

# Food and fibre: Mathematics

## Mathematics

The Australian Curriculum addresses learning about food and fibre predominantly in Design and Technologies and F-6/7HASS/Geography, however there are opportunities to make connections with aspects of Mathematics, particularly Measurement and geometry and Statistics and probability.

## Food and fibre dimensions

### Mathematics - Years 9 and 10

#### Year 9

##### Statistics and probability

###### *Data representation and interpretation*

Content descriptions with elaborations:

Identify everyday questions and issues involving at least one numerical and at least one categorical variable, and collect data directly and from secondary sources (ACMSP228)

- comparing the annual rainfall in various parts of Australia, Pakistan, New Guinea and Malaysia

Construct back-to-back stem-and-leaf plots and histograms and describe data, using terms including 'skewed', 'symmetric' and 'bi-modal' (ACMSP282)

- using stem-and-leaf plots to compare two like sets of data such as the heights of girls and the heights of boys in a class
- describing the shape of the distribution of data using terms such as 'positive skew', 'negative skew' and 'symmetric' and 'bi-modal'

Compare data displays using mean, median and range to describe and interpret numerical data sets in terms of location (centre) and spread (ACMSP283)

- comparing means, medians and ranges of two sets of numerical data which have been displayed using histograms, dot plots, or stem-and-leaf plots

##### Number and algebra

###### *Real numbers*

Content description with elaborations:

Solve problems involving direct proportion. Explore the relationship between graphs and equations corresponding to simple rate problems (ACMNA208)

- identifying direct proportion in real-life contexts

#### Year 10

##### Statistics and probability

###### *Chance*

Content description with elaborations:

Use the language of 'if ... then', 'given', 'of', 'knowing that' to investigate conditional statements and identify common mistakes in interpreting such language (ACMSP247)

- using two-way tables and Venn diagrams to understand conditional statements

###### *Data representation and interpretation*

Content descriptions with elaborations:

Evaluate statistical reports in the media and other places by linking claims to displays, statistics and representative data (ACMSP253)

- investigating the use of statistics in reports regarding the growth of Australia's trade with other countries of the Asia region

Use scatter plots to investigate and comment on relationships between two numerical variables (ACMSP251)

- using authentic data to construct scatter plots, make comparisons and draw conclusions