YOUR CHILD; OUR FOCUS

## NUMERACY 2020-2022



Donnybrook District High School

### NUMERACY PLAN 2020-2022

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## Numeracy

## The Rationale

Numeracy is comprised of multiple but interrelated and interdependent concepts which students apply beyond the mathematics classroom. To apply these concepts across a range of curriculum areas, students must develop and refine their mathematical understanding, fluency, reasoning and problem-solving skills.

Students develop an appreciation and understanding of mathematical reasoning and learn to apply this creatively and efficiently across a range of contexts. By doing so, students become self-motivated, confident learners across all areas of Numeracy.



### Vision

At Donnybrook District High School, we believe that every student, with our support, will leave school with an excellent mathematical understanding and the ability to apply this knowledge into their daily life with fluency.

Students should be able to apply reasoning and problem solving skills with confidence and communicate their understanding to others.

## Milestones

- PLC Action Learning Model Reviews demonstrate clear evidence of collaboration, peer observation and coaching.
- Number of students at or below the National Minimum Standard (NMS) will decrease between Years 3-7.
- The percentage of students achieving in the top 20% in all bands will increase in Year 5, 7 and 9.
- The proportion of students making progress in NAPLN results in Reading and Numeracy shows improvement in the three-year period.
- Agreed school wide assessment schedule is supported by PLCs and adhered to by all staff.
- Staff are utilising the judging standards and assessment samples provided by School Curriculum and Standards Authority (SCSA) to help make valid judgements regarding Common Assessment Tasks.
- Professional Management plans and PLC Action Learning Models are evidencing internal and external networks to inform planning and assessing.
- Numeracy committee analyses data and provides annual review and feedback to PLCs on implementation of programs and student progress.
- Differentiated learning and teaching adjustments for students working below or above year level expectations are evident in all classrooms and in planning documentation.
- Regular implementation of student feedback evident in all classrooms.
- Common language visable and evident in all classrooms.

Donnybrook District High School

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## FLUENCY 2020 - 2022

KNOWLEDGE

Activate (and link) prior knowledge by making connections.

Understand the how and why of mathematical thinking.

Build robust knowledge and apply skills when answering questions.

Apply prior knowledge to develop new ideas.

### CURRICULUM & PLANNING



Apply a consistent approach to Numeracy in all learning areas, including;

Use handover data to inform classroom planning.

- lesson structure
- ∘ language

Conduct mental mathematics at the beginning of lessons.

Use warm-ups to consolidate and revise previously taught concepts.

Use concrete manipulatives, such as unit blocks and number lines, to connect ideas.

Apply a consistent vocabulary and explicitly teach definitions. Teach students to calculate answers effectively.

ASSESSING

EXPLICIT

TEACHING



Implement whole school common assessments.

Regulary and consistently use diagnostic, formative and summative assessments.

Check for understanding throughout the lesson. Use of TPT and PAT assessments to inform planning and reporting.

### Your Child; Our Focus

# PROBLEM SOLVING & REASONING 2020 - 2022

#### K N O W L E D G E

Develop tasks in which students must interpret, formulate, model and investigate problem-solving.

Give students the opportunity to apply prior knowledge when seeking solutions.

### CURRICULUM & PLANNING



Plan and implement whole school problem-solving strategies across all learning areas.

Develop and implement a school Numeracy vocabulary to be used across learning areas.

Use whole school data from handover documents to inform planning.

E X P L I C I T T E A C H I N G Use real life/authentic scenarios as problem-solving questions and tasks.

Integrate STEM across multiple learning areas to develop and apply problem-solving skills.

Encourage students to design investigations to demonstrate understanding.

Problem-solving strategies are explicitly taught. Encourage students to compare and contrast related ideas.

ASSESSING



Ask students to justify answers with reasonable thinking.

Encourage students to demonstrate logical thought process using analysing, proving, evaluating, explaining, inferring, justifying and generalising.

Use rubrics to form judgements regarding student learning.