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Overview

- This presentation will explore the curriculum for planning, teaching, and assessment.
- Key areas of focus include understanding the unique features of Mathematics Version 2.0.
- Resources shared in this presentation aim to inspire and inform participants about the effective practices being implemented across Victoria.

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Victorian Curriculum Foundation to Level 10: Mathematics Version 2.0 Professional Learning Program Sharvn Livy & Jennifer Hall This project was driven by the need to improve student outcomes in mathematics and to better equip leaders and teachers with planning and assessment practices for implementing the Victorian Mathematics Curriculum V 2 0 asses V2.0







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- Probability (commencing at Level 3).

In Mathematics, students progress along a curriculum continuum that provides the first achievement standard at Foundation and then at Levels 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10. Content descriptions In Mathematics, content descriptions sequence and describe the mathematical knowledge and skills that teachers need to teach and students are expected to learn.

Elaborations

Achievement standards

Elaborations are examples that provide guidance on how the curriculum may be transformed into a classroom activity or learning opportunity. They are provided as advisory material only and are not mandated.

Achievement standards describe what students are typically able to understand and do, and they are the basis for reporting student achievement.

Students' mastery of concepts under the 6 strands is indicated by their ability to demonstrate proficiency against the achievement standards. Each achievement standard in Mathematics has been organised into paragraphs that reflect each of the strands.

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Learning in Mathematics

Learning in Mathematics emphasises the importance of providing opportunities students to develop proficiency in mathematics. This development of proficien ochieved in how content is explored or developed, that is, how students experie the thinking and doing of mathematics.

Proficiency in Mathematics

The proficiencies of Understanding, Fluency, Reasoning and Problem-solving are embedded in all Stands and further the development of increasingly sophisticated knowledge and understanding of mathematical concepts, fluency in presenstantion and procedures, and sound mathematical reasoning and problem-solving skills. Proficiency in mathematics enables students to respond to familiar and unformiliar situations by employing mathematical processes to solve problems efficiently and to make informed decisions. Proficiency in mathematics also enables students to reflect on and evaluate approaches, and verify that answers and results are reasonable in the context.

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Mathematics emphasises mathematical resoning as central to thinking and working mathematicality and as a critical component of proficiency in mathematica hypothematical resonance guides students in developing on increasingly separatical cosports for logical tought and actions, such as conjecturing, hypothesising, analysing, aroning, assertimizing, madelling, evaluating, explaining, informing, justifying, refuting, abstracting, and generations, Students are reasoning informing, justifying, refuting, abstracting, and generations, Students are reasoning and conclusions reactions, doubt the known to the unknown, forther knowing from one constant to another, make inferences about data or the likelihood of events, and and conclusions reactions to use of foits. There exercising when they compare and contracts related lates, and reflect on and explain their choices.

Problem-roking Methannicis recognises the innortance of providing students with meaningful opportunities to use mathematics to solve problems from both abstract mathematics and relevant contexts. Students engage in mathematical proble solving when they are presented with a problem situation for which they do not innordably lives the solver, and they was through a process of planning, choosing and applying strategies and haunstates to find a solution to the problem problems of the problems and haunstates to find a solution to the problem operation of the problems and haunstates to find a solution to the problem operation of the problems and haunstates to find a solution to the problem operation of the problems and haunstates to find a solution to the problem operation of the problems and haunstates and normalized as a solution approximation, select and use technologoed functions and communicates solutions mathematically select and use technologoed functions and communicates solutions are meaningful situations, design investigations and planning answords solid. Revolutes and processo to solve problems, which you the many answords have an encounted as solutions (solver) and justify the measurabless det the approaches.



Mathematical processes

Mathematical processes

Mathematical processes refer to the thinking, reasoning, communicating, problemsolving and investigation skills involved in working mathematically. Opportunities to learn process skills have been embedded across the strands, building in sophistication across the levels. Mathematical problem-solving and investigation draws on the processes of mathematical modelling, computational and algorithmic thinking, statistical investigation, probability experiments and simulations.

Understanding

Understanding Mathematics provides opportunities for students to build and refine a robust knowledge of adaptable and transferable mathematical concepts, structures and procedures. Students make concentions between relevated ideas, progressively draw on their reasoning skills to adapt and transfer understanding of familiar understanding of the relationship between the 'why' and the 'how' of mathematics. Students build conceptual understanding and procedured fluency when they connect related ideas, represent concepts in different ways, identify commonities and differences between aspects of content, describe their thinking mathematically and interpret mathematical information.

Fluency Fleency Mathematics provides opportunities for students to develop, practise and consolidate skills, choose appropriate procedures, carry out procedures flexibly, accurately, efficiently and appropriately and apply their recall of factual knowledge and understanding of concepts readily. Students are fluent when they conceptual conceptual understanding to learned strategies and procedures, make reasonable strategies efficiently, without solutions and use and understanding strategies efficiently, who have not accurate they are applied strategies efficiently, who must appropriate apresentations and approximations when they can compute the yelfonktions, facts and theorems, and when they can compute the yelfonktions, facts and theorems, and equations, when they facts appropriate appresentatical objects, expressions, relations and equations to find solutions to problems.



Mathematical modelling

Mathematical models are used to gain insight into and make predictions about realworld phenomena, to inform judgements and make decisions in personal, civic and work life. In the modelling process students formulate a real-world problem mathematically by making assumptions; recognise, connect and apply mathematical structures; analyse and solve the mathematical model; and interpret, generalise and communicate their results in response to the real-world situation. Mathematical andelling is an essential dimension of the contemporary discipline of mathematics and is key to informed and participatory citizenship.



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Mathematical modelling process

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REAL MATH

Reflect on the results is whether they make sens the model used, inclu

https://v9.australiancurriculum.edu.au/teacher-resources/understand-this-learning-area/mathematics

eir reasonableness and to the context. Evaluating it achieves what war







Probability experiments and simulations



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