

How to program multistage classes – Setting up for success

Primary and Secondary Curriculum Team

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Acknowledgement of Country

We recognise the Ongoing Custodians of the lands and waterways where we work and live. We pay respect to Elders past and present as ongoing teachers of knowledge, songlines and stories. We strive to ensure every Aboriginal and Torres Strait Islander learner in NSW achieves their potential through education.

‘Gaawaa’ created by Finley Andrews from John Palmer Public School on Dharug Country as part of the 2022 Schools Reconciliation Challenge.

Session overview

Purpose

Learning intentions

1. Deepen understanding of effective design principles of a multi-staged program.
2. Explore how to incorporate differentiated instruction within a multi-staged program.

Success criteria

1. Enhanced ability to identify and explain the key principles of a multi-staged program.
2. Enhanced ability to identify and implement at least two strategies for differentiating instruction within a multi-staged program.

Alignment to NSW Plan for Public Education



Our commitment: Every student learns, grows and belongs in an equitable and outstanding education system.

NSW Department of Education

Our Plan for NSW Public Education

Transforming lives through learning

Our plan is built on the power of public education to provide opportunities for all and transform lives through learning. Our plan sets our direction and priorities for the coming years and harnesses the commitment of our teachers and schools to provide an outstanding education for every learner. Our approach has been informed by evidence and insights from engagement with our education community.

Our commitment
Every student learns, grows and belongs in an equitable and outstanding education system.

Acknowledgement of Country
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Together we will	Advance equitable outcomes, opportunities and experiences	Strengthen trust and respect for the teaching profession and school support staff	Give children the best start in learning	Deliver outstanding leadership, teaching and learning	Strengthen student wellbeing and development	Provide meaningful post-school pathways
With actions that	<ul style="list-style-type: none"> Foster a culture that values diversity by advancing reconciliation and eliminating barriers Ensure schools have access to the staff and specialists they need Prioritise resources where they are needed most Develop targeted, differentiated, evidence-informed initiatives and supports Embed diverse learner, family and staff voices in decision-making Provide broad, inclusive and rich curriculum with strong co-curricular activities 	<ul style="list-style-type: none"> Address staffing shortages Attract and retain more high-quality teachers, especially in high-need locations and specialist subject areas Ensure initial teacher education is fit-for-purpose by partnering with the university sector Improve staff wellbeing Address workload pressures to ensure a manageable workload for all staff Support staff development through high-quality and accessible professional learning Make public education a more attractive career with more quality career pathways Strengthen development for leaders at all stages of their careers 	<ul style="list-style-type: none"> Increase enrolment and participation in preschool for all children Build new public preschools co-located with public primary schools Create better transitions between early education and primary school Deliver the NSW Aboriginal Children's Early Childhood Education Strategy 	<ul style="list-style-type: none"> Support schools to deliver school excellence through continuous improvement Deliver effective teaching practices including explicit teaching and effective feedback underpinned by high expectations Strengthen educational and instructional leadership Provide high-quality, evidence-based curriculum resources Increase student literacy and numeracy Strengthen high-quality assessment Improve how data is used to inform teaching 	<ul style="list-style-type: none"> Implement evidence-informed, whole-school wellbeing approaches that value student voice Build partnerships with students and families to connect them with the support they need Provide equitable access to services by building partnerships across agencies Expand counselling services in schools Improve support for students at all transitions through school Ensure schools are inclusive and safe 	<ul style="list-style-type: none"> Enhance access to high-quality vocational education and training (VET) in schools, school-based apprenticeships and traineeships, and HSC pathways Support, inform and inspire all students to choose post-school pathway options aligned to their goals Improve access, opportunities and choice across post-school pathways including university, training and work for all students
So	Every learner receives a high-quality education that enables them to excel	Our teachers and staff feel valued, included and supported to perform at their best	All children have the best start in life	Every student achieves ambitious learning goals every year	Every student is known, valued and cared for	Every student finishes school ready to succeed in their chosen pathway as an informed, responsible citizen
And we'll measure success by	<ul style="list-style-type: none"> Reducing gaps in student outcomes, due to structural inequities Increasing community confidence in public education 	<ul style="list-style-type: none"> Increasing the number of school staff so supply meets demand Increasing the proportion of teachers and school staff who feel valued, trusted and respected in their profession 	<ul style="list-style-type: none"> Increasing the proportion of children enrolled in preschool Increasing the proportion of children who are developmentally on track 	<ul style="list-style-type: none"> Improving literacy and numeracy outcomes for all students Increasing the proportion of students completing Year 12 in public schools 	<ul style="list-style-type: none"> Increasing the proportion of students reporting a sense of belonging Increasing attendance rates 	<ul style="list-style-type: none"> Increasing the proportion of students who take up university, training or work in the year after school
Enabled by	Support services that are efficient, effective and easy to access		School infrastructure that meets the needs of a growing population and supports improved student outcomes			
Our values	Excellence	Integrity	Equity	Accountability	Trust	Service

