

Mathematics Level 2

Contents

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Contents

This book is the **Mathematics Level 2** student workbook. It is written for **Level 2** of the Victorian Curriculum F–10 Version 2.0 (VC2), Mathematics — Year 2 in Victorian schools. **Level 2 is one year level, not a band.** The book covers the nineteen content descriptions of Level 2, each owned by exactly one subtopic, and no others: Level 1 is behind the students and Level 3 is ahead, so nothing from Level 1 is re-taught here, and nothing from Level 3 is taught early.

The series is eight booklets:

- **Chapter 1 — Number** — Maths2_Chapter01 — subtopics 1A to 1F: numbers to 1000; place value to 1000; adding and subtracting one- and two-digit numbers; multiplying and dividing by one-digit numbers; modelling additive and multiplicative problems, including whole-dollar money; and one-half, quarters and eighths by repeated halving. Chapter check C1, with its answers and marking guide, is at the back (73 pp)
- **Chapter 2 — Algebra** — Maths2_Chapter02 — subtopics 2A to 2D: additive patterns that increase or decrease by a constant amount; repetition in operations; addition facts to 20 and the related subtraction facts; and multiplication facts for twos and the related division facts. Chapter check C2, with its answers and marking guide, is at the back (45 pp)
- **Chapter 3 — Measurement** — Maths2_Chapter03 — subtopics 3A to 3E: length, capacity and mass with uniform informal units; calendars and the days between events; the analog clock to the hour, half-hour and quarter hour; halves, quarters and eighths of shapes, objects and events; and quarter, half, three-quarter and full measures of turn. Chapter check C3, with its answers and marking guide, is at the back (63 pp)
- **Chapter 4 — Space** — Maths2_Chapter04 — subtopics 4A and 4B: comparing and classifying two-dimensional shapes, and locating positions and following pathways in a two-dimensional representation. Chapter check C4, with its answers and marking guide, is at the back (36 pp)
- **Chapter 5 — Statistics** — Maths2_Chapter05 — subtopics 5A and 5B: acquiring categorical data by survey, observation and experiment and sorting it into lists and tables, then making different graphs of the same data and comparing what each one shows. Chapter check C5, with its answers and marking guide, is at the back (31 pp)
- **Chapter 6 — Practical tasks** — Maths2_Chapter06_Tasks — the three practical and observed tasks: P1 measuring with uniform informal units, P2 turn and pathway, and P3 class data investigation, each with a marking guide written as observable student actions (18 pp)
- **Chapter 7 — End-of-level review** — Maths2_Chapter07_Review — the cumulative written review across all five strands, run across two short sessions with materials permitted, with its marking guide (11 pp)
- **Chapter 0 — Contents** — Maths2_Chapter00_Contents — this booklet: how to use the book, what it covers, teacher notes and safety notes (0 pp)

Series total: eight booklets ≈ 277 pages. The built booklets — Maths2_Chapter00_Contents and Maths2_Chapter01 to Maths2_Chapter07_Review — are in S:\Files\VC2Maths\Textbook2\.

How to use this book

One level, one scope. Every subtopic in this book teaches exactly one Level 2 content description, and every Level 2 content description is taught by exactly one subtopic. The book reaches into Level 1 and Level 3 only to say where it does: each chapter opens with a half-page revision strip from Level 1, and each chapter closes with a one-line note naming its Level 3 destination. The revision strip is a quick look back at work the students have already done — it is not new work and it is never assessed for marks. The closing note teaches nothing and sets no task.

The chapters follow the five strands. Number carries six subtopics, Algebra four, Measurement five, Space two and Statistics two. **There is no Probability chapter, and nothing is missing:** the Victorian Curriculum has no Probability content description at Level 2 — the strand begins at Level 3. Nothing in this book gestures at chance, likelihood or “how likely”.

The order is the curriculum's own order. Chapters and subtopics follow the authority file's own row order, which is teaching-sensible at this level. A subtopic's code belongs to the subtopic, not to its position: 1F owns VC2M2N03 even though it is the last subtopic of Chapter 1.

Every subtopic is laid out the same way. Each subtopic opens with the content description it owns, quoted word for word, and its **Things you need** list. Then:

- **What we learn** — the teaching sequence: short, concrete sentences, with the mathematics carried in the picture, the diagram and the materials rather than in the prose.
- **We try together** — two worked examples modelled with materials.
- **Questions to practise** — six questions with help, then about eight on your own.
- **Maths in real life** — one short applied task in a real Victorian context.
- **Answers and All the working** — a compact answer key, then every question fully worked out.

