I can count

Assessment description	Category
Children count the number of objects (1–20) in a collection, record the solution, and describe the strategy used.	Spoken/signed written
	Technique
	Observation record

Context for assessment	Alignment
This assessment provides diagnostic information to inform future planning. Teachers observe, record and assess the child's learning in counting a sequence, subitising and one-to-one correspondence. Children use concrete materials to make a collection. They count the number in the collection. Children select ways to record their solution (i.e. pictorially, symbolically, in text or electronically) and describe the strategy used. This assessment is appropriate to embed in everyday contexts where these numbers are applicable (e.g. making groups, counting images in texts or patterns in music). This assessment can be used with the QCAA Australian Curriculum resource titled *Prep plan—Mathematics exemplar*, available at: www.qcaa.qld.edu.au/prep-maths-resources.html.	*Australian Curriculum v7.0* Prep Year Mathematics Australian Curriculum content and achievement standard www.australiancurriculum.edu.au Prep Year Mathematics standard elaborations www.qcaa.qld.edu.au/downloads/p_10/ac_math_prep_se.pdf
	Connections
	This assessment can be used with the QCAA Australian Curriculum resource titled *Comparison Challenges Prep Year unit overview — Mathematics exemplar* available at: www.qcaa.qld.edu.au/prep-maths-resources.html.
	Definitions
	One-to-one correspondence: The matching of one, and only one, number-word to each element of a collection. **Subitising**: Recognising the number of objects in a collection without consciously counting.

In this assessment	Resources
• Teacher guidelines (this document) • Task-specific standards — continua • Task-specific standards — matrix • Assessment resource: Sample observation record • Assessment resource: Observation record • Assessment resource: Number representation Note: No student booklet	• Coloured buttons or counting discs • Counters • Pencils • Small toys • Printed number cards 1 to 20 or a number chart • Unifix blocks • Mathematical attribution blocks

Teacher guidelines

Identify curriculum

Content descriptions to be taught

Number and Algebra

Number and place value

- Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point (ACMNA001)
- Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002)
- Subitise small collections of objects (ACMNA003)

General capabilities (GCs) and cross-curriculum priorities (CCPs)

This assessment may provide opportunities to engage with the following GCs and CCPs. Refer also to the Resources tab on the Mathematics curriculum and assessment page:
www.qcaa.qld.edu.au/prep-maths-resources.html

Literacy	Aboriginal and Torres Strait Islander histories and cultures
Numeracy	

Achievement standard

This assessment provides opportunities for children to demonstrate the following highlighted aspects.

By the end of the Foundation year, students make connections between number names, numerals and quantities up to 10. They compare objects using mass, length and capacity. Students connect events and the days of the week. They explain the order and duration of events. They use appropriate language to describe location.

Students count to and from 20 and order small collections. They group objects based on common characteristics and sort shapes and objects. Students answer simple questions to collect information.

Source: ACARA, The Australian Curriculum v7.0, www.australiancurriculum.edu.au

Sequence learning

<table>
<tr><td style="background-color:gray">Suggested learning experiences</td></tr>
</table>

This assessment leads on from the learning experiences outlined in the QCAA's Prep Year Mathematics unit overview. The knowledge, understanding and skills developed in the exemplar unit will prepare children to engage in this assessment:

See unit overview — Mathematics exemplar titled *Comparison challenges*
www.qcaa.qld.edu.au/prep-maths-resources.html

Adjustments for needs of learners

To make adjustments, teachers refer to learning area content aligned to the child's chronological age, personalise learning by emphasising alternate levels of content, general capabilities or cross-curriculum priorities in relation to the chronological age learning area content. The emphasis placed on each area is informed by the child's current level of learning and their strengths, goals and interests. Advice on the process of curriculum adjustment for all children and in particular for those with disability, gifted and talented or for whom English is an additional language or dialect are addressed in *Australian Curriculum — Student Diversity* materials.

