

Transforming your national mathematics curriculum



TRANSFORMING SOCIETIES THROUGH EDUCATION

Leading change in mathematics education

Mathematics plays a fundamental role in developing economies and societies. In our modern, data-driven, and technology-focused world, nations are striving more than ever to improve their national mathematics curricula and ensure their education systems are competitive against international benchmarks. The goal is for learners to thrive and excel from foundational stages and grasp opportunities in the world of tomorrow.

The Cambridge Mathematics Framework is key for addressing all your system-level challenges in mathematics and supporting your teachers and students to achieve better outcomes. Our Framework is a unique digital tool that:

- is a network of connected mathematical concepts offering an innovative way of representing mathematics as a coherent map of ideas;
- is created by leading Cambridge University mathematics and education experts;
- is curriculum-agnostic, enabling Cambridge to work with all education systems;
- allows mapping any curriculum against our research-based outcomes, or against other curricula, providing valuable comparative data for systemic improvement.

The Cambridge Mathematics Framework is part of Cambridge's holistic approach for any education system; this includes curriculum design, assessment design, professional development and teaching and learning resources that aim to transform mathematics education.

Empowering tomorrow's leaders

Improving your curriculum has not only the potential to enhance academic achievement but also lays a solid foundation for lifelong learning and success for tomorrow's generation. We can partner with you towards:

- **Promoting** coherent, connected, relevant and internationally competitive curricula and education resources
- **Ensuring** you are equipping young learners with the relevant skills for a world of tomorrow
- **Preparing** learners for the contemporary higher education and job market
- **Improving** assessment systems, teachers' approach to testing, and students' performance in national and international exams
- **Reinforcing** teachers and learners in using modern and reliable teaching and learning approaches, while developing their knowledge and skills
- **Increasing** equity, improving quality, and widening the accessibility of your resources



Cambridge Mathematics Framework

The Framework is a digital tool that provides clear visual representations of how mathematical ideas are built upon and connected to each other. The Framework is



Underpinned by research and evidence

Every element of our framework is created by Cambridge experts and informed by cutting edge international research on mathematics teaching and learning

Curriculum agnostic

Our framework can interact with any curriculum and provides a unique reference point for comparison of different curricula. We are driven by the connectedness of mathematical ideas and are not constrained by traditional perspectives on structuring mathematics as a subject



Coherent

Ideas in mathematics are connected to one another in a myriad of ways. Our framework highlights where topics, concepts, and ways of engaging with mathematics can usefully blend, interact, and enhance one-another to enrich learning



Accessible

There are many pathways that can be taken to reach a particular destination in mathematics and STEM education in general. Our framework captures various routes and approaches that can support a diverse and responsive mathematics education for all your learners' needs

How the Framework can strengthen your national curriculum

This unique digital tool can assist in the evaluation, refinement and reimagining of your mathematics curriculum in various ways.

Organisation of mathematical content

Review how you structure, group, and arrange the content in your mathematics curriculum

Sequencing of mathematical concepts

Evaluate the progression of ideas in your mathematics curriculum, revealing potential gaps, inconsistencies, and opportunities to enhance conceptual development

Coherence of mathematical ideas

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Alignment of mathematical learning

Enhance the interaction between mathematics and other subjects to create a unified approach in your system



Customisable pathways to suit your needs

Reviewing

We identitfy core content, then uncover and emphasise the key messages in your national curriculum

Visualising

We extract data from your curriculum and highlight its main themes and trends

Mapping

We compare your curriculum to the Cambridge Mathematics Framework, analyse the content and the sequencing, and provide recommendations for improvement

Enhancing

We strengthen your existing curriculum based on the findings from the mapping exercise

Redesigning

We develop a new curriculum based on a co-created vision

Every journey starts with a discussion. It begins by listening to you so we can better understand your needs and requirements. We then respond by offering various possible pathways.



Visualising can also be included as an optional component in journeys: 3 4 5

Mapping your curriculum framework

We use the Cambridge Mathematics Framework to explore, sort, analyse and interrogate a visual map to extract information and reveal points of strength and weakness of your curriculum.







Our partners include

Ministries of Education

Reviewing the sequencing and coherence of the mathematics curriculum framework from kindergarten to high school in various systems.

Arizona State University

Redesigning undergraduate courses in calculus to enhance cross-disciplinary mathematics learning.

ACARA

Training and support for design teams in the development of statistics and probability content for their revised curriculum.

Microsoft

Designing bespoke activities for a new game-based learning experience for Minecraft Education.

UNICEF

A collaboration to develop a mathematics curriculum for education in emergency situations.

Start creating your change

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