

Differences in approaches

I have attempted to show the differences of the above three approaches in a table.

Community of Enquiry	'Marion Bird' Activities	Cognitive Acceleration through Maths Education (CAME)
<p>A stimulus is provided, often a story or picture containing mathematical ideas.</p> <p>Pupils reflect and pose questions.</p> <p>Questions are discussed and sorted, connections sought, with the object of identifying more 'philosophical' examples</p> <p>Pupils select a question.</p> <p>Question is used as focus for discussion within which dialogue and reasoning skills are emphasised.</p> <p>Ideas are summarised and acknowledged as different possible answers (or partial answers)</p>	<p>A relatively open stimulus is provided within a rich mathematical context.</p> <p>Time is given for exploration and sharing of ideas and language to reveal present understanding and refresh memories.</p> <p>The teacher then provides a pointed example within that context which guides activity and discussion towards some key mathematical ideas.</p> <p>Pupils choose focus for exploration within the redefined area.</p> <p>Pupils may work collaboratively or individually, they share work which is built upon by the teacher in future questions.</p>	<p>15 lessons per year from year 5 to 8.</p> <p>Each lesson centred on a 'big mathematical idea'</p> <p>Initial activities accessible to all</p> <p>Pupils work collaboratively on a series of episodes within the lesson punctuated by feedback.</p> <p>Pupils learn from their own and other's successes and failures.</p> <p>Pupils learn through the experience of cognitive dissonance (realising the limitations of present understanding and the need to amend it)</p>
<p>The teacher may select the stimulus, assists in maintaining forward motion of the discussion. Plays the role of co-enquirer.</p> <p>Ideas developed may be recorded for follow-up at a future date.</p>	<p>The teacher provides initial stimulus and later a pointed example within that context which guides activity and discussion towards some key mathematical ideas. Teacher builds on pupils own work in later sessions.</p>	<p>Materials are carefully structured and sequenced in episodes. Teacher plays crucial part in introducing the activities and conducting the feedback sessions. Focus is on the thinking not written outcome.</p>