**Transcript – Curriculum Adjustments Practical 17 June 2020**

Loren Swancutt:

Thank you, Letitia. Thanks again for everyone coming along to this session. The first session is really the primer behind what you're now going to engage with in the practice. This webinar follows on from the preceding session titled, Making Supplementary, Substantial and Extensive Curriculum Adjustments.

The focus this time around is the practical run through of the curriculum alignment process, that draws together the flexible components of the Australian Curriculum, into a process that allows us to plan age-equivalent content for all students, including those... and in particular, those with complex learning profiles.

We discussed a little bit about that in the previous session. Today is about bringing together, and actually seeing how all of those components that I spoke about in the previous webinar come together in actual practice.

In this session, we will reconnect with how students with complex learning profiles can be included in the age-equivalent curriculum, briefly. Just to cover off on some of those key components of that first webinar.

Given that we know that some people may have not engaged with that one yet, but also a good reminder to prime us ready for what we will cover today. Then we'll go more explicitly through the actual curriculum alignment process, and how it works when making substantial and extensive curriculum adjustments in particular.

The alignment process is a skill that doesn't become automatized or independent, just with one quick run through. It is a process that is usually coached through in job embedded contexts, in real classrooms, with real teachers, with real units of study and real students. It's really a process.

It really needs that actual context and that real life application, for it to really come together. This is the sort of professional learning that is then delivered across an extended period, before a teacher reaches the level of confidence and capability to engage with it efficiently and effectively on their own.

We usually use a gradual release of responsibility to apply this, where the teacher will engage with some professional learning, to prime their knowledge and understanding. Then they will work with a coach to transition that to their practice, from a point where they're being heavily guided through the process.

Gradually fading away that coaching, until they're able to engage with it independently. Then they're at a point to then transfer that knowledge to other people that they're working with as well.

Keep in mind that given the format of today's presentation and the associated time constraints, you're going to get a small slither of the modeling and of the guided instruction that you'll get to actually do some practicing with.

This being said, you will still get a good taste of the potential and the application, and what it looks like using a mock example. To facilitate today's session, it will be broken into four main sections. First off, we will reconnect briefly with the content from the previous accompanying session.

If you didn't engage with this one, I do urge that you follow that up after [inaudible 00:03:13], because you might have some aha moments and some realization about why you're seeing some of the things that you will see today. It's the key knowledge that precedes this alignment process.

I will then model the alignment process for you in the explore phase. This will involve starting with the age-equivalent curriculum alignment process, and then extending that into the alignment of substantial and extensive curriculum adjustments.

From here, you will then have an opportunity to apply the learning that we've gone through in the session, and get to engage with the collaborative guided practice activity that I've put together for you. Then we'll finish up with some reflection and further question time.

As Letitia mentioned, I've also placed a couple of opportunities where we can pause and allow for questions throughout. Please at any stage, add relevant comments and questions into the chat as we go. Then during these designated times, that's when I can stop and fully look at the chat window.

Go back through that, and prompt you to add any questions that you might have at that point in time. As I mentioned, this is the practical follow-up session of... it's ultimately the what of the work. In alignment with Simon Sinek's Golden Circle, it's the final step in the three-phased process.

His work highlights the importance of starting with the why, before then shifting to the how and following up with the what. In this instance, the first session of making supplementary substantial and extensive curriculum adjustments, was the why and the how, or the professional knowledge and understanding.

Which is the important precursor to this session, on the what or the professional practice. Starting with the why and how is important, to build the will and the culture that is needed to propel and fuel this work.

Also, to understand the processes and the decision making in all the different phases and processes that you're going to see me do, where they come from and why they're important. I reiterate the importance of you engaging with that session, through the recorded, if you haven't already.

Okay, so to refresh our memories and prime our knowledge, before we tackle the alignment process, we're just going to do a couple of quick slides on that, all important why and how of the work.

In the first session, we covered the importance of providing all students... including those with complex learning profiles, access to their age-equivalent curriculum.

