Counting Forwards is Adding One Each Time, Counting Backwards is Taking Away One Each Time.

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Differentiate and Assess

Not every student will be ready to investigate this concept at this Level and so we will need to differentiate to ensure every student is learning at their leading edge. Select the Differentiate button on this screen.

Integrate

Every mathematical concept is integrally related to other mathematical concepts. Teaching and learning related concepts simultaneously develops deep relational understanding. Select the Integrate button on this screen.

Intervene

Some students may not yet be ready to investigate this concept at any Level, and so we will need to provide some intervention. Select the Intervention button on this screen.

COUNTING FORWARDS IS ADDING ONE EACH TIME, COUNTING BACKWARDS IS TAKING AWAY ONE EACH TIME.

EXPLICIT TEACHING PLAN OVERVIEW PAGE

THIS PAGE IS A SUMMARY OF THE EXPLICIT TEACHING PLAN, INCLUDING STRATEGIC QUESTIONS, AND DESRIBING THE SEQUENCE WHICH WILL OCCUR OVER MULTIPLE LESSONS.

RESOURCES:NUMBER CARDS,COUNTERS, PENCIL, PAPER

WHAT COULD WE DO?	WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?
Children: • place out a counter, record 1 • add 1 counter, record 2 • add 1 counter, record 3 • add 1 counter, record 4 • explain counting forwards is adding 1 each time • place out 5 counters, record 1, 2, 3, 4, 5 • take away 1 counter, cross out 5 • take away 1 counter, cross out 4 • take away 1 counter, cross out 3 • explain counting backwards is taking away 1 each time	Children: • ask questions aboutcounting forwards is adding one each time, counting backwards is taking away one each time, for example, • please add 1 counter • what did we do? • how many counters do we have? • when we count forwards by ones, how many are we adding each time? • please take away 1 counter • what did we do? • how many counters do we have left? • when we count backwards by ones, how many are we taking each time?

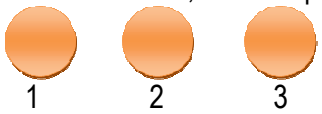
COUNTING FORWARDS IS ADDING ONE EACH TIME, COUNTING BACKWARDS IS TAKING AWAY ONE EACH TIME.

EXPLICIT TEACHING PLAN

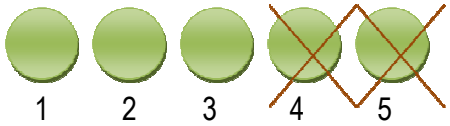
FULL EXPLICIT TEACHING PLAN, EMBEDDING DEEP RELATIONAL UNDERSTANDING, METALANGUAGE, AND QUESTIONS THAT MAY BE USED OVER MULTIPLE LESSONS.

WHAT COULD WE DO?	WHAT LANGUAGE COULD WE USE TO EXPLAIN AND ASK QUESTIONS?
Children think about, talk and listen to a friend about, then have the opportunity to share what they already know.	► Today we're going to investigate counting forwards. ► What do you already know about counting forwards? ► Talk to a friend about counting forwards. ► Is anybody ready to share what they are thinking about counting forwards?
As children count to 10, record the numbers on the board, for example, 1 2 3 4 5 6 7 8 9 10 As children count backwards, point to each number. *Children count backwards as often as they count forwards to develop equal capacity at both.*	► Let's count forwards from one to ten – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. ► Let's count backwards from ten – 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0. ► When we count, what do we say? ► Do we say numbers when we count? ► When we count forwards and backwards, do we say the same numbers? ► What are these symbols I've recorded here? ► Are these symbols, numbers? ► Do we use numbers to count things?
Display a container of counters (grouping 20 counters in small containers for each child is very convenient). A child adds 1 counter, for example,  Children explain that they added 1 counter - children may initially say they 'put' a counter. If so, repeat your request to 'Please add 1 counter' and ask again 'what did we do?' to encourage children to use mathematical language 'add'.	► **Today we're going to investigate what we are doing when we count forwards by ones.** ► Please add 1 counter. ► What did we do? ► Did we add 1 counter? ►

