

# Perton First School

## KS 1 Maths New Curriculum

# Why a new National Curriculum?

- **New National Curriculum-** September 2014
- Sets out the framework for what children should be taught.
- The changes were necessary to keep pace with the achievement of pupils in other countries.
- The new curriculum is very knowledge based.

# Maths Curriculum 2014

## (Year 1 onwards)

Maths is broken down into 3 areas:

- **NUMBER**

$+$ ,  $-$ ,  $\times$ ,  $\div$  also fractions, measurement

- **GEOMETRY**

Properties of 2D and 3D shapes/position , direction and movement

- **STATISTICS**

Constructing charts and interpreting data

Throughout and underpinning these strands is

**USING AND APPLYING**

Word problems and real life connections

# Expectations in Number and Place Value

Year	
1	<p>Count , read and write numbers to 100 (1-20 in words)</p> <p>Count in multiples of 2, 5 &amp; 10</p> <p>Identify and represent numbers using objects and use language of more than, less than, equal etc</p> <p>Count to &amp; across 100, forwards &amp; backwards. Know one more/one less</p>
2	<p>Read and write numbers to at least 100 in numerals and words</p> <p>Count in steps of 2,3 &amp; 5 from 0 and 10's from any number, forward and backwards</p> <p>Identify, represent &amp; estimate numbers using different representations, including number lines</p> <p>Recognise place value in two digit numbers (tens / ones)</p> <p>Compare numbers to 100 using <math>&lt;</math> <math>&gt;</math> and <math>=</math> signs</p> <p>Use place value and number facts to solve problems</p>

# Expectations in fractions

Year	
1	Recognise, find and name a half and quarter of an object, shape or quantity
2	Recognise, find, name & write $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{1}{2}$ & $\frac{3}{4}$ of a length or set. Write simple fractions such as $\frac{1}{2}$ of 6 = 3, understand equivalence to $\frac{1}{2}$

# Expectations in measure

Year	
1	<p>Compare, describe and record length, mass, capacity &amp; time in solving practical problems</p> <p>Recognise and know value of coins &amp; notes</p> <p>Sequence events chronologically e.g. first, next, tomorrow, next week etc,</p> <p>Recognise and use language relating to dates e.g. days of the week, months years etc.</p> <p>Tell the time to the hour and half hour, being able to draw hands on a clock</p>
2	<p>Choose &amp; use appropriate units of measure</p> <p>Find different combinations of coins to equal same amount. Use and combine £ and p, giving change in practical applications</p> <p>Tell &amp; write the time to nearest 5 minutes, including quarter past / to the hour</p> <p>Know the number of minutes in an hour and hours in a day</p>

# Expectations in Geometry

Year	
1	Describe position, direction and movement including whole, half, quarter and three-quarter turns. Name common 2D and 3D shapes
2	Identify properties of 2D shapes including symmetry in a vertical line. Identify properties of 3D shapes, including #edges, faces and vertices Identify 2D shapes on the surface of 3D shapes

# Expectations in Statistics

Year	
1	No requirements
2	Interpret & construct simple pictograms, tally charts, tables. Count and sort objects into categories. Answer questions about data.



# Broad aims of the New Curriculum

To ensure

- that pupils develop mathematical **fluency** *eg times tables, number bonds etc*
- children can **reason** mathematically *children need to be able to **explain** the mathematical concepts with number sense, they must explain **how** they got the answer and **why** they are correct.*
- an emphasis on **problem-solving** throughout so they can make connections across mathematical ideas. *applying their skills to real- life contexts.*

# Thinking is at the heart of Mathematics

- Maths is about
- spotting patterns
- making links
- understanding how pieces of knowledge fit together.
- **NOT** purely memorising facts and procedures by rote.

**What approach do we use at ks1?**



# Concrete Experiences

- Concrete representation
- This is a 'hands on' component using real objects and it is the foundation for conceptual understanding.

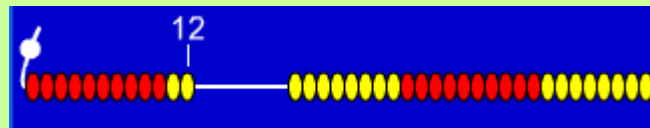
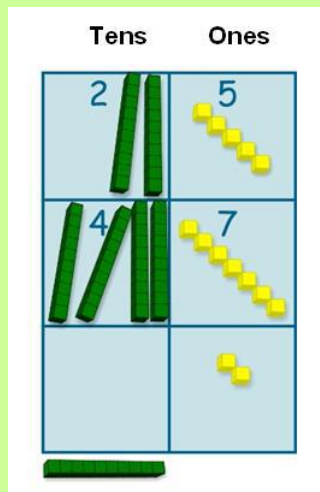




