



Bletchley Park
P R I M A R Y

Maths Policy

Effective: 30 August 2019

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At Bletchley Park PS we believe effective teaching and learning of Numeracy occurs when:

- *Students* are actively engaged in hands on, purposeful activities, utilising concrete materials where appropriate, to become effective problem solvers.
- *Teachers* explicitly teach, while differentiating the learning to meet each student's individual needs. They support students to become problem solvers and provide opportunities for every child to succeed.

Aims

Our school has adopted the aims developed by the Australian Curriculum: Mathematics. To ensure that students:

- are confident, creative users and communicators of Mathematics, able to investigate, represent and interpret situations in their personal and work lives and as active citizens.
- develop an increasingly sophisticated understanding of mathematical concepts and fluency with processes, and are able to pose and solve problems and reason in *Number and Algebra, Measurement and Geometry, and Statistics and Probability*.
- recognise connections between the areas of Mathematics and other disciplines and appreciate Mathematics as an accessible and enjoyable discipline to study.

Planning

Mathematics overviews are used in each learning team, which outline the objectives that need to be taught each term. Learning teams plan together, ensuring connected practice and continuity in the delivery of concepts. Teachers need to base their planning on First Steps in Mathematics stages of development aligned to the Western Australian Curriculum and use the ISTAR model for the planning of Numeracy Blocks. Planning, teaching and assessing must encompass all four proficiency strands.

Timetabling

At Bletchley Park Primary School, a minimum of six hours each week is dedicated to the teaching of Mathematics. This is delivered in one hour or two hour blocks of time to accommodate the ISTAR planning model and inclusion of fluency activities as part of each lesson.

Hands-On Learning Experiences

Students from K-6 should be provided with a variety of learning opportunities that enable them to build on their existing experiences, strengths and mathematical understandings. Learning should be meaningful, purposeful and involve students in hands-on mathematical experiences to develop their understanding of concepts. Students need to regularly experience opportunities for both individual and collaborative learning and teachers must ensure all students are given the opportunity to achieve intended outcomes in a safe and fair environment.

Vocabulary of Mathematics

Vocabulary is explicitly introduced at the start of the lesson as part of WALT and WILF; eg some of the words you will be using are; then is referred to throughout the lesson. Vocabulary is developed through hands on mathematical experiences that allow students to make connections. Mathematical language is represented on a class word wall (appropriate to the level of the students) and is actively used as a learning tool. Where appropriate, we use mathematical literature for the start of the lesson (Inform/Inspire) or as a review.



Fluency

All teachers **must** dedicate 10 minutes every day to practising mathematical fluency skills. Fluency is a vital opportunity for children to learn and consolidate their knowledge of key mathematical facts and practise recalling these efficiently and accurately. This is important for progress in Mathematics because knowing facts frees up a child's working memory. Fluency sessions must incorporate a range of maths areas and not just focus on the four number operations. Bletchley Park Primary School has developed a Fluency Scope and Sequence for number activities and each teaching block has a set of Paul Swan resource books with additional teaching ideas.

Numero

Numero is taught by all teachers in Years PP-6. It is a mathematical card game that has been designed to assist in developing understanding of numeracy concepts and build problem solving skills. It can significantly boost children's mental maths abilities and encourages tactical thinking. The skills in the game must be explicitly taught and modelled to the children. Bletchley Park Primary School incorporates this game into the teaching of mathematics and some classes' pair up to practise game skills.

Whole School Approach to Problem Solving

Bletchley Park Primary School has developed a whole school approach to problem solving. This process builds the development of vocabulary and encourages students to be critical thinkers. Students are explicitly taught a small range of problem solving strategies and provided with opportunities to practice these.

Our process is displayed and taught in all classrooms K-6.

Understand
Devise A Plan
Do
Review

Calculation Strategies

A key component of mathematics teaching at Bletchley Park Primary School is the development of student's mental and written calculation strategies. There is a school scope and sequence for the teaching of these strategies and time is set aside for teaching and consolidation of these skills. A set of calculation posters has been developed to show how each strategy must be taught in the classroom and these must be followed by teachers to ensure strategies are taught consistently across the school. The attached posters show the progression in teaching the skills and do not need to be displayed in the classroom. There are many games and resources to support the implementation of this in the classroom.

Resources

Bletchley Park Primary School supports a hands-on, student-centred approach to teaching Mathematics and is well resourced to support this. Each classroom has access to a well-equipped resource box and each learning team has shared resources. The library has a collection of Mathematics story books which provide meaningful contexts for teaching and also a link to real life application. There are also teaching support materials and past NAPLAN papers kept in the library.

Assessment

All assessments must adhere to the criteria outlined in our whole school approach to mathematics.

All assessments must:

1. Be **open ended** and assess a **range** of skills.
2. Focus on **selecting strategies** and **problem solving**.
3. Be **purposeful** and **inform teaching**.
4. Have **clear criteria** that is made available to students.



Assessment schedules are used by each learning team and provide a clear and consistent method of monitoring children's progress. We aim for no more than six formal assessments throughout the year and encourage the use of ongoing formative assessments throughout the teaching program. Time is set aside during team meetings to moderate tasks and monitor teacher grading.

During Term 4, a whole school Mathematics audit is planned where classes will complete the one minute Maths tests and PAT-M test.

Reporting to parents

- Two summative reports
- Parent/Teacher interviews
- NAPLAN reports – Years 3 and 5
- On Entry reports – Pre Primary, Year 1 and Year 2
- Case Conferences – development of Teaching and Learning Adjustments (TALAs) for individuals and groups

Parent Education

Parents will be invited to attend and participate in Mathematics information sessions e.g. Numero workshops. Teachers will include information about their Mathematics program at Parents Information Meetings at the commencement of the school year.

Role of the Mathematics Coordinators

- Lead, manage and monitor the implementation of the Mathematics Curriculum
- Build up resources and ensure all staff have access to materials and equipment
- Provide support to teams and individual staff members
- Provide professional learning workshops for staff as needed
- Ensure that mathematics remains a high profile in school
- Discuss regularly with the leadership team the progress of implementing the Maths Policy within the school
- Collect whole-school data and set targets for improvements
- Lead the Maths committee

Role of the Mathematics Committee

- Actively represent your year level team at meetings
- Feedback decisions/happenings/tasks set by the committee to your team in *an accurate and timely manner*
- Lead/promote the Numeracy focus in your team
- Collect data/work samples to share with the committee
- Support the implementation of our Whole School and Operational Plan (Numeracy)

Mathematics Coordinators

Administration: Kylie Avery

Maths Impact Project: Annette Ziegelaar & Matt Cave

