Formative Assessment in Geography

AGTA Conference October 2019

Introductions

Who?

Where from?

Why?

Experience of formative assessment

What is formative assessment?

Formative assessment is any assessment that is used **to improve teaching and learning.**

Best-practice formative assessment uses a **rigorous approach** in which each step of the assessment process is **carefully thought through**.

Assessment is a three-step process by which evidence is collected, interpreted and used.

By definition, the final step of formative assessment requires a use that improves teaching and learning.

For the best results, teachers can work together to interrogate the curriculum and use their professional expertise and knowledge of their students to outline a learning continuum including a rubric of measurable, user-friendly descriptions of skills and knowledge.
Once this planning work is completed and there is explicit detail about what progress might look like in their classroom, teachers can draw on this learning continuum and rubric to collect evidence of current competence for each student.

This evidence is evaluated and the learning continuum and rubric is then used to provide formative feedback and describe the learning expectations for all students in the class, tailored to individual needs.

Teachers can then **use this learning continuum to determine the best evidence-based pedagogy** to teach the knowledge and skills and progress student learning.

Teachers should also consider where it is useful for **students to receive timely and detailed feedback** to support progress within a task, learning activity or unit of work.

Formative Assessment Project

Jointly undertaking by the VCAA with the Assessment Research Centre at the University of Melbourne

2018 Pilot program

Geography - group of 6 teachers

Levels 5-10

2019 Refined program

Geography – group of 8 teachers

Levels 5-10

- Each Curriculum Manager worked with a group of teachers
- Expression of Interest
- Geography fieldwork
- Targeted primary and secondary schools
- Preference was given to teams of teachers
- 1 SE primary government school level 5
- 1 SE independent school – level 5 and 7
- 1 government primary school level 5-6
- 1 S government school level 10
- 3 whole Professional Learning Days 1 per term – CRT release covered funded by project

2019 Result Formative Assessment Guide and Annotated Work Samples

What did we do?

Fieldwork

3 groups of teachers – range of schools

Levels 5-6, Levels 7-8, Levels 9-10

2018 Data collection

2019 Data presentation

The rubric in this project was developed to help inform teaching and learning in Geography. This rubric supports the **explicit teaching of representing data** including:

Construction of geographic media (tables, maps, graphs)

Selection of data forms (sketches, maps, graphs)

Selection of information (surveys, interviews, photographs)

VICTORIAN CURRICULUM AND ASSESSMENT AUTHORITY

The rubric in this document was developed to help inform teaching and learning in Geography. This rubric supports the explicit teaching of representing data including:

- Construction of geographic media (tables, maps, graphs)
- Selection of data forms (sketches, maps, graphs)
- Selection of information (surveys, interviews, photographs)

Links to the Victorian Curriculum F–10

Curriculum area:	Geography
Levels/Bands:	7-10
Achievement standard/s extract:	They select and represent data and information in a range of appropriate forms including maps at different scales that conform to cartographic conventions. They select, organise and represent data and information in different forms, using appropriate digital and spatial technologies and through special purpose maps that conform to cartographic conventions
Content Description/s:	Content description Level 7/8 Data and information Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC103) Content description Level 9/10 Data and information Select, organise and represent data and information in different forms, including by constructing special purpose maps that conform to cartographic conventions, using digital and spatial technologies as appropriate (VCGGC131)

Using part of the Victorian Curriculum F–10 as a learning continuum

	Curriculum level/s F-8			
Strand/sub-strand	Level F-2	Level 3-4	Level 5-6	Level 7-8
Geographical Concepts and Skills:	Content description	Content description	Content description	Content description
Data and information	Represent data and the location of places and their features by constructing tables, plans and labelled maps.	Represent data and their characteristics by constructing tables and simple graphs and maps of appropriate scale that conform to cartographic conventions of border, scale, legend, title and north point	Represent the location of places and other types of geographical data and information in different forms including diagrams, field sketches and large-scale and small-scale maps that conform to cartographic conventions of border, scale, legend, title, north point and source; using digital and spatial technologies as appropriate	Select and represent data and information in different forms, including by constructing appropriate maps at different scales that conform to cartographic conventions, using digital and spatial technologies as appropriate.
Achievement standard extract	Level 2 • They represent data in tables, plans and labelled maps	Level 4 • They represent data and information in tables, simple graphs and maps of appropriate scale that conform to cartographic conventions.	Level 6 • They represent data and information in forms including diagrams, field sketches and large scale and small-scale maps that conform to cartographic conventions.	Level 8 • They select and represent data and information in a range of appropriate forms including maps at different scales that conform to cartographic conventions. •

Learning Continuum

What is a learning continuum and why is it needed?