Advance equitable outcomes, opportunities and experiences

Strengthening trust and respect for the teaching profession

Delivering outstanding leadership, teaching and learning

Graduate Standards for Teachers

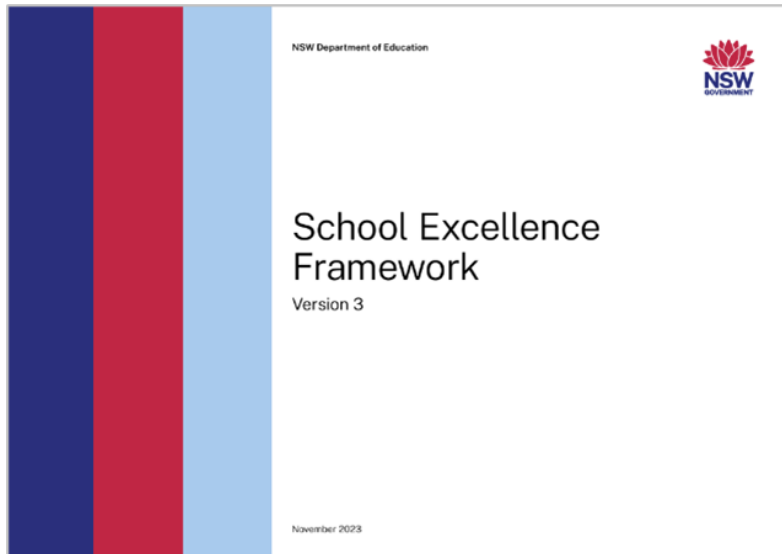
3.2.1 - Plan lesson sequences using knowledge of student learning, content and effective teaching strategies

3.3.1 - include a range of teaching strategies in teaching

3.4.1 - Demonstrate knowledge of a range of resources, including ICT, that engage students in their learning



School Excellence Framework v3



School Excellence Framework
NSW Department of Education

Learning Domain

- Learning culture
- Wellbeing
- Curriculum** >
- Assessment
- Reporting
- Student growth and performance

Teaching Domain

- Effective classroom practice
- Data skills and use
- Professional standards
- Learning and development

Leading Domain

- Educational leadership
- School planning, implementation and reporting
- School resources
- Management practices and processes

Curriculum

In schools that excel, an evidence-informed approach to quality teaching, curriculum planning, implementation and assessment promotes learning excellence. Teaching and learning programming are responsive to the learning needs of students and syllabus requirements.

