

Take a seat and get started...

Find at least one person to play with.

Take it in turns to throw a 6 sided dice.

Cover the corresponding number on the board that is shown on the dice face. (1 dot cover the number 1)

Who can be the first to cover all their numbers.

How could you adapt it for your child?

1	2	3	6	5
4	1	2	3	6
5	4	3	2	1

LEARNING 4 KIDS



Maths

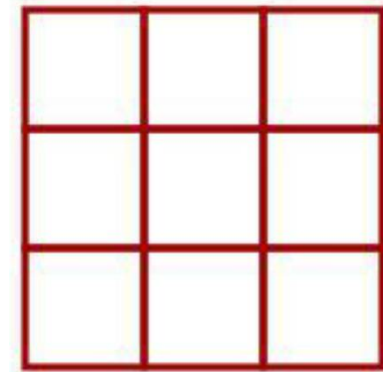
Addition and Subtraction

Wednesday 10th October 2018



Warm up

Dotty 6



Consider what maths skills you are using when playing this game.

How could you adapt the game?



Aims

- To get an insight into how Maths is taught at St Peter's.
- To become more familiar with the methods used to teach calculations.
- To take away some ideas to support your child at home.



Maths at St Peter's



Y1	Y2	Y3
Addition and subtraction Pupils should be taught to: • read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 • add and subtract one-digit and two-digit numbers to 20, including zero • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$	Addition and subtraction Pupils should be taught to: • solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems	Addition and subtraction Pupils should be taught to: • add and subtract numbers mentally, including: - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction



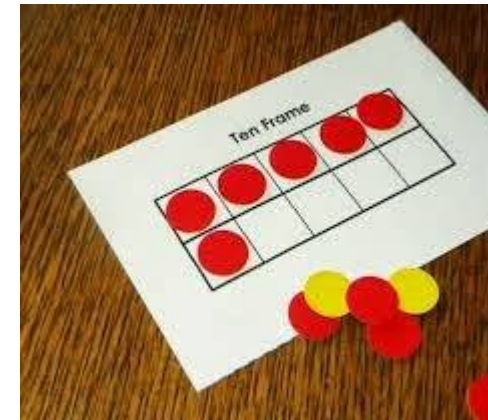
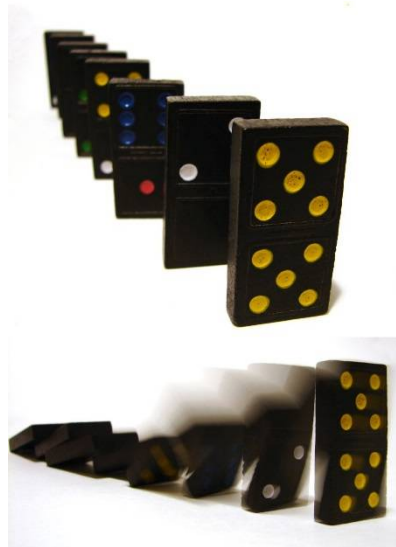
Number Sense

Children need to understand our number system, starting with counting numbers, building an understanding of how our numbers work and fit together. This includes exploring place value and comparing and ordering numbers then applying this understanding in different contexts.

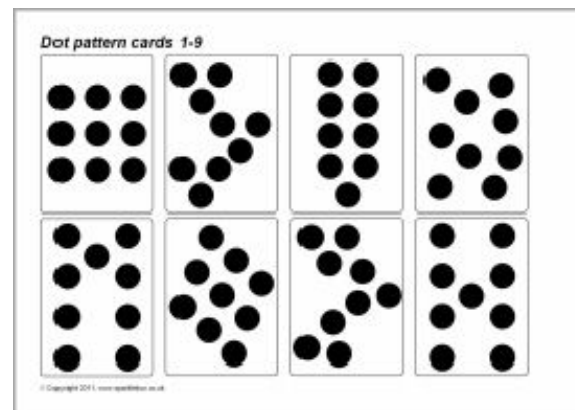


Subitising

Start with ...