For information to support children with diverse learning needs, see:

- Queensland Curriculum and Assessment Authority materials for supporting children with diverse learning needs www.qcaa.qld.edu.au/10188.html
- Australian Curriculum Student Diversity www.australiancurriculum.edu.au/StudentDiversity/Overview
- The *Melbourne Declaration on Educational Goals for Young Australians* www.mceecdya.edu.au/mceecdya/melbourne_declaration,25979.html
- The *Disability Standards for Education* www.ag.gov.au

Resources

Online

- Mathematics and numeracy learning objects for the Australian Curriculum.
  National digital learning resources network,
  e.g. *Number trains* series, *Counting beetles* series under Early years > Number and Algebra [log-in required] www.ndlrn.edu.au/using_the_resources/australian_curriculum_resources/mathematics.html
- Strategies for teaching numbers, including the counting sequence and addition and subtraction. Queensland Studies Authority, Mathematics (2004) support materials, *About number*, under Information for teachers www.qcaa.qld.edu.au/1184.html

Develop assessment

Develop a mathematical vocabulary related to numbers (including two-digit numbers), such as:

- numerals, numeral names, -teen, -ty, ones place value, tens place value, hundreds place value
- count forwards, count backwards, number before, number after, more than, less than, zero, is the same as
- more, less, first, last, different, order, same, same as, not the same as (when comparing characteristics of objects)
- first, second, third.

Rote learn numbers 1 to 20 by:

- naming numbers to and from 20
- playing games involving counting (e.g. hide-and-seek, skipping)
- listening to and reciting rhymes with numbers
  (e.g. 'One, two, three, four, five, once I caught a fish alive'; 'One, two, buckle my shoe'; 'Ten green bottles')
- pointing to ordered cards (pictorial and symbolic) saying the name of the number
- removing a card from a sequence of 1 to 20 and asking the child what number is missing.

Match between different representations of numbers, such as:

- spoken numerals
- images of objects (e.g. groups of dots) of the same number
- numerals
- numeral names
- places on a number line
- number grids (e.g. 2 x 5, 1 x 10, 2 x 10).

Explore multiple strategies for counting collections, such as:

- using a counting cloud
- using their eyes
- moving the objects into a row and from left to right as they count until 1:1 is established
- placing individual objects into small numbered containers
- subitising, then counting on
- moving the objects into groups to count objects into twos, fives or tens while counting.

Note: Emphasise to children that they can start counting at any position. Moving objects around in the collection doesn't change the number of objects. The order that the objects are counted in does not matter.

Practise counting:

- with and without touching the object
- objects in a shape
- back in ones
- from the middle object.

Practise counting, such as the number of:

- stairs to the classroom
- pavers as they are stepped on
- claps in a song
- individual movements
- moving objects (e.g. cars in traffic)
- things in a lunch box
- children absent
- children at a table.

Implementing

Section 1.   Organisation

Child role	**Teacher role**
Children work in pairs and: • decide who will make the collection of objects first • start with different numbers of objects in the collection of items each time.	Each pair of children will be supervised by an adult. • Arrange for children to work in pairs of similar ability. • Determine appropriate target numbers for each child to count to, and pair accordingly.

Section 2.   The assessment

Child role	**Teacher role**

Working in pairs:
• Child 1
  makes a collection of items and asks, 'How many are there?'
• Child 2
  responds with answer
• Child 2
  explains the counting strategy used
• Child 1
  checks the answer
Children exchange roles and repeat the process outlined above using different numbers of objects.
	Provide a collection of objects (between one and 20) appropriate to the level of the pair of children.
	• Ask Child 1 to make a collection of items and ask their partner to count the number of items. Ensure Child 2 understands the request.
	• Encourage children to respond using their preferred method of representation (refer to Assessment resource: Number representation) and to check their own answers before responding.
	• Ask Child 2 to explain how they have counted the number of objects (e.g. pointing, moving the objects, using their eyes, subitising). Make observations about the children's responses — their thinking processes and numeric answers throughout the assessment.
	• Ask Child 1 to check the answer. If child checks incorrectly, ask them to check again.
	• Support children when exchanging roles. Ensure each child has the opportunity to count collections that have both had objects removed and objects added to them.

