THE DEAN TRUST
Lord Derby Academy

MATHEMATICS

THE KNOWSLEY STRATEGY

Lessons learnt from Shanghai

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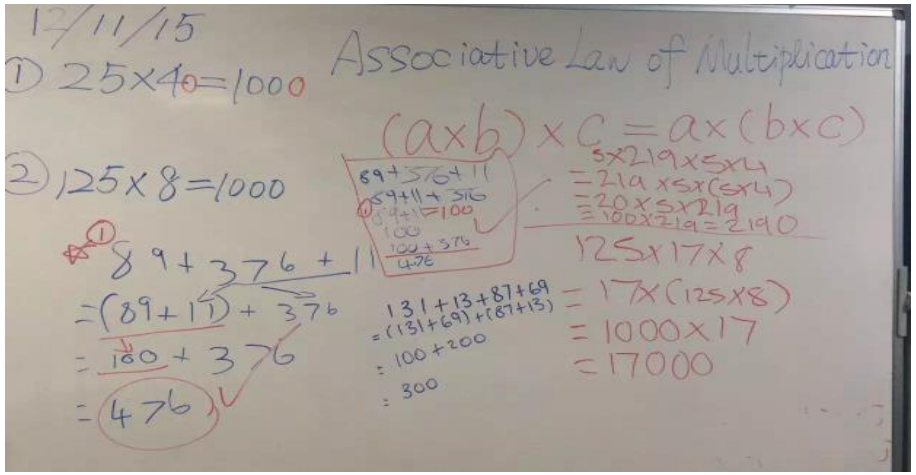
A rock from another mountain can be used to chisel your own jade

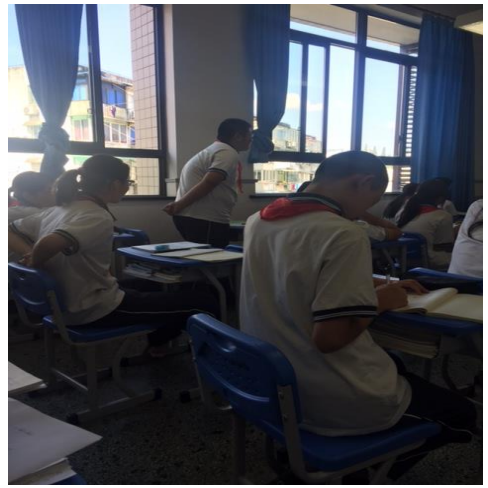
(Xiao Ya, Shijing: He Ming, 1000 A.C.)

“Raise the water, raise the boat”

<u>High expectations of our pupils in all lessons across the curriculum</u>

- **Accurate and consistent use of technical language**
- **Difficult and confusing examples planned for, not avoided**
- **Pupils consistently challenged to explain their answers with reasons and referring to rules and prior knowledge, using full sentences**

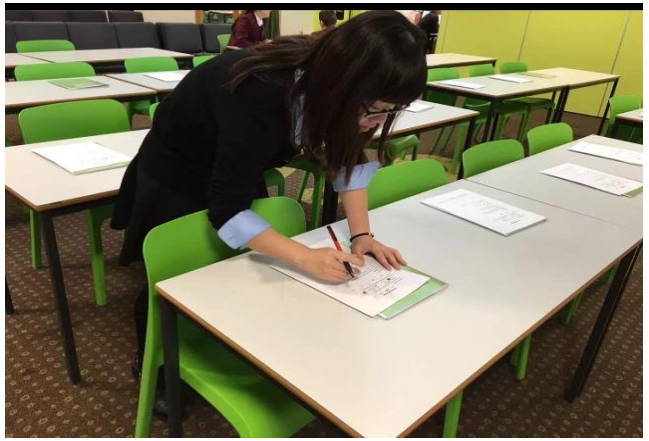




“The real scholar is not afraid to ask questions of his pupils”

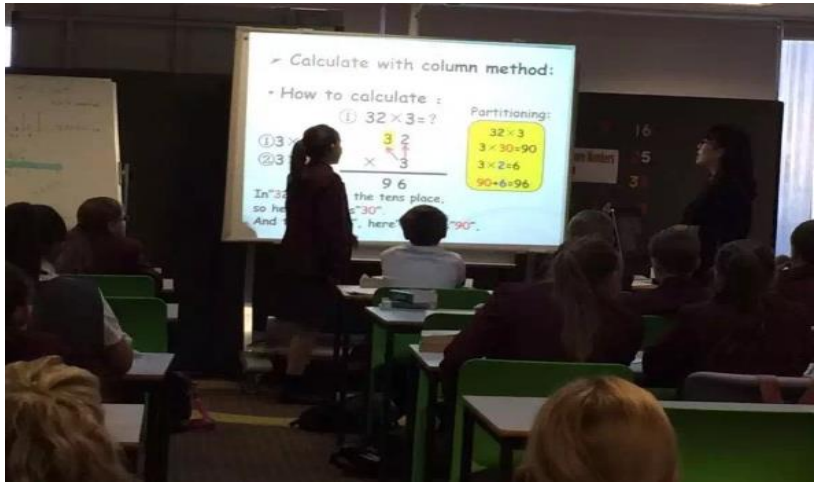
<u>High profile questions for the classroom:</u>

