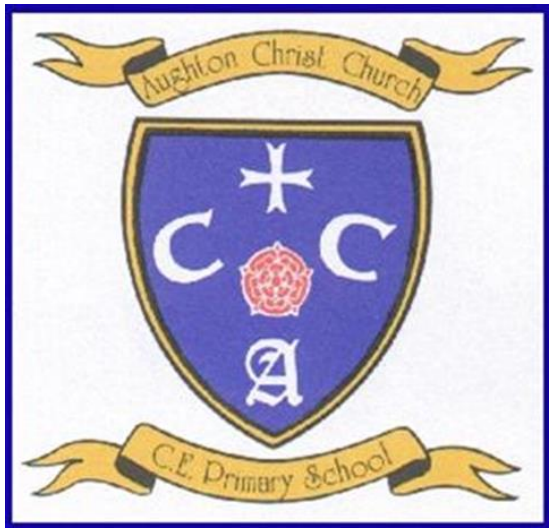
Maths Parent Workshops – KS1

Wednesday 16th March, 2016



Our aims for this evening are:

- To explain the changes to the Maths curriculum
- To explain how we teach Maths to your child in school
- To provide some ideas on how you can support your child at home

Aims of Maths Curriculum 2014

- Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

- **Reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations and developing an argument, justification or proof using mathematical language.

- **Solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

How Maths teaching has changed

- To give children a chance to **explore** ways of finding an answer and being able to **explain** why it works

- To give them the **key skills** needed to solve **real world** problems and examples

- To provide opportunities to **apply** these skills in practical situations

Assessment

- National Curriculum levels have been removed.

- New end of key stage statutory assessments introduced this year for Year 2 where children will be judged to have met (or not) end of key stage expectations.

- 2 Maths papers
  - Paper 1 – Arithmetic (15 mins)
  - Paper 2 – Fluency, Problem Solving & Reasoning (35 mins)
  - Teacher assessed

- The New National Curriculum tests will be more demanding, with a higher and more ambitious expected standard

- Throughout school, children will be teacher assessed on whether they are secure in their year group age related expectations.

- At Aughton Christ Church we assess children's learning against the Key Learning Indicators of Performance (KLIPs) to help teachers make a judgement as to whether a child is "on track" to achieve that year group's expectations. Children are judged termly to be entering, developing or secure in their particular year group.
  (Key Learning Documents on school website).

Key Learning

Key Learning in Mathematics – Year 1

Number – number and place value

- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- Count in multiples of twos, fives and tens
- Read and write numbers to 100 in numerals
- Read and write numbers from 1 to 20 in numerals and words
- *Begin to recognise the place value of numbers beyond 20 (tens and ones)*
- Identify and represent numbers using objects and pictorial representations including the number line
- Use the language of: equal to, more than, less than (fewer), most, least
- Given a number, identify one more and one less
- *Recognise and create repeating patterns with numbers, objects and shapes*
- *Identify odd and even numbers linked to counting in twos from 0 and 1*
- *Solve problems and practical problems involving all of the above*

Number – fractions

- *Understand that a fraction can describe part of a whole*
- *Understand that a unit fraction represents one equal part of a whole*
- Recognise, find and name a half as one of two equal parts of an object shape or quantity *(including measure)*
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *(including measure)*

Number – addition and subtraction

- 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 *(using concrete objects and pictorial representations)*
- Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ☐ - 9

Geometry – properties of shapes

- Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles
- Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres

Geometry – position and direction

- Describe movement, including whole, half, quarter and three-quarter turns
- *Recognise and create repeating patterns with objects and shapes*
- Describe position and direction

Statistics

- *Sort objects, numbers and shapes to a given criterion and their own*
- *Present and interpret data in block diagrams using practical equipment*
- *Ask and answer simple questions by counting the number of objects in each category*
- *Ask and answer questions by comparing categorical data*

Number – multiplication and division

- *Recall and use doubles of all numbers to 10 and corresponding halves*
- Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher