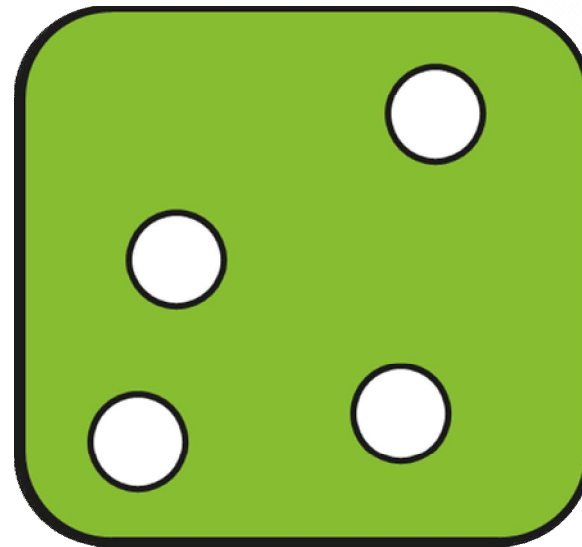


Move on to ...



Subitising

Roll!



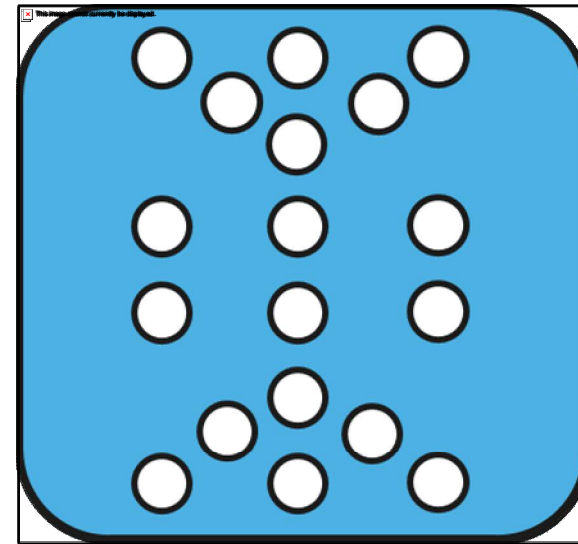
How many dots do you see?

How do you know how many dots there are?

Did anyone work out the number of dots differently?



Roll!



How many dots do you see?

How do you know how many dots there are?

Did anyone work out the number of dots differently?

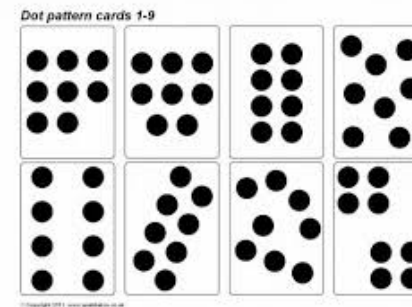


Subitising – At home

- Play board games/dominoes
- Use dot cards



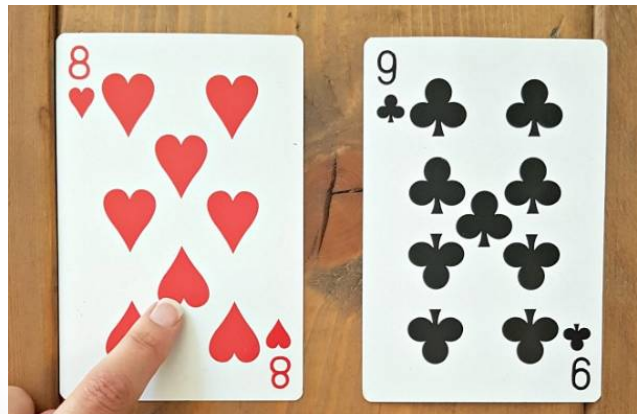
1	2	3	6	5
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- Encourage use of comparative (more/less/fewer/most)