Make judgments

When making judgments about the evidence in children's responses to this assessment, teachers are advised to use the task-specific standards provided. The development of these task-specific standards has been informed by the Queensland Prep Year standard elaborations. See www.qcaa.qld.edu.au/prep-maths-resources.html

The Queensland standard elaborations for Mathematics

The Queensland Prep Year standard elaborations for Mathematics are a resource to assist teachers to make consistent and comparable evidence-based A to E (or the Early Years equivalent) judgments. They should be used in conjunction with the Australian Curriculum achievement standard and content descriptions for the relevant year level.

The Queensland Mathematics standard elaborations provide a basis for judging *how well* children have demonstrated what they know, understand and can do using the Australian Curriculum achievement standard.

The dimensions of the Australian Curriculum achievement standards, Understanding and Skills, are used to organise the Queensland Mathematics standard elaborations. Understanding and Skills in Mathematics are organised as Understanding & Fluency, and Problem solving & Reasoning.

The valued features of Mathematics, drawn from the achievement standard and the content descriptions for Understanding and Skills, are organised as:

- conceptual understanding
- procedural fluency
- mathematical language and symbols
- problem-solving approaches
- modelling
- reasoning and justification.

Task-specific standards

Task-specific standards give teachers:

- a tool for directly matching the evidence of learning in the response to the standards
- a focal point for discussing children's responses
- a tool to help provide feedback to children.

Task-specific standards are not a checklist; rather they are a guide that:

- highlights the valued features that are being targeted in the assessment and the qualities that will inform the overall judgment
- specifies particular *targeted aspects* of the curriculum content and achievement standard
- aligns the valued feature, task-specific descriptor and assessment
- allows teachers to make consistent and comparable on-balance judgments about a child's work by matching the qualities of children's responses with the descriptors
- clarifies the curriculum expectations for learning at each of the five grades (A to E or the Early Years equivalent)
- shows the connections between what children are expected to know and do, and how their responses will be judged and the qualities that will inform the overall judgment
- supports evidence-based discussions to help children gain a better understanding of how they can critique their own responses and achievements, and identify the qualities needed to improve
- encourages and provides the basis for conversations among teachers, children and parents/carers about the quality of children's work and curriculum expectations and related standards.

Task-specific valued features

Task-specific valued features are the discrete aspects of the valued features of Mathematics targeted in a particular assessment and incorporated into the task-specific standards for that assessment. They are selected from the Queensland Mathematics standard elaborations valued features drawn from the Australian Curriculum achievement standard and content descriptions.

The following table identifies the valued features for this assessment and makes explicit the understandings and skills that children will have the opportunity to demonstrate. This ensures that the alignment between what is taught, what is assessed and what is reported is clear.

Australian Curriculum achievement standard dimensions	Proficiency strands	Queensland standard elaborations valued features	Task-specific valued features
Understanding and Skills	Understanding & Fluency	Mathematical language and symbols	Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty
		Procedural fluency	Recall and use of facts and procedures, including subitising and one-to-one correspondence, to count objects in a collection
	Problem solving & Reasoning	Problem-solving approaches	Uses problem-solving approaches to count objects in a collection of twenty objects
		Reasoning and justification	Description of mathematical thinking, including demonstration of strategies used to count a collection of objects

The task-specific standards for this assessment are provided in two models using the same task-specific valued features:

- a matrix
- a continua.

Evidence for this assessment is gathered through an observation record.

Matrix and continua

Task-specific standards can be prepared as a matrix or continua. Both the continua and the matrix:

- use the Queensland standard elaborations to develop task-specific descriptors to convey expected qualities in children's work — A to E (or the Early Years equivalent)

- highlight the same valued features from the Queensland standard elaborations that are being targeted in the assessment and the qualities that will inform the overall judgment

- incorporate the same task-specific valued features, that is, make explicit the particular understanding / skills that children have the opportunity to demonstrate for each selected valued feature

- provide a tool for directly matching the evidence of learning in the child's response to the standards to make an on-balance judgment about achievement

- assist teachers to make consistent and comparable evidence-based A to E (or the Early Years equivalent) judgments.