Children explain that they now have 1 counter.  Record the counter and the numeral 1, for example, 1 A child adds 1 counter, for example,  Children explain that they added 1 counter. Children explain that they now have 2 counters. Record the counter that we added and the numeral 2, for example,  1 2 Point to the number 2. A child adds 1 counter, for example,  Children explain that they added 1 counter. Children explain that they now have 3 counters.	▸ How many counters altogether? ▸ Is there 1 counter altogether? ▸ How could we record this? ▸ Could we record the counter that we added? ▸ Could we record the number 1? ▸ Please add 1 counter. ▸ What did we just do? ▸ Did we add 1 counter? ▸ How many counters altogether? ▸ Are there 2 counters altogether? ▸ How could we record this? ▸ Could we record the counter that we added? ▸ Could we record the number 2? ▸ Let's look at the number 2. ▸ Is 2 the number after 1? ▸ Is 2 one more than 1? ▸ Did we add one to 1 to get 2? ▸ Please add 1 counter. ▸ What did we just do? ▸ How many counters altogether?

Record the counter that we added and the numeral 3, for example,  	▸ How could we record this?
Point to the number 3.	▸ Let's look at the number 3. ▸ Is 3 the number after 2? ▸ Is 3 one more than 2? ▸ Did we add one to 2 to get 3? ▸ Is the number after 2 one more than 2?
	▸ How many have we been adding each time? ▸ Have we been adding 1 each time?
	▸ Let's read the numbers, 1, 2, 3. ▸ Are we counting forwards by ones?
As children develop their understanding that counting forwards by 1s means we are adding 1 each time, they may initially say they added 3 (the total number of counters). At this stage, don't worry - their understanding will develop as they investigate. Children think about, talk and listen to a friend about, then have the opportunity to share what they already know.	▸ When we count forwards by ones, how many are we adding each time?

	▸ **Today we're going to investigate counting backwards.** ▸ What do you already know about counting backwards? ▸ Talk to a friend about counting backwards. ▸ Is anybody ready to share what they are thinking about counting backwards?
Display a container of counters (grouping 20 counters in small containers is very convenient).	
Display 5 counters. Record 5 counters and the numerals 1, 2, 3, 4, 5, for example,  	▸ How many counters? ▸ How could we record this? ▸ Could we record the counters? ▸ Could we record the numbers?
A child takes away 1 counter. Children explain that they took away 1 counter.	▸ Please take away 1 counter. ▸ What did we do? ▸ Did we take away 1 counter?
Children explain that they have 4 counters left.	▸ How many counters are left? ▸ How could we record this?
Cross out the final counter, for example,  	▸ Could we cross out the counter that we took away?
Point to number 4.	▸ Let's look at the number 4. ▸ Is 4 the number before 5? ▸ Is 4 one less than 5? ▸ Did we take away one from 5 to get 4?

Have a child take away 1 counter. Have children explain that they took away 1 counter. Have children explain that they have 3 counters left. Cross out one counter, for example,  Point to number 3. As children develop their understanding that counting backwards by 1s means we are taking away 1 each time, they may initially say they took away 3 (the number of counters left). At this stage, don't worry - their understanding will develop as they investigate.	► Please take away 1 counter. ► What did we do? ► Did we take away 1 counter? ► How many counters are left? ► How could we record this? ► Could we cross out the counter that we took away? ► Let's look at the number 3. ► Is 3 the number before 4? ► Is 3 one less than 4? ► Did we take away one from 4 to get 3? ► How many have we been taking away each time? ► Have we been taking away 1 each time? ► Let's read the numbers, 5, 4, 3. ► Are we counting backwards by ones? ► When we count backwards by ones, how many are we taking away each time?

Numerals 0 – 10 (print, cut out and distribute to each child) (back)