Subtopic 2B is the one exception: one worked example, four questions with help and about five on your own. That is deliberate — the multiplication and division problem-solving volume of Level 2 lives in subtopic 1D, and 2B is the structural idea. It is taught in full and assessed on its own terms; it is short by design, not under-built.

The materials are everyday. Counters, connecting cubes, ten-frames, hundreds charts, number lines, bundling sticks, balance scales, sand, spoons and cups, paper strips for folding, a paper-plate clock, a wall calendar and a floor grid mat, plus dice, toy money, sticky notes and shape cards where a subtopic names them. Subtopics 5A and 5B use a computer with survey and graphing software where one is available; the book names the tool.

The reading stays at Year 2. Sentences are short and concrete, any item may be read aloud by the teacher, and the vocabulary is held to a Year 2 ceiling by a house rule: curriculum words are used exactly as the curriculum uses them, and every such word is named and explained the first time it appears. A mathematically correct item written above the students' reading level would be a failed item.

Everything real is really real. Every real-world number in the book — dates, public holidays, prices, pack sizes, coin and note values, sporting fixtures — carries a source line with a retrieval date. Calendar work uses the real Victorian year: southern-hemisphere seasons, four school terms, and moveable dates checked against a dated source for the year the task uses. Money is Australian and **whole dollars only**: \$1 and \$2 coins, and \$5, \$10, \$20, \$50 and \$100 notes. There are no cents anywhere in this book.

Where a number is missing, the book uses a box — □ — **never a letter.** Letters as unknowns first appear at Level 7.

What this book keeps out. Level discipline is the most common way a lower-primary book goes wrong, so the boundaries are stated once, here:

- informal units only — no centimetres, metres, grams, kilograms, millilitres or litres (Level 3);
- halves, quarters and eighths in words and pictures — no fraction symbol for a student to read or write (Level 3);
- the analog clock only — the hour, the half-hour and the quarter hour; no minutes, no digital clocks and no am/pm (Level 3);
- turn, not angle — no degrees, no protractors, no right angle as a reference (Level 3 and Level 5);
- two-dimensional shapes only — no classifying three-dimensional objects (Level 3);
- positions and pathways — no grid references (Level 4) and no coordinates (Level 5);
- categorical data and one-to-one displays only — no numerical variables (Level 3) and no many-to-one pictographs (Level 4);
- no vertical algorithms — number sentences are written horizontally (algorithms are Level 3);
- no calculators, anywhere in the book;
- no chance or probability of any kind (Level 3).

Two things that look over-level but are **in scope**: four-digit numbers on a number line in subtopic 1A — the Level 2 range is “to at least 1000” and the curriculum’s own examples go past it — and clockwise and anticlockwise turns in subtopics 3E and 4B.

The checks and tasks are untimed. There is no time to beat on any instrument in this book, and any item may be read aloud. See the teacher notes below for administration.

What this book covers

The table below is the series coverage register, reproduced from the series plan without change. It lists all nineteen content descriptions of Mathematics Level 2 against the subtopic that owns each one. **Every code appears exactly once as an owner. There are no unowned codes, no code is owned twice, and no code is deferred to another book.** This is the table the series coverage audit checks.

The register is sorted by strand then code — the authority file’s own row order is not numeric, so ownership here is keyed by **code**, never by position. Elaboration ids are positional and contiguous from .E01, so the ranges below are exact.

#	CD code	Strand	Owner	Subtopic title	Elaboration ids	Count	MCQs
1	VC2M2N01	Number	1A	Numbers to 1000: recognising, representing and ordering	.E01 –.E04	4	32
2	VC2M2N02	Number	1B	Place value to 1000: partitioning, regrouping, renaming, role of zero	.E01 –.E02	2	0
3	VC2M2N03	Number	1F	One-half, and quarters and eighths by repeated halving	.E01 –.E04	4	0
4	VC2M2N04	Number	1C	Adding and subtracting one- and two-digit numbers	.E01 –.E06	6	0
5	VC2M2N05	Number	1D	Multiplying and dividing by one-digit numbers	.E01 –.E05	5	0
6	VC2M2N06	Number	1E	Modelling additive and multiplicative problems, including money	.E01 –.E05	5	0

