Linking **SNAP 2006** to the Curriculum
Numeracy is the ability to effectively use the mathematics required to meet the general demands of life at home and at work, and for participation in community and civic life. Numeracy is a fundamental component of learning across all areas of the curriculum. Languages students, while developing proficiency in the target language, develop numeracy skills that apply both to the target language and to numeracy. The languages classroom provides an environment for developing, reinforcing and expanding the numeracy skills of students.

Syllabuses in Languages Stage 4 offer students the potential to:
- ask appropriate numeracy questions within the context of the target language
- identify, organise and interpret data in tables, charts and graphs
- use strategies to solve problems
- use number facts and calculations with whole numbers, decimals and fractions in a variety of contexts.

**Numeracy skills required in languages and assessed in SNAP**

The SNAP 2006 stimulus magazine *Times, Tours and Tables* uses a range of items with numeracy features that are commonly encountered in the languages classroom. These items would be useful resources for activities in the target language.

**Number**
- Using number facts
- Calculating with whole numbers
- Calculating with decimals and fractions
- Predicting results from sample data

**Data**
- Identifying data in tables, charts and graphs
- Organising data in tables, charts and graphs
- Interpreting data in tables, charts and graphs

**Measurement**
- Estimating and measuring area, length, distance and time

**Working Mathematically**
- Asking appropriate numeracy questions
- Relating numeracy skills in one situation to numeracy skills in another situation

**Space and Geometry**
- Locating position using grids
- Using compass directions
- Using precise terminology to give position

**Patterns and Algebra**
- Identifying and describing patterns

The syllabuses referred to are *Languages Years K–10* syllabuses, Board of Studies.
Questions 6a and 6b

In these questions, students are required to interpret data in a table and calculate using large numbers.

To address these numeracy skills in the languages classroom, students need to:

- interpret information from the internet and other sources that use large numbers
- apply strategies to estimate large numbers
- use samples to make predictions about larger populations
- identify and represent numbers in patterns.

Teaching strategies

In the languages classroom, students learn about the population of the target country and incorporate this information into their learning tasks.

1. In pairs, or as a barrier game, students practise saying large numbers greater than one million in the target language, e.g., 1 million, 5 million, 10 million, 100 million.

2. Discuss where large numbers, greater than 1 million, are likely to be used in relation to the country of the target language.

3. Provide students with a simple fact sheet on the population of the target country. Use the population data to practise saying dates, large numbers, decimals and percentages in the target language.

4. Have students represent the population and birth rate data as line graphs.

5. In pairs, have one student describe the population trends and the other student describe the birth rate trends in the tables and graphs.

6. Use the trends to predict what the population and birth rates are likely to be in 2010 and 2020. Ask students to justify their responses.

7. Look at family trees and the different words on the mother’s and father’s side of the family.

8. Provide fact sheets on the population of Australia, a European country and an Asian country, so students can make comparisons and predictions.

Further activities

- Provide students with an abacus and simple instructions for its use. (See Using Calculators Old and New, Curriculum Support for Primary Teachers, Vol 5 Number 2, 2000.)

- Students take turns to say and represent dates, large numbers, decimals and percentages on the abacus.

- Form teams of students and test their number skills in the target language. One student uses an abacus, another uses a calculator and a third student uses mental strategies to solve a number problem given in the target language. A fourth student times the process, reporting the results in the target language.

Syllabus reference

A student:

4.Ul.1 demonstrates understanding of the main ideas and supporting detail in spoken texts and responds appropriately

4.Ul.2 demonstrates understanding of the main ideas and supporting detail in written texts and responds appropriately

4.MBC.2 demonstrates knowledge of key features of the culture of the communities that speak the target language
Question 42

In this question, students are required to identify an object using number-based clues.

To address these numeracy skills in the languages classroom, students need to:

- calculate with decimals and fractions
- measure area
- identify, organise and interpret data in tables, charts and graphs
- recognise patterns and designs
- recognise and draw three-dimensional objects.

Teaching strategies

In the languages classroom, students learn about cultural activities of the target country and incorporate this information into their learning tasks.


2. Divide the class into groups. Assign each group one of the following tasks:
   - Research the World Cup, e.g. When does the Cup start? How long does it last? How many Groups are there? How many teams per Group? How many viewers worldwide?
   - Research the basics of soccer, e.g. How old is the game of soccer? How long/wide is a soccer field? What is the area of a soccer field? How long is a soccer match? How many players in a team?
   - Research the soccer ball, e.g. How many panels has a soccer ball? How many panels are black/white? What shape are the black/white panels? What is the weight of a soccer ball? What is the circumference?

3. Students prepare questions for the class to answer related to the facts they have researched. This could also be done in pairs as a barrier game.

Further activities

- Create a flow chart of the Cup draw, showing match dates and countries in the target language. Progressively record match results.
- Use the flow chart information to prepare player interviews and sports news reports. This could be done as a role-play.
- Use a computer-based tutorial to create a three-dimensional soccer ball and design a promotional poster in the target language around the resulting image. See http://www.freehandsourcing.com/_frames/_tips/_archive/tip_week087.html.

Syllabus reference

A student:

4.UL.1 demonstrates understanding of the main ideas and supporting detail in spoken texts and responds appropriately
4.UL.2 demonstrates understanding of the main ideas and supporting detail in written texts and responds appropriately
4.UL.4 applies a range of linguistic structures to express own ideas in writing
4.MBC.2 demonstrates knowledge of key features of the culture of the communities that speak the target language
Questions practice B and 24

In these questions students are required to identify the measurements in a recipe and interpret a timeline using a scale.

To address these numeracy skills in the languages classroom, students need to:
- use number facts
- measure volume and capacity
- calculate with decimals and fractions
- calculate and draw length
- use scale.

Teaching strategies

Recipes are used in the languages classroom to encourage students to ask simple questions, express quantity and time and follow basic instructions in the target language.

1. Choose a simple and culturally appropriate recipe which can be made in 2–3 steps using a maximum of 4–5 ingredients. Suitable recipes might include a rice dish, fruit or green salad, sandwich, ice-cream sundae, pizza or smoothie.
   - Provide students with cut-up copies of the recipe text in the target language and a set of recipe illustrations on a separate sheet.
   - Have students reconstruct the recipe text, individually or in pairs, then publish as a recipe card using the illustrations provided.
   - Have students, in pairs, ask questions in the target language about the quantities of ingredients and the preparation time for the recipe.
     eg How many minutes does it take to prepare/cook?
     How much/many (of an ingredient) for 1 person/3 people/6 people?

2. Have students calculate the cost of the ingredients and estimate the total cost of making the recipe for the class.

Further activities

- Provide students with an indicative completion time for filming a demonstration of the recipe. Divide the class into groups. Have students develop a timeline and scale showing the time needed to complete each stage in the production of the film, eg script writing, developing the storyboard, practising dialogue with props, filming and editing, uploading to the school’s intranet site.

Syllabus reference

A student:
- 4.UL.1 demonstrates understanding of the main ideas and supporting detail in spoken texts and responds appropriately
- 4.UL.2 demonstrates understanding of the main ideas and supporting detail in written texts and responds appropriately
- 4.MLC.1 demonstrates understanding of the importance of appropriate use of language in diverse contexts
- 4.MBC.2 demonstrates knowledge of key features of the culture of the communities that speak the target language