RAISING THE ATTAINMENT OF DISADVANTAGED PUPILS IN MATHEMATICS

Peter Howard and Bev Bessey

AIMS OF THE PROJECT…

In 2016, the achievement gap between our disadvantaged and non-disadvantaged children widened in maths.

We wanted to take action to ensure that this gap closes and that our disadvantaged children make rapid progress.

We dedicated our eight week project to raising the attainment of disadvantaged children in maths across our school.

WHY?

11 November 2015

Ofsted

What does the school need to do to improve further?

Improve teaching and learning in mathematics by:

- providing training and support for teachers to develop their subject knowledge
- ensuring planning and teaching are designed to enable all pupils to secure their understanding effectively

Improve the effectiveness of leadership and management by:

- ensuring information about the use of the pupil premium is detailed, and that pupils' progress is checked regularly to ensure the additional funding is used effectively

"Overall, teaching in the school is good… It is not yet outstanding because some of the teaching in mathematics does not have the right amount of support and challenge to enable all pupils to make the best progress."

"Disadvantaged pupils make progress that is broadly in line with that of other pupils. However, as their starting points were lower, they still need to catch up the relatively small gap. Although their progress has improved since the last inspection, they do not all make sufficiently rapid progress in order to close the gap with their peers."

"There are few open-ended activities and real-life examples to enable pupils to deepen their understanding."

"A few teachers do not always have good enough subject knowledge in mathematics to ensure pupils gain a deep understanding of some of the more complex ideas."

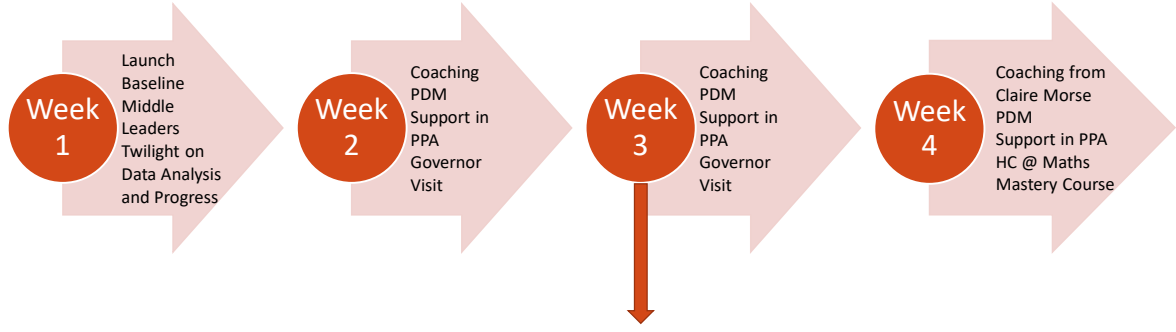
"Some teachers lack a deep understanding of the mathematics they are teaching. At times, this holds pupils back."

ACTION PLANNING – OUR JOURNEY

SUCCESS CRITERIA

- All Governors, Teachers and Support Staff are clear about the project and its aims
- Challenge from SLT leads to improved planning, which help teaching become more effective
- Better use of physical apparatus and visual representations lead to better conceptual understanding
- Lessons are more personalised for individual pupils
- Disadvantaged pupils are more engaged and become better mathematicians
- Improvements in engagement and outcomes are clear in pupils' books