We centered this on ensuring that we do not limit a student's potential, based on our own biases and assumptions about what we think they can do or what they are capable of. Or by limitations in their own confidence and capability, to respond to that diversity in our instructional methods and pedagogical approaches.

We then went through and explored the components of the Australian Curriculum, and how they can be applied to ensure inclusive and equitable curriculum engagement for all students, centered on their regular age, grade level curriculum content.

Before we continue, as in the previous session, I will just draw your attention around the fact that I will be utilizing the Australian Curriculum throughout this session, as I did in the first one. For those in states not adopting the Australian Curriculum, the concepts still apply.

All of the different curriculum, so the curriculums used in New South Wales and in Victoria and the Australian Curriculum, are all standards-based curriculums that utilize the same or similar aspects. What you will find is that, they're called different things across those three different curriculums.

When we refer to achievement standards in the Australian Curriculum, that's referring to stage statements or level descriptions from the other two and outcomes, and level content descriptions are used in place of what the Australian Curriculum calls content descriptions.

Lots of words to get your head around there. If you're from those other states, please take note of that, because I will be using the Australian Curriculum terminology. That doesn't mean that you can't do this process.

You just have to think about what that's called in your circumstance, and where you would go to find that information and that documentation for you. As a recap on those components from the Australian Curriculum, that we can utilize to support inclusive curriculum provision and the alignment process.

Or the learning areas being, traditional subjects like English, math, science, et cetera. The general capabilities, the cross curriculum priorities and the new-ish learning progressions, which I actually just noted in the ACARA terms of reference.

When they are going through the review process of the Australian Curriculum across the next two years. They have actually indicated that they are looking to replace the general capabilities of literacy and numeracy, with the learning progressions for literacy and numeracy.

Watch that space with what happens around there, instead of doubling up on those things. It's through the sequences of achievement, the sequences of the content descriptions, the learning continuums and the progression maps associated with those aspects of the three-dimensional design of the Australian Curriculum.

That the true potential and intent of a high quality curriculum for all young Australians is realized. You'll see that, through the application of these components in today's modeling. As an overview, the blueprint for providing inclusive curriculum is broken down in the broad steps that you're seeing on the screen now.

We always start with and stay with the age-equivalent content and the expectations, because this is the teaching and learning focus for the class and for the same age peers. It's the age-appropriate experience.

Therefore, it is the opportunity that we need to open up to all of the students that we have, regardless of their diversity or the barriers and challenges, and the impacts that they may face.

We open up this opportunity, by developing clarity of exactly what students need to know, do and think about, to be successful at the regular age equivalent grade level content. We then reduce and remove barriers through universally design principles.

Through our teaching and learning phase, we respond to how students are progressing with responsive differentiation. Then if we need to, we then provide authentic application of supplementary, substantial and extensive curriculum adjustments.

That's the mini recap, or connection with some of the key professional knowledge and understanding that was followed through in the initial session. Let's now move into the explore phase, where I will take you through the practical application of planning for inclusive curriculum.

That is ensuring that all students have access to that age-equivalent curriculum that we just spoke about, regardless of the level of adjustment required. Even right through to the extensive level, and regardless of any of the myths that are out there in relation to their perceived curriculum gaps.

Their reading ability, their communication barriers, et cetera. We covered up on those myths in the first session, that are often out there in the way of students being able to access their age-equivalent content.

What you are now engaged with is the implementation guide, that I've prepared to help you step through the process, and anchor your knowledge and learning around what you are seeing take place. I will then also talk about where to find the information that you will see me using.

Today, were accessing a year 10 mathematics unit of study. In particular on trigonometry, to help us step through this real life application of the process. Along with the slides for today, you would have received an additional piece of paper.

It has the 10 steps on it, that you're seeing on the screen now. Also, some little bits of information that you will use when we go into the guided phase, where you will get to practice part of the process. As I mentioned, it should have come to you in a handout in the email. I'll reference these 10 steps.

