

### Activity Title:

# 1c - Population distribution and density

(Parts of this activity were adapted from Cubitt, Irvine and Dow, *Top Tools for Social Science Teachers*, 2000)

### Learning outcome(s):

- Explore the concept of population distribution.
- Investigate how and why people are spread across the landscape.
- Understand some of the causes and effects of population density.

### Key words:

Population; population distribution; population density

### Materials:

- 1c Population Distribution and Density PowerPoint slides
- PowerPoint projector, computer, screen, internet connection (and Google Earth)
- Fishbone template
- Paper and pens

### Approximate time required:

Activities are broken into 20 minute segments. Each numbered activity below takes approximately 20 minutes.

### Suggested prior learning:

1a Western Bay of Plenty sub-region – population change over time

### Possible learning activities:

NOTE: Review the PowerPoint slides before showing them to students.

#### *Fishbone activity*

1. (This activity was adapted from one developed by Cubitt, Irvine and Dow, *Top Tools for Social Science Teachers*, 2000). Review the PowerPoint slides before showing them to students. Break into small groups. Provide each group with a copy of the fishbone template (following these instructions). Direct half the groups to focus on establishing the causes of dense populations, the other half to focus on the causes of sparse populations. To start, write the focus at the head of the fish (dense or sparse population density). Use information from PowerPoint slides to write a heading related to focus on each rib of the fish. For example, for sparse and dense population density one heading might be 'relief'. On each riblet provide

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#### Curriculum Level:

Level 5 / 6

#### Curriculum Links:

##### **Social Science Achievement objectives**

**6.2** Understand that natural and cultural environments have particular characteristics and how environments are shaped by processes that create spatial patterns.

**5.4** Understand that people move between places and how this has consequences for the people and the places.

#### Curriculum:

##### *Key competencies:*

*Thinking*

*Principles:*

*Future focussed*

*Values:*

*Innovation, inquiry and curiosity*

#### Geographic Key Concepts:

Change; Environments; patterns

#### Geographic skills:

Patterns, Map & table interpretation

#### Māori geographic concepts:

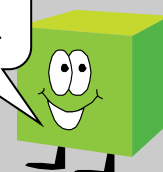
Whakanohonoho

#### Assessment opportunities:

Geography Achievement Standards: 1.2, 2.2, 3.2, 1.6, 2.6, 3.6, 2.5, 3.5

#### Sustainability tip!

Double side any handouts.



specific examples relating to the heading on the rib. (For example, for sparse population density under the heading relief, examples might include steep land such as Southern Alps, Himalayas...). To conclude have the students present back to class to summarise their key findings.

#### *PowerPoint slides discussion and activity*

2. Review the PowerPoint slides before showing them to students. Show the PowerPoint slides and work through the discussion questions and activities described in slides 1-17.

#### *Google Earth activity*

3. Open Google Earth. Spend time scanning the earth to view sparsely and densely occupied places. Then complete the activity on slide 18.

#### *Figure comparison*

4. Print slides 20, 21 and 22. Have students compare the tables on slides 20 and 21 and complete the activity on slide 22 of the PowerPoint. Share and discuss the answers from each group for this activity as a class.

#### *Quiz and discussion*

5. Complete the quiz on the final slide of the PowerPoint. And then take time to discuss:
  - Why do you think people originally chose those reasons to live in our town or district? What were the original motivating factors? Consider for example, natural factors and cultural factors?
  - How have the reasons why people choose to live here changed over time?
  - How do you think the population distribution and density in our district might have changed over time? Why?

#### **Additional resources / activities:**

- For a more in-depth study of population distribution in the western Bay of Plenty sub-region, view the 2008 *Development Trends* report (see PDF files).
- Explore population density and distribution using the Department of Statistics Table Builder Tool at [http://www.stats.govt.nz/tools\\_and\\_services/nzdotstat.aspx](http://www.stats.govt.nz/tools_and_services/nzdotstat.aspx) Or if the link doesn't work go to [www.stats.govt.nz](http://www.stats.govt.nz) and type 'NZ Stat' in the search box.
- Quick and helpful Table Builder tutorials are available. Near the bottom of the NZ.Stat webpage on the above link, you will find a quick and helpful Table Builder tutorial. Otherwise the YouTube link is: <http://www.youtube.com/watch?v=V531iG5Garw#t=28>

#### **Follow-on activities (found elsewhere in this resource):**

- 1d Age-sex pyramid
- 1i Population concepts matching game