



# AUSTRALIA

## Lesson 5: AI in Different Careers and Industries

2024 SENIOR PROGRAM

LESSON PLAN

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# Lesson 5: AI in Different Careers and Industries | 60 mins

## Lesson Summary

In this lesson, students investigate the intersection of AI and various industries. They explore the concept of a business, identify key stakeholders, and categorise well-known Australian companies into major industries. Through research and group discussions, they investigate how AI is currently impacting different industries and envision its future role. Students analyse AI's potential benefits for stakeholders like customers, employees, and owners, while considering associated risks. By the end, they present their findings, offering recommendations on responsible AI use across diverse sectors, fostering critical thinking and industry awareness.

## Objectives

- Students will explore **Societal Impact**, the fifth **Big Idea of AI**
- Students will develop a basic understanding of what a business is
- Students will learn who the key stakeholders in businesses are
- Students will learn about the largest industries in Australia
- Students will consider careers they may be interested in
- Students will do research on a business they are interested in
- Students will learn how AI is impacting different businesses and imagine how AI may be used in the future to help business stakeholders

## Curriculum Alignment

This lesson is linked to the following [Australian Curriculum \(Version 9\)](#) content descriptors:

- **Years 7 and 8**
  - [AC9TDE8K01](#): analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments.
  - [AC9TDE8K02](#): analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures.
  - [AC9TDE8K04](#): analyse how food and fibre are produced in managed environments and how these can become sustainable.
- **Years 9 and 10**
  - [AC9S9H04](#): examine how the values and needs of society influence the focus of scientific research.
  - [AC9TDE10K01](#): analyse how people in design and technologies occupations consider ethical, security and sustainability factors to innovate and improve products, services and environments.
  - [AC9TDE10K02](#): analyse the impact of innovation, enterprise and emerging technologies on designed solutions for global preferred futures.
  - [AC9TDE10K04](#): analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises.

## Vocabulary

- **Business**, n. an organisation engaged in commercial activities
- **Commercial**, adj. making or intending to make a profit
- **Profit**, n. a financial gain, especially the difference between the amount earned and the amount spent in buying, operating, or producing something
- **Industry**, n. a group of businesses that produce a particular kind of goods or services
- **Stakeholder**, n. a person, group or organisation with a vested interest, or stake, in the activities of a business
- **Shareholder**, n. a person or group of people who own a share in a business

## Resources

- [Presentation Slides for lesson](#) (available on website once logged in)
- Videos: How AI has impacted different industries today
  - [Using AI to Help the Blind & Visually Impaired](#)
  - [Building a More Sustainable Food System](#)
  - [Robots in Sports](#)
  - [Using AI to Help Farmers Increase their Yields](#)
- [Introducing Space Cows video](#)

## Activity Steps

1. **1 min.** Introduce **Societal Impact** as the fifth ‘big idea’ of AI.
2. **2 mins.** Ask the students if they know what a business is and have them call out names of businesses they have heard of. Write the names of the different businesses on a board that everyone can see. If the students don’t mention them, make sure to add Bunnings Warehouse, Kmart, Coles, Bupa, Qantas, ANZ, Woolworths and Ten Entertainment.
3. **3 mins.** In pairs, ask students to spend 3 minutes discussing the following points on what makes something a business. Then, ask some or all of the pairs to share their thoughts.



What are the goals of a business and why are businesses set up?



Is their school a business? Why or why not?



Is a vending machine a business?



**EXTENSION QUESTIONS:** What do you think the goal of an “AI Company” is? Why do you think “AI Companies” exist?

4. **2 mins.** Have the students look at their definition and then the list of businesses that are on the board and ask them what is similar across the businesses they have listed.



Why do you think some businesses are successful and some are not?



What do you know about the businesses that are listed and other businesses?

5. **1 min.** If it isn’t mentioned by one of the students, explain that every business has three key stakeholders:

- a. Customers
- b. Employees
- c. Owners/shareholders

6. **3 mins.** Define these three key stakeholders and ask the students what each of the stakeholders wants from a business.

- a. Customers want better and less expensive products and services
- b. Employees want high salaries, more benefits, and better work conditions
- c. Owners want more profits

Make sure to point out that not all these goals are necessarily aligned. For example, customers want lower prices and for businesses to stay open for longer hours, while owners want more profits and employees want to work shorter hours

7. **2 mins.** Now ask the students what is different about the businesses listed. If it doesn't come up, point out that the businesses listed are in different **industries**.

8. **3 mins.** Ask the students if they know what an "industry" is, and then share with them the major industries in Australia (healthcare, mining, construction, finance, retail, tourism, and food).

9. **3 mins.** Group the names of the businesses into the different industries in Australia. Feel free to add any other well known Australian businesses in these industries. Make sure the students understand what each of these industries is and what businesses in those industries do.

10. **3 mins.** Ask the students if they are already a stakeholder (they almost certainly are!). Discuss the following questions from each of the stakeholder perspectives below:



**As a customer:** What companies do they (or might they) buy things from?



**As an employee:** What industry do they (or might they) work in?



**As an owner:** What industry do they (or might they) want to own?



**EXTENSION QUESTION:** Can you be a stakeholder in a business even if you don't buy anything from them or actively use their services?

11. **5 mins. CASE STUDY:** Agriculture is an example of an industry in Australia being affected by AI. Play the video to learn how Microsoft and the CSIRO are using space technology (another growing Australian industry), local Indigenous knowledge and AI to manage feral buffalo and cattle herds in the northern parts of Australia.

12. **10 mins.** Play the videos showcasing how AI has impacted different industries today:

- a. [Using AI to Help the Blind & Visually Impaired](#)
- b. [Building a More Sustainable Food System](#)
- c. [Robots in Sports](#)
- d. [Using AI to Help Farmers Increase their Yields](#)

13. **2 mins.** Break the students into smaller groups by the industry they are most interested in. If there is an industry a student is interested in that is not listed, you can add it to the board and write down some businesses that are in that industry.

14. **8 mins.** Set the students a research task. Ask the students if they can think of any ways AI might already be impacting businesses in the industry they are interested in.

- a. Make sure groups also consider the different stakeholders of those businesses and how AI may:
  - i. Be able to produce better products for customers
  - ii. Make work easier and safer for employees
  - iii. Increase profits for shareholders

15. **8 mins.** Continuing on from the previous research task, give the smaller groups time to research how AI is currently impacting the industry they are interested in and come up with ways AI might impact that industry in the future. Encourage students to be imaginative and far-reaching when considering new ideas, ensuring that they can explain how those ideas would be in the interest of the stakeholders.

Make sure groups also consider the risks associated with AI to the businesses in their chosen industry. Remind students of the general risks they have learned about AI and how that may impact their chosen businesses in the following ways:



Could AI make employees redundant?



Could AI show bias in product creation or hiring?



Could AI lead to significant change in their industry so that their business was no longer relevant or profitable?

16. **4 mins.** Bring the students back to present their research and new ideas to their classmates. Based on the time remaining in class, give each group an equal opportunity to talk about:

- The ways AI is being used in their chosen industry today
- The ways they think AI may be used in their industry in the future, and why
- The risks AI poses for their industry going forward



17. **EXTENSION TASK.** If there is time remaining, put together a list of recommendations on how businesses in different industries could and should use AI in the future, and how they should avoid some of the risks of AI, based on feedback from the full class.

**END OF LESSON PLAN**