#	CD code	Strand	Owner	Subtopic title	Elaboration ids	Count	MCQs
7	VC2M2A01	Algebra	2A	Additive patterns increasing or decreasing by a constant amount	.E01 -.E04	4	0
8	VC2M2A02	Algebra	2C	Addition facts to 20 and the related subtraction facts	.E01 -.E03	3	0
9	VC2M2A03	Algebra	2D	Multiplication facts for twos and the related division facts	.E01 -.E04	4	0
10	VC2M2A04	Algebra	2B	Repetition in operations: repeated addition and repeated subtraction	.E01 -.E02	2	0
11	VC2M2M01	Measurement	3A	Length, capacity and mass with uniform informal units	.E01 -.E06	6	0
12	VC2M2M02	Measurement	3D	Halves, quarters and eighths of shapes, objects and events	.E01 -.E05	5	0
13	VC2M2M03	Measurement	3B	Calendars: dates and days between events	.E01 -.E04	4	0
14	VC2M2M04	Measurement	3C	Analog clock to the hour, half-hour and quarter hour	.E01 -.E03	3	0

#	CD code	Strand	Owner	Subtopic title	Elaboration ids	Count	MCQs
15	VC2M2M05	Measurement	3E	Quarter, half, three-quarter and full measures of turn	.E01 –.E04	4	0
16	VC2M2SP01	Space	4A	Comparing and classifying shapes by sides and spatial terms	.E01 –.E04	4	0
17	VC2M2SP02	Space	4B	Locating positions and following pathways	.E01 –.E05	5	0
18	VC2M2ST01	Statistics	5A	Acquiring categorical data; sorting into lists and tables	.E01 –.E05	5	0
19	VC2M2ST02	Statistics	5B	Different graphs of the same data, compared	.E01 –.E05	5	0
Totals						80	32

Notes on this table:

- **Elaborations are illustrations, not requirements.** The content description is the expectation; an elaboration is one way the curriculum suggests it might look. The ids are carried for linkage and coverage — they join each subtopic to the question bank. A subtopic that teaches its content description properly while drawing on only some of its elaborations is correct, not under-covered.
- **Six of the elaborations above are not taken up in this book:** VC2M2N04.E06, VC2M2N06.E05, VC2M2A01.E04, VC2M2M01.E05, VC2M2M01.E06 and VC2M2ST01.E05. They carry Aboriginal and Torres Strait Islander content, which this book does not cover; the notice on the first page of every booklet says why. No content description is left without a teaching context — every one of the nineteen is delivered in full.
- **The counts close.** 19 codes, 19 owners, 80 elaborations. The bank holds 32 multiple-choice questions, all keyed to VC2M2N01 (subtopic 1A); the questions keyed to the other eighteen codes will be authored. A zero in the MCQ column is a bank-inventory fact, not a coverage fact — it never means a content description is not covered.
- **Register check (run 2026-08-07 against the authority file):** 19 codes listed · 19 codes in the authority file · 0 duplicated owners · 0 unowned codes · 0 owned codes absent from the authority file · 0 codes left to another book · 80 elaboration ids accounted for · 80 elaborations in the authority file.
- **The audit runs both directions.** Authority to book: every one of the nineteen codes has a home. Book to authority: no subtopic claims a code it does not own here, and no subtopic teaches content whose only home is Level 1 or Level 3.

What this book does not cover.

- **Probability** — there is no Level 2 code to own; the strand begins at Level 3 (VC2M3P01, VC2M3P02).
- **Towards Foundation Mathematics (Levels A–D)** — a separate continuum for students with disability working below Foundation Level. None of its codes appears in this book’s authority file, and nothing in this book cross-references them as “earlier work”.
- **Birth–Foundation** — VEYLDF territory, a separate framework with no VC2 content descriptions. Nothing in this book may imply it is covered.
- **Codes that do not exist.** Level 2 Number ends at N06, Algebra at A04, Measurement at M05, Space at SP02 and Statistics at ST02. There is no VC2M2N07, VC2M2A05, VC2M2SP03, VC2M2ST03, and no VC2M2P... code. Codes are matched on the full code, never on a prefix — the Towards Foundation codes (such as VC2MFAN01, Level A Number) and the Foundation-year codes (such as VC2MFN01) belong to other products.

Teacher notes

Read the level. This is a Year 2 book. There is no exam, no timed paper and no end-of-year examination. Assessment here is what a Victorian Year 2 teacher actually does: short chapter checks with materials on the desk, plus practical tasks for the content descriptions that a written item cannot evidence. Checks are untimed in principle; where a duration is given it is guidance for a teacher planning a lesson, not a time to beat. **No calculators.** The teacher may read any item aloud.

The instruments. Five chapter checks, three practical tasks and one end-of-level review — nine assessment artefacts. The five chapter checks are at the back of their chapter’s booklet, each with its answers and marking guide; the three practical tasks fill the Chapter 6 booklet; the end-of-level review fills the Chapter 7 booklet.