WE INVESTED IN OUR STAFF



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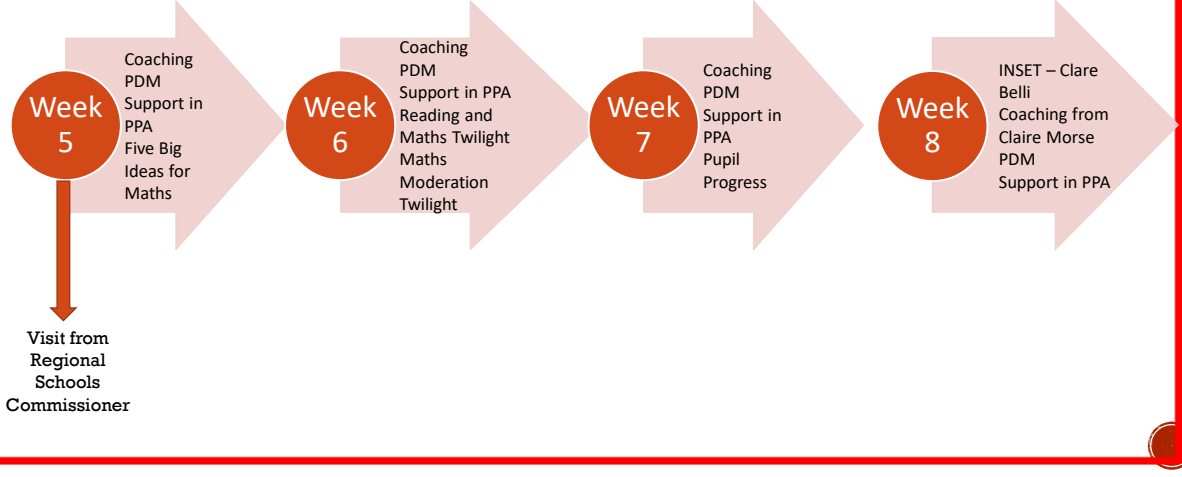
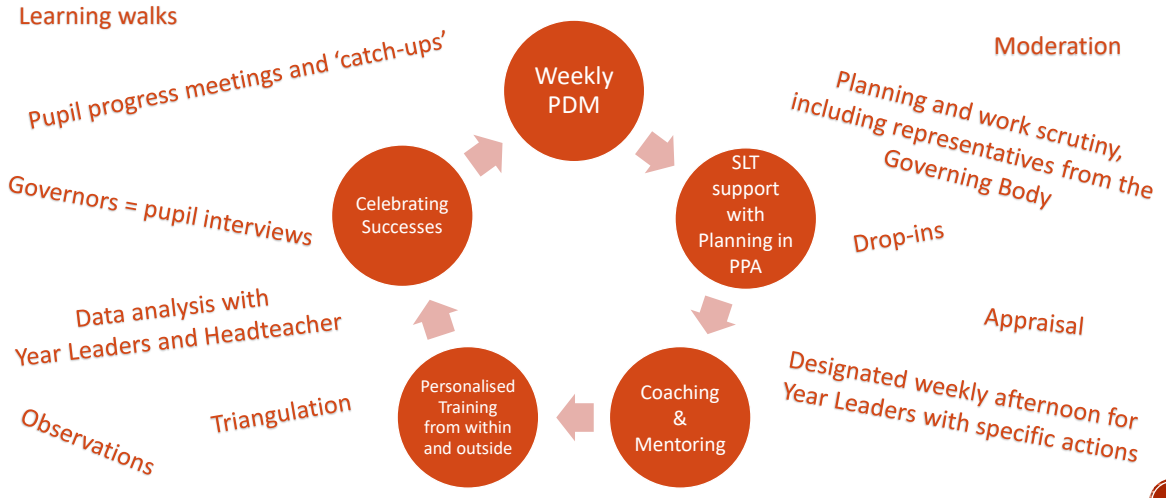


CONTINUOUS CYCLE TO IMPROVE TEACHING AND LEARNING…



CHILDREN, TEACHERS AND GOVERNORS

The book look and pupil discussions in the lower school revealed that many disadvantaged pupils perceived achieving well as presenting work neatly. This was a contrast to their non-disadvantaged peers, who referred to success as explaining their ideas. The disadvantaged children spoke more honestly about how difficult they find certain areas of maths and how they have to persevere.

CHILDREN'S VIEWS IN JANUARY 2017

There was a clear difference in attitude towards learning between the two groups of children. The disadvantaged children showed a growth mind-set towards maths and were very aware of the progress they had made through overcoming challenges and this made them proud. The non-disadvantaged children talked about enjoying the challenges they have been faced with but did not talk about needing to persevere at all.