Continua

The continua model of task-specific standards uses the dimensions of the Australian Curriculum achievement standard to organise task-specific valued features and standards as a number of reference points represented progressively along an A to E (or Early Years equivalent) continuum. The task-specific valued features at each point are described holistically. The task-specific descriptors of the standard, use the relevant degrees of quality described in the Queensland standard elaborations.

Teachers determine a position along each continuum that best matches the evidence in the children's responses to make an on-balance judgment about achievement on the task.

The continua model is a tool for making an overall on-balance judgment about the assessment and for providing feedback on task-specific valued features.

Matrix

The matrix model of task-specific standards uses the structure of the Queensland standard elaborations to organise the task-specific valued features and standards A to E (or the Early Years equivalent). The task-specific descriptors of the standard described in the matrix model, use the same degrees of quality described in the Queensland standard elaborations.

Teachers make a judgment about the task-specific descriptor in the A to E (or the Early Years equivalent) cell of the matrix that best matches the evidence in the children's responses, in order to make an on-balance judgment about how well the pattern of evidence meets the standard.

The matrix is a tool for making both overall on-balance judgments and analytic judgments about the assessment. Achievement in each valued feature of the Queensland standard elaboration targeted in the assessment can be recorded and feedback can be provided on the task-specific valued features.

Use feedback

Feedback to children	Evaluate the information gathered from the assessment to inform teaching and learning strategies. Focus feedback on the child's personal progress and the next steps in the learning journey.
	Offer feedback that:
	• makes explicit the strategies the child is using and advances their knowledge and understanding of counting and ways of working to generate and check for reasonableness of the solution
	• identifies difficulties children might have with the difference in suffixes in two-digit numbers (i.e. -teen, -ty)
	• uses correct number names when transitioning from one decade to the next
	• assists with writing numbers correctly and in the correct order (e.g. sixteen as '16', not '61')
	• identifying notions of conservation when counting.
Resources	For guidance on providing feedback, see the professional development packages titled:
	• *About feedback* www.qcaa.qld.edu.au/downloads/p_10/as_feedback_about.docx
	• *Seeking and providing feedback* www.qcaa.qld.edu.au/downloads/p_10/as_feedback_provide.docx

I can count

Name ....

Purpose of assessment: To fluently count the number of objects (1–20) in a collection, and describe the strategy used, using some appropriate mathematical language.

Understanding and Skills	
Understanding & Fluency	**Problem solving & Reasoning**
Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty. Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects.	Use of problem-solving approaches to count objects in a collection of twenty objects. Description and explanation of mathematical thinking, including demonstration of counting strategies used to count a collection of objects.

Understanding & Fluency	Problem solving & Reasoning	
◀ Clear use of appropriate mathematical language, actions, materials, or recordings to count and represent numbers to twenty. Accurate and efficient recall and use of facts and procedures, including subitising and one-to-one correspondence to count objects in a collection.	◀ Use of unfamiliar strategies, such as partitioning, to count objects in a collection. Clear explanation of mathematical thinking, by justification of strategies used to count a collection of objects.	**A P**
		M C
◀ Use of everyday and some appropriate mathematical language, actions, materials, or recordings to count and represent numbers to twenty. Recall and use of facts and procedures, including subitising and one-to-one correspondence, to count objects in a collection.	◀ Use of a familiar strategy, such as one-to-one correspondence, to count objects in a collection. Description of mathematical thinking, including demonstration of strategies used to count a collection of objects.	**W W**
		E X
◀ Some use of everyday language to count and represent numbers to twenty. Use of simple procedures, including one-to-one correspondence, to count objects in a collection, with direction.	◀ Use of a simple strategy to count objects in a collection, with direction. Isolated statements about counting a collection of objects.	**B A**

Australian Curriculum Prep Year Mathematics	I can count Unit: Comparison challenge	Task specific standards — continua

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I can count

Name ....

Purpose of assessment: To fluently count the number of objects (1–20) in a collection and describe the strategy used, using some appropriate mathematical language.

