and together performing a particular task".*

How is similar/different to your definition?

- Can you think of things that function like a machine (i.e. have component parts) that are not physical objects?

*[This qn is designed to get students thinking beyond the traditional idea of a machine as a mechanical device; to consider systems – e.g. political, economic, governmental, ecological.]*

## Other tools/techniques

There are many tools and frameworks available to get students thinking about an issue and generating new ideas. They may involve forcing a connection between two seemingly unrelated ideas (associative thinking) or may be about modifying an existing idea.

1. Techniques like reverse thinking, in which the opposite question is instead explored, can yield effective solutions and also be a lot of fun. E.g. instead of generating ideas about how to make a playground safer, we could ask how it could be made more dangerous.
2. SCAMPER is a creative thinking technique designed to help solve problems and formulate solutions from existing ideas. You could consider individual parts or functions of the machine or consider it as a whole, as you apply each action / verb to your machine or system.

E.g. In small groups of around 6, Apply the SCAMPER technique to transform a semi-automatic machine gun into an instrument of peace?

S	<i>substitute</i>	What materials or ideas could be swapped or substituted?
C	<i>combine</i>	Which aspects could be combined to create something new?
A	<i>adapt</i>	How could the work or idea be adapted to serve another use?
M	<i>modify</i>	What could be added to improve the work or idea, what aspects could be highlighted?
P	<i>put to another use</i>	Can the work or idea be used for another purpose altogether?
E	<i>eliminate</i>	Which elements could be eliminated or how can the work be simplified?
R	<i>reverse</i>	What does the exact opposite of the idea, goal or solution look like?

Adapted from DIY Toolkit

<http://diytoolkit.org/media/DIY-Toolkit-Full-Download-A4-Size.pdf>

## **Useful thinking tools and resources online.**

Harvard Project Zero's Agency by Design, focuses on maker-centred learning, providing useful tools or "thinking routines" for exploring and brainstorming around complex systems, and complement any design framework.

The DIY Toolkit provides simple, quick strategies "to invent, adopt or adapt ideas" and generate solutions for meeting goals for social development.