When planning a teaching and learning program, it helps to understand the typical developmental phases students go through in their learning. These are known as a 'learning continuum'. When using a learning continuum, teachers can:

- **collect evidence of learning because the phases indicate what to look for**
- **interpret the evidence collected against the phases to identify what students are ready to learn next**
- **use the information to design teaching and learning activities that help students to progress along the continuum.**

How did we develop a learning continuum?

Using the Victorian Curriculum F–10 in combination with teacher expertise to describe more granular phases between achievement standards or more complex knowledge and/or skills.

When creating formative assessment rubrics, it is important to use a learning continuum that breaks learning down into phases that are the right granularity to support lesson-to-lesson decisions or activity-to-activity decisions and to support student learning progression.

Learning Continuum

Learning continuum	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	Students construct a table or draw a simple map representing the location of places and their features.	Students construct a table or a labelled map, including title, representing the location of places and their features.	Students represent data and information in tables, simple graphs and maps that include a legend, border and simple scale.	Students construct maps that use all cartographic conventions including appropriate scale and use diagrams to represent geographical data.	Students construct field sketches and use large and small-scale maps to represent the location of places and other geographical data. Students explore digital technologies to represent data.	Students are beginning to represent data (including maps, graphs, tables and sketches) in a range of forms for presentation. Students are beginning to select and represent information (from surveys, interviews, observations, photographs) in a range of appropriate forms for presentation

Workshop 2 Rubric

Version 1 (created in workshop 2)

Learning continuum		Phase 6		Phase 7	Phase 8	Phase 9
		Students are beginning to represent data (including maps, graphs, tables, sketches) in a range of forms for presentation. Students are beginning to select and represent information in a range of appropriate forms for presentation.		Students at this phase can represent data through determining the appropriate form for presentation. Students at this phase can represent information in a range of appropriate forms for presentation.	Students at this phase are beginning to represent and organise their data clearly. Students at this phase can utilise appropriate digital and spatial technologies to present their data.	Students at this phase can represent and organise their data in a sophisticated manner. Students at this phase can purposefully utilise digital and spatial technologies to create their data presentation. Students at this phase can represent and organise their information in a sophisticated manner. Students at this phase can purposefully utilise digital and spatial technologies to create their information presentation.
Organising element	**Action**	**Insufficient evidence**	**Quality criteria**			
Representing Data and Information	1 Constructs geographic media (eg. tables, maps, graphs) (F-10)	1.0 Insufficient evidence	1.1 Applies all cartographic conventions	1.2 Constructs geographic media from instruction and matches to purpose		1.3 Independently creates geographic media for varied purposes to represent ideas
	2 Selection of data forms including maps, graphs, tables, sketches (starts at 6)	2.0 Insufficient evidence	2.1 Uses data forms provided	2.2 Matches geographic data to geographic media		2.3 Creates and organises geographical media to match the media form
	3 Selection of information (from surveys, interviews, observations, photographs)	3.0 Insufficient evidence		3.1 Uses geographical information	3.2 Matches geographic information to geographic media	3.3 Creates and organises geographical information to match the media form
Representing data through the use of digital and spatial technologies.	4 Use of digital and/or spatial technologies.	4.0 Insufficient evidence		4.1 Uses digital and spatial technologies provided	4.2 Embeds digital and spatial technologies to the presentation	4.3 Constructs special purpose maps using digital and spatial technologies

Workshop 3 Rubric

Version 2 (uploaded in Workshop 3)

Learning continuum	Phase 6	Phase 7	Phase 8	Phase 9
	Students are beginning to represent data (including maps, graphs, tables, sketches) in a range of forms for presentation. Students are beginning to select and represent information in a range of appropriate forms for presentation.	Students at this phase can represent data through determining the appropriate form for presentation. Students at this phase can represent information in a range of appropriate forms for presentation.	Students at this phase are beginning to represent and organise their data clearly. Students at this phase can utilise appropriate digital and spatial technologies to present their data.	Students at this phase can represent and organise their data in a sophisticated manner. Students at this phase can purposefully utilise digital and spatial technologies to create their data presentation. Students at this phase can represent and organise their information in a sophisticated manner. Students at this phase can purposefully utilise digital and spatial technologies to create their information presentation.

Organising element	Action	Insufficient evidence	Quality criteria				
Representing Data and Information	1 Constructs geographic media (eg. tables, maps, graphs) (F-10)	1.0 Insufficient evidence	1.1 Applies geographic conventions	1.2 Applies all geographic conventions	1.3 Constructs geographic media from instruction and matches to purpose.		1.4 Independently creates geographic media for varied purposes to represent ideas
	2 Selection of data forms including maps, graphs, tables, sketches (starts at 6)	2.0 Insufficient evidence	2.1 Uses data forms provided		2.2 Matches geographic data to geographic media		2.3 Creates and organises geographical media to match the media form
	3 Selection of information (from surveys, interviews, observations, photographs)	3.0 Insufficient evidence			3.1 Uses geographical information	3.2 Matches geographic information to geographic media	3.3 Creates and organises geographical information to match the media form
Representing data through the use of digital and spatial technologies.	4 Use of digital and/or spatial technologies.	4.0 Insufficient evidence			4.1 Uses digital and/or spatial technologies provided	4.2 Embed digital and/or spatial technologies to the presentation	4.3 Constructs special purpose maps using digital and spatial technologies

