

The background features a dark blue gradient with a subtle pattern of white dots. On the left side, there are several mathematical diagrams. A prominent one is a large circular scale with tick marks and numbers ranging from 140 to 260. Other diagrams include circles with arrows indicating rotation, and various geometric shapes like arcs and lines.

MATHS WORKSHOP

TUESDAY 30TH OCTOBER 2018

“We belong to a small minority of people in England for whom it is not socially acceptable to say ‘I can’t do maths’. Sadly, for many others in this country, such a claim is commonplace. It is extraordinary that a deficiency at mathematics has come to be seen as a defining national feature.

The idea that maths is something some people can do, and some people cannot, is cognitively untrue for all but a tiny minority of people. It is also of dire consequence for adult’s livelihoods, and our country’s economy.

According to the international PISA tests carried out every three years by the OECD, 22% of fifteen year olds in this country are functionally innumerate. This means they are unable to carry out simple tasks such as recognising that travelling 4km in 10 minutes means going at the same speed as travelling 2km in 5. The PISA survey which produced those results was carried out in 2012.

Since then, the situation may, has been changing for the better. Today, I want to celebrate a renaissance in mathematics teaching that is taking place in our schools. It has the potential to revolutionize the teaching of the subject in this country.”



Published 12 February 2016
From: Department for Education and
The Rt Hon Nick Gibb MP

MASTERY

Mastery is what we want pupils to acquire (or go on acquiring), rather than teachers to exhibit, we use the phrase 'teaching for mastery' to describe the range of elements of classroom practice and school organisation that combine to give pupils the best chances of mastering mathematics.

Mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject. At any one point in a pupil's journey through school, achieving mastery is taken to mean acquiring a solid enough understanding of the maths that's been taught to enable him/her move on to more advanced material.

When taught to master maths, children develop their mathematical fluency without resorting to rote learning and are able to solve non-routine maths problems without having to memorise procedures.

MATHS 
NO PROBLEM!

Mathematics

- Count reliably to 100, forwards and backwards from any number
- Count on and back in 1s, 2s, 5s, and 10s from any given number to 100
- Write all numbers in words to 20
- Say the number that is one more or one less than a number to 100
- Recall all pairs of additions and subtractions number bonds to 20
- Add and subtract 1-digit and 2-digit numbers to 20, including zero
- Know the signs $+$, $-$ and $=$ and what they mean.
- Solve a missing number problem, such as: $5 = \square -$
- Solve a one-step problem involving an addition and subtraction, using concrete objects, pictorial representations and arrays
- Solve a one-step problem involving a multiplication and division, using concrete objects, pictorial representations and arrays
- Recognise all coins: £1; 50p; 20p; 10p; and 1p
- Recognise and name the 2D shapes: circle; triangle; square and oblong
- Recognise and name the 3D shapes: cube; sphere; cuboid
- Name the days of the week and months of the year
- Tell the time to 'o'clock' and half past the hour



Danemill
Primary School

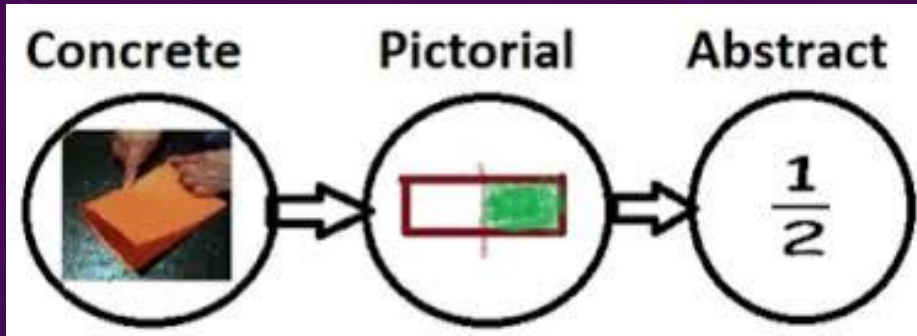
Only the best is good enough.

End of Year Expectations for Year 1

This booklet provides information for parents and carers on the end of year, national age related, expectations for children in our school. The staff, following the new National Curriculum statutory guidance, have identified these expectations as being the minimum requirements your child must meet in order to ensure continued progress throughout the following year.

All the objectives will be worked on throughout the year and will be the focus of direct teaching. Any extra support you can provide in helping your children to achieve these is greatly valued.

If you have any queries regarding the content of this booklet or want support in knowing how best to help your child please talk to your child's teacher.



CPA



Concrete, pictorial, abstract (CPA) is a highly effective approach to teaching that develops a deep and sustainable understanding of maths in pupils. Often referred to as the concrete, representational, abstract framework.

LESSON STRUCTURE

Coherence

- Microscopic steps (within a lesson, unit, year, scheme)
- Focused, key learning objectives
- Careful sequencing of steps within a lesson, building to generalisation
- Pre-empting misconceptions
- Opportunities for fluency, reasoning and problem solving with each objective

What does
this mean?

$$8 + 3 = 11$$

In which order should
concepts be
introduced?

What understanding is
required to access this?

