

Ebola epidemic in the DRC

Lesson Map: <http://esriaustralia.com.au/education/SpatialActivity55>

Engage

What is Australia's current population?

- Click on the URL above to open the web map. A topographic map centered on Australia is evident. Under the 'Details' pane, click 'Content' and turn on the *Australian population – 2018* layer.
- On the map, click on the layer (green) to enable an information box.
- ? What was Australia's 2018 population? [*24,992,369*]
- ? How much has it increased since 2008? Hint: search the information box. [*3,743,170*]
- Visit the [Population Clock](#) hosted on the Australian Bureau of Statistics website.
- The Population Clock is live and is updated multiple times each day. It records Australia's growing population, birth and death rates, and immigration and emigration rates.
- ? What is Australia's current population? In your response, note the date. [*Answers will vary*]

Explore

What reasons contribute to the distribution of Australia's population in the states and territories?

- Return to the map. Under the 'Details' pane, click 'Content' and turn off the *Australian population – 2018* layer. Turn on *State populations – 2018*. Click the 'Legend' tab to understand what the different colours represent.
- ? Why do you think Australia's Eastern states have the highest populations? [*These states were the first to be discovered and heavily colonised; more suitable climate*]

Download student worksheet [here](#).

Time

35 minutes

Activity

Investigate Australia's key population statistics for 2018.

Learning Outcome

Students will be able to:

- Identify key population statistics
- Examine patterns and trends between Australia's growing population and statistical data
- Understand general factors that are contributing to Australia's changing population characteristics

ACARA Curriculum Link

[Year 12 Geography – Managing population change – Population challenges in Australia](#)

Teacher Feedback:

To share your feedback on this, or any Spatial Activity, please contact education@esriaustralia.com.au

Acknowledgements:

All data has been sourced from the [Australian Bureau of Statistics](#).

and more available agricultural lands; large cities that act as economic hubs]

- ? What reasons may contribute to the Northern Territory and Tasmania having the lowest populations? *[Northern Territory – largely arid land, very little rainfall, desert region; Tasmania – physically smaller in area compared to other states, cold climate, separated from mainland Australia]*
- ? Despite the ACT being over 28 times smaller in area to that of Tasmania, its population is only approximately 100,000 less. What reasons may contribute to this? *[The ACT / Canberra is the political and governmental hub of Australia; there are many federal government-funded jobs in the territory; Parliament also resides there]*

Explain

How have Australia's births and fertility rates changed over time?

- Under the 'Details' pane, click 'Content' and turn off *State populations – 2018*. Turn on *Registered births by state – 2018*. Click the 'Legend' tab to understand what the different symbols represent.
- ? In 2018, what state / territory had the highest amount of births? What state / territory had the lowest amount of births? *[NSW – 105,463 ; NT – 4,051]*
- Under the 'Details' pane, click 'Content' and turn off *Registered births by state – 2018*. Turn on *Change in registered births from 2017 to 2018*. Click the 'Legend' tab to understand what the different colours represent.
- ? What observations can you make about the relationship between states and territories, and registered birth rates in 2017 and 2018? *[There was a decrease in registered births in WA, ACT, TAS and VIC from 2017 to 2018. There was an increase in registered births in the NT, QLD, NSW and SA from 2017 to 2018]*
- ? Why can this be considered surprising considering Australia's population has been steadily increasing? *[A steady increase in Australia's population would suggest that registered births would increase from year to year across all states and territories]*
- Under the 'Details' pane, click 'Content' and turn off *Changes in registered births from 2017 to 2018*. Turn on *Fertility rates – 1975*. Click the 'Legend' tab to understand what the different colours represent.
- Fertility rates measure the average number of children per woman. A fertility rate of 2 means that an adult couple have essentially replaced themselves in a population but have not increased the population.
- ? Which state or territory had the highest fertility rate in 1975? Which state or

territory had the lowest fertility rate in 1975? *[NT – 2.85; SA - 2]*

- ? What was the average fertility rate across all states and territories in 1975? HINT: Add each fertility rate together and divide by the total number of states and territories. Don't forget the ACT. *[2.24]*
- Under the 'Details' pane, click 'Content' and turn off *Fertility rates – 1975*. Turn on *Fertility rates – 2008*. Click the 'Legend' tab to understand what the different colours represent.
- Turn off *Fertility rates – 2008*. Turn on *Fertility rates – 2018*. Toggle between the three *Fertility rates* layers as required in order to respond to the following questions.
- ? As you toggle between 1975, 2008 and 2018, what patterns and trends emerge? *[Despite a general population increase in Australia, fertility rates have been slowly decreasing. As the data progresses to more current years, fertility rates in all states and territories, except for the NT, have fallen below 2; This suggests that Australians aren't replacing themselves]*
- ? What may have contributed to the decrease in fertility rates? *[Answers will vary but may include: Families continue to separate from the concept of the traditional family unit – husbands are breadwinners, wives are stay-at-home mothers; females have entered the workplace and are pursuing career interests and pathways, which in turn contributes to less time for children or a later start to child-bearing]*
- ? If fertility rates are below 2, what may be contributing to Australia's steady population increase? *[A higher immigration rate as foreigners move from abroad and make Australia home]*

Extend

What role is life expectancy playing in Australia's population increase?

- Under the 'Details' pane, click 'Content' and turn off all layers. Toggle the following layers on and off as necessary: *Female life expectancy – 2018* and *Male life expectancy - 2018*. Click the 'Legend' tab to understand what the different colours represent.
- How does Australia's high average life expectancies, for both females and males, contribute to population growth despite a clear decrease in registered births and fertility rates? *[Due to developments in health and Australia's standard of living, people can live to a higher average age. Death rates have decreased due to people*

living longer, which in turn plays a role in Australia's population increase]

- Extra feature layers (*Deaths by state – 2018, Distribution of death as a percentage – 2018 and Australian Snapshot data – 2018*) have been incorporated to allow for further investigation.

Next Steps:

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