Making totals



Rhymes and songs



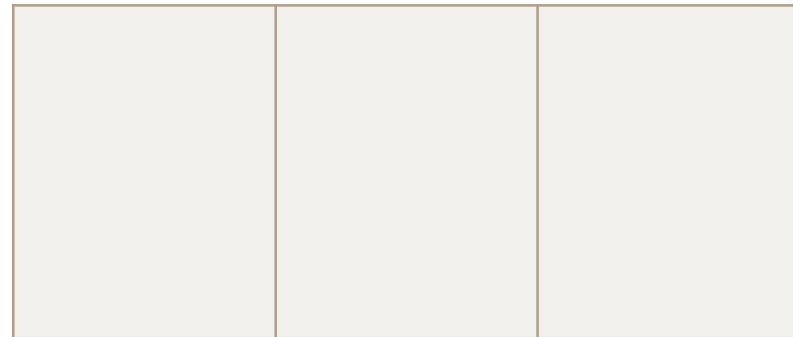
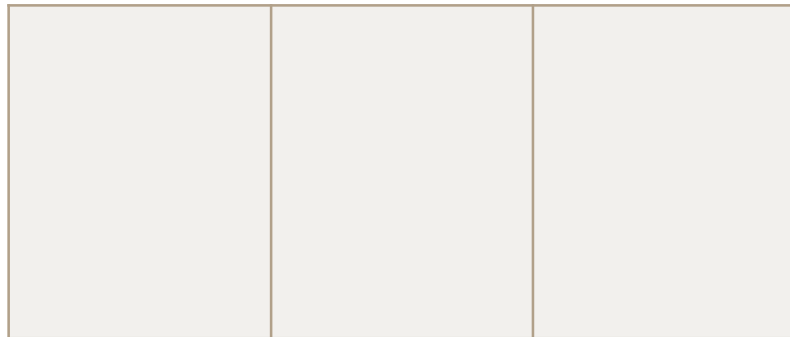
<https://www.bbc.co.uk/programmes/b03g64rd/clips>

<http://www.teachingyourchild.org.uk/number-songs.htm>

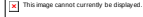


Place Value

- Place value is at the heart of the number system. All digits have a value and a secure understanding of this will enable children to use and understand different calculation methods.



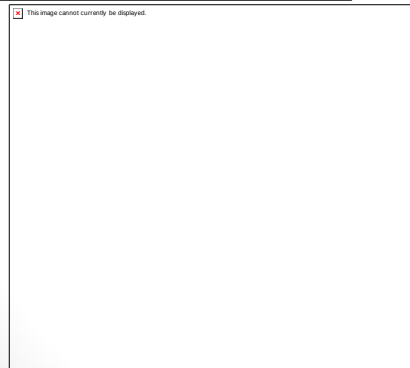
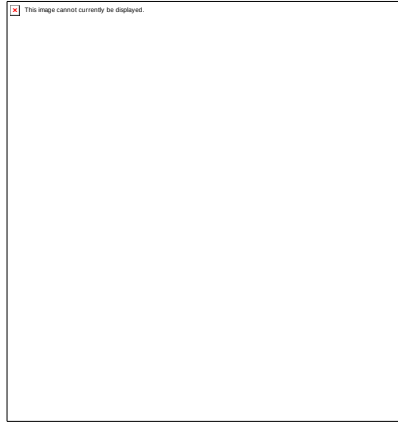
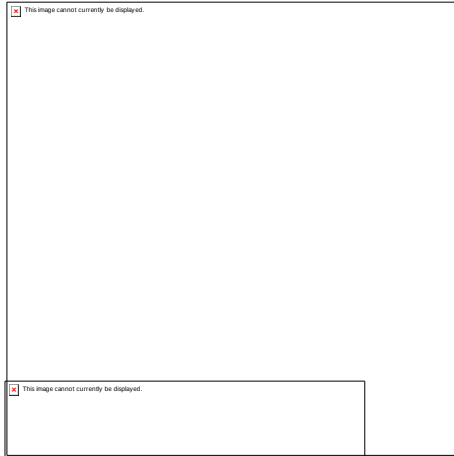
Line up



