

Year 1 Number Check: teachers guide

An understanding of number and counting is essential to the development of mathematics knowledge and skills and critical to developing numerate learners. The Year 1 Number Check is a voluntary check that teachers can use to find out if Year 1 students are developing the number and counting knowledge they need to be successful in their maths learning. Teachers can then use student data from the Number Check to review their existing mathematics program.

There are two Number Checks to choose from: a 12-item Number Check and a 20-item Number Check.

- The 12-item Number Check includes questions on numeral identification, number sequences, subitising, counting, addition and subtraction.
- The 20-item Number Check includes questions on numeral identification, number sequences, skip counting, subitising, and counting, addition and subtraction, including partitioning and flexible strategies, and multiplicative thinking.

Year 1 curriculum connections

Australian Curriculum

In the Australian Curriculum Mathematics Number and Algebra strand, number, counting and basic operations knowledge begins in Foundation and continues throughout all levels of schooling. The Foundation level includes the identification of numerals, number names and quantities, which leads to counting and number sequences. Students may also begin to use strategies such as partitioning, rearranging and subitising. As students complete basic operations of simple addition and subtraction, they may use a range of different strategies including counting on, counting back and counting all.

Relevant Year 1 Content descriptions

- Recognise, represent and order numbers to at least 120 using physical and virtual materials, numerals, number lines and charts (AC9M1N01)
- Partition one- and two-digit numbers in different ways using physical and virtual materials, including partitioning two-digit numbers into tens and ones (AC9M1N02)
- Quantify sets of objects, to at least 120, by partitioning collections into equal groups using number knowledge and skip counting (AC9M1N03)
- Add and subtract numbers within 20, using physical and virtual materials, part-part-whole knowledge to 10 and a variety of calculation strategies (AC9M1N04)

Find the relevant content descriptions at [Australian Curriculum, Mathematics](#).

National Numeracy Learning Progression

The National Numeracy Learning Progression outlines a series of observable indicators that can be used to help gauge students' key understandings and skills.

Number sense and algebra strand

Number and place value NPV3, NPV4

Counting processes CPr6

Additive strategies AS6

Find more details at the [Australian Curriculum National Numeracy Learning Progression Version 3.0](#).

Student participation

The Number Check is administered to Year 1 students by the classroom teacher. Any Year 1 student can be included in the Number Check but of course, you know your students best. There may be students whose number skills are already working beyond this level in the maths curriculum.

Preparing for the Year 1 Number Check

Accessing the Year 1 Number Check materials (online and offline)

Familiarise yourself with the Number Check materials before you are ready to administer the Number Check. Find the following resources on the Year 1 [Number Check materials page](#).

- Year 1 Number Check: teachers guide
- Year 1 Number Check student materials (printed number cards and dot card)
- Year 1 Number check: paper-based (12 items and 20 items)
- Year 1 Number Check: answer sheet (12 items and 20 items)
- Year 1 Number Check: scoring guide (12 items and 20 items)
- Year 1 Number Check: practice sheet (if you wish to familiarise the process of the check with students before administering the official check)
- Year 1 Number Check: analysis and response (12 items and 20 items)

Materials required

- at least 28 counters
- at least 16 interlocking cubes
- printed number cards (provided, see [Appendix 1](#))
- printed dot card (provided, see [Appendix 2](#))

Note: The downloaded Number Check student materials can be modified or adapted to match your classroom practices, for example, adjusting font, font size, swapping counters for equivalent existing classroom equipment, or using a coloured overlay, as required.

Conducting the Number Check

The Year 1 Number Check is administered with students one-on-one. Ensure you are familiar with the Number Check materials and process, and be sure to conduct the check in a quiet, comfortable, well-lit space, so students can focus.

Reading the questions: Worded scripts have been provided for each question to support teachers to conduct the check consistently with each student. Teachers may modify the sample script, however, care should be taken to ensure that these changes do not provide students with leading questions, or the correct answers, while they undertake the Number Check.

Time allocation: There is no time limit for completing the Number Check. Most students will take no longer than 15 minutes to complete the 20-item Number Check. Be sure to give students enough time to respond to each question. As the questions progress in complexity, earlier questions may take only 15 seconds, while later questions may require a little longer. If needed, give individual students short rest breaks but ensure they finish the Number Check on the same day.

Process: Introduce the Number Check to each student as consistently as possible, providing enough information to those students who do not initially understand the task. For an example of how to introduce the Number Check, see the sample script below.

