# Community of Inquiry: First World War

YEAR 5, 7, 8 AND 9

# Future Makers

Future Makers is an innovative partnership between Queensland Museum Network and Shell's QGC business aiming to increase awareness and understanding of the value of science, technology, engineering and maths (STEM) education and skills in Queensland.

This partnership aims to engage and inspire people with the wonder of science, and increase the participation and performance of students in STEM-related subjects and careers — creating a highly capable workforce for the future.

*Cover image: Australian troops wearing respirators in the advance trenches. Fred Port Collection. © QM, Peter Waddington.*

# Community of Inquiry: First World War
## Teacher Resource

In this activity, students participate in a community of inquiry to consider the ethical implications of scientific and technological knowledge within the context of the First World War.

The community of inquiry is a structured, dialogic process that requires participants to ask open inquiry questions, listen and think, share ideas and consider alternative viewpoints. Problematic issues and concepts are discussed collaboratively within a supportive learning environment where all views are considered and respected. Reflecting on thinking is integral to the process.

The following engagement protocols are used during the community of inquiry process, and these should be displayed for all students to see:

- Listen attentively

- Build on and connect ideas

- Respect self, others and place

- Disagree reasonably and respectfully

- There may be many responses considered to be correct

Detailed step-by-step instructions for this activity can be seen below. It is recommended that you use these instructions to guide your students through the activity as a class.

1. Ask students to brainstorm the various ways in which science and technology were used during the First World War. Students may examine the images used in the previous activity to gather some initial ideas. Students may also need to conduct additional research to assist in the completion of this activity. Examples could include:

   - Communication technologies

   - Chemical warfare

   - Artificial nitrates

   - X-rays

   - Underwater acoustics

2. Circle any suggestions that exemplify the tensions between the 'use and abuse' of scientific and technological knowledge during the First World War. Explore these suggestions further by completing the following table:

| Use of Science/ Technology | Advantages | Disadvantages | Questions Arising |
| --- | --- | --- | --- |
| | | | |

3. Share the following quotes with students. Quote 1 should be supplied to Years 5, 6 and 7 students. Quotes 1 and 2 should be supplied to Year 8 and 9 students. Students should be provided with time to consider, interpret and discuss the quotes with their peers.

### Quote 1

*"… technological capabilities, while they may in some sense be morally neutral, have a profound moral impact."*

Agar, J. [UCL Lunch Hour Lectures]. (2014, July 1). Science and the First World War [Video File]. Retrieved from *https://www.youtube.com/watch?v=oA1hMahtSKQ*

### Quote 2

*"… in scale and in intensity alike, this war represents the results of the totality of scientific progress – it is the realisation of all that which the accumulated powers with which science has endowed mankind can effect when used for destruction."*

Moulton,J.F. (1919). Science and War. The Rede Lecture. Cambridge: Cambridge University Press.

4. Ask students to consider the quotes and any earlier discussions before responding to the following questions. Please note:

- Not all questions should be used in a single community of inquiry activity. Instead, select the questions that best suit your purpose and student group.

- Ensure engagement protocols are shared and discussed with students prior to engaging in the community of inquiry.

- When answering questions, students should always provide reasons for their responses.

A 'values continuum' can also be used to implement this activity. After sharing the engagement protocols, pose a question to the student group. Provide students with time to silently consider and reflect on the question, before sharing their thoughts with a partner. Following this, invite students to stand along a continuum ranging from strongly agree to strongly disagree. Students then discuss why they decided to stand where they did along the continuum with the group. After listening to the responses of their peers, provide students with an opportunity to change their position along the continuum. Students who do change their position along the continuum should discuss why they decided to make this change.

## Community of Inquiry Questions

- What do these quotes convey about the connections between scientific/technological progress and war?

- Can scientific/technological capabilities be considered morally neutral when used in the context of war? Why/why not?

- What might have occurred if the use of scientific/technological advances were restricted by government at the time of the First World War?
  In what ways might this have affected the outcomes of the First World War?

- Should society aim for scientific/technological progress, regardless of the possible consequences of its use?

- Prior to the First World War, the scientific communities had started to openly share ideas/scientific theories internationally. Could it ever be considered ethical for a nation to use the ideas of others in ways that might cause harm (such as for the purpose of a war victory)?

- Is science/technology solely responsible for the atrocities of the First World War? **(Year 8/9)**

- Do you think it was ethically sound that the accumulation of world-wide scientific/technological knowledge was utilised for the purpose of destruction during the First World War? Why/why not? **(Year 8/9)**

- Consider whether the appropriation of this collective knowledge during the First World War be considered abuse of power if it was used for:
  o Mass destruction
  o Protection of a country and its people **(Year 8/9)**

- Are the above purposes essentially same or different? Why do you think that? **(Year 8/9)**

- If scientific/technological progress was made through the atrocities of war, do you consider it ethical to build on/utilise that knowledge for general use after the war had ended? **(Year 8/9)**


## Future Impact:

- When considering the current scientific/technological advances that have been made throughout the world to date, what impact do you think this might have if a third world war was to occur?

- Does this alter your previous thinking about the connections between scientific/technological progress and war?

- In what ways might the extent/type of scientific advancement impact on the ethics of its use during a war? **(Year 8/9)**

# Reflection

- What was your key 'take away' from this discussion today in relation to the progression of science/physics/technology and its ethical considerations?

- How might you use your thinking and learning from today's discussion in the future?

- What further questions has this discussion elicited for you in relation to science/physics/technology?

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# Curriculum Links

## General Capabilities

### Literacy
Comprehending texts through listening, reading and viewing

### ICT Capability
Investigating with ICT

### Critical and Creative Thinking
Inquiring: Identifying, exploring and organising information and ideas

Reflecting on thinking and processes

### Personal and Social Capability
Social awareness

### Ethical Understanding
Understanding ethical concepts and issues

Reasoning in decision making and actions

### Intercultural Understanding
Interacting and empathising with others

# Community of Inquiry: First World War
## Student Activity

| Use of Science/ Technology | Advantages | Disadvantages | Questions Arising |
|---|---|---|---|
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