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|  | Australian Curriculum Prep Year Mathematics sample assessment ׀ Assessment resource  I can count |

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# 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 |
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| 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. |

| Name: | | | Comments |
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| 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. |

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| 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. |

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| 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. |

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| 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. |