



Maths workshop

St Marks CEP School



Maths is like.....

- Train-spotting.....you jot down a whole load of numbers for no apparent reason
- Cabbage.....you either love it or hate it depending on how it was served up to you as a child



Aims of session

- To consider briefly how maths is taught today
- To consider the role of problem solving in maths
- To discuss how parents can support their children at home



Key differences

- Interactive teaching
- Emphasis on mental calculation
- Different approach to written calculation
- Maths through problem solving
- Maths is fun!



Math FUN ???

- 1. Think of a number between 0-9.
- 2. Times that number by 9.
- 3. Add the digits in your answer.
- 4. Subtract 5 from your answer.
- 5. Count in that number of letters in the alphabet.
- 6. Think of a country starting with that letter.
- 7. The second letter - think of an animal.
- 8. Think of a colour for your animal.



Why a Grey Elephant from Denmark?

- Any number in the 9 X Table will have digits that add to nine.
- Five from 9 = 4
- The rest is association.
- Children need to know WHY!



What is problem solving?

- Thinking skills
- Questioning skills – teacher and pupils
- Enquiry
- Reasoning



What do we want children to be able to do?

- **Understand and explore the problem**
- **Find a strategy**
- **Use the strategy to solve the problem**
- **Reflect on the solution and how useful the strategy was**

Problem Solving Strategies

- **Act it out**
- **Draw it out**
- **Use equipment**
- **Draw a diagram**
- **Make a list**
- **Trial and Improvement**
- **Draw a table**
- **Work backwards**
- **Thinking**



Key objectives in problem solving

- **R** Use developing mathematical ideas and methods to solve practical problems. Talk about, recognise and recreate simple patterns.
- **Y2** Choose and use appropriate operations and efficient calculation strategies to solve problems. Explain how a problem was solved orally and where appropriate in writing.
- **Y4** Choose and use appropriate number operations and appropriate ways of calculating (e.g. mental, mental with jottings, pencil and paper) to solve problems.
- **Y6** Identify and use the appropriate operations (including combinations of operations) to solve word problems involving numbers and quantities, and explain methods and reasoning. Develop from explaining a generalised relationship in words to expressing it in a formula using letters as symbols. Solve simple problems involving ratio and proportion.



Problem solving in reception

Activity:

In the role play / home corner area set the children the problem of setting the table for everyone in the group to have a place for tea.

Ask each child one of the following questions;

- Are there enough plates for everyone?
- Are there enough mugs on the table for us all to have a drink?
- How many more do we need?
- How many slices of bread do we need for everyone to have a whole sandwich each?
- How many cakes in the box?
- What shape are they?
- Take half of them out.
- How many are left for tomorrow?
- Do you think we have enough orange squash for everyone?



Year 6

- Every day a machine makes 100 000 paper clips which go into boxes

1. A full box has 120 paper clips.
How many full boxes can be made from 100 000 paper clips.
Show your method.



2. Each paper clip is made from 9.2cm of wire.
What is the greatest number of paper clips which can be made from 10 meters?





The Problem

Birthday Candles

Sally Gillespie is
10 years old
today

How many
birthday candles
has she blown
out on her
birthday since
she was born?





How did you find the total?



1, 2, 3, 4, 5, 6, 7, 8, 9, 10





Now work through Y6 version
Mrs. Gillespie is 73
How many candles?

- How did you do it ?
- Can you find a general rule?
- Express algebraically



Why problem solving?

- Part of everyday life
- Puts maths into a real context
- Makes maths fun

How can I support my child at home?

Play board games

Encourage your child to help with shopping –

- how much money do we need?
- How much change?
- How many sweets can we buy?

Sharing food, toys

Television timetables

Measuring ingredients, cooking

Play cards and other number games

Teach your child to tell the time and use it

Take and discuss measurements of people, furniture...

Ask questions!

