



The Language of “Doing” Mathematics

“It is better to work on one problem in many different ways rather than work on many problems in the same way.” GEORGE POLYA

George Polya (1887-1985) was a famous 20th century Mathematician who was fascinated with how people worked through mathematical problems.

We remember too well our days in the classroom as students and how our maths lessons were organised. Doing mathematics meant that we did ‘work’ that involved ‘getting the right answers’. We did lots of ‘plussing’, ‘times tables’ and drills. The verbs listen, copy, and memorise were all too familiar to us.

In classrooms today ‘doing’ mathematics begins with posing problems and taking risks while students discuss and defend their mathematical ideas and conjectures with their peers. They are engaged in thinking, which encompasses ‘making sense of’ and ‘figuring things out’.

The verbs that might have reflected mathematical classes of the past have been replaced by verbs such as explore, justify, construct, develop, investigate, represent, verify, explain, describe, solve and discover. Your children are taught using these verbs and engage in challenging and meaningful authentic tasks daily.

The primary goal of mathematics instruction in our school is to ensure that our children make sense of the mathematics they are learning. All the students at RPS, no matter how little or how big, are challenged with mathematical problems to solve and supported in their efforts to solve these problems. They are afforded with every opportunity to discuss and share their ideas and understandings with their peers in order to consolidate the learning that results.

Here’s an example of a mathematical problem that could be used in the classroom. Try it at home with your family:

There are 25 heads in a barnyard. The heads belong to both dogs and chickens. There are 78 legs. How many of the heads belong to dogs and how many to chickens?

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