Chapter checks

Check	Chapter	CDs assessed	Marks	Guidance duration
C1	1 — Number	6	30	30 min, may be split across two sessions
C2	2 — Algebra	4	20	20 min
C3	3 — Measurement	5	25	25 min
C4	4 — Space	2	10	15 min
C5	5 — Statistics	2	10	15 min
	Chapter checks	19	95	

Practical and observed tasks

Five content descriptions cannot be evidenced by a written item alone, because the content description requires the student to *do* something — measure with an instrument, physically demonstrate a turn, move along a pathway, or actually collect data. These content descriptions stay owned by their subtopics in the register above; the tasks below are how the book assesses them.

Task	Assesses	Owner subtopics	Marks
P1 — Measuring with uniform informal units: length, capacity and mass, including choosing a smaller unit for accuracy	VC2M2M01	3A	10

Task	Assesses	Owner subtopics	Marks
P2 — Turn and pathway: demonstrate quarter, half, three-quarter and full turns; give and follow a route across a floor grid mat	VC2M2M05, VC2M2SP02	3E, 4B	10
P3 — Class data investigation: pose a question, survey the class, sort into a table, then build two different displays (one using software) and say what each one shows	VC2M2ST01, VC2M2ST02	5A, 5B	15

Tasks

35

Each task ships with a marking guide written as **observable student actions**, not adjectives. P3 satisfies the digital-tools requirement that VC2M2ST01 and VC2M2ST02 carry in their content description text, and names a real product.

End-of-level review

Review	Format	Marks	Coverage
End-of-level review	Written, materials permitted, run across two short sessions	30	All five strands

The review is cumulative across the book, carries **no new content**, and assesses **no content description that was not already assessed in its chapter check**. It exists so a Year 2 teacher can check retention before the students move to Level 3, and so a Year 3 teacher receiving the class can see where the gaps are.

Totals

	Marks
Chapter checks C1–C5	95
Practical tasks P1–P3	35
End-of-level review	30
Total assessed marks authored	160

Administration

- **Materials are supplied for every check.**
- **Multiple choice is used sparingly** — no more than a quarter of the marks in any check, because at this level it hides method. Where it is used, it is keyed to the content description code of its subtopic, so bank items and book items share one identifier.
- **Each check scores only the content descriptions its own chapter owns, and every owned content description contributes at least one separately scored item**, so a coverage audit can read delivery straight off the mark scheme.
- **All nineteen content descriptions are assessed at least once.** Fourteen are assessed by written items only. The five in the task table are assessed by a practical or observed task **and** also appear in written form in C3, C4 or C5 — reading a completed tally table, for example, or choosing which informal unit suits a given object.
- **Rubrics are written in the language of the content description's achievement-standard extract**, so a teacher's judgement maps to VCAA wording without translation. Rubrics score the **strategy** as well as the answer: several content descriptions require students to explain and justify, and a rubric that scores only the answer fails to assess the content description.

- **One rubric wording is deliberate.** The 3D rubric (VC2M2M02, halves, quarters and eighths of shapes, objects and events) is written against the part-whole sentence of the achievement standard, not the turn sentence the curriculum export carries on that code — a recorded anomaly in the export. Subtopic 3E keeps the turn sentence; every other subtopic uses its own extract verbatim.
 - **The question bank.** The bank holds 32 multiple-choice items, all keyed to VC2M2N01 (subtopic 1A); items for the other eighteen content descriptions will be authored. The check structure is set by content description count, not by bank inventory.
 - **The marks are evidence, not ranking.** The records feed reporting against the Level 2 achievement standard; they are not used to rank students.
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Safety notes

This is a written maths workbook, and its risks are the ordinary ones of classroom materials and classroom movement. Every subtopic names its materials under **Things you need**; the standing rules below apply across the whole book.

1. **Small parts stay out of mouths.** Counters, connecting cubes, dice, bundling sticks and split pins are for counting, building and sorting. The teacher watches materials work.
2. **Sand and water are for measuring and experimenting, never for tasting.** Subtopic 3A and task P1 use sand with spoons, cups and balance scales; subtopic 5A's float-and-sink experiment uses a bowl of water. Spills are wiped up at once, and hands are washed after handling sand.
3. **Scissors, pins and split pins are used with the teacher.** The paper-plate clock in subtopic 3C is cut from card and held with a split pin; 3D cuts paper shapes into halves, quarters and eighths; 4A cuts and glues shape cards; the paper arrow in 3E turns on a pin.
4. **Movement work gets a clear space.** In subtopic 3E students stand and make turns; in 4B and task P2 they follow pathways across a floor grid mat. One mover at a time, walking only.
5. **If real food is cut, the teacher plans it.** Subtopic 3D's cutting work is drawn with pizzas. Where a class cuts real food, hands are washed first, the tools are safe ones, and allergies are checked before anything is shared.