# Statistics

## Year 10 maths

### Australian curriculum Learning objectives

* [ACMSP253](http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACMSP253)[[1]](#footnote-1) Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative [data](http://www.australiancurriculum.edu.au/Glossary?a=M&t=data)[[2]](#footnote-2)

### Resources required

* [World Statistics Day video](http://www.youtube.com/watch?v=piSCkkSvoMo&cc=1)[[3]](#footnote-3) (duration: 6 minutes) including facilities to watch video streamed on the Internet.
* News articles:
  + [Alarm over 175m education gap for vulnerable](http://www.smh.com.au/opinion/political-news/alarm-over-175m-education-gap-for-vulnerable-20120321-1vka5.html)[[4]](#footnote-4)
  + [Moree hospital helps to close the gap](http://www.moreechampion.com.au/news/local/news/general/moree-hospital-helps-to-close-the-gap/2502330.aspx)[[5]](#footnote-5)
  + [Give us a job: baby boomers ‘talent’ going to waste](http://www.heraldsun.com.au/business/worklife/give-us-a-job-baby-boomers-talent-going-to-waste/story-fn7j1dox-1226330598570)[[6]](#footnote-6)
* Student computers

Lesson outcome: Students learn about the relevance of statistics in their lives.

#### Lesson outline:

1. Introduce the concept of statistics as an important component of contemporary society. Use questioning to check that students have a basic understanding of what statistics are.
2. Introduce the World Statistics Day video by explaining that it provides an overview of statistics, and that although it is focussed on the United States, it remains useful for Australian context.
3. Play World Statistics Day video.
4. As a class, create a mindmap which brings together the information students have gained from the video. Direct students to focussing on the following:
   * How do statistics come about?
   * Why do we need statistics?
5. Provide students with the links to the news reports listed above. Students then read articles as individuals, before choosing one of the articles to focus on in pairs.
6. Each pair must then identify the statistical component of their chosen article and investigate the origin of this component. This may lead students to finding the Gonski Report or searching the Australian Bureau of Statistics website, for example. Students should look closely at what they find and answer the following in their notebooks:

* Did you find that the claims made in your news article were accurate?
* Write a summary of the statistics relevant to your news story.
* Why do you think these statistics are useful?

1. Arrange students into three groups according to the three different news articles. Students then share the answers they have developed.
2. A representative from each of the three groups should then provide a short oral overview of their group’s work.

### Homework/extension

Students should each explore a component of the [Australian Bureau of Statistics website](http://www.abs.gov.au/websitedbs/d3310114.nsf/Home/Home?OpenDocument)[[7]](#footnote-7). They should be prepared to report back on their allocated aspect of the site.

### Opportunity for further activity

Students could consider other online articles about the value of statistics such as, [Mind your confidence interval: how statistics skew research results[[8]](#footnote-8).](http://theconversation.edu.au/mind-your-confidence-interval-how-statistics-skew-research-results-3186)

1. <http://www.australiancurriculum.edu.au/Curriculum/ContentDescription/ACMSP253> [↑](#footnote-ref-1)
2. <http://www.australiancurriculum.edu.au/Glossary?a=M&t=data> [↑](#footnote-ref-2)
3. <http://www.youtube.com/watch?v=piSCkkSvoMo&cc=1> [↑](#footnote-ref-3)
4. <http://www.smh.com.au/opinion/political-news/alarm-over-175m-education-gap-for-vulnerable-20120321-1vka5.html> [↑](#footnote-ref-4)
5. <http://www.moreechampion.com.au/news/local/news/general/moree-hospital-helps-to-close-the-gap/2502330.aspx> [↑](#footnote-ref-5)
6. <http://www.heraldsun.com.au/business/worklife/give-us-a-job-baby-boomers-talent-going-to-waste/story-fn7j1dox-1226330598570> [↑](#footnote-ref-6)
7. <http://www.abs.gov.au/websitedbs/d3310114.nsf/Home/Home?OpenDocument> [↑](#footnote-ref-7)
8. <http://theconversation.edu.au/mind-your-confidence-interval-how-statistics-skew-research-results-3186> [↑](#footnote-ref-8)