			Applying (AP)	Making connections (MC)	Working with (WW)	Exploring (EX)	Becoming aware (BA)
Understanding and Skills dimensions	**Understanding & Fluency**	**Mathematical language and symbols** Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty	Clear use of appropriate mathematical language, actions, materials, or recordings to count and represent numbers to twenty	Consistent use of everyday and some appropriate mathematical language, actions, materials, or recordings to count and represent numbers to twenty	Use of everyday and some appropriate mathematical language, actions, materials, or recordings to count and represent numbers to twenty	Use of everyday and some aspects of mathematical language, actions, materials, or recordings to count and represent numbers to twenty	Some use of everyday language to count and represent numbers to twenty
		Procedural fluency Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects	Accurate and efficient recall and use of facts and procedures, including subitising and one-to-one correspondence, to count objects in a collection	Accurate recall and use of facts and procedures, including subitising and one-to-one correspondence, to count objects in a collection	Recall and use of facts and procedures, including subitising and one-to-one correspondence, to count objects in a collection	Some recall of facts and use of procedures, including one-to-one correspondence, to count objects in a collection, with guidance	Use of simple procedures, including one-to-one correspondence, to count objects in a collection, with direction
	Problem solving & Reasoning	**Problem-solving approaches** Uses of problem-solving approaches to count objects in a collection of twenty objects	Use of unfamiliar strategies, such as partitioning, to count objects in a collection	Use of a simple unfamiliar strategy, such as subitising, to count objects in a collection	Use of a familiar strategy, such as one-to-one correspondence, to count objects in a collection	Use of a strategy to count objects in a collection, with guidance	Use of a simple strategy to count objects in a collection, with direction
		Reasoning and justification Description and explanation of mathematical thinking, including demonstration of counting strategies, used to count a collection of objects	Clear explanation of mathematical thinking, by justification of strategies used to count a collection of objects	Explanation of mathematical thinking, including demonstration of strategies used to count a collection of objects	Description of mathematical thinking, including demonstration of strategies used to count a collection of objects	Statements about strategies used to count a collection of objects	Isolated statements about counting a collection of objects

Australian Curriculum Prep Year Mathematics	**I can count** Unit: Comparison challenges	**Task specific standards — matrix**

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I can count

Image: *Numbers 0-9*, Denise Krebs, Creative Commons Attribution 2.0, flic.kr/p/fPFMet

Queensland Government

QCAA
Queensland Curriculum
& Assessment Authority

For all Queensland schools

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Number representations

The child may:

- verbally state the number

- use number names
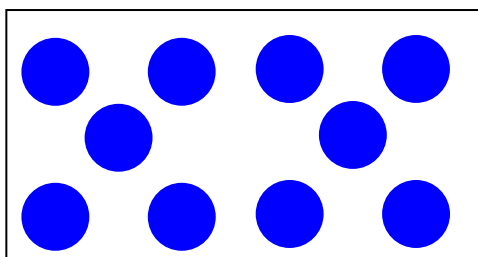
ten

- use symbolic notation

10

- circle a number on a number chart
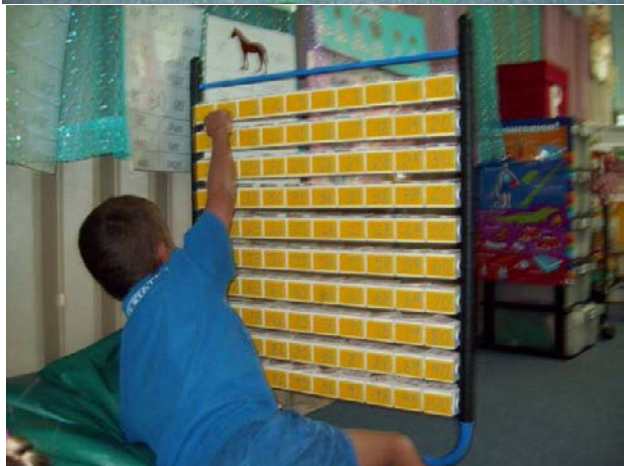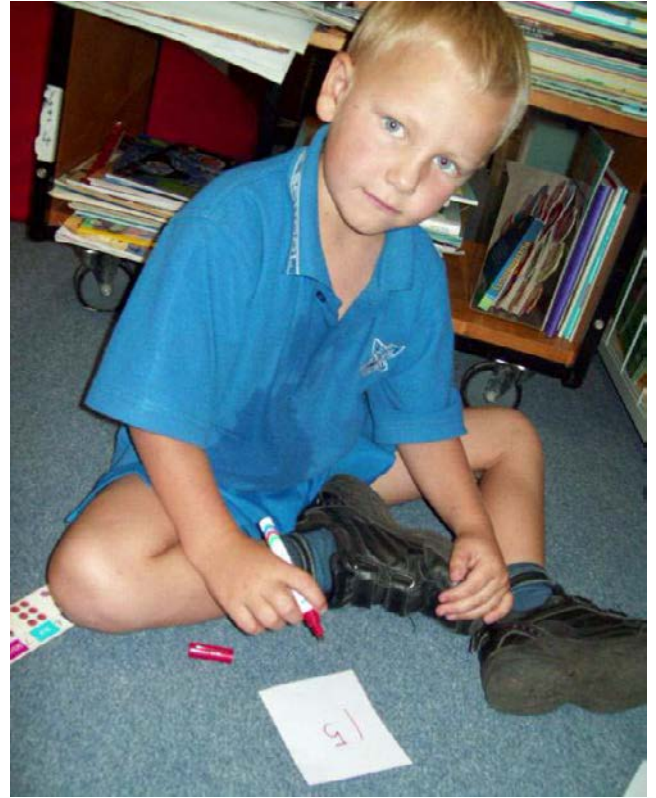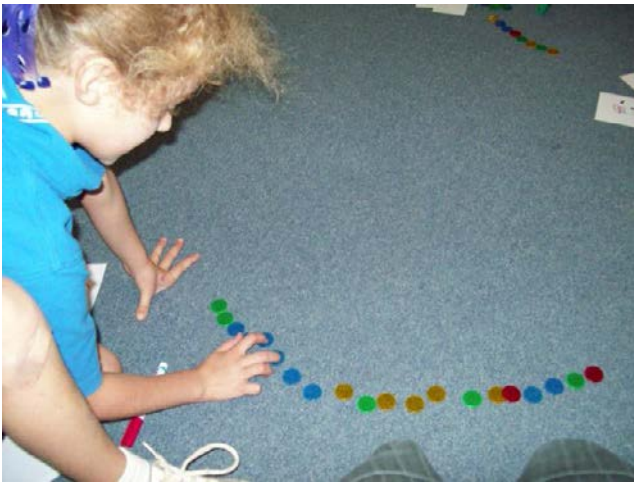
Hundreds number chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- use stickers to represent the amount counted

| **Australian Curriculum** Prep Year Mathematics | **I can count** Unit: Comparison changes | **Assessment resource** |

I can count

Observation record

Assessment description: To count the number of objects in a collection, record the solution, and describe the strategy used.

Name:			Comments
Understanding and Skills dimensions	**Understanding & Fluency**	**Mathematical language and symbols** Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty	
		Procedural fluency Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects	
	Problem solving & Reasoning	**Problem-solving approaches** Uses of problem-solving approaches to count objects in a collection of twenty objects	
		Reasoning and justification Description and explanation of mathematical thinking, including demonstration of counting strategies used to count a collection of objects	
Possible judgment		Additional comments	

I can count

Sample observation records

Assessment description: To count the number of objects in a collection (1–20), record the solution, and describe the strategy used.