- **Why? What if?**
- **What is the same? what is different?**
- **True and false questions**
- **Precise feedback, verbal or written**
- **“Intelligent practice” in mathematics**

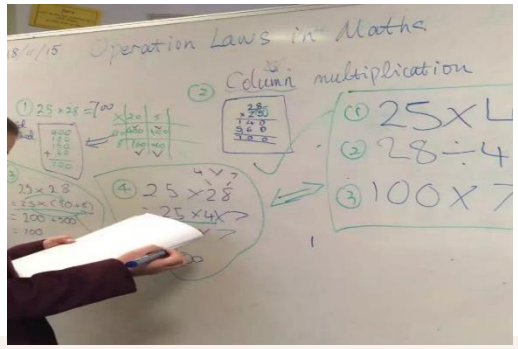


“The answer is only the beginning”

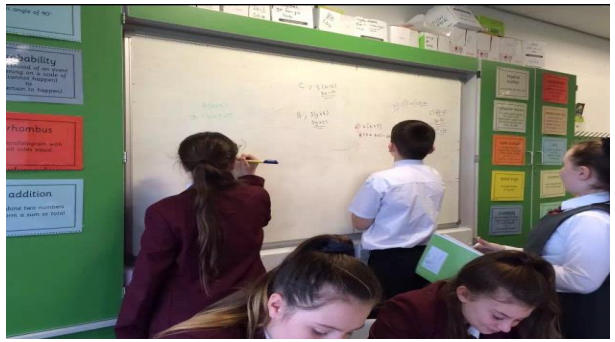
- **Pupils are expected to stand up to explain their answers**
- **Pupils are expected to answer in full sentences to explain their thinking**
- **Pupils are expected to use precise, subject related vocabulary**
- **We assess pupils regularly in lessons to identify those requiring intervention**
- **In mathematics, we use probing questioning to test conceptual and procedural knowledge in mathematics**



“ There are no mistakes, only lessons”



- **Analysis of pupils’ work to identify errors and explore misconceptions**

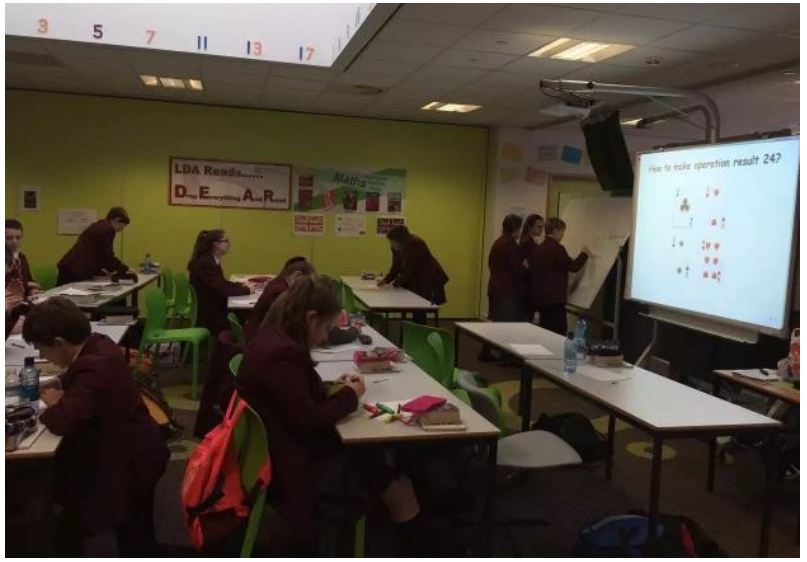


- **Sharing of pupils’ mistakes on the visualiser to move learning forward**

- **Using pupils’ work from the board to discuss their methods and possible mistakes**

“Do not intervene before pupils have made an effort to understand”

- **Link old knowledge to new knowledge**
- **Lesson structure: Review – Think – Learn – Apply – Challenge**
- **Pupils explore new materials without support prior to the teacher giving clues to move forward in their learning**
- **Different solutions are encouraged, shared and discussed**



“Reviewing what you have learned and learning anew, you are fit to be a teacher”

- **CPD is focussed on developing subject knowledge and pedagogy for the subject(s) that we teach**

- **Mutual observations have increased followed by “teacher research group” and feedback**