Year 3

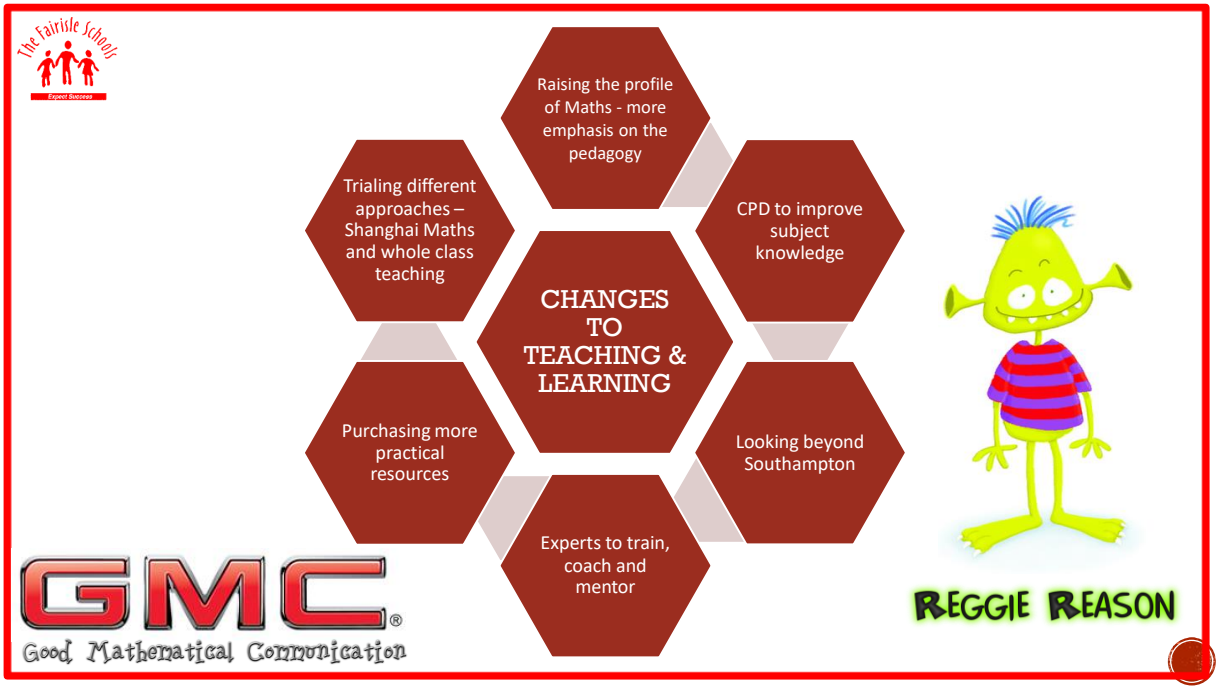
Children felt that the work was not challenging enough for them and they wanted to do more problem solving and have displays which supported and challenged them. They wanted to be mixed with different children so they are not grouped according to how good they are at maths.