Name:			Comments
Understanding and Skills dimensions	**Understanding & Fluency**	**Mathematical language and symbols** Use of everyday and some appropriate mathematical language, actions, materials, and recording to count and represent numbers to twenty	Was able to count 12 markers when markers were placed in a line, and was able to orally represent this. When markers were placed in a circle, counted as 30 although there were 12. In another example, when the markers were placed in a pile, she said, 'There are seven markers' when there were actually six. Counted to 12 by rote. After 12, stated the other teen numbers as their tens (30, 40, 50, 60, 70, 80, 90, 100). Counted back from 11 to one correctly. When asked to count on from four counters to finish completing the count, she became confused and needed to start again at one.
		Procedural fluency Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects	At times, she touched and counted showing one-to-one correspondence (in the example of 12 markers). When markers were placed in a pile or circle, became confused and often missed or over-counted markers. She was unable to show subitising, apart from the number one. She missed a marker and, when prompted, went back and counted the pile correctly.
	Problem solving & Reasoning	**Problem-solving approaches** Uses of problem-solving approaches to count objects in a collection of twenty objects	She attempted to touch and count markers and was able to do this with some success. She moved counters into a sort of line as she checked her partner's collection, although hesitantly.
		Reasoning and justification Description and explanation of mathematical thinking, including demonstration of counting strategies used to count a collection of objects	She made some isolated statements about counting the markers.
Possible judgment **BA**		Additional comments	Is confident with numbers one to 11 and can show one-to-one correspondence, although this needs to be consolidated. Counting the markers, which were in a pile or heap, sometimes proved difficult — missing and over-counting at times — highlighting that she has not yet fully grasped the concept of one-to-one correspondence. Her understanding of the value and order of numbers is still developing, as she struggled to count on from four without starting from the number one.

			Comments
Name:			
Understanding and Skills dimensions	Understanding & Fluency	**Mathematical language and symbols** Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty	Was able to count 20 markers when they were placed in a line, showing one-to-one correspondence as she pointed to counters. When markers were placed in a pile, counted as 60, although there were 16. Correctly counted eight when markers were placed in a circle, although could not write the number eight. Pointed to all numbers on the number strip, but was not able to write the numbers. Counted to 20 correctly and in order. Struggled to count back from 20, unable to continue from 20. Said '60' instead of 16. Counted back from 10 to zero correctly on second attempt (on first attempt she said '10, 8, 9').
		Procedural fluency Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects	Moved counters to one side as she counted. Each counter had a unique number name, showing one-to-one correspondence. She carefully touched and counted each marker each time a collection was counted.
	Problem solving & Reasoning	**Problem-solving approaches** Uses of problem-solving approaches to count objects in a collection of twenty objects	Chose to move counters carefully into a circle formation. Each time, every counter was touched. When asked to count on from three, started counting from one to complete the task of counting to 16.
		Reasoning and justification Description and explanation of mathematical thinking, including demonstration of counting strategies used to count a collection of objects	She made a statement about the strategy of moving the counters to the side as she counted.
Possible judgment EX		Additional comments	Is consolidating knowledge and understanding of one to 20. On one attempt said '60' instead of 16, so may be confused about the value of 16 and numbers larger than 10. Is confident with counting forwards, and backwards from 10 to zero is developing. She has an understanding of one-to-one correspondence.

Name:			**Comments**
Understanding and Skills dimensions	**Understanding & Fluency**	**Mathematical language and symbols** Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty	Was able to count 20 markers in a line, a pile and in a circle. Correctly identified partner's collection as 17 and represented this correctly by writing the number 17. Counted forwards to 20 correctly and in order. Counted back from 20 to 16 and then became confused. Was able to count from 10 to zero with confidence. Was able to count on from four to 20, starting with a group of four counters.
		Procedural fluency Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects	Touched and counted each marker, giving each one a unique name (showing one-to-one correspondence). She maintained an understanding of one-to-one correspondence with the markers placed out of order, in a circle and in a heap, by moving them into a line. She missed the number 17 but went back and corrected herself. She also chose to go to the number board and copy all the 'tricky' numbers from 11 to 20 so that she could learn them.
	Problem solving & Reasoning	**Problem-solving approaches** Uses of problem-solving approaches to count objects in a collection of twenty objects	She moved the markers into a line as she counted them in every example. (Also, when the markers were placed in a circle and a heap). She attempted counting in twos after she had counted the markers in ones. When asked to count on from four, she mouthed the numbers '1, 2, 3' and then said '4', continuing to count on from four.
		Reasoning and justification Description and explanation of mathematical thinking, including demonstration of counting strategies used to count a collection of objects	When asked about her counting strategy she was able to demonstrate it and provide some corresponding statements.
Possible judgment WW		Additional comments	She has a solid understanding of one-to-one correspondence and a fair grasp of the order and value of numbers — she was able to order numbers zero to 20 forwards and backwards. She demonstrated the desire to learn more efficient ways of counting by checking her answer, by counting in twos and by copying the teen numbers from the number board.