You can use the printed practice sheet to familiarise students with the task. It has one number recognition question and two counting questions.

Provide guidance about using the practice sheet, if needed, to ensure students understand the task. Remind students that they can count out loud, use their fingers to count, and touch the objects as they count if they wish. Demonstrate what you mean using one of the practice questions. However, to better understand where the student is at in their learning, this instruction must not be given during the actual Number Check.

You may prompt the student to move to the next question but be careful not to do so while they are in the process of silently counting or thinking through a response.

Offer encouragement and support during the Number Check but do not indicate whether the student has responded to the question correctly or not.

You know your students best, and you will recognise when it is appropriate to take a rest break or stop administering the Number Check.

Students with additional needs: For students with additional needs, make adjustments based on normal classroom practice. Changes should not unfairly benefit individual students. It may be helpful to use the practice sheet with students before administering the Number Check as this will help you identify if modifications need to be made (for example, changing font or font size or allowing time for a rest break).

Sample script to introduce the check: Use this script to introduce the Number Check.

Teacher:

In this activity, I am going to ask you about some numbers. I will also ask you to count for me, and help me work out how many counters there are.

Try to answer each question as best you can, but don't worry if you can't. If it helps, you can count aloud, use your fingers to count, or touch or move the items as you count.

[Optional] *This practice sheet shows you what the questions will look like.*

[Optional] *Have a go at each of the practice questions with me.*

OK, now we are going to look at some numbers and counting problems and I'm going to write down what you say.

Scoring (marking) the Number Check

Refer to the Scoring guide sheet on the [Number Check materials page](#) for guidance on when the student gets a response correct and when they aren't quite there yet.

You can record whether the student responded correctly or not, by using the answer sheet. Students score one point for each correct response, for a total score out of 12 or 20 depending on the Check you use.

Completing the answer sheet using the paper-based version of the Number Check

If you are using a paper-based version of the Number Check, use the answer sheets to record each student's responses.

Add your own comments to help you plan future mathematics teaching (for example: The student found subtraction difficult and could not count back from 7.) It is important to record both the errors and the nature of the errors.

Analysing and responding to results

The most valuable use of the Number Check results will be at the classroom level. You can find useful information to help you analyse the data you collect from each student's results in the Analysis and response.

The expected achievement level of 9 out of 12 questions (12-item check) or 15 out of 20 questions (20-item check) provides teachers with a sense of what is reasonable to expect for Year 1 students, given the requirements of the Australian Curriculum. Please note that this is not a pass/fail mark. Rather, it is an indication of the score a student might achieve if their numeracy learning is progressing as expected.

After recording the results consider the following:

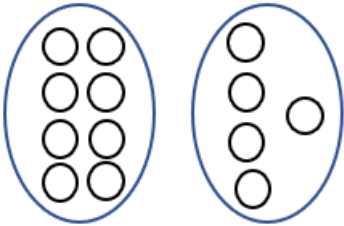
- Did your students do as well as you expected?
- Were there any surprises? (Which students achieved/struggled with particular content? Is it clear why they struggled?)
- How close to mastery of counting, subitising, addition and subtraction are your students? What do they need to learn next?

Annotating student errors: Example

Recording student responses in a meaningful way will give teachers a clearer means of analysing the data collected from the Number Check. Below are examples of how you could record student actions when responding to a question.

12-item Number Check

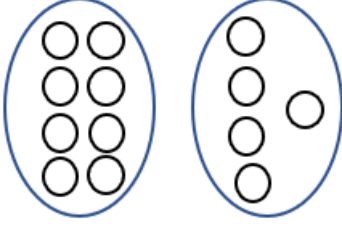
Question number	Question	Got it	Not yet	Comment
1	What is this number? (6)	Y		
2	What is this number? (12)		1 Y, 2 Y	Correctly identified the digits but not the number as a whole
3	How many dots are there? (5)	Y		Used finger to point and count each dot
4	What is the next number after 13?		Y	Identified the displayed number, rather than the number after
5	What number comes just before 20?	Y		Counted from 1 through to 20 then said '19'
6	What number comes just before 47?		48	Identified the number after, rather than the number before
7	Start counting from 62. I'll tell you when to stop. (73)		62, 63, 64, 65, 66, 67, 68, 69, 60, <u>61, 62, 63</u>	Counted correctly to 69, then repeated 60s sequence
8	Count backwards		23 Y, 22 Y, 21 Y, 20 Y,	Counted correctly to 20, and then became confused

