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| Report to: | Education Resources Committee |
| Date of Meeting: | 8 February 2022 |
| Report by: | Executive Director (Education Resources) |

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| Subject: | Numeracy and Mathematics Update |
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1. Purpose of Report

1.1. The purpose of the report is to:-

- ◆ provide an update on developments in Numeracy and Mathematics
- ◆ inform the Committee on the strategy for recovery in Numeracy and Mathematics

2. Recommendation(s)

2.1. The Committee is asked to approve the following recommendation(s):-

- (1) that the strategy for recovery in Numeracy and Mathematics be noted.

3. Background

3.1. Numeracy continues to be a key priority within the Scottish Government's National Improvement Framework with a specific focus on raising attainment overall and closing the poverty related attainment gap.

3.2. The Making Maths Count Report (2016) highlighted that 'Scotland has a maths problem'. One of the three identified areas to focus on was:

Improving confidence and fluency in maths for children, young people, parents and all those who deliver maths education to raise attainment and achievement across learning.

3.3. Education Scotland published their Thematic Review of Numeracy and Mathematics, 'Multiplying skills, adding value', early in 2019. This review built on the findings of the 'Making Maths Count' report. It reported that although professional learning was deepening the knowledge and skills of staff in Numeracy and Mathematics, it is not yet resulting in significant improvement in outcomes for children and young people.

3.4. The National Response to Improving Mathematics Partnership Board (NRIM) has been established with the aim of realising the ambitions of these two reports, as well as taking into consideration the findings of the most recent PISA and OECD reports.

3.5. South Lanarkshire Council has representation at national level. The Head of Education (Senior Phase) is the Chair of the NRIM Board and Education Resources' Lead Officer for Numeracy and Mathematics is also member of this Board.

- 3.6. 2019/20 'School Leavers' Data' in Insight shows that South Lanarkshire Council learners' attainment in Numeracy were broadly in line with comparators (National and Virtual).
- 3.7. Since the full return to school in August 2021, formative assessment has been being used by all classroom practitioners across the estate to understand progress in learning throughout lockdown. Where appropriate, interventions and additional support is being provided both on an individual and a whole school level.
- 3.8. Feedback from school leaders suggest that progress in Numeracy is being identified as a common area of focus for 'recovery'. For a range of reasons, supporting the Numeracy agenda during lockdown was identified as having been a complex process. A post lockdown increase in use of school-based support interventions for Numeracy was also observed. In response, and to support schools, Education Resources committed to a centrally supported Numeracy recovery strategy for 2021/2022.
- 3.9. While it is recognised that there are numerous examples of excellent practice in the learning and teaching of Numeracy and Mathematics in establishments across South Lanarkshire, there is also still work to be done to improve consistency and to close our poverty-related attainment gap. This can be achieved by continuing to improve the core pedagogy in Numeracy and Mathematics in classrooms.

4. Strategy for Recovery

- 4.1. The Lead Officer for Numeracy and Mathematics within Education Resources has engaged extensively in educational research, with specific focus on addressing barriers to learning and raising attainment in Numeracy and Mathematics. The Lead Officer also chairs the West Partnership Maths Group, which is a specialist network group within the West Partnership Regional Improvement Collaborative. After analysis of extensive research and through discussion with other National leaders, Maths Recovery Training was identified as the most suitable programme for roll out to support core learning and teaching in Mathematics in South Lanarkshire Council.
- 4.2. The Education Resources Numeracy and Mathematics Strategic Plan has 3 main areas of focus:-
- to develop a Numeracy strategy to support schools to understand how to develop Numeracy Curriculum to recover from the impact of Covid-19 lockdown.
 - to build a Numeracy CLPL programme to support the recovery strategy
 - to self-evaluate the Numeracy CLPL programme and strategy to ensure it is dynamic and responsive to evolving need.
- 4.3. Given the levels of training required, the strategy details the process to train every Primary Teacher and appropriate Secondary Teachers in the pedagogical approaches of Maths Recovery over the next 5 years, although this will be reviewed through the period of implementation.
- 4.4. Maths Recovery is a methodology for core Learning and Teaching in Numeracy and Mathematics to advance the numerical ability of learners at all levels. It prepares teachers to approach mathematics instruction in a new way. It emphasises ongoing assessment, careful observation, gauging student's current knowledge and strategies, and building on them to increase the student's knowledge, ability and self-confidence in mathematics. Maths Recovery also increases teacher knowledge and understanding of the foundations of Number and strategies to support learners at all levels. This enables teachers to be more fluent and responsive in their teaching.

- 4.5. The long-term plan is to have an internal team of accredited Maths Recovery trainers. Currently, the training is dependent on external trainers from the Maths Recovery Council.
- 4.6. The strategy, therefore, combines a programme of roll out of CLPL for classroom teachers in parallel with a programme to upskill a group of identified practitioners to become Maths Recovery trainers.
- 4.7. The first cohort of staff have already begun their training in 'The Learning Framework in Number' course. For the majority of this cohort, the expectation will be that they roll out Maths Recovery within their own classroom. For a selected number, the journey to becoming an accredited trainer of Maths Recovery will be completed by the end of the 2023-24 session.
- 4.8. Currently, the courses are being delivered by Maths Recovery Council trainers but from session 2024/2025, the selected and trained internal staff will deliver training in the following courses:
- The Learning Framework in Number
 - Teaching Number in the Classroom with 4 – 8-year-olds
 - Developing Number Knowledge: Assessment, Teaching and Intervention with 7–11-year-olds.
- 4.9 Evidence shows that schools who have embedded the pedagogy of Maths Recovery across all stages have seen the greatest improvements in attainment.
- 4.10. Education Resources strategy supports the roll out of Maths Recovery to all appropriate staff over the next 5 years, with a view to embedding this approach across all establishments.
- 4.11. There will also be an annual refresh/top up programme to ensure that every appropriate member of staff within South Lanarkshire Education Resources is trained in Maths Recovery.
- 4.12. The training programme will be evaluated at every stage to ensure that it is meeting the needs of our staff. Careful analysis of our data will ensure that we are tracking the progress of our learners and responding to need as necessary.

5. Employee Implications

- 5.1. All appropriate staff within South Lanarkshire will receive training in the pedagogical approaches of Maths Recovery.

6. Financial Implications

- 6.1. Costings are being met through existing resources

7. Climate Change, Sustainability and Environmental Implications

- 7.1. There are no implications for climate change, sustainability or the environment in terms of the information contained within this report.

8. Other Implications

- 8.1. There are no issues in terms of risk associated with this report.

9. Equality Impact Assessment and Consultation Arrangements

- 9.1. Mathematics should be accessible to all of our learners, regardless of ethnic or socio-economic background, gender or any of the other characteristics. Practitioners may display unconscious bias based on these factors. The training we are providing will seek to overcome these issues by providing practitioners with skills and knowledge which will enable them to understand better the underlying barriers learners have. This will give them confidence in teaching mathematical pedagogy, allowing children and young people to explore and discover the creativity within.
- 9.2. Consultation and engagement have taken place with teachers, head teachers, and other staff and feedback during the recovery period from school leaders is being used to plan the next steps in taking forward learning and teaching in numeracy and mathematics.

Tony McDaid

Executive Director (Education Resources Resources)

20 January 2022

Link(s) to Council Values/Ambitions/Objectives

- ◆ Improve achievement, raise educational attainment and support lifelong learning
- ◆ Ensure schools and other places of learning are inspirational

Previous References

None

List of Background Papers

- ◆ Scottish Government National Improvement Framework

Contact for Further Information

If you would like to inspect the background papers or want further information, please contact:-

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