1: Stage 1: One to one counting

Welcome to Module Six

This is one of seven modules describing effective teaching practices.

Once you have finished you will be able to select and implement learning activities appropriate for students working at stage 1: one to one counting.

2: General principles for the teaching and learning activities presented:

- Activities are designed to strengthen students’ understandings within the ACTUAL STAGE that they are linked to. Teachers wishing to move students into the next strategy stage need to select activities linked to that NEXT STAGE.
- Each of the teaching modules is structured under the following headings:
  - Strategy stage review
  - Knowledge being developed
  - Activities to develop knowledge
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  - Activities to develop strategy.
- The knowledge component is described first as the knowledge outlined provides a foundation for the development of strategy at each stage.
- The activities assume that students understand the ideas from earlier stages so it is important that teachers check that students have these understandings.
- The activities do not necessarily require the purchase of specialised materials. In general they use resources readily available within New Zealand schools or easily accessible from the project materials section of the nzmaths website.
- The activities presented here are provided as a starting point. Teachers are encouraged to develop other activities using the methods presented here as the basis of an approach. Further ideas for activities can also be found from the number section of nzmaths, from the Numeracy Development Project Books, and by using the Numeracy Planning Assistant.

3: Strategy stage review

Stage 1: One to one counting

- The One to One Counting stage is characterised by students who can count and form a set of objects up to ten, but cannot solve simple problems that involve joining and separating sets, like 4 + 3.

Video Clip

4: Knowledge being developed

There are two types of knowledge students need to learn at this stage.

1. Forwards and Backwards Number Word Sequences "One, two, three, four...." Students need to be able to say the sequence of numbers up to at least 10.
2. Numeral Identification Students need to be able to read and write numerals to at least 10. In particular students need to be able to identify numerals and record numerals to match sets.

Number Word Sequences are part of the Number Sequence and Order domain of knowledge, and Numeral Identification is part of the Written Recording knowledge domain in the Number Framework.
5: Activities to develop knowledge: forwards and backwards number word sequences

Rote counting is a valuable activity that can be done in many ways.

- Sit in a circle and count together. Clapping or other rhythmic movements can be used to emphasise each number in the counting sequence.
- Count in different voices "Let's all count to 8 in a whisper voice, let's all count backwards from 14 using a giant voice."
- Use every opportunity to count together. Count the number of library books as they are returned, the number of children that are lined up waiting or the number of paint brushes needed for the class.
- Students in small groups pass an object around the circle. As each student receives the object they say the next counting number. What is the highest number the group can count to? Reverse the direction the object is passed and count backwards.

6: Activities to develop knowledge: numeral identification

Writing Numbers

Get students to practice writing numbers in many different ways. For example:

- painting numbers: "Let's all paint some eights. Can you paint a small eight? Can you paint a large eight? Can you paint a red eight?"
- tracing numbers in trays of sand
- making numerals out of clay
- include numbers in your handwriting programme. "Today we’re working on letter L and the number 4"
- use calculators "Press number 3, now press number 9."

7: Activities to develop knowledge: numeral identification

Lily Pads

Place numeral cards around the room, tell the students the numbers are lily pads and they are frogs. They need to find the number you call out and jump on it. "Jump on number 7, jump on number 6". Numeral cards are Material Master 4-1 (available from Material Masters).

Number fans

This Number fans equipment animation shows how number fans can be used to help students identify written numerals. Start working with numbers to 5, and once students have mastered these work on numbers to 10, then 20. Number fans are Material Master 4-10 (available from Material Masters).

8: Activities to develop knowledge: numeral identification

Lucky Dip

Have the students take turns drawing numeral cards from a large bag. As each student takes a "lucky dip" ask them to tell the others what number they have got and then all practice writing the number in the air together. "What number have you got Sam? A seven. Lets all draw seven in the air. Across and down, that's how we write a seven." Numeral cards are Material Master 4-1 (available from Material Masters).
9: Strategy being developed

At this stage students are learning to count one to one. In order to be able to count students must be able to:

1. say the forward number word sequence: "One, two three, four…"
2. match the items or actions being counted one to one with each number in the sequence.

10: Activities to develop strategy

Students need to have experience with two types of counting tasks:

1. forming a set of a given number, for example "Can you get me 6 buttons?"
2. counting the number in a given set, for example "How many candles are on the cake?"

A variety of examples of these types of tasks follow. You will be able to use your own ideas to create activities and games that involve counting and are related to students’ interests or the current topic of study.

11: Activities to develop strategy

Making flowers

Give students circles of card, each with a number in the middle. Students place the appropriate number of pegs onto each circle to make flowers.
12: Activities to develop strategy

Car Race

Tell students that there is going to be a race and they need to line the cars up so they are ready. "Can you get 6 cars ready to race?" Count together to check there is the right number. Ask students to write down the number of cars that are going to race.

Play dough cakes

Have students make play dough cakes, using sticks to represent candles. Students should swap cakes and count the number of candles on their partner’s cake. Record together the number of candles on each cake.

Feeding the birds

Give each student a card with a picture of some birds. Ask students to count how many birds are on their card and write this number down. They then get enough "seeds" (counters) so that the birds on their card can have one seed each. To check that they have the right number of seeds, match each bird with one seed by placing each counter on one bird. Swap cards and repeat.

13: Activities to develop strategy

Rockets game

Make each player a game board with 4 rockets, each rocket containing 8-12 squares that can be filled using counters.

To play the game students take it in turns to roll the dice, collect the appropriate number of counters and then place these onto one of the rockets. The aim of the game is to fill all of the rockets, ready for blast off. Each rocket needs to be filled with the correct roll of the dice, for example a roll of 5 cannot be used to fill the last 3 spaces in a rocket.
14: Activities to develop strategy

Tea Party

Ask students to set up a tea party for teddies. For example, tell them there will be 6 teddies at the party and each teddy will need a plate, a cup and a spoon. Once the party is set up students can count again to check that there are the right number of plates, cups and spoons. Reinforce the written recording of the numeral "6" by asking students to select the number of teddies coming to the party from a set of numeral cards.

Many tasks can be devised that involved counting. Use your own ideas to create activities and games that involve counting and are related to students' interests or the current topic of study.

15: Activities to develop strategy

Video of other teaching activities.

Video Clip

16: End of Module Six

This module has covered selecting and implementing learning activities appropriate for students working at stage 1: one to one counting. It is intended as an introduction only. Further information and additional activity ideas can also be found in:

- The teaching units and activities available from the [number section](#) of the nzmaths website. Select appropriate activities from those listed under Level One.
- The [Numeracy Planning Assistant](#). Find appropriate activities for this stage under "one to one counting".
- The Numeracy Development Project Books (PDF versions available from [Numeracy Development Project Books](#)). Relevant activities for this stage can be found in
  - Book 4: Teaching Number Knowledge
  - Book 5: Teaching Addition, Subtraction, and Place Value

17: End of Module Six

Modules 7 and 8 look at teaching activities for students working at the other strategy stages that involve counting. Module 7 describes working with students at stages 2-3, the counting from one stages, and module 8 covers activities suitable for those students working at stage 4, advanced counting.