How might it be
misunderstood?

CONCRETE RESOURCES



THIRD SPACE
LEARNING

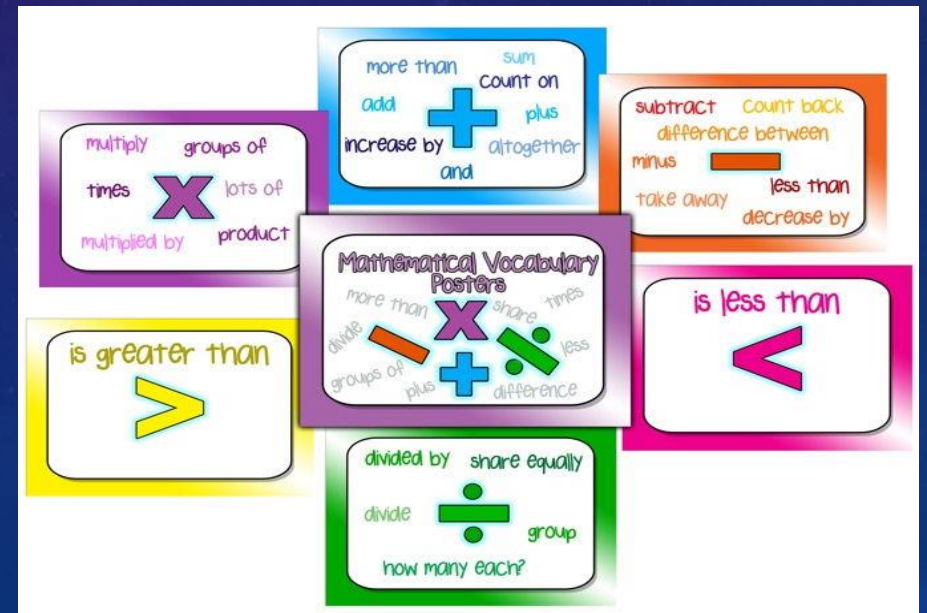
The Ultimate Guide to Hands On Maths Manipulatives

15 hands on resources every primary
classroom should have—and how to
get them on a budget

MATHEMATICS VOCABULARY

Children need to use a variety of mathematic language as well as answer problems and questions in full sentences.

Click on the image below



THE CORRECT VOCABULARY

Maths vocabulary for the new National Curriculum

We worked with Jazz Williams, one of the Key's associate education experts, to produce this KeyDoc.

It sets out Key Stage (KS) 1 and KS2 maths vocabulary under the new National Curriculum. The tables can be used to check pupils' understanding of new vocabulary introduced in years 1-8. The lists are intended as a guide to what pupils should know, and are not exhaustive.

Jazz Williams is a deputy headteacher at a primary school. He has contributed to research projects and academic articles on reading comprehension and the primary curriculum.

New maths vocabulary for year 1							
Number and place value	Addition and subtraction	Multiplication and division	Measure	Geometry (position and direction)	Geometry (properties of shape)	Fractions	General/problem solving
Number	Number bonds, number line	Odd, even	Full, half full, empty	Position	Group, sort	Whole	Listen, join in
Zero, one, two, three to twenty, and beyond	Add, more, plus, make, sum, total, altogether	Count in twos, threes, fives	Holds	Over, under, underneath, above, below, top, bottom, side	Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square	Equal parts, four equal parts	Say, think, imagine, remember
None	Inverse	Count in tens (forwards from/backwards from)	Container	on, in, outside, inside	Shape	One half, two halves	Start from, start with, start at
Count (on/up/to/from/down)	Double, near double	How many times?	Weigh, weighs, balances	around, in front, behind	Flat, curved, straight, round	A quarter, two quarters	Look at, point to
Before, after	Half, halve	Lots of, groups of	Heavy, heavier, heaviest, light, lighter, lightest	Front, back	Hollow, solid		Put, place, fit
More, less, many, few, fewer, least, fewest, smallest,	Equals, is the same as (including equals sign)	Once, twice, three times, five times	Scales	Before, after	Corner (point, pointed)		Arrange, rearrange
		Multiple of,	Time	Beside, next to, Opposite	Face, side, edge		Change, change over
			Days of the week: Monday, Tuesday, etc.		Make, build,		Split, separate
			Seasons: spring, summer, autumn, winter				Carry on, continue, repeat & what

Every mathematical concept has a set of specific words linked to it. Children need to be immersed in a mathematical language rich environment on a daily basis even at home.

The Ultimate Maths Vocabulary Activity Guide

Maths Vocabulary Games,
Activities and Ideas

STEM SENTENCES

Sentence stems. This technique gives students the opportunity to respond in the form of a complete **sentence** to effectively communicate. **Sentence stems** provide scaffolding to help students get started in speaking or writing without the added pressure of thinking about how to correctly formulate a response.

It can't be ...
because ...

I noticed that...

It must be ...
because ...

This is true here
because ...

If ... then ...

I wonder
whether ...

This is different
because ...

I already know
that ... so ...

This is the same
because ...

I know that ...
because ...

I think that ...
because ...

This is always
true because ...