- Players take it in turns to throw the dice. Either throw the dice three times or use three dice.
- First throw represents the H, second throw the T and third throw the Ones.
- Plot the 3-digit number on a blank number line.
- First to get 4 in a line without opponent's numbers in between wins.
- Variation: You can choose which throw (or dice if you are using 3) is the H, the T and the Ones. This can bring in more strategic thinking.



Concrete apparatus



Addition – Practical

<http://www.stpeters.herts.sch.uk/maths-1/>

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Addition - Written

- Blank number line
- Expanded column method
- <http://www.stpeters.herts.sch.uk/maths-1/>



Expanded Method

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Have a go

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Taken from Year 2 SATs paper

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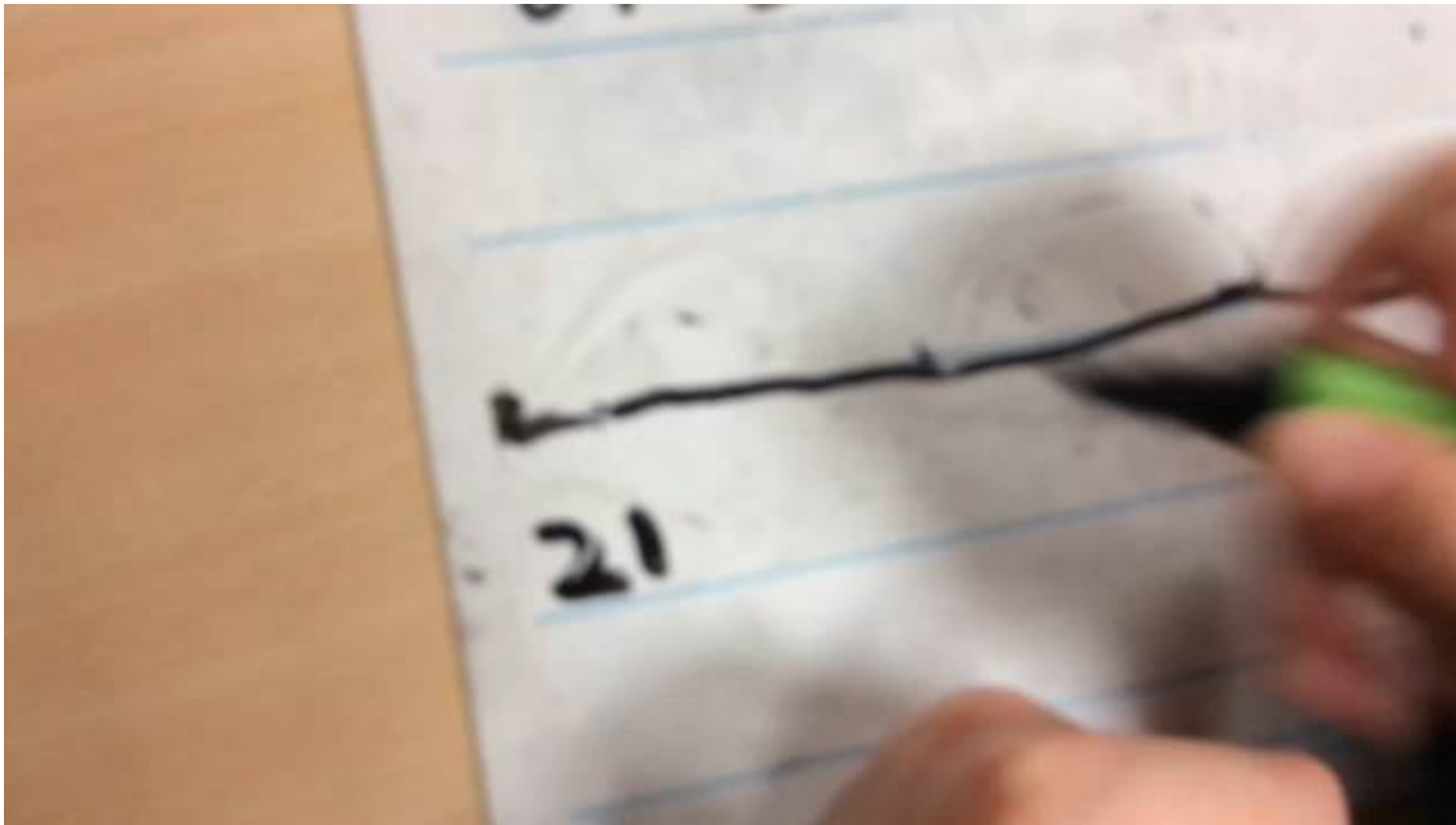
Subtraction – Practical

