**Voiceover:** The VCAA has developed a set of sample programs covering the Victorian Curriculum Mathematics Foundation to Level 10, now available on the VCAA website. These sample programs illustrate how the Mathematics curriculum could be organised into yearly teaching and learning programs based on a selection and sequence of topics covering the three strands: Number and Algebra, Measurement and Geometry, and Statistics and Probability. When you integrate the sample programs, you have a Mathematics curriculum plan that demonstrates sequencing of knowledge and skills to progress learning through the curriculum levels.

Schools can approach curriculum planning in a variety of ways, and there are resources from VCAA that can support this process. The following is an example of the work that Camberwell South Primary School are doing in relation to planning their Maths curriculum.

Camberwell South Primary School implemented a data protocol and accompanying data template in 2019 to support a targeted approach to teaching. The data template is a spreadsheet that aligns class assessment tasks with the relevant Victorian Curriculum F–10 Mathematics content descriptions and achievement standards. Teachers enter students’ assessment data into the data template after each formative and summative assessment task. The template allows teachers to map the content descriptions covered in the class to the section of the achievement standard that has been understood by each student.

Teachers can use the data as an indication of what the student is ready to learn next or areas where a student may need further support. The data protocol ensures that the data template is continually updated throughout the use of allotted meeting times during the week. This approach provides teachers with a strong evidence base that they can use to track student progress and plan lessons and assessment.

**Mark McKelson:** NAPLAN results told us that we needed a greater focus on the students achieving above the level. So, to have more of a focus on the top two bands, we implemented a data protocol for the teachers to work through to plan specific lessons that targeted and differentiated the maths lessons each week.

We really wanted to move our curriculum to, what do our children need to know next? To get teachers thinking about the lessons they’re going to be teaching and what they’re going to focus on, we really had to get them to understand where the children were starting from, and I think we were wasting a lot of time in the classroom teaching children what they already know. So what we wanted to do was actually get a really clear pre-assessment before the unit of work and then allow the teachers time to plan together to plan a five- or six-week unit of work to actually show the growth and the progress in that unit.

The data template is around changing that thinking from, “What do we need to cover next in the curriculum?” to, “What do our children need to know next?” Giving teachers the time to work together on the data protocol has really allowed us to move forward with the process. So, we’ve reorganised our specialist timetable so teachers will be released together in level teams, and they could have two meetings a week - one for the data protocol and one then to plan from the data.

**Voiceover:** The VCAA has developed the Victorian Curriculum F–10 Mathematics annotated student work samples, which provide teachers with examples of student learning achievements for each level and each strand of the Mathematics curriculum. These work samples may be used as part of professional discussions to support teachers to deepen their understanding of the curriculum and assess student achievement in relation to the relevant Victorian Curriculum achievement standards. The work samples can also inform interpretation of student achievement with respect to the national minimum standards in NAPLAN.

Each set of work samples was produced by students working at a particular level of the Victorian Curriculum Mathematics. Evidence of student achievement has been annotated, including evidence of both knowledge and skills addressed in the relevant achievement standard and some common misconceptions in student learning in mathematics. Advice is provided to support the planning of the next stage of learning for all students, from those who need to review underpinning knowledge and skills at a previous level to those who are ready to move on to new knowledge and skills at the next level.

**Annabelle Owens:** So, at the beginning of every unit, we conduct a pre-assessment, which is based on the curriculum content and across many levels. From there, we sit down and we analyse the data and work out what the student’s goals are. And from our recent unit on place value, I discovered that there were a group of students that required some further support and development of their knowledge in numbers up to tens of thousands. So, from there, we designed some mini lessons and some focus groups based on those students’ learning needs so that they could sit and work with me, more closely focused on their goals, while the rest of the class were working on what they needed to do.

**Jonathon Watkins:** The data protocol template has allowed us to dive deep into the data and analyse pre-test, post-test data looking for specific content descriptions for each and every child, their point of need, and what it is that we need to do next for them. Um, so, basically, we can go higher if we need to go higher, or lower if we need to go lower, and differentiate the program for each child.

We have an allotted time in every professional learning community that we have for data discussion. It’s a really great way for us to all be on the same page, to look at the data across the cohort, to plan out the lengths of the units, to look at our point of need across the cohort, to start grouping children into various groups for differentiated learning and focus groups. Any questions that come up, we’re able to look at as a team, and we’re also able to go in and have a look at the content descriptions and build our own knowledge as a professional to make sure that it’s very sound for us so before we go in and teach these different content descriptions, we’re really confident with what it is that we need to get across.

What’s vital as part of this process is the pre-assessment data. That tells us everything from what it is the students know, their strengths, their areas of capability, to what it is that they’re not so capable with. Therefore, it drives our unit, our learning, our teaching, our differentiation, and it allows us to be very accountable for what we’re teaching in the classroom, and we’re able to measure the growth at the end of the unit. And if we need to add any extra support at the end of the unit, now, with the data, it’s very clear if we’ve hit those targets and if the students understand what it is that they’re trying to learn.

**Girl:** We were doing place value for maths. My learning goal was to understand numbers of tens of thousands. Sometimes if you’re doing it with the whole class, some people might not need to work on it and some people will more than others.

Once we did the pre-tests, the teachers did, like, these focus groups with a few different people, but not the whole class, and it’s what you needed to work on and what your goal was from the pre-test. So, after you do the pre-test, you see what you need to work on and if you need to work on multiple things or just one thing.

**Annabelle Owens:** Yeah, the use of data is...it’s huge. It underpins everything that we do now. Because we’ve really, you know, started to move away from, you know, teaching a specific level but really looking at, what do the students really need?

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