Measurement

- Measure and begin to record:
  - lengths and heights, *using non-standard and then manageable standard units (m/cm)*
  - mass/weight, *using non-standard and then manageable standard units (kg/g)*
  - capacity and volume *using non-standard and then manageable standard units (litres/ml)*
  - time (hours/minutes/seconds)

  within children's range of counting competence
- Compare, describe and solve practical problems for:
  - lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)
  - mass/weight (for example, heavy/light, heavier than, lighter than)
  - capacity and volume (for example, full/empty, more than, less than, half, half full, quarter)
  - time (for example, quicker, slower, earlier, later)
- Recognise and use language relating to dates, including days of the week, weeks, months and years
- Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening
- Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times
- Recognise and know the value of different denominations of coins and notes

Maths at Aughton Christ Church Primary School

- Morning Work
  - Independent
  - 15 mins.

- Maths lesson
  - Daily
  - 1 hour
  - Start each lesson with a problem to generate thinking and discussion

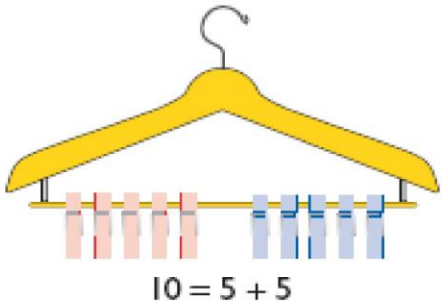
- Times Tables
  - 15 mins at the end of each day
  - Songs/Games/Counting in 2's, 5's 10's

- Maths Displays
  - Vocabulary
  - Examples of problem solving
  - Challenges

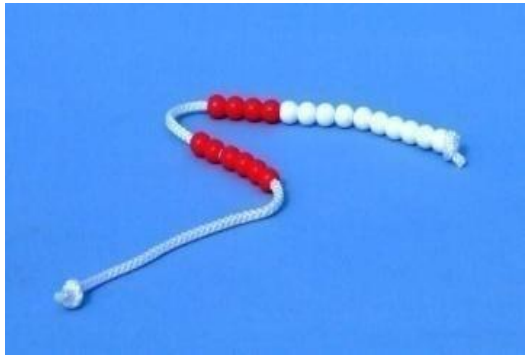
Developing Understanding

- Prompting thinking and questioning
- Providing opportunities to manipulate, experience and see (through use of resources)
- Develop thinking through investigation
- Reasoning & making connections
- Engaging in talk using mathematical vocabulary
- Encouraging children to make links and generalise

Reception & KS1

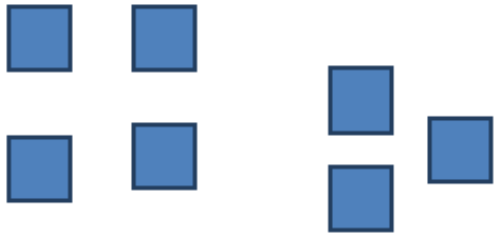


- The emphasis in Reception and KS1 is on mental arithmetic **BUT** based on practical activities using a range of equipment:

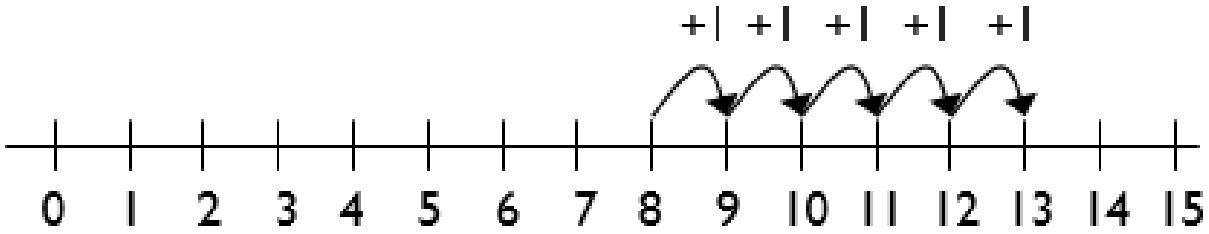


Addition

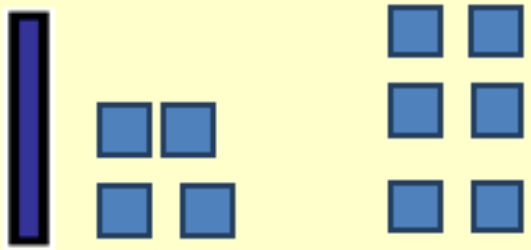
4 + 3 =



8 + 5 = 13



14 + 6 = 20

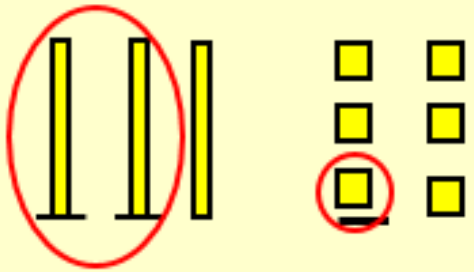


Which two numbers could have a total of 15?

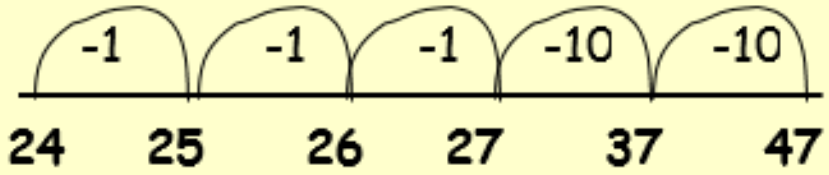
Subtraction

5 - 2 =

36 - 21 = 15

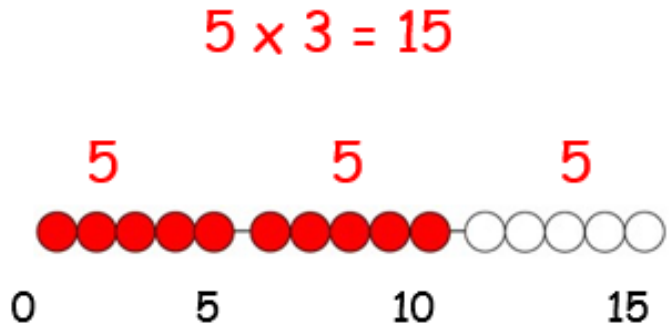


47 - 23 = 24

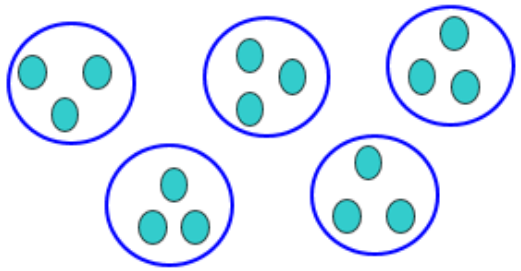


7 = ? – 9 (Year 1)

Multiplication



3+ 3 + 3 + 3 + 3 = 15



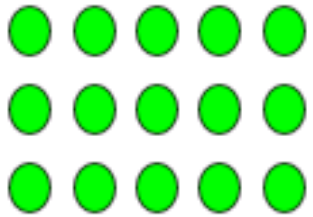
5 x 3 = 15

Is the same as

3 x 5 = 15

5 x 3 = 15

3+3+3+3+3 =15



Division

15 ÷ 3 = 15 'shared between' 3

The number in the group is known
but how many groups is unknown.

How many 3s in 12?

We need to count the number of groups.

Year 2

17 ÷ 5 = 3 remainder 2

Helping your child at home

- Research shows that families have the first and most significant influence on their children's learning and development. Practising with your child at home can play a key role in helping your child succeed at school.

What methods should I use?

I wasn't taught to do it that way!

I don't want to make them more confused!