Themes	Delivering	Sustaining and growing	Excelling
Curriculum provision	The school offers a curriculum that meets requirements of the NSW Education Standards Authority and Department of Education policies, providing equitable academic opportunities for students.	The school's curriculum provision and evidence-informed teaching practices provide a high expectations framework, within which all students effectively develop their knowledge, understanding and skills. The school focusses on transition points (for example into K; Y6 to Y7; Y10 to Y11) when designing and implementing the curriculum.	The school's curriculum provision promotes high expectations for student learning and nurtures student agency. Effective practices are enhanced by incorporating student voice and fostering learning alliances with other schools or organisations, where appropriate. Students' learning pathways are longitudinally monitored (for example K-2; K-6; 7-12) to ensure sustained challenge and optimal learning outcomes.
Teaching and learning programs	Teaching and learning programs outline the implementation of NSW syllabus outcomes and requirements, describing what all students are expected to know, understand, and do.	The teaching and learning cycle clearly underpins all teaching and learning programs. Programs are inclusive and describe expected student progression in knowledge, understanding and skill. This is aligned and assessed against NSW syllabus outcomes.	Teaching and learning programs are dynamic and culturally responsive, with adjustments made based on feedback and reflection. This is consistent with reliable student assessment to support student progress and achievement.
Differentiation	Staff are supported in developing strong pedagogical knowledge to differentiate the curriculum for students with identified needs. The parents/carers of affected students are advised about adjustments made.	Teachers differentiate curriculum delivery to meet the needs of students at different levels of achievement, including adjustments to support learning or increase challenge. Students have agency in articulating their learning and understand what they need to learn next to enable continuous improvement.	Teachers think critically and exercise their professional judgement in adjusting teaching and learning programs to address individual student needs and learning goals. All students are challenged, and all adjustments lead to improved engagement for learning. Teachers involve students and parents/carers in planning to support learning and share expected outcomes.
Literacy and numeracy focus	The school ensures teaching proficiency through the provision of professional learning that continually builds teachers' knowledge and understanding of effective strategies in teaching literacy and numeracy skills through the curriculum.	The school provides support for staff to collaboratively plan, deliver, and evaluate the use of explicit literacy and numeracy teaching practices. Progress is monitored against syllabus outcomes and communicated with parents/carers to foster learning partnerships.	There is a school-wide approach ensuring teachers understand and explicitly teach literacy and numeracy through the curriculum to students across all achievement levels and subject areas. There are embedded evaluative processes for utilising student progress and achievement data to measure impact. Parents/carers are supported as collaborative partners in their children's literacy and numeracy development.

Multi-age, multi-stage, composite – same or different?

Composite	Multi-age and multi-stage
Composite classes usually formed when there are uneven grade enrolments	Multi-age classes usually made up of students drawn from different year/stage levels.

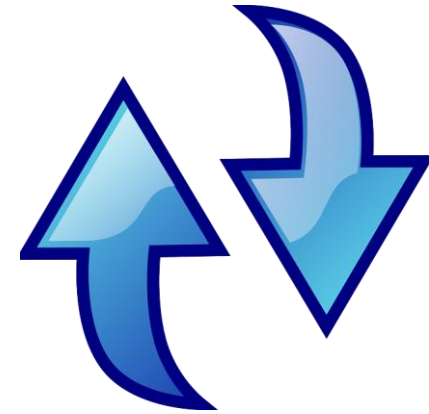


Reference: [Multi-age or composite classes in NSW government schools \(2014-2024\) | Data.NSW - Data.NSW](#)

General programming steps

Reflect

- Understanding your students' needs
- Identifying learning objectives and outcomes
- Determining the key knowledge, skills and understanding
- Creating learning sequences
- Identifying summative assessment
- Establishing key checkpoints/ formative assessments
- Allocating resources



