Week 1

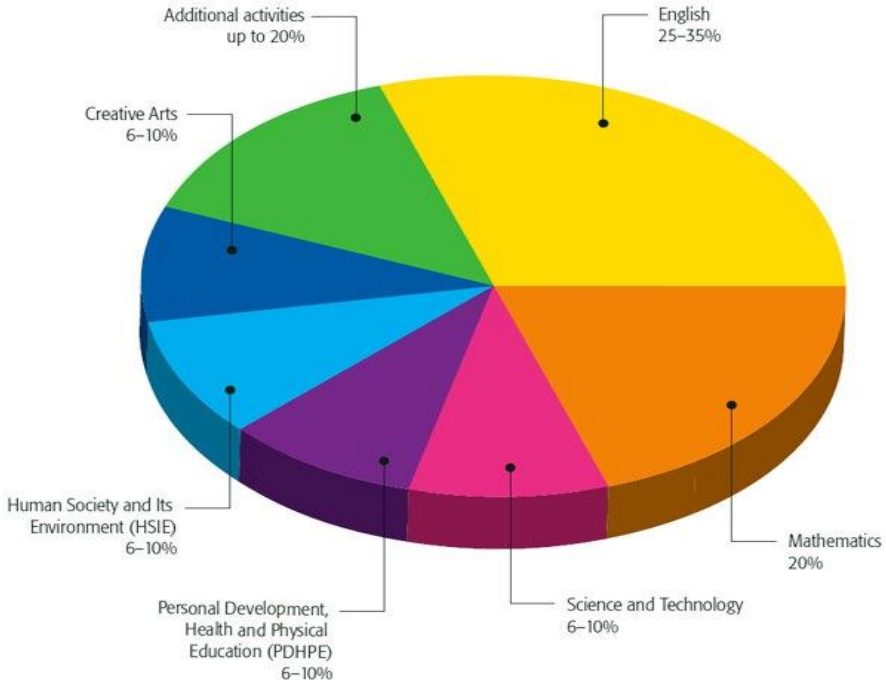
Lecture Notes

- ACARA – the Australian Curriculum, Assessment and Reporting Authority
- Mathematics is organized around the interaction of three content strands and four proficiency strands
- 3 Strands:
  - Number and Algebra
  - Measurement and Geometry
  - Statistics and Probability
- Proficiency Strands
  - Understanding
  - Fluency
  - Problem Solving
  - Reasoning
- The proficiency strands (Understanding, Fluency, Problem Solving, and Reasoning) describe the actions in which students can engage when learning and using the content. While not all proficiency strands apply to every content description, they indicate the breadth of mathematical actions that teachers can emphasise. They describe how content is explored or developed, i.e., the thinking and doing of mathematics.
- Content descriptions –
  - These describe the knowledge, concepts, skills and processes that teachers are expected to teach and students are expected to learn.
  - They are intended to ensure that learning is appropriately ordered and that unnecessary repetition is avoided.
- Substrands
  - Content descriptions are grouped into sub-strands to illustrate the clarity and sequence of development of concepts through and across the year levels.
  - They support the ability to see the connections across strands and the sequential development of concepts
- WORKING MATHEMATICALLY is made up of these 5 areas
  - Communicating
  - Problem solving
  - Reasoning
  - Understanding
  - Fluency
- WORKING MATHEMATICALLY is embedded in each sub strand
- WORKING MATHEMATICALLY has up to 3 specific outcomes for communicating, problem solving and reasoning, which are incorporated into each substrand.
- Current abbreviations
  - *Working mathematically MA-WM*
  - *Number and Algebra MA-NA*
  - *Statistics and Probability MA-SP*
  - *Measurement and geometry MA-MG*

- How is the content organized?

Number and Algebra	Measurement and Geometry	Statistics and Probability
• Whole number • Addition and subtraction • Multiplication and division • Fractions and decimals • Patterns and algebra	• *Length* • *Area* • *Volume and capacity* • *Mass* • *Time* • *3D space and 2D space* • *Angles* • *Position*	• Chance • Data
Working mathematically Communicating, problem solving, reasoning, understanding, fluency	**Working mathematically** Communicating, problem solving, reasoning, understanding, fluency	**Working mathematically** Communicating, problem solving, reasoning, understanding, fluency

- Recommended time



- Outcome coding

Stage	Code
Early Stage 1	e
Stage 1	1
Stage 2	2
Stage 3	3

Working Mathematically	WM
Number and Algebra	NA
Measurement and Geometry	MG
Statistics	SP

- Outcome Coding
- The code identifies the subject, stage, outcome number, and the way content is organised