Times Tables

- It is really important for children to learn their times tables.
- Year 1 – 2x, 5x, 10
- Year 2 – 2x, 3x, 5x, 10x
- E.g.

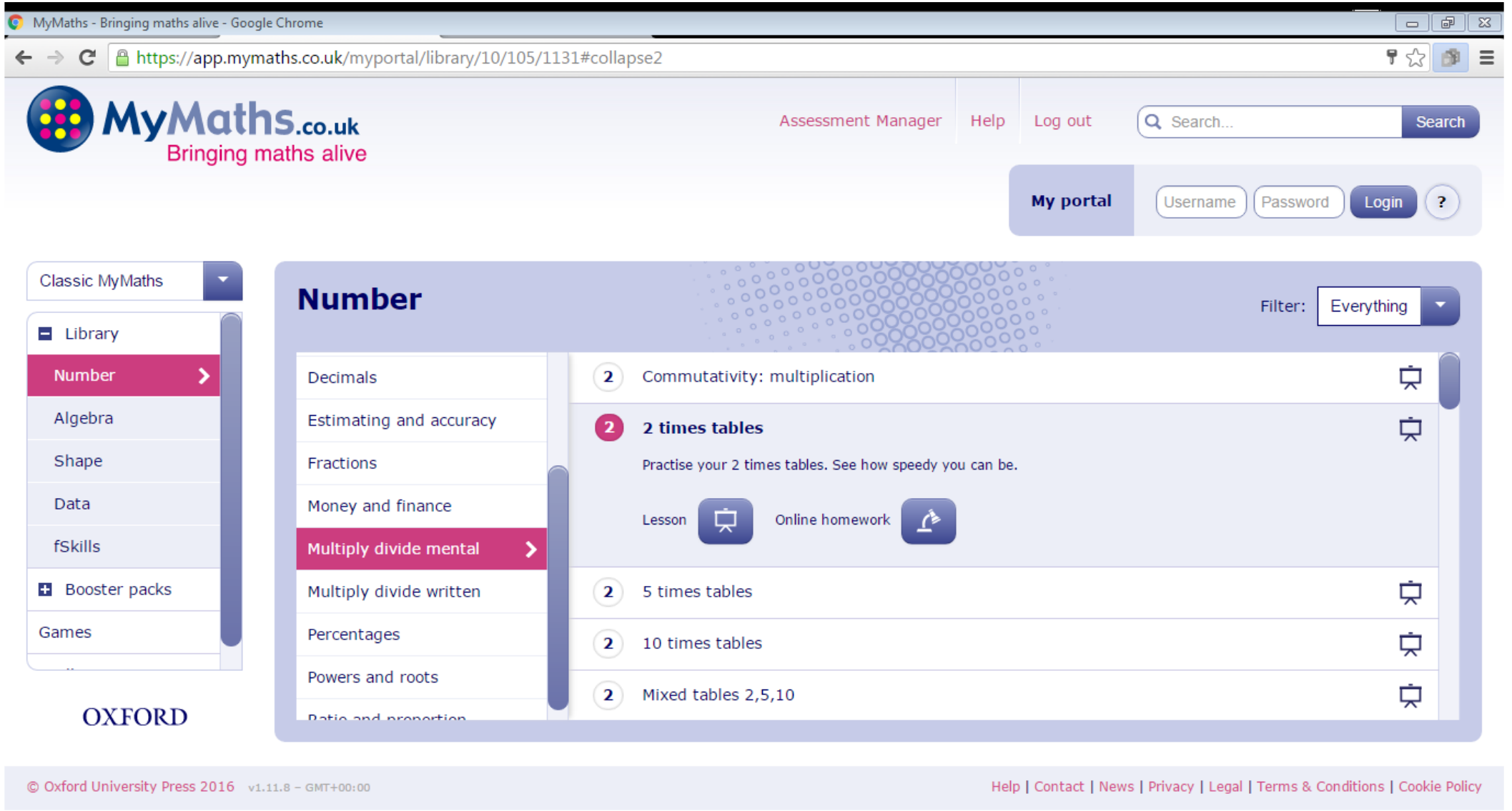
  2 x 2 = 4

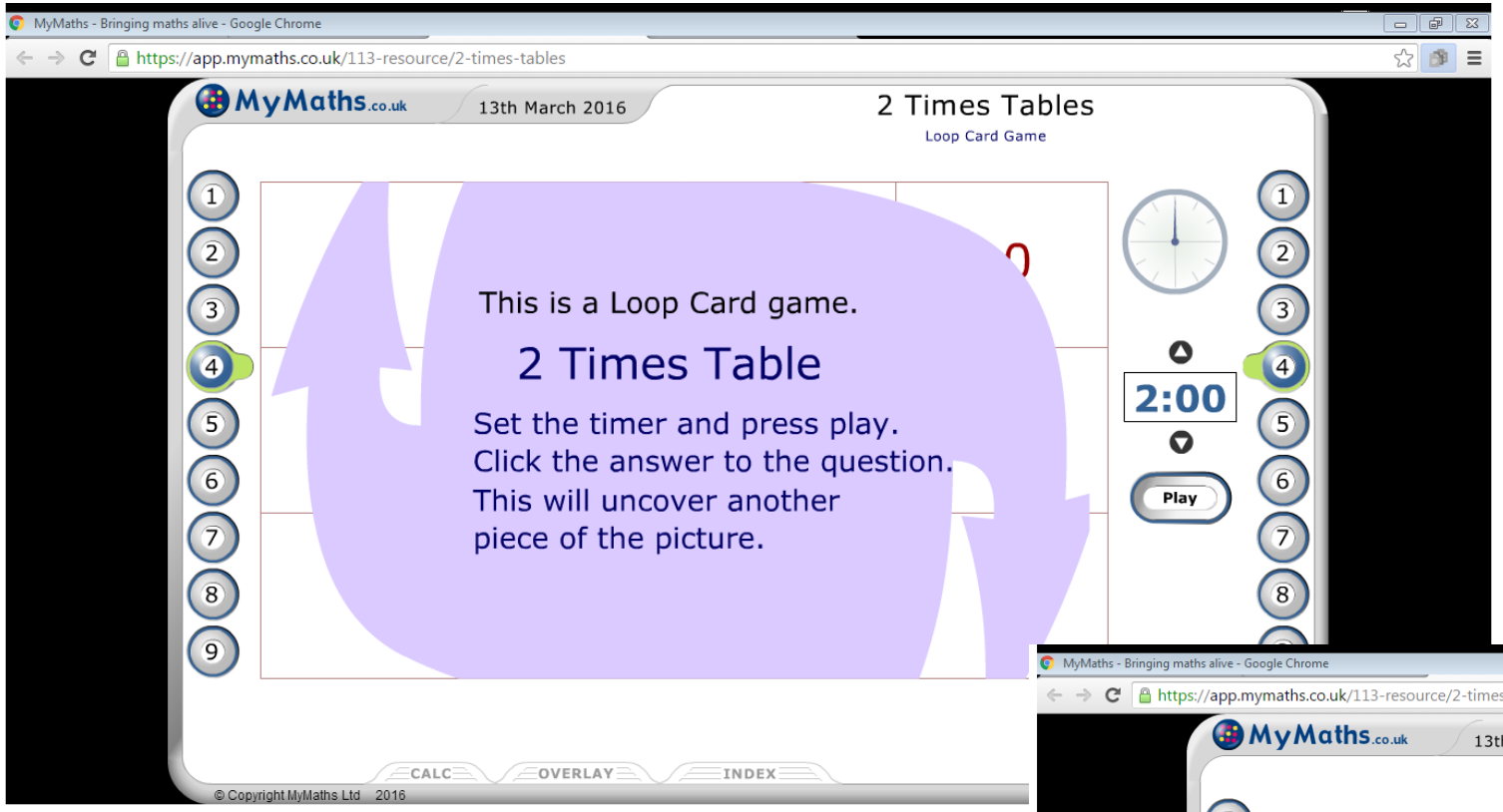
  4 ÷ 2 = 2

  How many 2's make 6?

