Moving Maths Forward – lesson deign at Cookridge Holy Trinity C of E Primary School

Starter

to improve working memory/recall and reinforce prior learning/revisit earlier skills and knowledge

> Differentiation is through increased challenge within a

Teacher-Led → Pupils participate

Representations

Introduction of new and developing concepts. Teacherled with pupils participating in discussion and written activities. Pupils establish conceptual understanding. Multiple representations are used to expose structure. Teacher guides and supports the learning. Assessment for learning questions are completed together.

Pupil-Led —

Teacher is facilitating and monitoring

Fluency

Pupils independently complete questions. Procedural variation expected ("keeping some things the same and only varying the idea that you want your children to focus on, gives a greater likelihood of them understanding that concept or idea.")

Probing Questions

Probing questions (reasoning and problem solving) – pupils independently justify, reason and convince. They can explain their thinking to others and explain typical misconceptions. They can apply their learning to problems in a range of familiar contexts.

Deepening learning

Mastery:

Every pupil can achieve.

The answer is just the beginning.

A positive teacher mindset and strong subject knowledge are key to student success in mathematics.

topic

Focused on developing long term relational understanding rather than superficial competence with a rule or process. Teachers provide more support and guidance to pupils who take longer to grasp the concepts via representation and interaction. Teachers extend pupils who grasp concepts quickly within the concept beyond routine question to reasoning in unfamiliar contexts. Differentiation is through varied and increased challenge. Pupils could receive more time and support if required to establish understanding while higher attainers move on to more complex problems.

Representations: Impact of representations is that pupils have a deep conceptual understanding of each small step and not just a method or fact by making connections with prior learning.

Fluency: Impact of fluency questions is that pupils can independently and directly answer routine and familiar questions.

Probing Questions: Impact of probing questions is that pupils can independently prove their conceptual understanding and use prior learning to answer questions and identify misconceptions.

Misconceptions:

You can miss out the representation if a child seems fluent.

The most able pupils should start on probing questions and miss out on fluency.

Pupils only need to complete a few fluency questions if they get the answer right.

Mastery goes from easy to hard questions.

Children shouldn't get all the answers correct