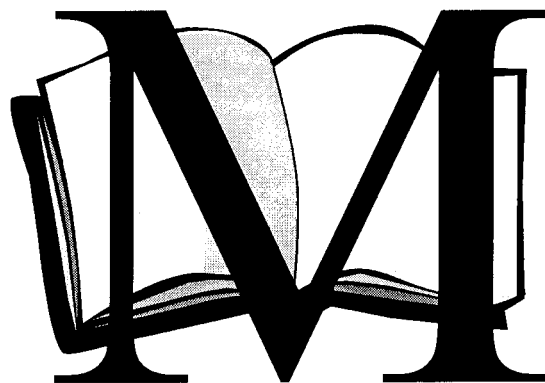


# **Learning Mathematics And SOSE through Calender**

**An integrated unit of work compiled using the SACSA Framework**



## **Planning and Brainstorming**

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## Planning an Integrated TRT Lesson

**Band:** Upper primary years (Year 4,5,6)

**Learning area:** Mathematics, SOSE, English

**Activity:** Learning mathematics and studies of society and environment through a calendar.

**Duration:** 2 sessions

**Key ideas:** Understanding Chinese lunar calendar and the Gregorian calendar, numbers, and maths skills such as addition, subtraction and multiplication

**Purpose:** To help students to build in knowledge of numbers, number patterns, and problem solving skills

**Materials required:** A copy of Chinese Solar and Lunar calendar, and a copy of calendar showing the years of the twelve animals

**Topic Description:** This is a topic that can range from the fun of hunting numbers to solving maths problems and understanding another culture. Students investigate different calendars, work out maths problems and number patterns.

Essential Learnings	Key Competencies	ICTs	Texts
<input type="checkbox"/> Futures <input type="checkbox"/> Identity <input type="checkbox"/> Interdependence <input checked="" type="checkbox"/> Thinking <input checked="" type="checkbox"/> Communication	<input type="checkbox"/> Collecting, analysing, organising information <input checked="" type="checkbox"/> Communicating ideas and information <input type="checkbox"/> Planning and organising activities <input checked="" type="checkbox"/> Working with others in teams <input type="checkbox"/> Using mathematical ideas and techniques <input checked="" type="checkbox"/> Solving problems <input type="checkbox"/> Using technology	<input type="checkbox"/> Digital camera <input type="checkbox"/> Computer/Printer <input type="checkbox"/> Video camera <input checked="" type="checkbox"/> Calculator <input type="checkbox"/> Internet <input type="checkbox"/> CD Player <input type="checkbox"/> Clock <input type="checkbox"/> Fax <input type="checkbox"/> Scanner <input type="checkbox"/> Email	<b>Literature Texts</b> <input type="checkbox"/> Classic <input checked="" type="checkbox"/> Contemporary <input type="checkbox"/> Popular <input checked="" type="checkbox"/> <b>Media Texts</b> <b>Everyday Texts</b> <input type="checkbox"/> Daily <input type="checkbox"/> School <input type="checkbox"/> Work

Learning Area	Strand	Key ideas	Possible Outcomes
Mathematics	Texts & contexts	Students understand the use of numbers in daily life; investigate mathematical problems; practise counting addition, subtraction, multiplication; comparing number patterns. <b>T, C, KC1, KC2, KC6</b>	After this unit of work, students should be able to:  2. Pose questions, explore number patterns. <b>T, C, KC1, KC2.</b>  2.8 Use calculating strategies, including memorising addition, subtraction with whole numbers. <b>Id, In, CK1.</b>
SOSE	Place, culture	Students understand the difference between Chinese lunar calendar and the Gregorian calendar, cultural diversity, and geographical difference between China and Australia. <b>T, Id, KC2,</b>	After this unit of work, students should be able to:  2.7 Describe diversity of practice of groups and communities. <b>Id, T, C, KC2.</b>
English	Texts & contexts	Students listen oral instruction to identify specific information and communicate own views and read written texts. <b>Id, T, C, KC1, KC2.</b>	After this unit of work, students will be able to:  2.1 Listen to texts to identify information. <b>T, C, KC1.</b>  3.11 Select and use strategies for locating and recording information and for reading. <b>Id, T, C, KC1, KC2.</b>