  How many 5's are there in 25?

My Maths – www.mymaths.co.uk




MyMaths - Bringing maths alive - Google Chrome
https://app.mymaths.co.uk/113-resource/2-times-tables
MyMaths.co.uk
13th March 2016
2 Times Tables
Loop Card Game
This is a Loop Card game.
2 Times Table
Set the timer and press play.
Click the answer to the question.
This will uncover another
piece of the picture.
2:00
Play
CALC
OVERLAY
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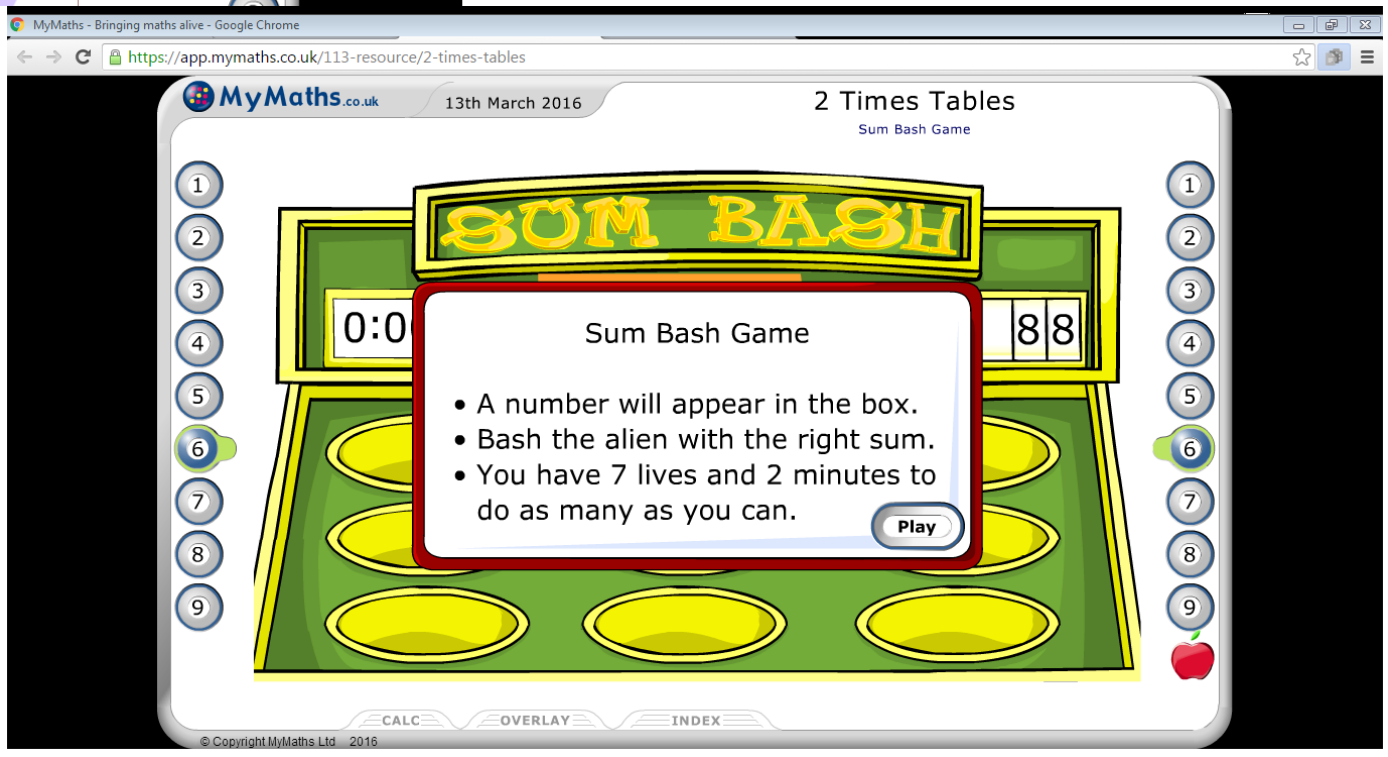
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MyMaths.co.uk
13th March 2016
2 Times Tables
Sum Bash Game
SUM BASH
Sum Bash Game
• A number will appear in the box.
• Bash the alien with the right sum.
• You have 7 lives and 2 minutes to do as many as you can.
Play
CALC
OVERLAY
INDEX
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Counting Ideas

