# Resource in focus – Mathematics – Stage 3 Unit 1

## Individual goal setting

This resource showcases an excerpt from sample unit [Mathematics – Stage 3 Unit 1 (DOCX 1.9 MB)](https://education.nsw.gov.au/content/dam/main-education/en/home/schooling/curriculum/mathematics/mathematics-s3-unit-01.docx). Sample units are optional resources that present ‘one way’ of designing teaching and learning experiences. They can be adopted and adapted for your school context.

The example below demonstrates **one way** that activities in a lesson may be adapted to strengthen opportunities for individual goal setting. It focuses on Lesson 5 – Daily number sense: 101 and you’re out. This lesson sits within a 2-week unit with 8 lessons.

Possible adaptations are represented in **bold red**.

## Lesson 5

**Core concept:** prime numbers are building blocks.

### Daily number sense: 101 and you’re out – 10 minutes

Daily number sense activities for Lessons 5 to 7 ‘loop’ back to concepts and procedures covered in previous units to assist students to build an increasingly connected network of ideas. These concepts may differ from the core concepts being covered by the unit.

The table below contains a suggested learning intention and success criteria. These are best co-constructed with students.

|  |  |
| --- | --- |
| Daily number sense learning intention | Daily number sense success criteria |
| Students are learning to:* use mental strategies for addition.
 | Students can:* use mental strategies to add 2-digit numbers.
 |

This activity is an adaptation of [101 and you're out (2-digit-addition)](https://education.nsw.gov.au/teaching-and-learning/curriculum/mathematics/mathematics-curriculum-resources-k-12/mathematics-k-6-resources/101-and-youre-out) from [Mathematics K–6 resources](https://education.nsw.gov.au/teaching-and-learning/curriculum/mathematics/mathematics-curriculum-resources-k-12/mathematics-k-6-resources) by State of New South Wales (Department of Education).

**Prior to beginning activities, students reflect on and discuss prior learning of mental strategies for addition and consider individual goals in this area.**

1. In pairs, students make a game board by drawing a table with 4 columns and 7 rows. Label the columns from left to right as ‘tens’, ‘ones, ‘number’ and ‘total’ (see Figure 6).
2. Using a 0–9 die or spinner, players take turns to roll or spin.
3. After every roll, each player decides whether to write the number in the tens or ones column. For example, if a 4 is rolled, players can either write it in the tens column to indicate 40 or in the ones column to indicate 4.
4. The game concludes after 6 rolls or spins. The winner is the player whose sum is closest to 100 without going over.

Figure 6 – 101 and you're out example

|  |  |  |  |
| --- | --- | --- | --- |
| **Tens** | **Ones** | **Number** | **Total** |
| 4 |   | 40 | 40 |
|   | 8 | 8 | 48 |
| 1 |   | 10 | 58 |
|   |   |   |   |
|   |   |   |   |

1. **Option:** draw another gameboard and use the same numbers from the game to get a total closer to 100 than in the previous game.

**Note:** variations could include using a 6-sided die or spinner, having each player roll and record their own throws or spins only, having the whole class use the same rolls or spins, including a thousands column and aiming to get a sum of 1000, starting at 100 and subtracting each throw to get as close to zero as possible.

1. As a class, discuss questions such as:
* What strategy did you use to try to win the game and was it successful? Why or why not?
* What might you do differently next time?
* What strategies did you use to get the total?
* Were some strategies more efficient than others? Explain.

**Provide time for students to reflect on responses from activity 6. Students set and record individual goals. These goals will be ‘****looped’ back to in Lessons 6 and 7. Provide sentence starters as needed. For example:**

* **In the next lesson, I want to improve... by...**
* **One strategy I need to focus on is... I will do this by...**

This table details opportunities for assessment.

|  |  |
| --- | --- |
| Assessment opportunities | Links |
| What to look for:* Can students use mental strategies to add 2-digit numbers? **[MAO-WM-01, MA2-AR-01]**
 | Links to [National Numeracy Learning Progressions](https://www.australiancurriculum.edu.au/resources/national-literacy-and-numeracy-learning-progressions/version-3-of-national-literacy-and-numeracy-learning-progressions/) (NNLP):* AdS7.

Links to suggested [Interview for Student Reasoning](https://education.nsw.gov.au/teaching-and-learning/curriculum/literacy-and-numeracy/assessment-resources/ifsr/additive-thinking) (IfSR) tasks:* **IfSR-AT**: 2A.2, 3A.2.
 |

Lesson continues as is...

## References

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