

Australian Maths Trust

Building teacher confidence in mathematical problem solving

The Learning Lens developed digital professional learning for Australian Maths Trust (AMT), helping teachers bring mathematical problem solving into their classrooms. Six modules combine practical examples, teaching approaches and knowledge checks to connect mathematical understanding with classroom application.

The challenge

AMT wanted to support teachers with varying levels of confidence in mathematics. The learning needed to make problem solving approachable while helping teachers guide students through uncertainty, different strategies and solutions that are not immediately obvious.

The design challenge was to translate specialist content into self-paced learning that supported both mathematical thinking and teaching practice. Teachers needed opportunities to experience problems themselves, then consider how to support students without doing the thinking for them.

The solution

A suite of six modules developed in Articulate Storyline 360 connects foundational understanding with practical classroom use. Broad topic areas include:

- Mathematical problem solving and the teacher's role
- Using digital resources to select and organise problems
- Computational and algorithmic thinking
- Practical problem-solving strategies
- Planning and facilitating classroom sessions
- Perseverance, preparation and productive learning habits

A consistent module structure helps teachers move between concepts, examples and application. The suite combines professional learning with guidance on using AMT's digital teaching resources.

Experience, reflect, apply

The learning approach

Problems provide an entry point into the learning. Teachers work through examples, explore possible approaches and consider prompts that support or extend thinking. This connects the experience of being a problem solver with the decisions involved in teaching others.

Classroom application remains central: preparing a task, inviting student thinking, noticing strategies, facilitating reflection and connecting learning to new situations. The content values reasoning, communication and perseverance alongside arriving at a solution.

Interaction with a teaching purpose

Worked examples and guided problem sequences make approaches visible. Multiple-choice, multiple-response and drag-and-drop knowledge checks ask teachers to identify useful practices, distinguish roles and recognise appropriate strategies.

Feedback, retry opportunities and results screens support checking understanding. Consistent navigation, help screens and transcript layers provide a familiar structure across the suite.

Design and development

The project approach combined SME-supported storyboarding, a branded visual template and Storyline development. A shared design established a consistent learning experience across modules while allowing examples and activities to suit each topic.

The delivery model specified individual SCORM packages for integration into AMT's online professional learning offering. Reusable templates and interaction patterns were intended to support further development as the suite expanded.

Intended impact

The learning was designed to support:

- Greater teacher confidence in mathematical problem solving.
- More deliberate preparation and facilitation of classroom sessions.
- Better use of prompts to support and extend student thinking.
- Greater emphasis on reasoning, perseverance and shared strategies.
- More confident use of digital problem-solving resources.

By linking mathematical experiences with practical teaching decisions, the suite supports teachers in creating classrooms where students have time and encouragement to think for themselves.