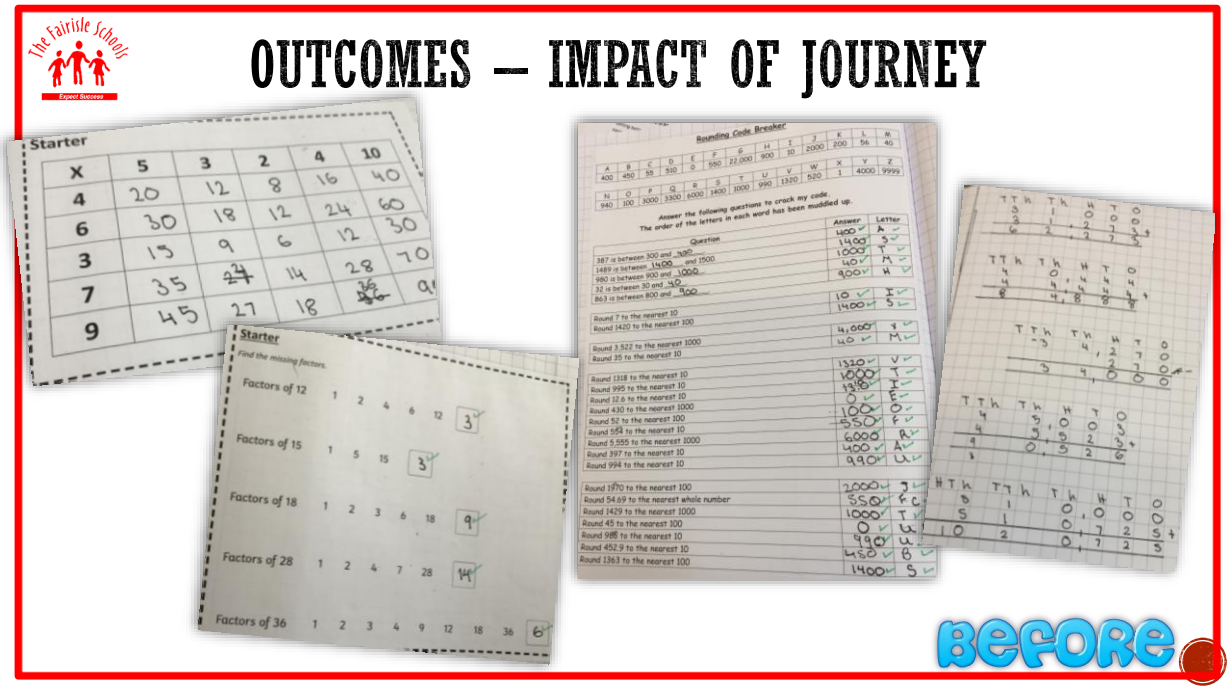
Year 5

Children wanted to be given more challenging problems, particularly in Year 6. Year 5 children wanted to be given more time to practise what they had learned.

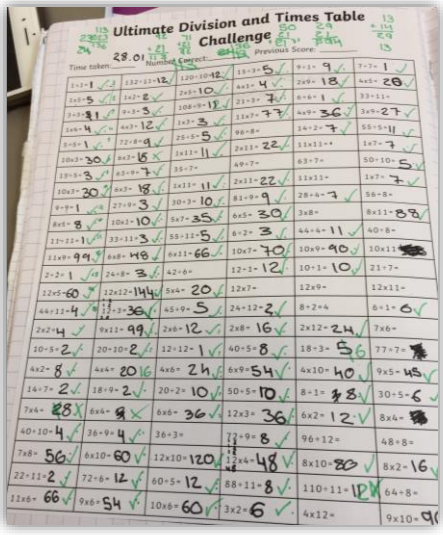
Year 4

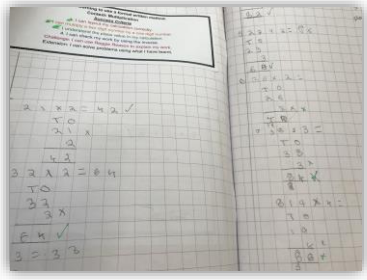
Year 6

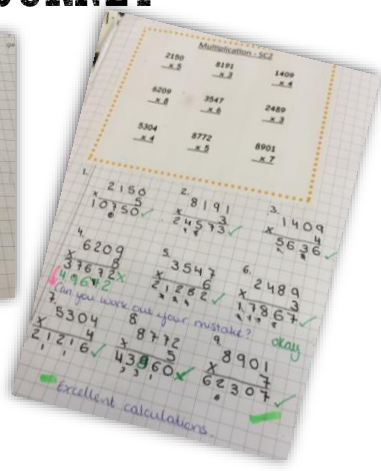

Raising the profile of Maths - more emphasis on the pedagogy
Trialing different approaches – Shanghai Maths and whole class teaching
CPD to improve subject knowledge
CHANGES TO TEACHING & LEARNING
Purchasing more practical resources
Looking beyond Southampton
Experts to train, coach and mentor
GMC
Good Mathematical Communication
REGGIE REASON


OUTCOMES – IMPACT OF JOURNEY
Starter
Starter
Factors of 12
Factors of 15
Factors of 18
Factors of 28
Factors of 36
Rounding Code Breaker
BEFORE

OUTCOMES – IMPACT OF JOURNEY







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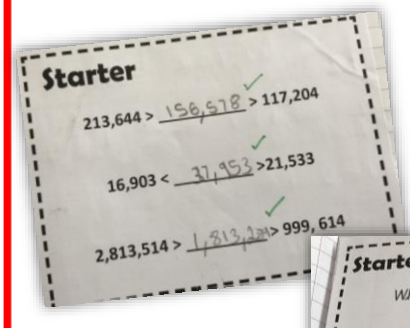
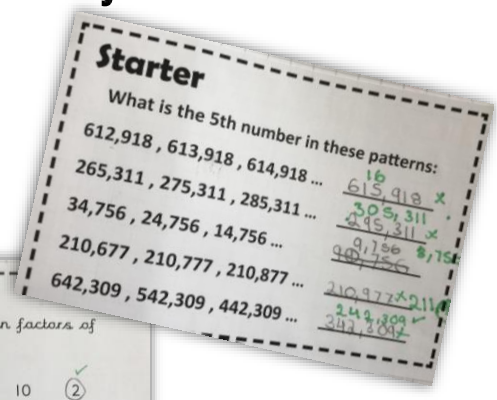
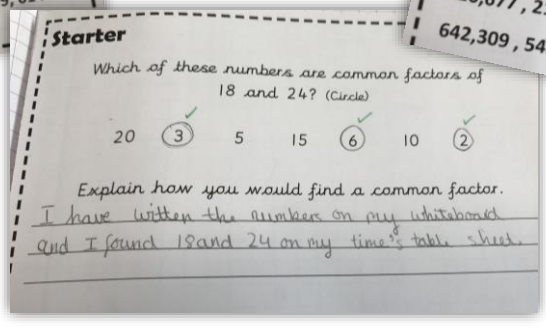
OUTCOMES – IMPACT OF JOURNEY