Ongoing tracking and monitoring

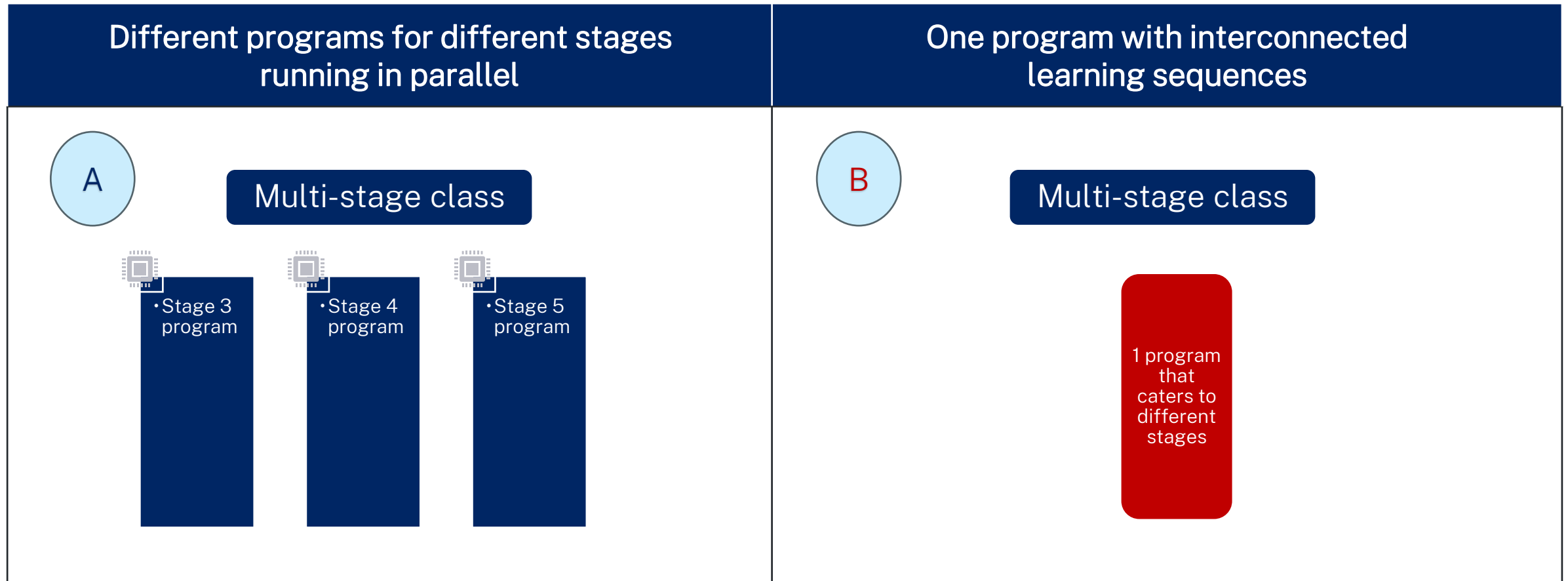
Multi-stage vs general programming

A comparison

Similarities	Differences
<p>Same key steps:</p> <ul style="list-style-type: none">• Understanding your students' needs• Identifying learning objectives and outcomes• Determining the key knowledge and skills and understanding• Creating learning sequences• Identifying summative assessment• Establishing key checkpoints• Allocating resources	<p>Multi-stage programming is more complex because it involves multiple stage that requires:</p> <ul style="list-style-type: none">• Curriculum alignment across stages• Differentiation and scaffolding• Assessment design and feedback• Time and resource management• Classroom management and engagement

