

## Calculator Week Revisited – Exploring Number Patterns Y3/4

### For this week you will need:

- A calculator. There are calculators on phones, laptops and other devices. Here's a link to one: <https://www.online-calculator.com/>
- Paper, pencil and pens (you'll need to keep the work you do each day).
- Small things to count with like cereal shapes, shells, stones, marbles, Lego bricks, pegs etc.



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## Calculator Week Revisited – Exploring Number Patterns Y3/4

### Day 1

- Press 0 then + 2 = =
- Keep pressing = to keep counting.
- Write down some three-digit numbers you know the calculator would show if you kept pressing =
- Write down some three-digit numbers you know the calculator would **not** show if you kept pressing =
- Now press 1 then + 2 = =
- Keep pressing = to keep counting
- What do you notice?
- Write down the numbers in this sequence.
- Draw something or find something from your home or garden to represent this number pattern.
- Write down some three-digit numbers you know the calculator would show if you kept pressing =
- Write down some three-digit numbers you know the calculator would **not** show if you kept pressing =
- What do you notice about the four sets of three-digit numbers you have written down?

#### *Notes for adults working with groups of children*

- Help the children to notice that the calculator is counting in equal steps and the first sequence produces even numbers and when starting with 1 the sequence counts in 2s from 1 and produces odd numbers.
- Numicon, number lines or hundred squares could be used to model the even and odd counting sequences
- Give the children the opportunity to explain how they have chosen to arrange their objects to represent the number patterns

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### Day 2

- Press 0 then + 5 = =
- Keep pressing = to keep counting.
- Write down some three-digit numbers you know the calculator would show if you kept pressing =
- Write down some three-digit numbers you know the calculator would **not** show if you kept pressing =
- Now press 1 then + 5 = =
- Keep pressing = to keep counting.
- What do you notice?
- Write down the numbers in this sequence.
- Draw something or find something from your home or garden to represent this number pattern.
- Write down some three-digit numbers you know the calculator would show if you kept pressing =
- Write down some three-digit numbers you know the calculator would **not** show if you kept pressing =

#### ***Notes for adults working with groups of children***

- Help the children to notice that the calculator is counting in equal steps of 5 both times. The first sequence produces multiples of 5 and the second sequence, when starting with 1, produces numbers ending in 6 and 1 because they are multiples of 5 plus 1.
- Numicon, number lines or hundred squares could be used to model the counting sequences.
- Give the children the opportunity to explain how they have chosen to arrange their objects to represent the number patterns

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### Day 3

- On day 2 you made the calculator count in 5s starting from 1
- Make the calculator count in 5s from a number of your choice e.g. 23
- What do you notice?
- Write down the numbers in this sequence
- Write down some three-digit numbers you know the calculator would show if you kept pressing =
- Write down some three-digit numbers you know the calculator would **not** show if you kept pressing =
- Draw something or find something from your home or garden to represent this number pattern.
- Choose a new number to count in 5s from, and another and another...
- What do you notice each time?

#### ***Notes for adults working with groups of children***

- Help the children to notice that the calculator is counting in equal steps of 5 each time. Each sequence has an alternating pattern of two numbers in the ones: 0 and 5, 1 and 6, 2 and 7, 3 and 8 or 4 and 9. This is because  $5 + 5 = 10$ . Help the children to identify if the numbers are multiples of 5 or multiples of  $5 + 1$ ,  $+ 2$ ,  $+ 3$  or  $+ 4$ .
- Numicon, number lines or hundred squares could be used to model the counting sequence
- Give the children the opportunity to explain how they have chosen to arrange their objects to represent the number patterns

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### Day 4

- Press 100 then  $- 2 = =$
- Keep pressing  $=$
- If you keep going, will the calculator show zero? Why?
- Write down the numbers in this sequence
- What do you notice?
- Press 99 then  $- 2 = =$
- Keep pressing  $=$
- If you keep going, will the calculator show zero? Why?
- Write down the numbers in this sequence
- What do you notice about these sequences and the ones you wrote down on day 1?

#### ***Notes for adults working with groups of children***

- Help the children to notice that the calculator is counting backwards in equal steps of 2 and that these sequences are the same as those from day 1: odd and even numbers
- Number lines will support children who are keen to see what is happening when counting backwards towards zero and then past zero

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## Calculator Week Revisited – Exploring Number Patterns Y3/4

### Day 5

- On day 4 you made the calculator count backwards in 2s from 100 and from 99
- Make the calculator count backwards in 5s from 100
- If you keep going, will the calculator show zero? Why?
- Now make the calculator count back in 5s from 99
- What do you notice?
- If you keep going, will the calculator show zero? Why?
- Make the calculator count back in 5s from a number of your choice. If you keep going, will the calculator show zero? Why?
- Were you right?
- What do you notice about these sequences and the ones you wrote down on days 2 and 3?

#### ***Notes for adults working with groups of children***

- Help the children to notice that the calculator is counting backwards in equal steps of 5 and that these sequences are the same as some of those from days 2 and 3. Each sequence has an alternating pattern of two numbers in the ones: 0 and 5, 1 and 6, 2 and 7, 3 and 8 or 4 and 9. This is because  $5 + 5 = 10$ . Help the children to identify if the numbers are multiples of 5 or multiples of  $5 + 1$ ,  $+ 2$ ,  $+ 3$  or  $+ 4$ .
- Number lines will support children who are keen to see what is happening when counting backwards towards zero and then past zero.

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