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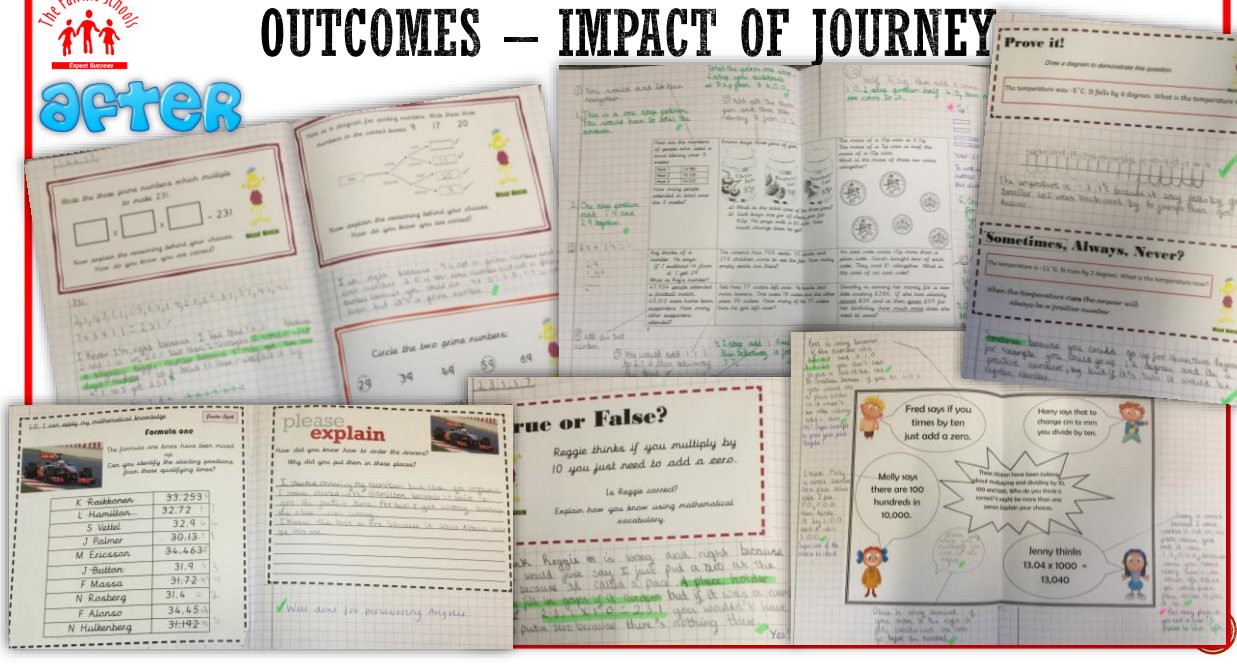
OUTCOMES – IMPACT OF JOURNEY