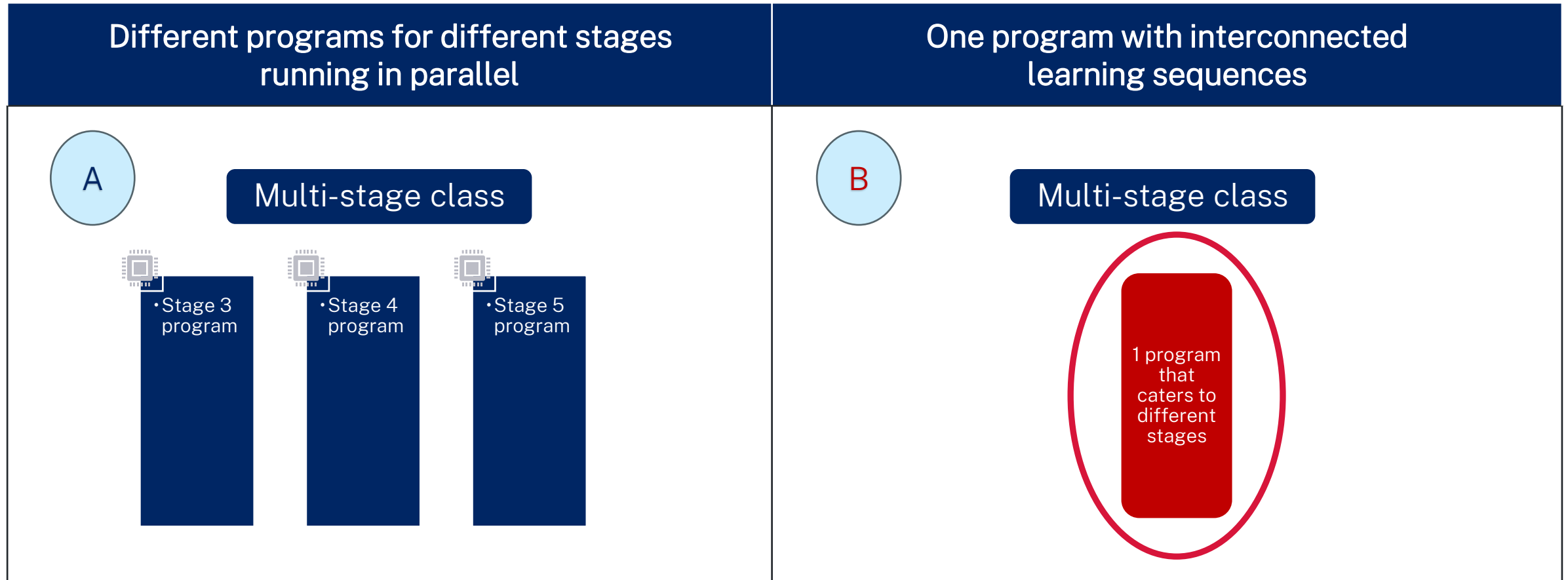
Multi-stage programming

Models



Multi-stage programming

Different models



Programming for multi-stage class

Key steps

1. Mapping outcomes across stages
2. Selecting the most appropriate outcomes to ensure a clear progression of knowledge, skills or understanding across stages
3. Identifying main concepts within a progression
4. Determining a tiered summative task for the concepts or progression
5. Developing interconnected learning sequences to build knowledge, skills, and understanding of each concept
6. Identify checkpoints/ formative assessment



Multi-stage programming scaffold

An example

	Stage 3	Stage 4	Stage 5
1. Map outcomes			
2. Unpack knowledge skills and understanding			
3. Identify overarching concept/s			
4. Design a tiered summative assessment			
5. Develop interconnected learning sequence/s			
6. Identify checkpoints/ formative assessment			

Resources that support mapping of outcomes

Overview [Rationale](#) [Aim](#) [Outcomes](#) [Content](#) [Assessment](#) [Glossary](#) [Teaching and learning support](#)

Outcomes

Compare outcomes ▾ Show related outcomes Show aligned content

Stage 2 Stage 3 Stage 4

MA0-WM-01 Working mathematically
develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly

This outcome is aligned to all content in each Stage.

MA2-RN-01
applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands

Content aligned to outcome

- Representing numbers using place value A
- Representing numbers using place value B

MA3-RN-01
applies an understanding of place value and the role of zero to represent the properties of numbers

Content aligned to outcome

- Represents numbers A
- Represents numbers B

MA4-INT-C-01
compares, orders and calculates with integers to solve problems

Content aligned to outcome

- Computation with integers

MA2-RN-02
compares ar

MA3-RN-02
compares ar

MA4-FRC-C-01
represents and operates with fractions, decimals and percentages to solve

NSW Education Standards Authority






Mathematics K–6: Continuum of content groups

This document lists all the content groups for each focus area across all stages. This document may be useful when planning and programming. For example, it may assist in creating scope and sequences for cross-stage classes.





