



# Developing children's Mathematical Reasoning and Problem Solving skills

Working with others to improve **teaching & learning**

## Overview

Problem solving, reasoning and fluency are the three key components in the new curriculum for mathematics. These are the elements that give mathematics purpose, direction and depth. Reasoning is fundamental to understanding and completing mathematics. If a child is able to reason they will be able to: justify, explain, explore, prove and generalise.

In order to encourage all our pupils to develop connections between different areas of the maths curriculum and to develop depth in mathematics rather than just fast recall, reasoning must be a part of every maths lesson, providing all children with the opportunity to practise and learn from each other's reasoning.

## The programme is designed to:

- **Encourage the development of well-articulated reasoning and justification in maths lessons, with children using appropriate mathematical language to explain their ideas.**
- **Strengthen teaching and learning of problem solving, reasoning and fluency in maths.**
- **Increase understanding of what mathematical reasoning means.**
- **Share ideas on how to embed problem solving and reasoning into every maths lesson**
- **Provide ideas to promote effective questioning to develop logical thought.**
- **Create a problem solving classroom climate where maths is contextualised**
- **Explore ways to encourage pupils to solve problems independently**



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## Course Suitability

Primary teachers, maths subject leaders, TA's, HLTA's.

## Course Dates

This is a two day course with a gap task.

**Day 1** Wednesday 1<sup>st</sup> March 2017 Time - 9.30 – 16.00

**Day 2** Wednesday 5<sup>th</sup> April 2017 Time - 9.30 – 16.00

Registration and refreshments are available from 9.30am for a 10.00am start, and we will finish around 3.30-4.00pm. Lunch will be provided.

## How to register your place

### Complete the booking form and send to:

Carol Webb  
cwebb@stpetersnewman.co.uk

OR

Yvonne Pellington  
YPellington1@stpetersnewman.co.uk

## Cost

The cost for the 2 days is £170.00 per delegate to include all refreshments, lunches and all resources.

## Venue

**Sandyford Community Fire Station, Marlborough Way off Reginald Mitchell Way, Stoke-on-Trent. ST6 5ED.**

**C2C Teaching School Alliance**

C/o St. Peter's Catholic Academy

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