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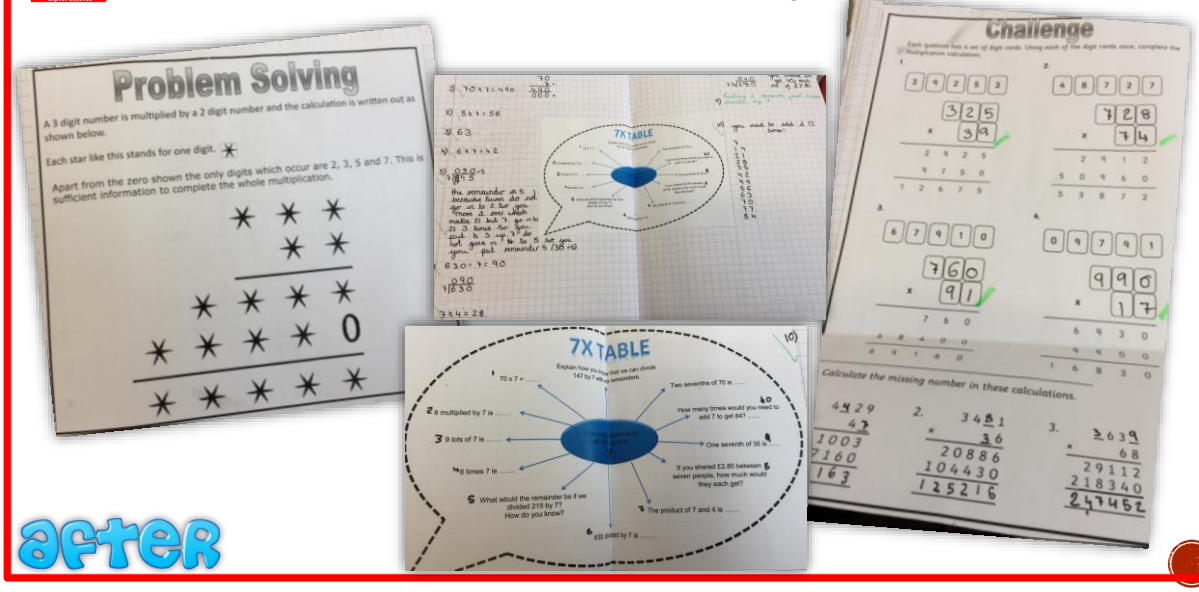

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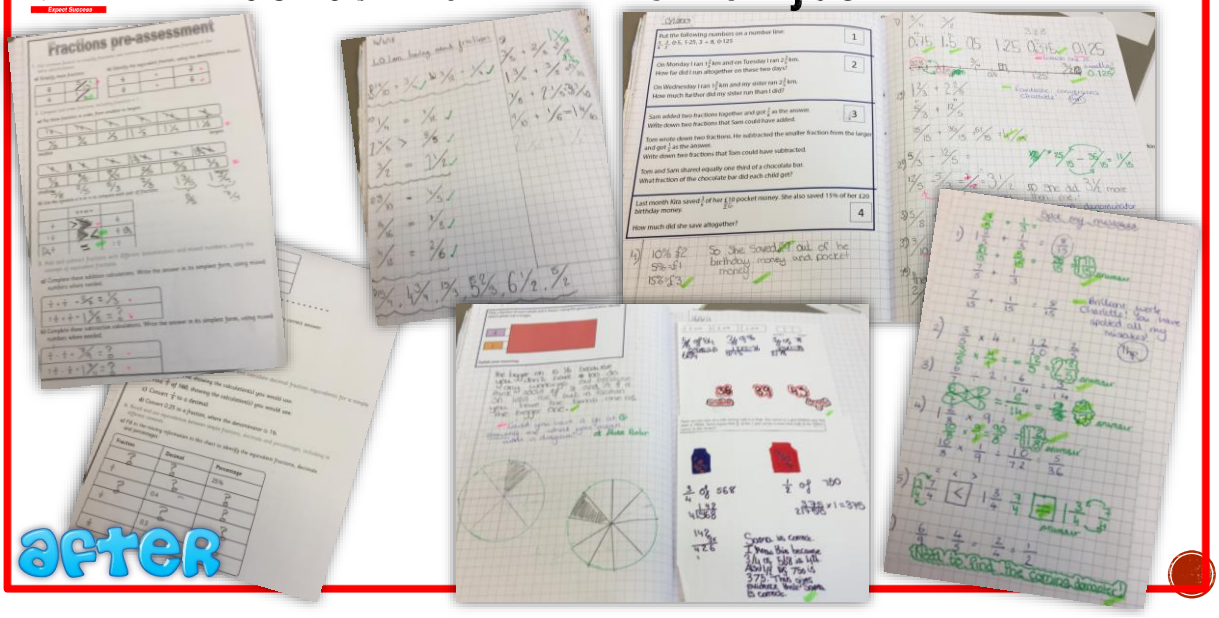