# Pictorial Experiences

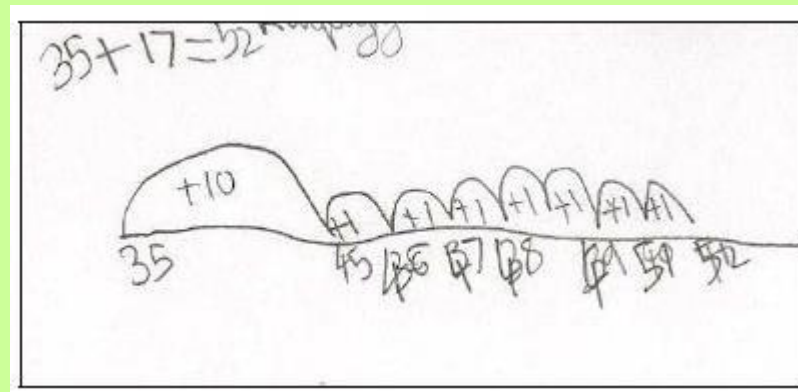


- Pictorial representation
- Using representations, such as a diagram or picture of the problem.

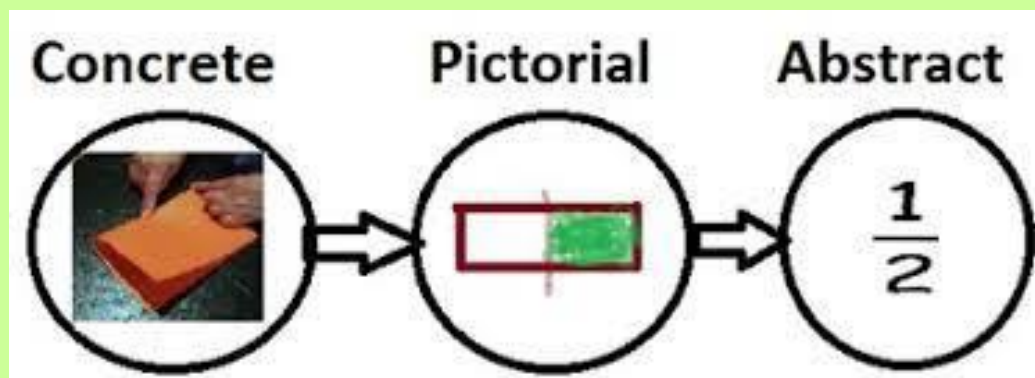
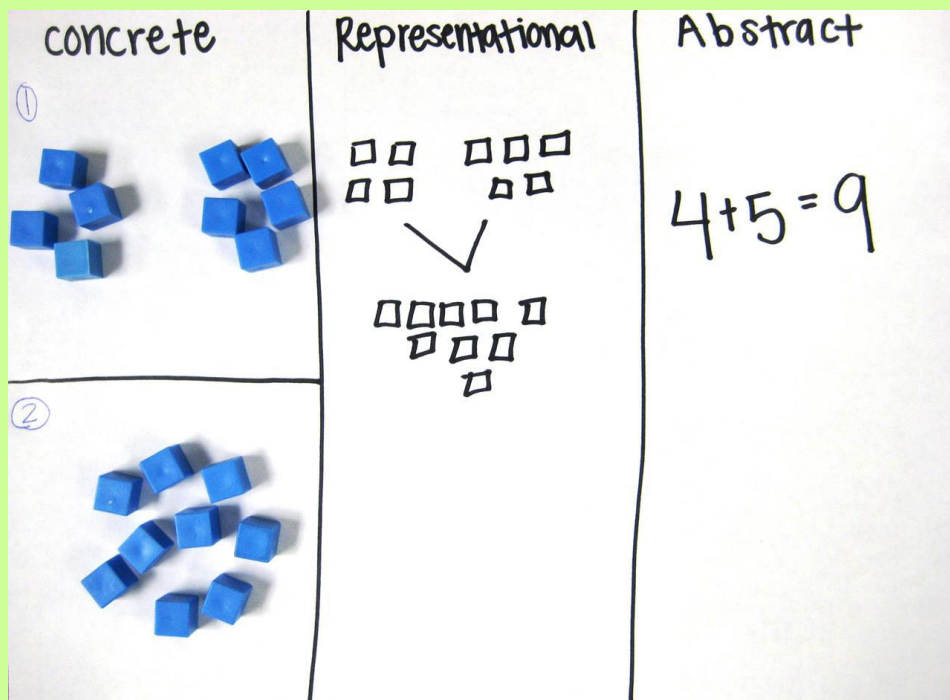


# Abstract/Symbolic Experiences

- **Abstract representation**
- The symbolic stage - a child is now capable of representing problems by using mathematical notation, for example:  $12 \div 2 = 6$

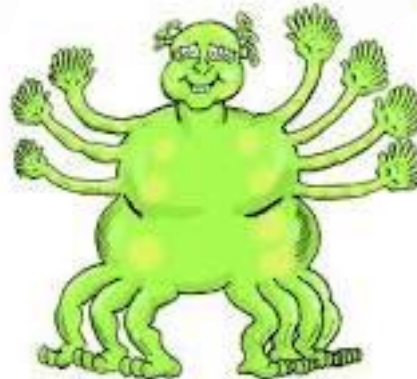


*This is what early progression looks like*



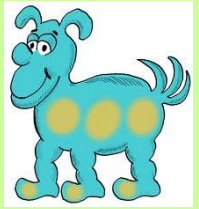


# Big Maths





# CLIC



Big Maths is based upon the principle that there are 4 core skills that lie at the heart of Maths.