Early Stage 1	Stage 1	Stage 2	Stage 3
<p>Representing whole numbers</p> <p>Instantly name the number of objects within small collections</p> <p>Use the counting sequence of ones flexibly</p> <p>Recognise number patterns</p> <p>Connect counting and numerals to quantities</p>	<p>Representing whole numbers</p> <p><i>Part A</i></p> <p>Use counting sequences of ones with two-digit numbers and beyond</p> <p>Continue and create number patterns</p> <p>Represent numbers on a line</p> <p>Represent the structure of groups of 10 in whole numbers</p> <p><i>Part B</i></p> <p>Use counting sequences of ones and tens flexibly</p> <p>Form, regroup and rename three-digit numbers</p>	<p>Representing numbers using place value</p> <p><i>Whole numbers</i></p> <p><i>Part A</i></p> <p>Read, represent and order numbers to thousands</p> <p>Apply place value to partition and regroup numbers up to 4 digits</p> <p><i>Part B</i></p> <p>Order numbers in the thousands</p> <p>Apply place value to partition, regroup and rename numbers up to 6 digits</p> <p>Recognise and represent numbers that are 10, 100 or 1000 times as large</p> <p><i>Decimals</i></p>	<p>Represents numbers</p> <p><i>Whole numbers</i></p> <p><i>Part A</i></p> <p>Recognise, represent and order numbers in the millions</p> <p>Apply place value to partition, regroup and rename numbers to 1 billion</p> <p><i>Part B</i></p> <p>Locate and represent integers on a number line</p> <p><i>Decimals and percentages</i></p>

Sample K–2 scope and sequences

-  [Mathematics Early Stage 1 scope and sequence \(XLSX 40 KB\)](#)
-  [Mathematics Stage 1 scope and sequence \(XLSX 56 KB\)](#)
-  [Mathematics K–2 multi-age scope and sequence \(XLSX 62 KB\)](#)

NSW Department of Education Mathematics K-2 and 3-6 scope and sequences

Sample 3–6 scope and sequence

-  [Stage 2 scope and sequence \(XLSX 53 KB\)](#)
-  [Stage 3 scope and sequence \(XLSX 61 KB\)](#)
-  [3–6 multi-age scope and sequence \(XLSX 70 KB\)](#)
-  [Daily number sense 3–6 instructional sequence \(XLSX 63 KB\)](#)

1. Map outcomes

Multi-age – Year A

Year A sample units are designed for early concept development of Stage 2 and Stage 3 outcomes, regardless of students' year level. Teachers should exercise professional judgement in determining the suitability of teaching and learning experiences in meeting the needs of their students.

Term 1	Term 2	Term 3	Term 4
<h3>Unit 1 – The number system extends infinitely to very large and very small numbers</h3> <ul style="list-style-type: none">Representing numbers using place value (Stage 2 only)Represents numbers (Stage 3 only)Multiplicative relations <p>Mathematics 3–6 multi-age Year A Unit 1 (DOCX 2 MB)</p>			

Syllabus outcomes

- MA0-WM-01** develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly

Stage 2

- MA1-RWN-01** applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers
- MA1-RWN-02** reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values
- MA2-RN-01** applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands

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Mathematics 3–6 multi-age – Year A – Unit 1 | 5

- MA2-AR-01** selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers
- MA2-MR-01** represents and uses the structure of multiplicative relations to 10×10 to solve problems

Stage 3

- MA2-RN-01** applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands
- MA2-RN-02** represents and compares decimals up to 2 decimal places using place value
- MA2-AR-01** selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers
- MA3-RN-01** applies an understanding of place value and the role of zero to represent the properties of numbers
- MA3-RN-02** compares and orders decimals up to 3 decimal places
- MA3-MR-01** selects and applies appropriate strategies to solve multiplication and division problems

2. Unpack knowledge, skills and understanding

Opportunities for students to:

- Name, rename, represent and order numbers
- Compare, order and represent decimals
- Explore the link between multiplicative thinking and place value



3. Identify overarching concept/s

Lesson	Content
<p>Lesson 1</p> <p>Daily number sense</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing whole numbers B: Form, regroup, and rename three-digit numbers <p>Stage 3:</p> <ul style="list-style-type: none"> Representing numbers using place value B: Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits 	<p>Lesson core concept: reading and representing large numbers is a key component of place value.</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing numbers using place value B: Whole numbers: numbers in the thousands <p>Stage 3:</p> <ul style="list-style-type: none"> Represents numbers A: Whole numbers: Recognise, represent and order numbers in the millions

