

## Standards and Quality Report 2016

Dept Name: Mathematics

Date: 23/09/16

### Improvement Planning

#### Review

TLC work on feedback has improved formative assessment within the maths department.

Links with Primaries have been greatly improved through increased contact. We are now getting requests for advice from Primary teachers. This allows a smoother transition and numeracy expertise to be shared.

SQA results were good. The Lifeskills exam continues to be challenging, but even here attainment is above Highland and National averages. These results are being taken into consideration when advising future pupils on choices.

#### Next Year

Benchmarking needs to be improved and will be a TLC focus.

Tracking and monitoring system changes are being made in the BGE. These will be linked to benchmarking. These will also be monitored with a view to "Closing the Attainment Gap" pupils. This should continue to be linked to self-evaluation.

A numeracy project with primaries has been requested to help strengthen links further.

A review of BGE numeracy will be required. In particular we need to look at the long-term impact of recent changes we have made such as Numeracy Ninjas, peer marking and Diagnostic Questions.

### BGE

BGE courses continue to be adjusted slightly as required based on the needs of each year group. For example teaching BODMAS earlier.

Stronger links with primaries have helped make setting classes easier. These links have been fostered through joint twilight sessions and visits to ASG primaries. One primary teacher has also visited UHS to observe a maths lesson. We hope to continue and expand this practice.

Due to pupil numbers we have been able to set the upper maths group much larger than the lower group. This allows for easier transition if needed and helps set high expectations. Essentially we are able to give anyone who might attain more in the upper group a chance to do so.

There has not needed to be many pupils changing classes in the last year.

Current S1 upper set are using the Diagnostic Questions website to get instant feedback and practice communicating maths. This should improve maths literacy.

### **3.2 Raising Attainment and Achievement (From How Good is Our School 4)**

“Almost all pupils are attaining appropriate levels and a few have exceeded these”

Comment:

We have access to previous year groups’ attainment records. This is useful to track attainment in a small school where there may be a great deal of variation between year groups.

We have developed a better understanding of SOSCA and InCAS assessments and use these together with other forms of assessment and teacher judgement.

Other ways to show maths attainment have been introduced such as the “How tall are the floodlights?” project which combines many topics with practical skills to create and self-evaluate a booklet of work.

Likewise the puzzle competition gave another way to judge attainment. Many pupils who find maths difficult presented good solutions to difficult questions. The number of submissions was very high.

“Confident teacher judgements together with benchmarking and an appropriate range of assessments are leading to improvements in attainment”

Comment: This is a focus of whole school during TLC. Benchmarking exercises have been carried out to try and provide consensus which allows confidence. This benchmarking also ties in with improvements being undertaken in BGE tracking and monitoring.

One member of the department has attended and reported back on tapestry and CPD sessions focused on feedback. Feedback discussions have allowed us to broaden our range of assessment types and focus on providing specific next steps.

Peer marking of homework has also helped pupils to understand standards.

### **Senior Phase**

#### **Nat 3/4**

Lifeskills National 4 Attainment was very good, with many pupils doing National 5 Numeracy. Only 3 pupils needed to do National 3 awards.

#### **Nat 5**

Lifeskills results were disappointing, however still well above both Highland and National averages. We felt this reflected literacy standards during the final exam. Insight relative value is unavailable.

Next year may see a drop in Lifeskills National 5 uptake due to only being available in one column.

Maths National 5 results were very good. Relative value improved and 3 star rating. There is a possibility that we have not encouraged some borderline pupils to attempt National 5 maths in the past. Now that we are more familiar with the standard we are allowing more borderline pupils to attempt it if they wish.

### **Higher**

Excellent results. All passed (with only 1 at D level). Last year's results were also good but relative value has gone up from 1.25 to 1.26 and still 2 star rated. Last year only 3 S5 girls sat higher maths (out of 10 S5) however this was in a year group with only 14 girls out of 38 pupils. We do not feel there is a significant reluctance of girls to choose maths because next year will have 7 out of 15 and girls are well represented at Advanced Higher level.

Uptake for Higher course was better than Highland and National averages last year. The year before it was better than Highland and almost identical to National uptake. This is a significant improvement on 2014 when it was only 16%. The department has been flexible to encourage candidates. This year one pupil who moved to the school after getting NA in National 5 elsewhere is doing a two year higher. Likewise another pupil who has recently moved to the school is studying National 5 while doing some Higher work with a view to sitting Higher next year.

### **Adv Higher**

All pupils passed. With one A and three Bs. This represents not only good results but a good level of uptake for a school our size.

### ***3.2 Raising Attainment and Achievement (From How Good is Our School 4)***

"Almost all pupils are attaining appropriate levels and a few have exceeded these"

We have used SOSCA data combined with teacher judgement to check pupils are attempting the correct level of course for them. Comparison with previous year group data has also been used. This is combined with regular tracking within the senior phase.

Learning conversations have proved particularly useful in the senior phase. S5 and S6 pupils are very familiar with the examination system and set challenging but realistic goals. S4 pupils find this more difficult and may need additional teacher input during learning conversations.

The most recently available Literacy and Numeracy insight data (2015) shows UHS slightly above our virtual comparator at Level 4 passes (96% to 93%) and approximately equal on Level 5 passes (69% to 70%).

Insight data across all levels and courses suggests on average pupils here perform better than expected.

### **Wider Achievement**

#### **Comment**

Many pupils have been able to participate in a range of national and regional maths competitions with above average success rates. Likewise the maths Jamboree for visiting p7 pupils allows all

abilities to access problem solving maths in a competitive environment.

S6 in class pupil support has allowed many S6 pupils to gain valuable experience working with children.

### **Developing Young Workforce**

Comment: Lifeskills maths courses offer the opportunity to learn maths which is more likely to be required in the young workforce.

We have tried new techniques to practice numeracy fundamentals because this has been identified as a missing skill in the young workforce. This year most S1 and S2 pupils are following the "Numeracy Ninjas" program. So far it has proved extremely enjoyable and is a very popular task.

### **Closing the Gap**

Comment: To try and break the "vicious cycle" of lower attainment we have started an S1 parent's maths session. Feedback this year was very encouraging.

Many study classes (after school), Easter sessions and study-leave sessions have been available. This should be of particular benefit to those who do not have a good environment to study in at home. This year, an after school class was added for S3 pupils.

All lower groups now start with revision questions because poor retention was identified as a large obstacle to attainment.

The school now has a "Closing the Attainment Gap" pupil list. This list is being considered when making plans which impact individuals.

InCAS to SOSCA maths data has been analysed to identify under-performance. This data showed significant improvement in average scores. There were only a few pupils who were under their predictions. Specific help/arrangements for these individuals have been discussed.

S6 in class support has been targeted at helping those pupils who will benefit most. In many cases these are pupils with very low attainment. Extra support should help these pupils to make extra improvement.