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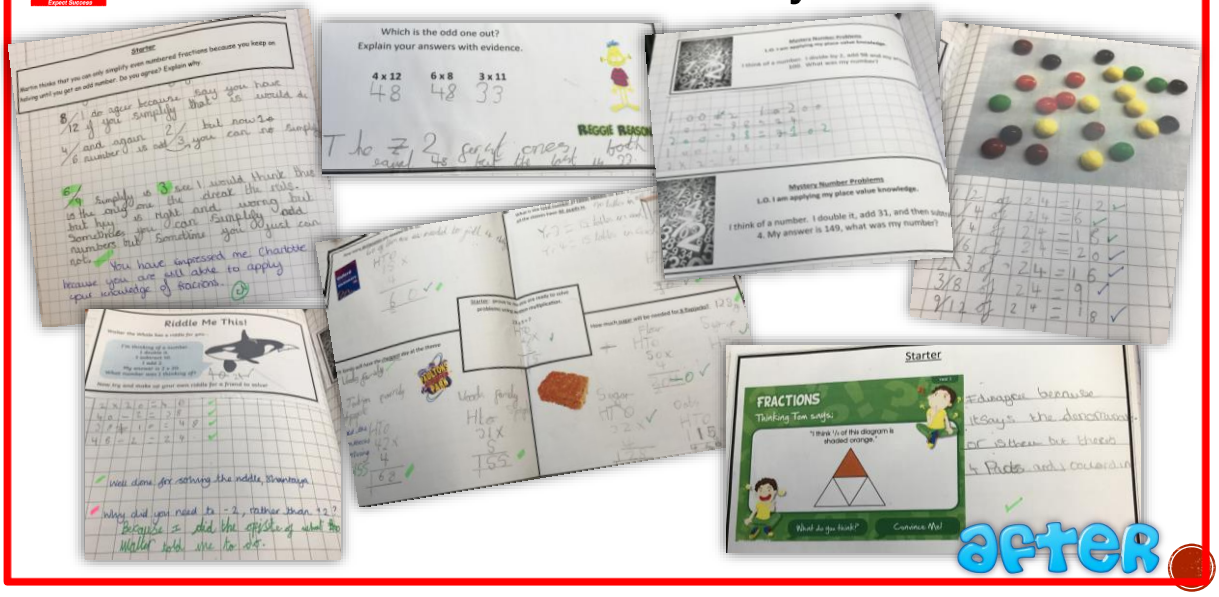

CHILDREN, TEACHERS AND GOVERNORS

CHILDREN'S VIEWS IN MARCH

AN EXTERNAL VIEW…

'The pupil premium is used effectively to support disadvantaged pupils in mathematics. A good example is through the purchase of practical resources that provide pupils with concrete experiences to help them understand mathematical concepts such as place value.'

'…You have made effective use of external trainers…to strengthen the quality of teaching and learning in mathematics.'

'Teachers demonstrate a good understanding of how to develop pupils' knowledge, understanding and skills in mathematics. This was confirmed in my observations of teaching and learning across the school, as well as by the work in pupils' books. The good quality of teachers' planning reflects the extent to which they plan carefully, taking account of what pupils have learned and how well they progressed in previous lessons… Plans respond to pupils' additional needs and misconceptions.'

THE SCHOOL SHOULD TAKE FURTHER ACTION TO:

'Ensure teaching provides good levels of challenge for the most able pupils, including those that are also disadvantaged.'

Ofsted

20 January 2017

'Leaders, managers and teachers benefit from the highly effective training provided by external consultants, particularly in mathematics and to further improve the quality of their leadership and management.'

REGIONAL SCHOOLS' COMMISSIONER

He concurred with the view of HMI regarding the children's work and expects the school to be judged as good at its next inspection.

We have good teaching and good outcomes in books. The current trajectory is positive.

3 February 2017

PROGRESS – WHAT'S MADE THE DIFFERENCE?

‘Following a dip in results in 2016…you have since developed a much more rigorous system for tracking and checking on the progress made by different groups of pupils. This is shared with teachers, who spoke enthusiastically about the progress made by different groups of pupils in their class, including those who are disadvantaged. Regular pupil progress meetings provide a good opportunity for staff to review the progress made by pupils, and to identify additional support for those at risk of underachieving.’

‘…You have raised teachers’ expectations of what pupils can achieve. You have also helped to raise pupils’ aspirations so they are happy to work hard and aim high.’

THE FUTURE

…Teaching does not provide enough challenge to stretch the most able pupils, including those that are also disadvantaged.

So…

Although we have made progress, we are by no means there yet… our journey continues…

We have a very clear vision of where we want maths to be at Fairisle Junior School and we know how this will be achieved.

We now need to embed new approaches and keep the plates spinning. We want to now ensure that the provision for our most able children, including those who are disadvantaged, are challenged in all subjects. This is part of our School Improvement Plan and our Pupil Premium Strategy.