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Statistically Australian

Lesson plan description

The students discuss what being Australian means to them and then explore the diversity of Australian society by examining the Australian Bureau of Statistics (ABS), 2006 Census - Basic Community Profiles.

Working in teams, they download the appropriate spreadsheets from the ABS website and use the software to calculate percentages and create graphs to compare the data on Australia-wide, State and regional levels.

Students discuss the requirements to compare data then develop suitable questions to compare their own class with the ABS data. They conduct a survey of class members and use spreadsheets to collate and display this data in graphical form and then compare it with Australian Bureau of Statistics data.

The class discusses how the statistics the students gathered and ABS statistics fit with their earlier picture of what being Australian means to them.

Each team takes on a role as a community representative and prepares a report on future planning needs of their community, based on the statistics gathered which they present to the class

Year levels

Early Adolescence (12–15 years)

Explicit values focus

- Freedom
- Respect
- Understanding, tolerance and inclusion
- Fair go

Key Learning Areas

- Mathematics
- Technology

Lesson plan

Getting started

Organise the class into teams of 4 to 5 students and allow them 3 minutes to brainstorm ideas on what being Australian means to them. Each group should appoint a facilitator whose task is to keep the discussion to the topic and to ensure all team members have an opportunity to speak and be heard, a recorder whose job is to record all ideas offered during the brainstorming session and a timekeeper whose job is to monitor the time taken and make sure the team completes the job in the time allowed. All team members must contribute to the discussion.

Teams record their brainstorms on butcher's paper or on individual Post-It notes and then display them so the whole class can see them.

Discuss similarities and differences between the teams' ideas and reach consensus on what they believe being Australian means.

Record this as a statement on the whiteboard.

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Discovering

Students are to research the ABS data in the Basic Community Profiles of the Australian Bureau of Statistics webpages at

http://www.censusdata.abs.gov.au/ABSNavigation/prenav/ProductSelect?&collection=Census&period=2006&breadcrumb=P&&navmapdisplayed=true&textversion=false.

Or they can use the following path:

1. Go to the Australian Bureau of Statistics' web site at http://www.abs.gov.au.
2. Click on the Census data on the left-hand side.
3. Click on the 2006 Community Profiles link on the page.

In teams, students download the following spreadsheets.

1. Basic Community Profiles for the whole of Australia from http://www.censusdata.abs.gov.au/ABSNavigation/prenav/ViewData?subaction=-1&producttype=Community%20Profiles&areacode=0&action=401&collection=Census&textversion=false&breadcrumb=PL&period=2006&javascript=true&navmapdisplayed=true&
2. Basic Community Profiles for their State/Territory from http://www.censusdata.abs.gov.au/ABSNavigation/prenav/PopularAreas?ReadForm&prenavtabname=Popular%20Locations&type=popular&&navmapdisplayed=true&javascript=true&textversion=false&collection=Census&period=2006&producttype=Community%20Profiles&method=&productlabel=&breadcrumb=PL&topic=& . They select the appropriate State/Territory and when directed to the State's/Territory's page, click on the Basic Community Profile link and download the spreadsheet.
3. Basic Community Profile by Location Name (Postal Areas) from http://www.censusdata.abs.gov.au/ABSNavigation/prenav/ProductSelect?newproducttype=Community+Profiles&btnSelectProduct=Select+Location+%3E&collection=Census&period=2006&areacode=&geography=&method=&productlabel=&producttype=&topic=&navmapdisplayed=true&javascript=true&breadcrumb=P&topholder=0&leftholder=0&currentaction=201&action=104&textversion=false. Enter a location name or postcode. You may prefer to use the name of your local government area. Select the location, select product, select Community Profiles, select View Community Profiles, click the Basic Community Profile link and download the spreadsheet.

(Alternatively, the teacher can download the relevant worksheets and make them available to students via the school's intranet or on CD, or as a whole class interactive whiteboard task.)

Teams explore the different worksheets by clicking the tabs at the bottom of the page and choose those they think give the best picture of what an Australian is.

Some suggested worksheets are:

- B05 – Ancestry by birthplace of parents
- B07 – Birthplace by regions
- B08 – Language spoken at home
- B10 - Religious affiliation
- B17 – Family type

- B32 – Household type

As a class, discuss the need to have the same type of questions for making comparisons, and then have the teams collaborate to devise suitable questions to ask class members so they can compare their class with the ABS statistics.

Teams then share tasks so that some team members analyse the ABS data while others survey the class and analyse the data they obtain.

For the ABS data students download the chosen worksheets and insert extra columns to convert the numerical data to percentages.

For the class survey, students design a suitable spreadsheet to collate their data and calculate percentages. (Students with advanced spreadsheet skills could enter responses directly into the spreadsheet and then use functions such as 'COUNTIF' to collate data.)

As a class, discuss the different types of graphs that can be used to display data, and their suitability, and then have students use the spreadsheet charting functions to prepare suitable graphs of the data they analysed.

The teams then discuss their graphs and the picture they present of Australia, comparing the ABS statistics with those of the class in light of the statements recorded earlier in the lesson.

Bringing it together

Teams make their presentations to the class. Follow up with a whole class discussion on how the statistics students gathered fit or do not fit with their earlier picture of what being Australian means to them.

Each team then takes on a specific role such as

- Principal of a local school in the area
- Recreation officer
- Health adviser
- Religious adviser
- Youth group leader
- Property developer

and outlines recommendations for resources and facilities required for the future planning of their area.

Teams decide on a suitable means to display their findings, prepare a report that includes graphs of statistical data, and present it to the class.

Individually, the students complete the following questions:

- How did the planning respect the needs of the various groups of people?
- In what ways did the planning reflect understanding, tolerance and inclusion of the various groups of people? Can you suggest further ways to enhance understanding and tolerance of inclusion of the various groups?
- Do you think all groups of people would have freedom to live in this community? Why or why not?

Notes for teachers

The Basic Community Profiles provide detailed census data in Excel formatted tables. They can be downloaded free of charge and include information on ancestry, education, computers and Internet usage, family type, housing circumstances and other important characteristics in Australia-wide, State/Territory, local government and postcode areas.

Help for navigating the ABS pages is available at
http://www.abs.gov.au/AUSSTATS/abs@.nsf//web+pages/Census+Data

Related activities can be obtained from the Schools Catalogue information Service (SCIS) website at
http://www.curriculum.edu.au/SCIS/connections/cnetw06/57census.htm

The ABS Australian CensusAtSchool web pages at
http://www.abs.gov.au/websitedbs/cashome.nsf/Home/Home contain further activities.

Please note that details for postcode areas are only available for NSW towns – teachers may suggest that students who need this information for towns outside NSW, refer to data of a similar town in NSW to their town.

In designing this activity it is assumed that students have the following skills in using Microsoft Excel:

- Copy worksheets
- Insert columns into worksheets
- Use formulas to calculate percentages
- Use charting functions to produce graphs.