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Subtraction – Written

Subtraction by counting on



Have a go

20

$86 - 21 = \boxed{}$

23

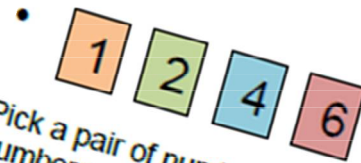
$71 - 14 = \boxed{}$

1 mark



What next?

Write a pair of numbers that add together to make 8. How many pairs can you find? Are you sure there aren't any more?



Pick a pair of numbers. Add them together. Write the numbers and the answer. How many different totals can you make?
Choose a pair of numbers and takeaway one from the other. How many totals can you make now?

Which four number sentences link these 3 numbers?

3 4 7

- **True or False?**
These four calculations have the same answer.
 $7 - 3 - 2$ $2 - 3 - 7$
 $3 - 2 - 7$ $7 - 2 - 3$

Use cubes to help to explain your answer.

Sam says 'I am thinking of a two digit number, if I add ones to it, I will only need to change the ones digit.' Is he right? Explain your answer.



Maths at home – make it real



- Nature Walk - look for numbers, shapes, patterns
- Cooking
- Shopping
- Sharing sweets (or a healthy alternative)



More maths at home

- **A prominent clock**- digital and analogue is even better. Place it somewhere where you can talk about the time each day.
- **A traditional wall calendar**-Calendars help with counting days, spotting number patterns and
- **Board games that involve dice or spinners**-helps with counting and the idea of chance
- **A pack of playing cards**- Card games can be adapted in many ways to learn about number bonds, chance, adding and subtracting
- **A calculator**- A basic calculator will help with maths homework when required, there are also many calculator games you can play, too.
- **Measuring Jug**-Your child will use them in school, but seeing them used in real life is invaluable. Also useful for discussing converting from metric to imperial
- **Dried beans, Macaroni or Smarties**- for counting and estimating
- **A tape measure and a ruler**- Let your child help when measuring up for furniture, curtains etc
- **A large bar of chocolate** (one divided into chunks)- a great motivator for fractions work
- **Fridge magnets with numbers on**- can be used for a little practice of written methods
- **Indoor/outdoor Thermometer**- especially useful in winter for teaching negative numbers when the temperature drops below freezing
- **Unusual dice**- not all dice have faces 1-6, hexagonal dice, coloured dice, dice from board games all make talking about chance a little more interesting
- **A dartboard with velcro darts**- Helps with doubling, trebling, adding and subtracting.