Lesson	Content
<p>Lesson 2</p> <p>Daily number sense</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing whole numbers B: Form, regroup, and rename three-digit numbers <p>Stage 3:</p> <ul style="list-style-type: none"> Representing numbers using place value B: Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits 	<p>Lesson core concept: numbers can be renamed equivalent ways using place value</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing numbers using place value A: Whole numbers: Apply place value to partition and regroup numbers up to 4 digits <p>Stage 3:</p> <ul style="list-style-type: none"> Represents numbers A: Whole numbers: Recognise, represent and order numbers in the millions

Lesson	Content
<p>Lesson 3</p> <p>Daily number sense</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing whole numbers B: Form, regroup, and rename three-digit numbers <p>Stage 3:</p> <ul style="list-style-type: none"> Representing numbers using place value B: Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits 	<p>Lesson core concept: reading, recording and extending numbers are key components of place value.</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing numbers using place value B: Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large <p>Stage 3:</p> <ul style="list-style-type: none"> Represents numbers A: Decimals and percentages: Recognise that the place value system can be extended beyond hundredths

4. Assessment design

Assessment is the thread that weaves through the teaching and learning cycle.

It connects each segment to the next, ensuring that teaching is responsive and that learning is deepened (Effective Assessment Guide, 2024)



5. Develop interconnected learning sequences

6. Identify checkpoints/formative assessment

Lesson	Content
<p><u>Lesson 2</u></p> <p>Daily number sense</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing whole numbers B: Form, regroup, and rename three-digit numbers <p>Stage 3:</p> <ul style="list-style-type: none"> Representing numbers using place value B: Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits 	<p>Lesson core concept: numbers can be renamed equivalent ways using place value</p> <p>Stage 2:</p> <ul style="list-style-type: none"> Representing numbers using place value A: Whole numbers: Apply place value to partition and regroup numbers up to 4 digits <p>Stage 3:</p> <ul style="list-style-type: none"> Represents numbers A: Whole numbers: Recognise, represent and order numbers in the millions

Too hard?	Too easy?
<p>Students cannot name large numbers.</p> <ul style="list-style-type: none"> Model making smaller numbers on the place value houses starting with hundreds. Students read these out loud. 	<p>Students can name large numbers in the thousands.</p> <ul style="list-style-type: none"> Students write larger numbers and read them out loud.

Assessment opportunities
<p>What to look for:</p> <ul style="list-style-type: none"> Can students arrange sets of place value variation cards in ascending order? [MAO-WM-01, MA2-RN-01, MA3-RN-01] Can students name numbers using the place value groupings of ones, tens and hundreds? [MAO-WM-01, MA2-RN-01, MA3-RN-01]

Further reading and resources

NSW Department of Education

- [Planning a sequence of lessons](#)
- [Universal Design for Learning](#)
- [High potential and gifted education](#)
- [Multicultural education](#)
- [Inclusive Practice hub](#)
- Examples of multi-age units:
 - [English K-2 units](#) and [English Year 3-6 units](#)
 - [Mathematics K-2 units](#) and [Mathematics 3-6 units](#)

NESA

- [Home | NSW Curriculum | NSW Education Standards Authority](#)
- [Evidenced-based practices for planning and programming](#) (2021)
- [English K-6: Continuum of content groups](#) (2023)
- [Mathematics K-6: Continuum of content groups](#) (2023)

Suggested readings about Multi-age education

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- [Multi-age education: Research summary](#) © State of Queensland (QCAA) 2023
www.qcaa.qld.edu.au/copyright.
 - [Multi-age or composite classes in NSW government schools \(2014-2024\) | Data.NSW - Data.NSW](#) (CESE 2014 – 2024)
 - [Multi-age education: Teaching and learning resource](#) © State of Queensland (QCAA) 2023
www.qcaa.qld.edu.au/copyright.
 - Ronksley-Pavla, M., Barton, G.M., & Pendergast, D. (2019) [Multiage Education: An Exploration of Advantages and Disadvantages through a Systematic Review of the Literature](#) *Australian Journal of Teacher Education*, vol. 44(5), pp. 24-41
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Contact us

For further support email

Primary curriculum support

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