

Raising Standards in Pupil Achievement in Mathematics

School(s) or partnership name: Willowbrook Primary School

Name of Lead Person: Miss Sian Ritchie / Mrs Rebecca Mansfield – Mathematics Subject Leaders

Role of lead person: Miss Sian Ritchie - Key Stage 2 Leader for Learning

Lead person e-mail address: sritchie@willowbrookprm.cardiff.sch.uk

Lead person telephone number: 029 2079 5965

Local Authority(ies): Cardiff

Phase(s): Foundation Phase and key stage 2

Context and background to case study

Willowbrook Primary School is located in St Mellons in Cardiff. There are currently 352 full time and 64 part time pupils on roll. 26.4% of pupils are entitled to free school meals.

In 2015/16 one of the Government's and school's priorities was to raise standards in Mathematics and Numeracy across the curriculum.

Nature of strategy or activity

- Challenging targets are set before the beginning of the academic year. A 3, 6 and 9 monthly review of pupil progress towards targets takes place identifying over/under achievement and teachers complete pupil concern sheets. From this review strategies are put in place to support those pupils;
- In KS2 pupils were set across the phase from Year 3 to Year 6. Through subject leader monitoring it became evident that many pupils in KS2 were not being taught the numeracy skills relevant to their year group. Rearranging the setting of maths across year groups rather than phase and making appropriate provision for ALN pupils means that nearly all pupils are being taught the correct skills for their age;
- The lesson timetable has been adjusted to ensure equitable time balance between literacy and numeracy which has provided more opportunity for mathematical reasoning;
- In addition to maths lessons, on a weekly basis each class is allocated a teaching assistant for one hour to complete a 'Magic Maths' session. During these sessions pupils identified as requiring extra support complete activities to consolidate and further their learning;

- Through monitoring of numeracy across the curriculum it was apparent that data handling skills were being taught frequently across the curriculum with less of a focus on other areas of maths. Due to this a review of medium term planning took place to ensure that opportunities are provided in each topic to deliver a wide range of numeracy skills; some topics were changed in order to facilitate this. INSET time was allocated for phases to work together to generate lesson ideas for numeracy skills to be consolidated across the curriculum;
- In order to improve the use of feed forward comments in mathematics, it was agreed that numerical reasoning activities would be focused marked and opportunities given for pupils to revisit and improve their work;
- Abacus Active Learn and Big Maths are used as resources to deliver numeracy skills. The use of reasoning RUCSAC resources and a calculations policy was agreed to ensure consistency across the school;
- Differentiated mathematics homework is set through Abacus Active Learn in an online pupil world. A daily homework club has been set up to allow pupils who don't have internet access at home to do their homework after school. This has allowed us to support eFSM pupils to access the curriculum;
- An annual Numeracy Strategies meeting with parents takes place to encourage collaborative learning between home and school;
- Each year mathematics subject leaders apply for a grant from Legal and General which funds an enterprise week where pupils apply their numeracy skills to real life situations culminating in an enterprise fair. Profit generated from the fair is used to purchase mathematics resources;
- The diagnostic tool is used to analyse the NNT results and skills for development highlighted have been a focus for the forthcoming year;
- Numeracy targets were linked to staff performance management targets and as part of the process lesson observations of numeracy lessons were completed. Teaching triad observations were facilitated between formal observations to allow staff to share excellent practice;
- Maths fun days have been organised to build enthusiasm for the subject. Pupils enjoy a range of maths games and activities through the use of ICT, the outdoors, real life problems/situations and external providers; and
- In 2015/16 the mathematics subject leader was part of a School Improvement Group. A levelled portfolio of reasoning evidence was produced and electronic resources were gathered. These resources were shared with staff accordingly.

Central South Consortium

Case Study

Impact on provision, teaching and learning and/or leadership:

Year	Outcome 5+ (%)	Outcome 6+ (%)	Level 4+ (%)	Level 5+ (%)
2013/14	89.4	22.8	87.1	35.4
2014/15	90.9	21.8	93.1	44.8
2015/16*	91.7	31.7	91.8	40.8
2016/17	98.3	41.4	97.4	56.4

*There is a general upward trend in both phases although in 2015/16 there was a dip at key stage 2 due to the composition of the cohort. Of the cohort 18 out of the 49 pupils (37%) were SEN, of these 44% were SA+. 96% of the cohort achieved their challenging targets.

Where is the effective practice recognised?

- Consortium Challenge Adviser
- Judith Davies, Headteacher, Danescourt Primary School.