



Abstract: Opening Plenary: Transforming Mathematics Learning through Cuisenaire Rods

Caleb Gattegno, ATM founder, proposed that learners experience structure and relationships through actions and operations with coloured rods. This is a physical experience that leads to virtual actions and mental images, thence to recording with formal systems of symbols. This approach embodies Gattegno's belief in *algebra before arithmetic*.

In this plenary I will explain how we are integrating Gattegno's approach to early algebra in our school. I will explain how we have been able to put algebra at the heart of KS1 to develop children's mathematical understanding and confidence. I will share some of the exciting work that children have completed and illustrate how Gattegno's *Numbers in Colour* textbooks have inspired our lessons and invigorated our approach to teaching across the school. I will describe how we are working with other schools in the Tizard network on the largest systematic study of Gattegno's approach to learning mathematics since the 1960s.

Bio

Jenny Cane has been a teacher at Burstled Wood Primary School since 2005. Before becoming a teacher she graduated with a First Class Honours degree in Music from Bath Spa University and was then awarded a scholarship to complete a MMus in composition at the Guildhall School of Music and Drama, London.

Jenny is currently the Key Stage 1 Manager at Burstled Wood. Through her initial involvement in the Year 1 Cuisenaire project with Dr Ian Benson, she became interested with the work of Caleb Gattegno and his *Numbers in Colour* textbooks. She became fascinated with the way in which young children could grasp complex mathematics with the use of Cuisenaire rods and express their work in writing. From the initial work and discussions with the school subject leader, she helped to construct a medium term plan which was based mainly on Gattegno's textbooks and this embedded the demands of the National Curriculum. This has now led to a whole school learning philosophy developing curiosity and the primary use of Cuisenaire rods in mathematics from Year 1 to Year 3, where algebra is at the heart of the mathematics. Jenny co-wrote articles for *Primary Mathematics Magazine* on the use of early algebra in the classroom and has since helped to deliver several presentations to other schools and organisations.