

Teaching for Maths Mastery: Teacher Exchange Visit England-Shanghai at St Stephens Community Academy: The IMPACT.

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@Snmaths

For two weeks in January, St Stephens Community Academy in Launceston, had the honour and privilege of hosting the return leg of the Shanghai-England Exchange for the Teaching of Mathematics, and welcoming Miss Du and Miss Xu into our school. A wealth of mathematical knowledge, practice and expertise, was shared throughout the duration of their visit; extending this dissemination of outstanding practice not only with all staff at St Stephens but also to approximately 300 people involved in education, at different levels, throughout Cornwall and West Devon via Live Lessons and post-lesson discussions- highly effective CPD.



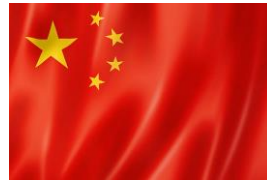
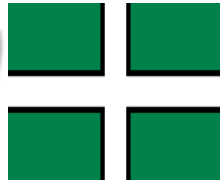
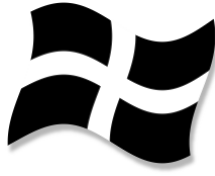
Miss Du: Teaching Year 6: Fractions



Miss Xu: Teaching Year 2: Multiplication

NB: PPTs/lesson sequences are available at :

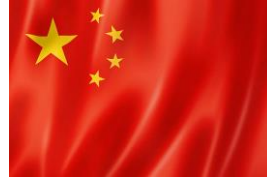
http://www.ststephenscornwall.co.uk/web/our_approach_to_learning/205070



The Impact on the teaching of Maths:

Small steps, Coherence, Variation:

- The over-riding observation made, was that **small steps** were taken throughout a lesson (even smaller than we were already planning) which supported and extended the learning of all pupils and how the careful **variation** in image chosen, model explained and question asked (written or verbal), encouraged **deeper thinking and understanding** and thus **challenge** was inherent in and **throughout** each lesson. This was clearly observed, where pupils who previously had been hesitant in **explaining their thinking**, were more motivated to have a go, and were given the time and structure (through the use of stem sentences) to do so, within a pair, small group or to the whole class. As a result of this, lessons are being developed further to allow for small, coherent steps, which build on previous learning, and a bank of **stem sentences** is being created.
- Maths lessons are more 'talkative', classrooms a collaborative place of learning, as a 'ping-pong' dialogue between teacher and pupils and peer to peer occur maintaining the **pace**; where verbal reasoning is being developed further, including explaining what a digit, number or part of a fraction **represents**, which number facts they need to use to solve the 'problem' and stem sentences are being used to support verbal and written **reasoning** which focus in on understanding the maths concept being learnt.
- Lesson planning is also being developed to include the use of **non-examples** and a **variety of methods** which can be used to solve a problem with further discussion as to the '**Why?**' and the employment of '**intelligent practice**' (an efficient method).



- **Diminishing the gap through the expectation that ALL will achieve**

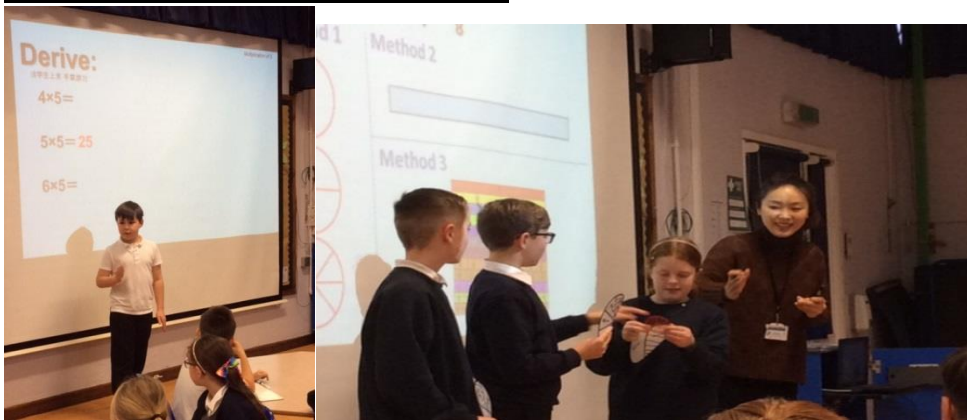
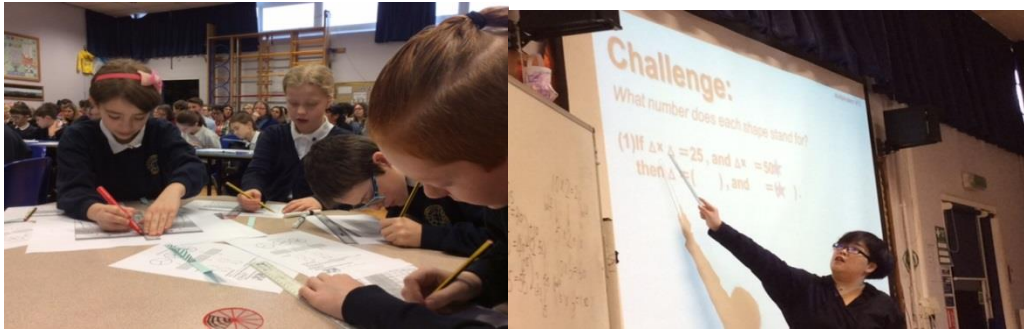
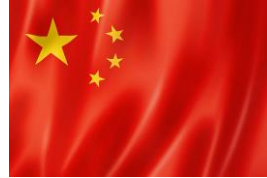
As stated in our Mathematics Curriculum in England, ‘**All** pupils are expected to make steady progress together in their learning of maths,’ and this was particularly noticeable in the approach delivered by both teachers. The use of carefully **selected images, targeted questions** and the **repetition** of what was **being learnt** throughout the lesson, enabled all pupils to **succeed** and to be **challenged** in their conceptual understanding. An ethos which we will continue to adopt in order to hear positive and powerful feedback like this:

Year 6 pupil: ‘I now understand fractions, I love them!’

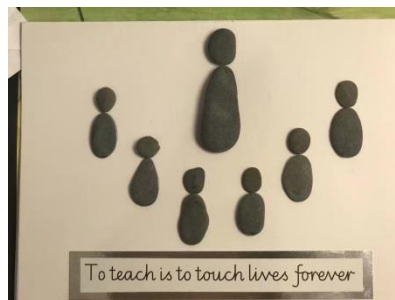
Student teacher: ‘I would class myself as having ‘maths anxiety’ but having watched Miss Du teach it through simple small, coherent steps, I know understand fractions and have the confidence to teach it!’

We also observed, outside of the main input lesson, the use of independent learning whereby the pupils applied their learning to a **variety of question types**, and any pupils who needed extra input received small group, 1:1 intervention prior to the next lesson, which always started with a **review** of the previous day’s learning.

This independent time of 20-25minutes, was thought to be a positive experience by the year 6 pupils and has raised whole school questions as to how to structure the day to facilitate this, along with the inclusion of pre-teaching as a tool in which to support learners.



Pupil Voice:



One of many cards made at home; sent by Year 6 pupils!

It was a true testament to the professionalism of these two inspirational teachers as to how, in the short time that they were in our school, they quickly became part of the 'team' at St. Stephens Community Academy and thanks to modern technology the link is being maintained on their return to Shanghai.



On display in the largest Primary School in Shanghai: Minang Primary School (Miss Xu's classroom)