

What is a subject blueprint?

The subject blueprint is a conceptual plan to bring the key drivers to life. It helps to communicate the future subject impact and ideas for Learning Design, Assessment Types and content that will make an impact.

FROM current subject

Similarity of assessment mode: emphasis on capturing static mathematical procedural knowledge (recall, procedure and application).
Highly structured tasks that are heavily teacher-directed and limit student metacognitive processes and agency.
Evidence of learning is highly curated and uniform. It does not capture all that students know or how they think.
Students communicate their understanding primarily in written form.
The current form of assessment tasks, (AT2: Mathematical Investigations) means students can rely heavily on tutors or AI to generate their work.
Students have few opportunities to be creative or to connect mathematics with their personal interests.

TO future of the subject

Differential assessment modes: capturing mathematical conceptual knowledge - knowledge that is adaptable, conceptual - where ideas are connected and evaluated.
Responsive tasks with multiple solution pathways shift the focus to developing metacognitive processes and ability to self-regulate their learning.
Assessment captures more of how students think mathematically.
Students communicate their mathematical understanding and application in a variety of ways.
Student evidence is more representative of what the student knows and how they think.
Students can experience mathematics as meaningful, with greater agency and the ability to demonstrate the personal relevance of their learning.

THROUGH

The nature of learning shifts from a focus on learning 'questions' to answer, to understanding concepts to model. Use integrated approaches such as Scenario-Based Modelling and Socratic Dialogue to foster adaptable, conceptual mathematical thinking.
Less structured problems with multiple solution pathways encourages students to use a more strategic approach which unlocks opportunity to uncover metacognition. Student approaches to learning are uncovered and intentionally developed by embedding opportunities for students to plan, monitor, and evaluate their learning.
The more flexible nature of learning design and assessment means that student evidence will be less prescribed, allow students to demonstrate their mathematical thinking in a mode unique to each student.
Learning and assessment design utilises a variety of presentation modes and methods, including Socratic dialogue and presentations.
The use of reflective dialogue, and responsive tasks are used to unpack the understanding of students, prompting them to explain, question, and justify the thinking in their tasks.
Learning and assessment design embeds opportunities for students to explore areas of interest, solve problems of relevance, and apply creativity to real-world contexts.

NB: as Subject Renewal Groups (SRGs) progress through the Subject Renewal process, plans and documents will be further refined and updated.