Name:			**Comments**
Understanding and Skills dimensions	**Understanding & Fluency**	**Mathematical language and symbols** Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty	Was able to count 20 markers in a line, pile and circle. When asked to write 20, represented it as '02'. Correctly identified partner's collection as 19 and represented this correctly by writing the number 19. He correctly identified the second collection of markers (placed in a circle) as 14, by counting them quickly and confidently. Counted to 20 correctly and in order. Counted back from 20 to zero, but said '90, 80, 70, 60, 50, 40, 30, 20' instead of the teen numbers. He was confident in counting back from 10 to zero. Was able to count on from nine to 15.
		Procedural fluency Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects	Touched and counted each marker, giving each one a unique name (showing one-to-one correspondence). He maintained an understanding of one-to-one correspondence with the markers placed out of order, in a circle and in a heap, by moving them into an orderly line. At times used subitising by grouping four and starting the count from four.
	Problem solving & Reasoning	**Problem-solving approaches** Uses of problem-solving approaches to count objects in a collection of twenty objects	Moved the markers deliberately into an orderly line as he counted them (in every example — also when the markers were placed in a circle and heap).
		Reasoning and justification Description and explanation of mathematical thinking, including demonstration of counting strategies used to count a collection of objects	Was able to demonstrate and describe strategies and how markers could be placed in an orderly line.
Possible judgment **MC**		Additional comments	Is confident with counting and representing numbers one to 20 orally and is consolidating understanding of the written aspect of two-digit numbers. (For example, 20 is two tens so the two needs to be in the tens house). Is beginning to experiment with different strategies to count more efficiently and showed this with his subitising skills and counting in twos to 12.

Name:			**Comments**
Understanding and Skills dimensions	**Understanding & Fluency**	**Mathematical language and symbols** Use of everyday and some appropriate mathematical language, actions, materials, and recordings to count and represent numbers to twenty	Was able to count 20 markers in a line, a pile and in a circle. She expressed that she wanted to continue counting and did so until the number 106. She was able to represent numbers one to 20 orally and write the number and word in the examples of 20, 12 and 11. She represented the number 105 as 1005 on paper. Counted forwards and backwards from zero to 20 correctly and in order. Was able to count on from any given number to 20, and could count back from 98 in order.
		Procedural fluency Use of one-to-one correspondence and subitising to recall numbers in a collection of twenty objects	She showed one-to-one correspondence with all of the collections and frequently grouped her markers in twos. She used subitising with some success and grouped even numbers (four and six) to begin her count to 20 She missed the number 17 but went back and corrected herself. She also chose to go to the number board and copy all the 'tricky' numbers from 11 to 20 so that she could learn them.
	Problem solving & Reasoning	**Problem-solving approaches** Uses of problem-solving approaches to count objects in a collection of twenty objects	She used multiple methods to count collections. She frequently grouped her markers into twos and counted in twos to complete the count more quickly.
		Reasoning and justification Description and explanation of mathematical thinking, including demonstration of counting strategies used to count a collection of objects	She frequently grouped her markers into twos and counted in twos to complete the count more quickly. She was able to explain her strategy and when asked why she chose that strategy, she replied, 'It is easier than counting each one'.
Possible judgment AP		Additional comments	Is extremely confident in representing numbers zero to 20 in a number of ways and has an excellent grasp of the value and order of these numbers. Her knowledge and understanding of numbers to 100 is sound and she is also able to represent these.