Maths Planning at Kennington CE Academy

Where to start

The White Rose Small Steps for overall **Block** objectives lay out what to be taught (These form your Learning Intentions). To ensure accurate starting points, multiple year group blocks may be used.

Pre-unit should be run to inform planning judgements *(No need to record – whiteboard, verbal response etc.)*

Planning Judgements – Key questions to consider

What parts of the block could be taught as mental starters or included in flashback 4?

Do all objectives need individual lessons, or can some be combined?

Are there any gaps from a previous end of unit assessment or a recent test that need to be covered?

Do children need a previous year group's objectives?

Key Vocabulary

Key vocabulary for the block should be introduced at the appropriate stage of learning. This should be added to the working wall (written on a whiteboard, a vocab sheet, post it notes, posters, etc).

Vocabulary used should match those listed on the termly vocabulary sheets, which are generated at the start of each term for all subjects.

Vocabulary should be referenced often, and praise given to children who attempt to use it appropriately.

Planning using CPA

CONCRETE: Each objective must be introduced using CONCRETE resources. Resources could include: dienes, counters, Numicon, bead strings, blocks, rulers, pencil bundles etc. *(This can be a photopage with an appropriate I wonder question)*

PICTORIAL: How can the concrete resources be represented in pictorial form? Burgers, Chips, Peas (BCP), Place value counters, bar methods, part wholes, etc. Add example of these representations to the maths working wall for children to fall back onto if required. *(This can be a photopage with an appropriate I wonder question)*

ABSTRACT: This is how calculations look in number sentence form and these should be directly written into books.

FLUENCY: Practice of the abstract. Children can have full access to Concrete and Pictorial representations. Ensure there is a range of "varied fluency" – different ways of representing the abstract.

Suggested resources which could be used (where appropriate):

- Target Your Maths,
- Maths on Target,
- Abacus,
- Maths No Problem,
- 10 ticks
- Teacher created questions

These are differentiated into three levels: Mild, Hot, Spicy challenges with a Red Hot Challenge (RHC) to extend learners upon completion of their task. RHC's can be written by the teacher or pre-printed.

Children should show all written methods, jottings and working out in books during fluency tasks.

Fluency lessons should finish off with a problem-solving or reasoning question, as an I Wonder question, RHC or displayed on the interactive board as part of a lesson plenary.

When children are confident with fluency, should they move fully onto reasoning and problem solving. Children can spend additional lessons on Fluency if required.

PROBLEM SOLVING: Problem solving involves children using their learnt knowledge of the concept (during fluency) and applying it to different situations such as: missing numbers, number sentences presented in a different ways, worded problem, number patterns etc.

Suggested resources which could be used (where appropriate):

- White Rose – Questions individually taken directly from the Scheme of learning, or Editable R&PS document (https://resources.whiterosemaths.com/resources/). Entire White Rose worksheet are not to be used.
- NRICH – Challenges and investigations (https://nrich.maths.org/10334)
- Twinkl – Challenge cards (https://www.twinkl.co.uk)
- Pixl – Problem solving therapies (https://auth.pixl.org.uk/primary#!/Resources/)
- Classroom secrets – Questions individually taken from problem solving and reasoning questions. Note the school doesn't have a log in for this. Ensure questions are spelt correctly.
- NCETM documents – also known as Mastery Documents (Staff Drive)
- Abacus books – the Owl Questions and Think! questions.

Children should continue to have access to Concrete and Pictorial resources/methods as required. Refer children back to examples on working walls and encourage use of working out and jottings.

This is a key opportunity to explore/recap estimation and inverse to check if answers make sense and planning

REASONING: Children can discuss, explain, and justify reasons given for their answers or opinions. Children's responses should include the use of key vocabulary, which was included at the start of the block, and should be spelt correctly. Reasoning questions can be used at any point in the planning stages but should be appropriate to the current stage in learning.

Suggested resources which could be used (where appropriate):

- Convince Me Cards (staff drive)
- Discuss It Cards (staff drive)
- White Rose - True or False, Editable R&PS
- Twinkl - Diving into Mastery
- Teacher created I wonders.

Example of Reasoning sentence openers:

- Explain why …
- Explain how …
- Can you tell me another way …
- Convince me…
- Tell me why …
- How do you know …
- How did you …
- How can you prove …
- Do you agree …

End of Unit Assessments

At the end of a block, a summative assessment should be run and recorded in children's books. Whiterose End of Unit assessments are to be used. These are usually 2 x A4 pages which can be copied onto 1 x A4 page. Ensure appropriate year group end of unit assessment sheets are used. These assessments then feed into your overall maths assessment sheets at the back of children's books.

Monitoring Requirements

Simple plans can be created which need only to contain: LIs, Steps to Success, differentiated task and lesson outcomes however these are not required for monitor if: resources are stored in the appropriate Staff drive planning folder, books clearly show the progression of objectives/concepts (appropriate to the learners starting point) and end of unit assessments are present. Pupil voice will be used to monitor other maths areas such as Flashback 4s, vocabulary, engagement, etc.