

Simonstone St. Peter's
Church of England School



Counting and Place Value in Key Stage 1

Current Foundation Stage Expectations

- Say and use number names in order in familiar contexts.
- Know that numbers identify how many objects are in a set.
- Estimate and count reliably up to 20 everyday objects.
- Place numbers 1-20 in order.
- Use language such as *more* or *less* to compare two numbers.
- Use ordinal numbers in different contexts e.g. First, second
- Find one more or one less than a number from 1 to 20?
- Begin to relate addition to the combining two groups of objects and subtraction to “taking away”.
- Add and subtract two single digit numbers and count on or back to find the answer.
- Use the vocabulary associated with addition and subtraction.
- Solve problems involving doubling, halving and sharing.

New Curriculum Expectations Year 1

- Count from 0 to and across 100, forwards and backwards from 0 or 1, and from any given number
- Count, read and write numbers to 100 in numerals, count in different multiples including ones, twos, fives and tens.
- Read and write numbers from 1 to 20 in words.
- Find one more and one less than any given number.
- Identify odd and even numbers.
- Represent and use number bonds and related subtraction facts within 20 e.g. $13 + 5 = 18$, $5 + 13 = 18$, $18 - 5 = 13$, $18 - 13 = 5$
- Solve e.g. $7 + \underline{\quad} = 15$, $12 - \underline{\quad} = 3$, $\underline{\quad} - 5 = 3$, $7 = \underline{\quad} - 9$

New Curriculum Expectations Year 2

- Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward
- Read and write numbers to at least 100 in numerals and in words
- Recognise the place value of each digit in a two-digit number (tens, ones). *Partition numbers in different ways (for example, $23 = 20 + 3$ and $23 = 10 + 13$).*
- Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs.
- *Find 1 or 10 more or less than a given number.*
- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.
- Add and subtract e.g. $43 + 8 =$, $65 - 7 =$, $38 + 40 =$, $76 - 50 =$, $53 + 28 =$, $66 - 25 =$ (and moving on to missing numbers)

Count the red counters!

- Take a handful of counters and count the red ones!
- Look at all the things you need to know!
- Matching – you know that the red ones match in colour and you mentally pick them out,
- Sorting – the red ones from those that are not red
- Order – put them in a suitable arrangement for counting – are some overlapping, concealed? You might put them in an order so you don't leave one out or count one twice.
- Recite number names. You will pair some number names with the counters, saying as many number names as there are counters
- You have selected a final number name which you associate with the whole set. It describes all the red counters you have counted.

Counting is very complex!

Is counting just starting at 0 or 1?



- **Starting at different numbers.**
- **Counting forwards and backwards.**
- **Counting is the basis of addition and subtraction.**

Counting

- Interactive Teaching Programmes (itps)

<http://www.taw.org.uk/lic/itp/>

- Counting out loud and missing a number e.g. 32, 31, 30, ____, 28, 27. Counting in a pair, saying alternate numbers.
- Counting sticks.
- Dropping coins into a tin. Children listen and count in their heads.
- Counting larger quantities of objects by grouping into 2s, 5s or 10s.

What is Place Value?

- Understanding the value of each digit in a number. What's it worth?
- **Partitioning** numbers into tens and ones (and partitioning in different ways.)
- Ordering numbers. Once you know the value of the number it is easier to work out where it is in the number system.
- Comparing numbers. Which is the smaller, larger number? Which number comes in between?
- Leads to being able to add two 2-digit numbers.
E.g. $56 + 32$. Add 50 and 30, and 6 and 2. Also doubling and halving by partitioning.

Activities with number cards

- Use number cards to 10. Spread the cards out upside down. One person chooses a card and starts to count from that number around the table. The person who says 10 wins a counter.
- Choose a card and say the number before or after.
- Choose a card and a rule card e.g. Count on 2, count back 3. Use cards to 20 or 100.
- Choose 2 cards and count from the lower one to the higher number or backwards. Be selective with the cards you choose!
- Choose 5 cards and put them in order starting with the lowest number or the highest number. Use knowledge of place value to order the cards – look at the value of the tens number.
- Without looking, choose a number card and place in a position on a ladder. Partner does the same on their ladder. Once placed a card cannot be changed. Keep choosing until you have tried to complete your ladder. Can you sometimes not place the card because there is no space between two numbers already placed?

HOW CAN TWO PLUS
THREE EQUAL FIVE?

YESTERDAY YOU SAID
ONE PLUS FOUR EQUAL
FIVE!



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Activities with dice

- Roll the dice, say the number that is one less/one more.
- Roll two dice and add the numbers together.
- Roll two dice and subtract/find the difference between the two numbers.
- Choose a number card, roll a dice and add or subtract the number on the dice to/from the number on the card.
(Adding/Subtracting, Counting forwards/backwards a single digit to/from a 2-digit number.)
- Making a target number e.g. The smallest number you can, the largest number, a number as near to 30 as you can, an even number, odd number, number between 20 and 50.

Activities with dominoes

- Find all doubles.
- Find all the near doubles.
- Find the number pairs to 10 (need sets of dominoes with numbers to 10)
- Choose a domino and make an addition and subtraction number sentence.
- Find a domino with 7 spots, 10 spots, 15 spots.
Write a number sentence to match.
- Domino dogs! Involves a lot of counting!

Place Value cards

- Layout the cards in hundreds, tens and ones (units)
- Make e.g. 36. Partition this. Make with tens and ones apparatus. You can use 10p and 1p coins too!
- Change 36 into 76. What did you have to do?
- How many 3 digit numbers can you make with 60 in them?

Addition/Subtraction facts with cubes

- Decide on a number we want to learn all the facts for e.g. 11.
- Count out that many cubes and place them in a line with a little space between each cube, between you and your partner.
- Place a whiteboard somewhere along the line between the cubes. If say, you can see 6 cubes, calculate how many cubes your partner can see.

Activities with playing cards

- Take out all the picture cards. Find all the pairs of numbers that make 10.
- Choose 3 cards and put them in order.
- Count the picture cards as 10. Choose a picture card and another card e.g. Jack and 4 is $10 + 4 = 14$.
- Choose 2 cards to make an addition number sentence or subtraction number sentence.

Websites

- <http://www.topmarks.co.uk/place-value/place-value-charts>
Make the number using the place value cards.
- <http://www.topmarks.co.uk/maths-games/5-7-years/counting> A variety of counting games .
- <http://www.ictgames.com/counting.htm> A variety of counting games
- http://www.bbc.co.uk/schools/websites/4_11/site/numeracy.shtml KS1 Bitesize
- <http://www.wmnet.org.uk/wmnet/14.cfm?p=125,index>
Gordon's itps. Lots of games and activities!
- <http://www.crickweb.co.uk/ks1numeracy.html>
- <http://primarygamesarena.com/Key-Stage-1>
- There are many websites! Just google counting and ordering or place value KS1!