



St Mary and St Giles School



Mathematics Lesson Design

Fluency Or Arithmetic – all lessons to start with rolling numbers, flashback 4, a fluency activity supporting maths mastery, red objectives recap or arithmetic session

10 minutes

Explore - In Focus

Present problem to explore - chn try to solve it using manipulatives.

10 minutes

Structure - Let's Learn

Teacher models chn's methods on board and helps to organise their ideas. Emphasise the method we want chn to pay attention to - have we used/found the same method today?

Reflect – Guided Practice

Reflection supported by teacher. Chn practise skills, with talk partner – work through examples to move from concrete/pictorial to abstract.

20 minutes

Practise – Independent

Chn complete independent work.

15 minutes

Diving Deeper

Chn complete a more complex problem that enables them to use their mathematical reasoning.

5 minutes

.....
Mastery!

A pupil really understands a mathematical concept, idea or technique if they can:

- describe it in their own words; (prompts for chn could be: I noticed that...I think that...I wonder if...)
- represent it in a variety of ways (e.g. using concrete materials, pictures and symbols – the CPA approach)¹;
- explain it to someone else; (are they able to explain the mathematics to one of the other chn who have not yet understood, so that they understand?)
- make up their own examples (and non-examples) of it;
- see connections between it and other facts or ideas;
- recognise it in new situations and contexts;
- make use of it in various ways, including in new situations.

Examples of challenge on planning could show:

- Find another way / use a different way of solving the problem
- Write a story about what you have done
- Write a note to a teacher and explain what we have been doing in our maths lesson today

Quick 6 activities:

- Create a word problem to match today's learning.
- Write an explanation of your preferred method with words and pictures.
- Write an explanation of a method which you did not choose.
- Develop a new method for solving the problem.
- Show a physical model of the problem.
- Show a visual model of the problem.

Depth 5:

- Do you agree? (true/false, etc)
- Explicit use of misconceptions and mistakes
- Probing questions (show me, convince me, what's the same, what's different?, etc)
- The missing digit/number (empty box)
- Here's the answer, create the question