# Learning Maths and SOSE through Calendar

## Procedures

### Session 1

Activities	Resources needed
<p><b>1. Setting the scene</b> This activity would be best undertaken by directly explaining today's task: Learning maths and SOSE through a calendar. Distribute copies of the Chinese solar and lunar calendar to the students, and explain to students that it is a special calendar and there are quite a few problems to be solved.</p> <p><b>2. Investigating the Chinese calendar</b> Students work in pairs to find out the difference between the Gregorian calendar and Chinese lunar calendar. The differences are:</p> <ol style="list-style-type: none"> <li>1) The lunar calendar is one month later than the Gregorian calendar. For instance, it is February now. In the Chinese lunar calendar, however, it is January. Why? Because the Chinese lunar calendar is based on the cycles of the moon.</li> <li>2) The lunar calendar has six 29-day months and six 30-day months. The Gregorian calendar has seven 31-day months, one 28-day month and four 30-day months.</li> <li>3) To catch with the Gregorian calendar, the Chinese lunar calendar would have a Leap year every ten years. Leap year means in that year, there is a double length month. For instance, if May is a Leap month, there would be two May.</li> </ol> <p><b>3. Solve maths questions</b> Students work out how many days a Chinese lunar calendar year has and how many day a Gregorian calendar year has, and work out the difference between the two calendars.</p> <p><b>Chinese lunar calendar:</b> Six 29-day months + six 30-day months =      days</p> <p><b>Gregorian calendar:</b> Seven 31-day months + one 28-day month + four 31-day months =      days</p> <p><b>4. Investigating numbers</b> Students answer the questions:</p> <ul style="list-style-type: none"> <li>• How many weeks are there in a Gregorian year?</li> <li>• How many school days are there in a year?</li> <li>• Which months has the fewest days?</li> <li>• Add up all the numbers of the first line of January. What is the answer?</li> <li>• Add up all the numbers in the first column from the left of January. What is the results.</li> </ul>	<ol style="list-style-type: none"> <li>1. A copy of Chinese Solar and Lunar calendar for each student (Appendix 1).</li> <li>2. A4 worksheets for each student</li> <li>3. A list of numbers from 1 to 31 in both English and Chinese</li> <li>4. Calculator (if necessary)</li> </ol>



## Session 2

Activities	Resources needed								
<p><b>1. Investigating number patterns</b> These activities could be undertaken:</p> <ol style="list-style-type: none"> <li>1) Draw a diagonal line from the left top number to the right bottom number. What is the pattern?</li> <li>2) Draw a diagonal line from the right top number to the left bottom number. What is the pattern?</li> <li>3) Draw a square around any block of 4 numbers on the calendar, add up the diagonal numbers. What pattern have you got?</li> </ol> <div style="display: flex; justify-content: space-around; align-items: center;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>1</td><td>2</td></tr> <tr><td>8</td><td>9</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>16</td><td>17</td></tr> <tr><td>23</td><td>24</td></tr> </table> </div> <ol style="list-style-type: none"> <li>4) Draw a square around a block of 3 x 3 numbers. Add up the diagonal numbers. Have you got the same pattern?</li> <li>5) Encourage students to do more investigations using the calendar.</li> </ol> <p><b>2. More than mathematics</b> Attached is a special calendar showing the years of animals. Students can be encouraged to investigate these problems:</p> <ol style="list-style-type: none"> <li>1) What is the sequences of the animals? Write in sentence form the order of the 12 animals.</li> <li>2) John is 48 years old in 2002. Which year was he born and what animal is he?</li> <li>3) Sara was born in 1992. Ketty was born the year after. What animals are they?</li> <li>4) Sherron was born in a dragon year. She is now a Year 6 primary school students. Which year was she born?</li> <li>5) There will be special program in Adelaide on May 1. Those children who have birthday on this day will be able to get free tickets and gifts as well. The task of our class is to investigate how many students in our school have the possibility and who they are. How are you going to conduct the investigation?</li> </ol> <p>* For this activity, before students start to the investigation, make sure that:</p> <ol style="list-style-type: none"> <li>a) students talk about their plans in class first;</li> <li>b) students work in pairs,</li> <li>c) students design a form for data collection.</li> </ol>	1	2	8	9	16	17	23	24	<ol style="list-style-type: none"> <li>1. A copy of Chinese Solar and Lunar calendar for each student (Appendix 1).</li> <li>2. A copy of calendar showing the years of the 12 animals.</li> <li>3. Work sheets for students</li> </ol>
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## References