MATHEMATICIANS SAY...



Reasoning sentence starters...

1. I solved the problem by...
2. The strategy I used was...
3. I discovered that...
4. I noticed that...
5. Another strategy you could use is...
6. The first thing I did was...
7. First...next...then...after that...

Comparing sentence starters

1. I agree with....because...
2. I disagree with....because...
3. That's a good answer because...
4. I got a different result because...
5. My strategy is like yours because...
6. What I heard you say is...
7. I made a connection with what....said....

Questions I can ask my partner...

1. How did you work out your answer?
2. Why did you....?
3. Could you have....?
4. What if....?
5. What steps did you take to work out your answer?
6. Can you prove your answer is right?
7. Why did you choose that operation?
8. Can you explain this to me?

Good talk partners...





CALCULATION POLICY

SEP 2018



MATHLETICS

CHANGES TO THE WEBSITE AND HOW YOU CAN USE THE SITE WITH YOUR CHILD.

Welcome to School Admin

Mathletics is changing ...

We've made some pretty important updates to Mathletics recently and we'd love you to tell your team what has changed and why.

Watch this short video to find out everything you need to know. (Hint: Watch all the way to the end to see some truly terrible acting from our tech team.)



TIMES TABLES ROCK STARS

HOW TO USE THE SITE WITH YOUR CHILD AT HOME.

The screenshot shows the main interface of the Times Tables Rock Stars website. At the top, there is a navigation bar with the logo on the left and buttons for 'PLAY', 'SHOP', 'BATTLES', and a profile for 'Cheryl Jackson WANNABE'. Below this, the interface is divided into 'Single Player' and 'Multi Player' sections. The 'Single Player' section features four game options: 'GARAGE' (Teacher set), 'STUDIO' (12 x 12), 'SOUND CHECK' (20 questions), and 'FESTIVAL' (12 x 12). The 'Multi Player' section features 'ARENA' (Teacher set). A detailed view of the 'GARAGE' game is shown below, including a 'Set time' dropdown set to '1 Minute', a 'PLAY!' button, and a 'Tables: Teacher set' indicator. At the bottom, a 'YOU'VE BEEN SET:' section displays a row of seven vinyl records with numbers 2 through 9 on them.

PLAY **SHOP** **BATTLES** Cheryl Jackson WANNABE

Single Player Multi Player

GARAGE Teacher set

STUDIO 12 x 12

SOUND CHECK 20 questions

FESTIVAL 12 x 12

ARENA Teacher set

GARAGE Set time: 1 Minute **PLAY!**

Tables: Teacher set Play solo 10 per correct answer

YOU'VE BEEN SET:

2 3 4 5 6 7 8 9

CENTURY MATHS

YEAR 5 AND 6 ONLINE MATHS SUPPORT

Mathematics - KS2
My Courses

Nuggets Search...

- Number - number and place value
Place value in large numbers
- Number - number and place value
Counting forwards and backwards in powers of tens
- Number - number and place value
Rounding whole numbers

Strands

- Number - number and place value 5 Nuggets
- Number - addition, subtraction, multiplication and division 14 Nuggets
- Number - fractions (including decimals and percentages) 14 Nuggets
- Ratio and proportion 4 Nuggets
- Algebra 3 Nuggets

Century
INTELLIGENT LEARNING

send us feedback

I am feeling neutral

Parent Questionnaire – 30th October 2018

Name: _____ Child: _____ Class: _____

We are always exploring ways we can improve the teaching and learning of Maths in the school and how we can enable all children to enjoy Maths and become confident, enthusiastic mathematicians. We are also looking at ways to support you with helping your child at home.

	Yes	No	Don't know
Do you feel Maths is important in everyday life?			
Did you enjoy Maths at school?			
Does your child enjoy Maths?			
Do you feel your child is good at Maths?			
Do you feel your child is better at Maths than you are?			

WEBSITES

ALEKS	MobyMax
Arithmetic Four	MrNussbaumMath
BEATCALC	New Jersey Center for Teaching & Learning
BrainPOP	Ninja Maths
Buzz Math	Numeracy Ninjas
Coolmath Games	NRICH Project
Common Core Sheets	National Library of Virtual Manipulatives
Compass Odyssey	Origo Education
Count Us In	PBS Math Club
Corbettmaths	PBS Math Club
Desmos	Digital interactive
DragonBox	PBS Math Club
Dreambox	PHET Interactive Simulations
Emathinstruction	PowerMyLearning
Engage NY	Prodigy Software
Figure This!	PurpleMath
Flocabulary	



Free Rice	Reflex
Front Row	Sheppard Software
GeoGebra	Show-Me Center
GregTangMath.com	Skoolbo
Illuminations	Slope Slider
Illustrative Math	SpeedMath Deluxe
Istation	Splash Math
IXL Math	SumDog
Kahoot	TenMarks
Khan Academy	That Quiz
Kuta Software	TopMarks
LearnZillion	Quizlet
Mashup Math	VirtualNerd
Math-Aids	Waggle
Mathletics	Xtramath
Math Playground	Zearn
MathsBot	

WE ARE