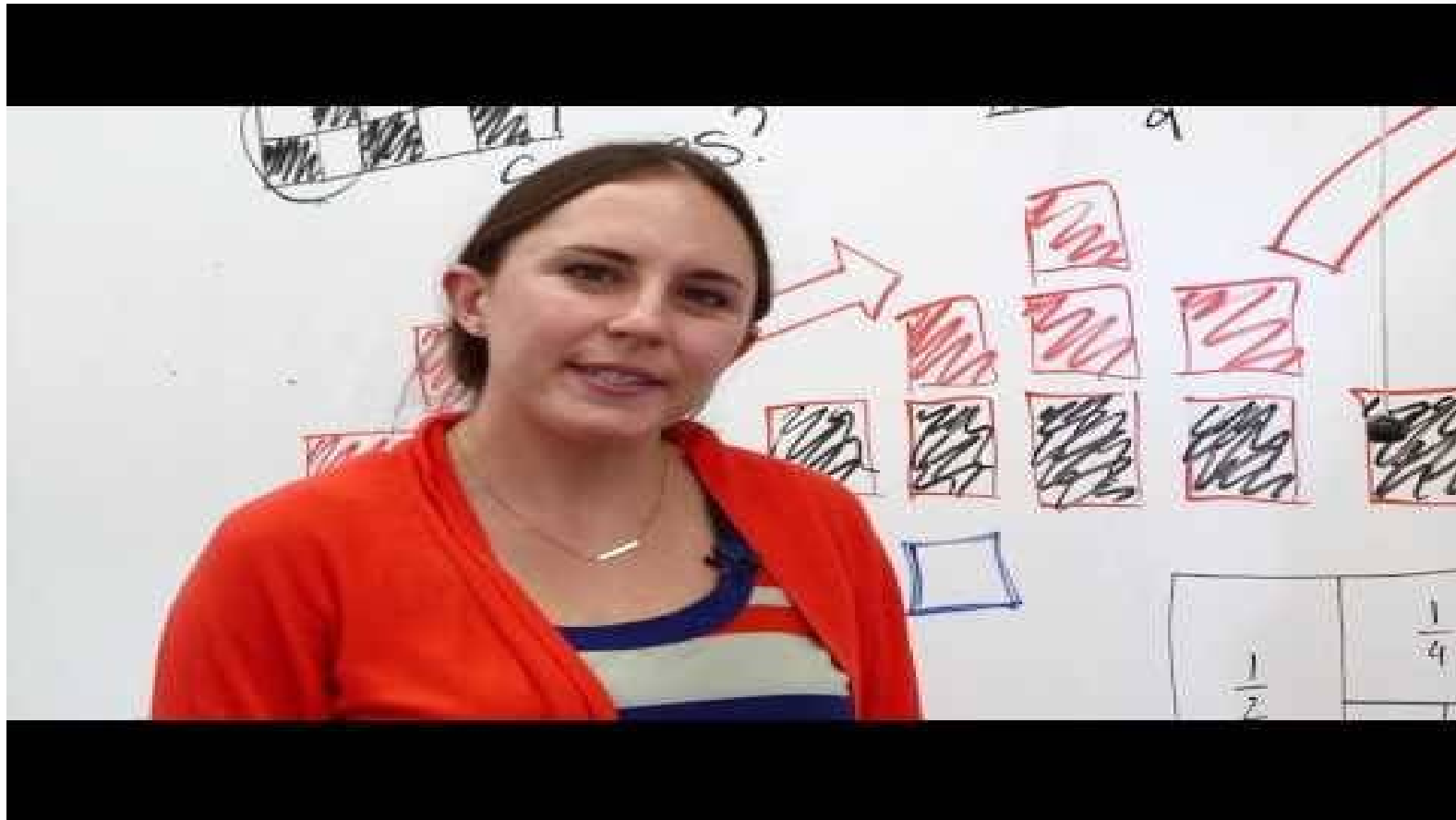


Resources for support

- Existing school publications
- <https://www.oxfordowl.co.uk/for-home/maths-owl/maths>
- Variety of picture books
- www.topmarks.co.uk
- <http://www.stpeters.herts.sch.uk/maths-1/>
- <https://nrich.maths.org/13371>
- <http://www.familymathstoolkit.org.uk/activities-for-children>



Final Word



Questions

Thank you.