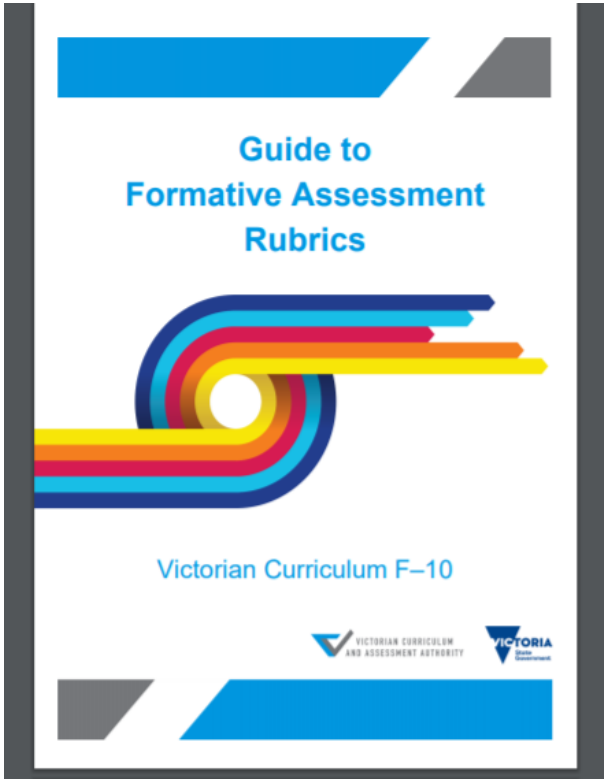
What did we learn?

- Curriculum is “front and centre”
- Time consuming
- Rigorous
- Collaboration – the known and unknown
- Worthwhile

Where to next?

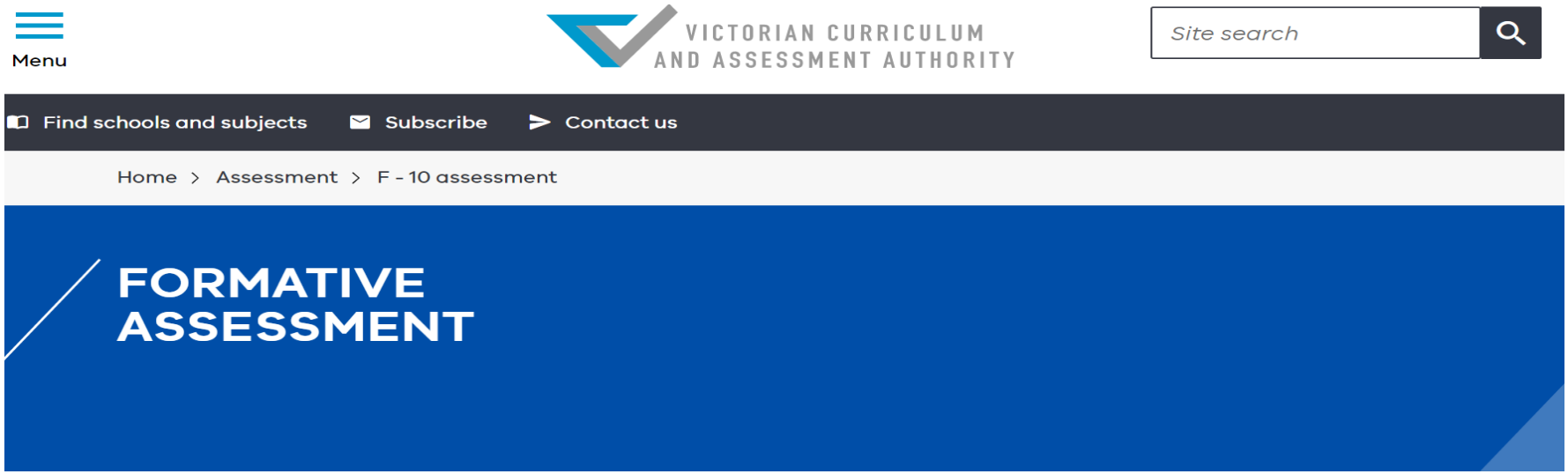
- Individual participants
- School context
- Other?

VCAA resources



https://www.vcaa.vic.edu.au/Documents/viccurric/formative-assessment/GuideFormativeAssessmentRubrics_2019.pdf

https://www.vcaa.vic.edu.au/assessment/f-10assessment/Pages/FormativeAssessment.aspx



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