These core skills form the platform for virtually all other maths skills and are affectionately known as CLIC ....

# CLIC

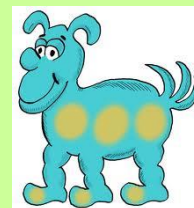
- \***C**ounting- Learn to count.
- \***L**earn **I**ts- Learn to remember totals as facts
- \***I**t's **N**othing **N**ew- Apply these facts to new situations
- \***C**alculations



# What happens on Friday?

Fridays is our Challenge session

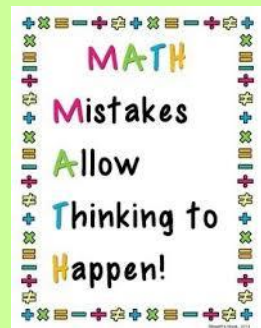
Big Maths Beat That - timed challenge where children answer 'Learn Its' questions. The aim is to beat their previous score.



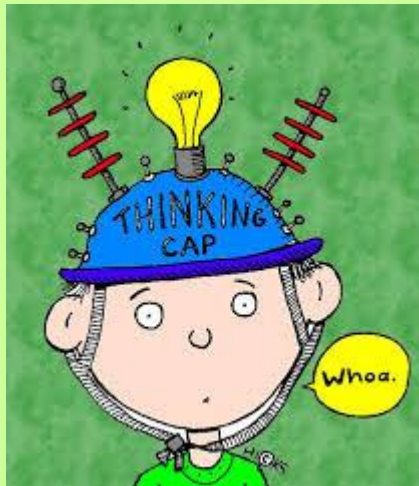
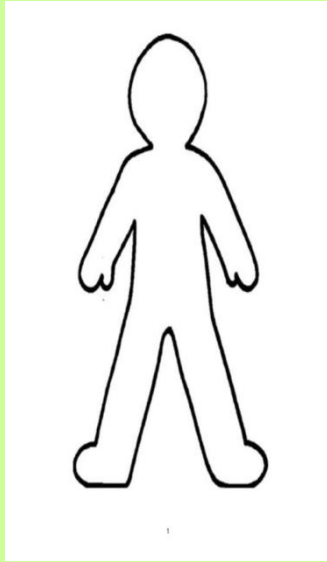
# Key Ideas



- All your children can be successful mathematicians.
- Don't be negative about Maths. Children pick up these emotions.
- Find opportunities to informally include maths
- **Do play (maths) with your child**
- •There are opportunities for impromptu learning in games with real people that you can't get from a DS or Xbox
- Praise learning not performance its ok to make a mistake.



# We want children who can...



take risks

- ask questions and explores alternative solutions without fear of being wrong

- enjoy exploring and applying mathematical concepts to understand and solve problems
- explain their thinking and presenting their solutions to others in a variety of ways

- reasons logically and creatively through discussion of mathematical ideas and concepts

- becomes a fluent, flexible thinker able to see and make connections

# How can you help your child?

- Do get excited about maths and your child will get excited too.



# How you can support your child at home?



- ❖ Look for and talk about numbers in the environment
- ❖ Play games
- ❖ Shopping and giving change.
- ❖ Number bonds for 10, 20, 100
- ❖ Times tables
- ❖ Cooking
- ❖ Telling the time and reading timetables



# Everyday 'real' maths

- ▶ Counting up and down the stairs.
- ▶ Number rhymes.
- ▶ Setting the table – cutlery, mats etc.
- ▶ Pair socks when getting in washing.
- ▶ Counting cars on the way to school.
- ▶ Spotting different numbers in the environment – door numbers, car number plates.



# Everyday 'real' maths

- ▶ Out shopping – making totals, finding change, % discounts.
- ▶ Time – plan days out, what time to leave, how much money to take.
- ▶ Cooking – weighing ingredients, reading scales, adapting recipes.
- ▶ Keeping score in games.

# Why play games?

- ▶ It cannot be stressed enough how important playing games with your child is for not only developing their mathematical skills but also their all round thinking, logic, strategy and problem solving skills; as well as developing vital speaking and listening and social skills, such as turn taking and learning that we can't always win!
- ▶ Most importantly, they should be fun and a chance to share time together.

# Play Games

- Playing number games, including board games like Snakes and Ladders, has been proven by research to increase children's understanding of relative number size as well as counting.





# Maths Apps

- Numberjacks

£1.49



Addition facts to 10

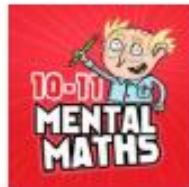
- Bugs and Numbers

£1.99



- Andre Brodie – Mental Maths Y1-6

£1.99 each



- DK – 10 minutes a day – FREE



- Squeebles – Times Tables

£1.49



# Websites

*Education City*



- *Busy Things*



- *Espresso*



# Finally



**Let's have fun!**