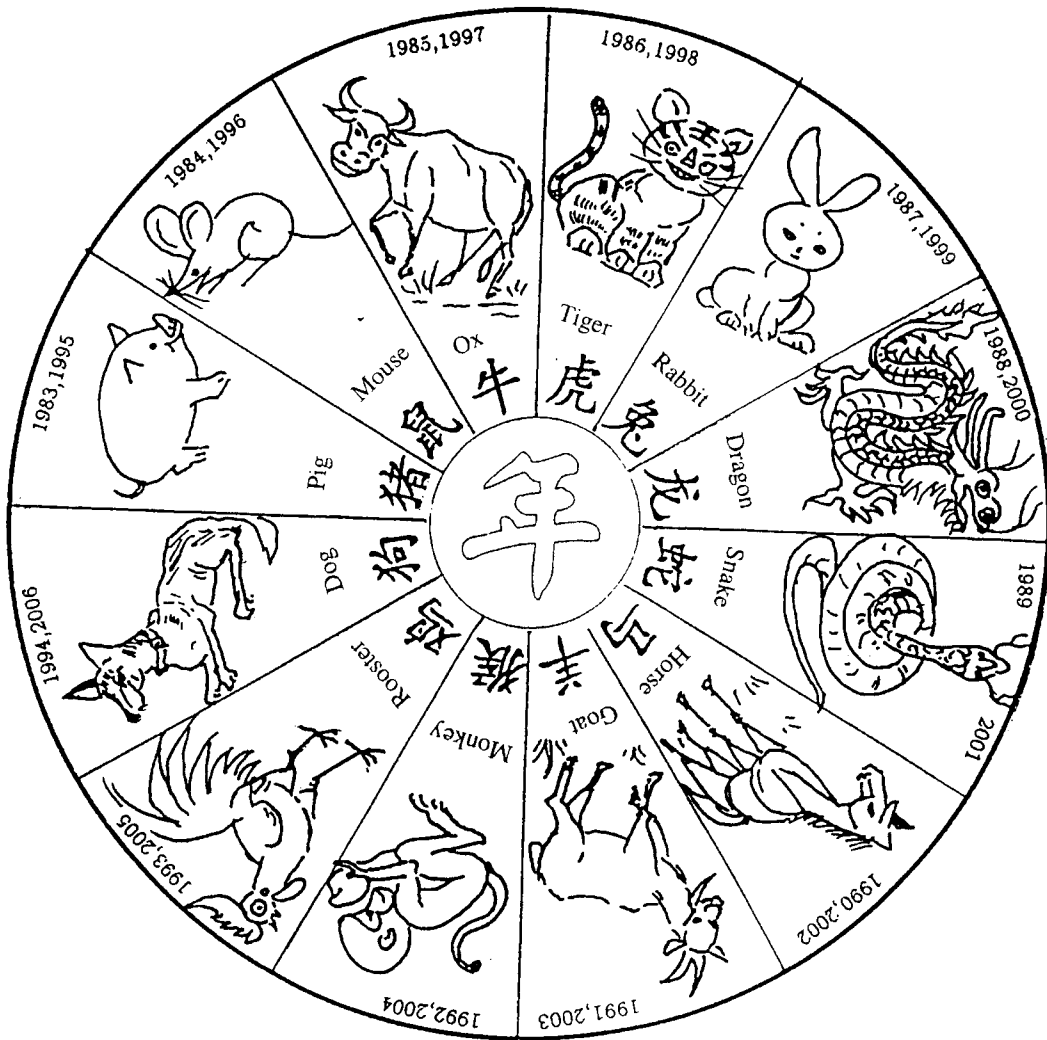
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# The Twelve Animals of Birth



Do you know what animal is 2002? \_\_\_\_\_

What animal was it last years? \_\_\_\_\_

What animal will it be next year? \_\_\_\_\_

Today is 20.02, 2002