- Practise chanting the number names. Encourage your child to join in with you. When they are confident, try starting from different numbers – 4, 5, 6 …
- Make mistakes when chanting. Can your child spot what you have done wrong?
- Give your child the opportunity to count a range of interesting objects (coins, pasta, buttons etc.) Encourage them to touch and move each object as they count.
- Count things you cannot touch to make it more difficult (ceiling lights, window panes, claps).
- Play games that involve counting (e.g. snakes and ladders, dice games).
- Look for numerals in the environment – at home, in the street, out shopping.
- Cut out numbers from newspapers and magazines and then help your child to put them in order.
- Choose a number of the week e.g.5. Practise counting in 5's, count out groups of 5 objects, how many times can you spot the number 5?

Practising Number Facts

- Have a 'Fact of the day'. Pin this fact up around the house. Ask your child during the day if they can recall the fact.
- Play 'Ping Pong' to practice compliments with your child – You say a number and they reply with how much more is needed to make 10. You can move on to 20 or 100. Encourage your child to answer quickly.
- Throw 2 dice. Ask your child to find the total, the difference between them or to multiply them together. This game can also be played using a pack of cards.
- Play Bingo. Each player chooses 5 answers (e.g. numbers to 10 to practise simple addition, multiples of 5 to practise the 5 times tables). Ask a question and if a player has the answer they cross it off. The winner is the first player to cross off all their answers.
- Give your child an answer. Ask them to write as many number sentences as they can with this answer.
- Give your child a number fact (e.g. 5+3=8). Ask them what else they can find out from this fact (e.g. 3+5=8, 8-5=3, 8-3=5).

Shapes & Measures

- Choose a shape of the week e.g. cylinder. Look for this shape in the environment (tins, candles etc) Ask your child to describe the shape to you.
- Play 'Guess my shape'. You think of a shape. Your child asks questions to try to identify it but you can only answer 'yes' or 'no' (e.g. Does it have more than 4 corners? Does it have any curved sides?)
- Look for symmetrical objects.
- Draw or paint symmetrical patterns.
- Let your child help measuring ingredients when cooking at home. Talk about what each division on the scale stands for.
- Choose some food items out of the cupboard. Try to put the objects in order of weight. Check by looking at the weights on the packets.
- Practise telling the time with your child. Ask your child to be the 'timekeeper' (e.g. tell me when it is half past four because then we are going swimming).
- Use a stop watch to time how long it takes to do everyday tasks (e.g. how long does it take to get dressed?) Encourage your child to estimate first.
- Calendar activities – What day is it today? Yesterday was... Tomorrow will be... How many days until the weekend?

Useful Websites

- www.mymaths.co.uk
- www.topmarks.co.uk
- www.ictgames.co.uk
- http://www.bbc.co.uk/bitesize/ks1/maths/

Final Thought

- Be positive about maths
- Make maths fun
- Talk to your child and ask them to explain their thinking
- Numbers are all around us all the time. Notice them and talk about them

Thank you for listening

- We would like to invite you to go to your child's classroom and have a look at the ways that they solve maths problems and some of the resources that they use.

- Reception – Miss Geeson

- Year 1 & 2 – Year 1 classroom (Mrs Fazakerley & Miss Fletcher)