Question number	Question	Got it	Not yet	Comment
	from 23. I'll tell you when to stop. (16)		19 N, 18 N, 17 N, 16 N	
9	Get me 8 counters.	Y		Collected a handful, then counted to 8, discarded the remaining counters
10	How many counters are there altogether? (7)		4 and 3	Identified the number of counters in each group but not the total
11	How many counters are there altogether? (13)	Y		Recalled the number of counters for each group, then calculated the total $8 + 5 = 13$ using a diagram 
12	How many are left? (9)		$12 + 3 = 15$	Found the total number of counters rather than the remaining

20-item Number Check

Question number	Question	Got it	Not yet	Comment
1	What is this number? (6)	Y		

Question number	Question	Got it	Not yet	Comment
2	What is this number? (12)		1 , 2	Correctly identified the digits but not the number as a whole
3	How many dots are there? (5)	Y		Used finger to point and count each dot
4	What is the next number after 13?		13	Identified the displayed number, rather than the number after
5	What number comes just before 20?	Y		Counted from 1 through to 20 then said '19'
6	What number comes just before 47?		48	Identified the number after, rather than the number before
7	Order these numbers from smallest to largest.	Y		Identified the number 13, first then 30, followed by 31
8	Start counting from 62. I'll tell you when to stop. (73)		62, 63, 64, 65, 66, 67, 68, 69, 60, 61, 62, 63	Counted correctly to 69, then repeated 60s sequence
9	Count backwards from 23. I'll tell you when to stop. (16)		23 Y, 22 Y, 21 Y, 20 Y, 19 N, 18 N, 17 N, 16 N	Counted correctly to 20, and then became confused

Question number	Question	Got it	Not yet	Comment
10	Start counting forwards by tens from 10. I'll tell you when to stop.	Y		10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120 (slight pause between 100 and 90)
11	Count backwards by tens from 120. I'll tell you when to stop.	Y		120, 110, 100, 90, 80, 70, 60 (slight pause between 100 and 90)
12	Get me 8 counters.	Y		Collected a handful, then counted to 8, discarded the remaining counters
13	How many counters are there altogether? (7)		4 and 3	Identified the number of counters in each group but not the total
14	How many counters are there altogether? (13)	Y		Recalled the number of counters for each group, then calculated the total $8 + 5 = 13$ using a diagram 
15	How many are left? (9)		$12 + 3 = 15$	Found the total number of counters rather than the remaining

Question number	Question	Got it	Not yet	Comment
16	What numbers add up to make 10?	Y		Partitioned 10 into parts in two ways: 4 and 6; 2 and 8
17	What numbers add up to make 16?			Not able to provide more examples other than 10 and 6
18	How many did I take away?	Y		said 3, counted down by ones.
19	Can you arrange the counters so they are easier to count?	Y		Arranged the counters as 2 tens and 8 ones to count them.
20	Which card has more dots? Or do they have the same?			said there are a different number of dots on each card

Appendix 1

Question 7. Order these numbers from smallest to largest

Cards below need to be cut individually.

31

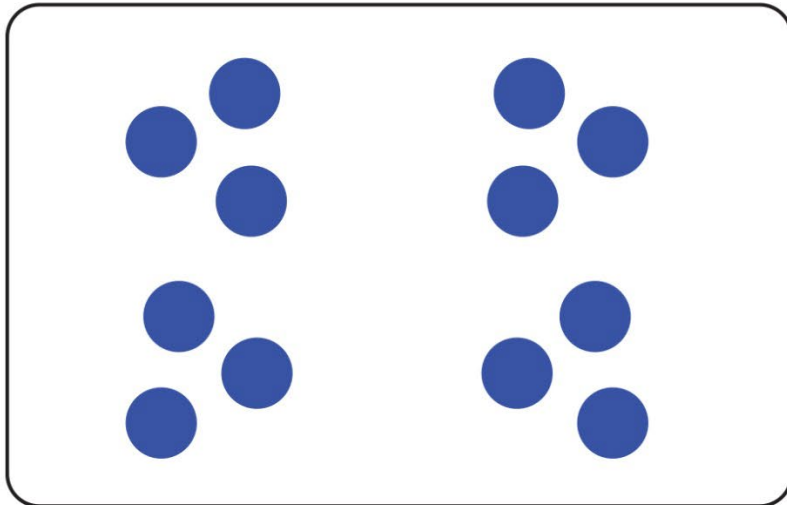
13

30

Appendix 2

Question 20. Which card has more dots? Or do they have the same?

Card A



Card B