You might like to have that handy with you, so that when we're looking at step five and you've forgotten what that actually is, you can look back at that as well. We'll start the process of accessing the age-equivalent achievement standard.

Deducing from that the content that's being explored this time, in relation to trigonometry in year 10 math. From there, we will use the year level descriptions, the content descriptions and their elaborations, to flash this content out and going through context around trigonometry.

What that actually looks like and means in the year 10 curriculum. We will identify the associated general capabilities, and what they provide us with in the process. Before then consolidating that into the, know, do, think table, which we utilized in the previous session and which is a core component of this alignment process.

From there, we will identify the key concepts and content that's being covered in year 10 maths. Then look at how to align that to a substantial and extensive curriculum adjustment level.

Before finishing off with what those adjustments would then look like, into some questions in the classroom and questions on assessment items. The next step is around where I'm getting this information from.

Given that we're utilizing the Australian Curriculum, the main point or goal for all of that is the Australian Curriculum website. Going to the learning area, in this instance, being mathematics.

Once you head in there, you will find the achievement standard, the year level description, the content descriptions, all of that stuff that we need and that I'll be referring to in relation to the Australian Curriculum.

In addition, on my website, I've developed some alignment guides. I'm using some screenshots and a little bit more detail there as well. You can also access those at a later date, but I've also developed some sequence of achievement, which you'll see me utilize today.

I've taken the achievement standards, and pulled them apart in relation to content. Aligned them from prep or foundation, through to year 10 and included in that, the process of how we go about aligning. You'll see me utilize that.

They're free and they're available, so far maths and science is up. I've got English and history just waiting to be proof-read, well, maybe so they go up as well. You can head along there and grab those at any time, and you'll see how I utilized those throughout the process as well.

What you're going to see is the actual modeling. I'm going to try and verbally tell you my thinking and my thought processes, and where I went and what I did throughout this alignment process. What I was looking at, what I was thinking and what I was doing.

You'll see that I actually did this with a pencil, drawing that you've got there, with the written down information. I actually went through the process of aligning this year 10 trigonometry.

I'm doing it by myself. I'm not teaching year 10 maths at the moment, but I was able to go through this full process, doing the alignment that I'm going to show you on my own in about an hour. I was able to... that's including realigning it to a year five level.

Then realigning it to a student who's accessing extensive curriculum adjustments, and is therefore working on individual goals from the general capabilities. Keep in mind though, that I've been doing this for six years. I started this process back in 2014.

It's been refined and iterated a few times, across the years after that. It is something that is very automatic for me, very subconscious for me. I'm going to try and make as much of that explicit to you, through this session.

Understand that it will not come that naturally and that quickly to you, but that's the point you can get to. Our curriculum planning teams at school, certainly are at an efficiency level themselves.

Where they can go through and do the realignments, do substantial and extensive adjustments in similar sorts of timeframes that I'm able to as well. We've expanded in scale, that capability across our school.

I will try and pare it back, but certainly add any questions into the chat if you... I might just say something, not realizing that it didn't really make sense, or you don't have the depth of understanding that you need. Please don't feel bad about popping questions in to re-clarify things.

Remind me to go back and slow down, or go through something in more detail. Here, we're looking at the first three steps. Accessing the Australian Curriculum, accessing the content descriptions and the elaborations. We get those from the Australian Curriculum website.

You'll see the little snip of my handwriting process, but you'll also see the snips of the documents where I went to get this information. My first point of call is always the achievement standard. That is the fixed reference point. That is the C standard, the expected 12 months learning for students.

I went to the year 10 mathematics achievement standard, knowing that I am about to teach a unit on trigonometry, hypothetically. Therefore, I read through that, to find the component that related to trigonometry. The little green square that you're seeing, is the actual sentence on trigonometry.

It's being pulled out of that sequence of achievement that I've put together and made available on my website. I'll show you that document in its whole, when we get to that point, further on as well.

For this unit, we know that students need to be able to use trigonometry to calculate unknown angles, in right angle triangles. It's quite broad. What I'm doing now is jotting down. You'll see in my hand writing there at 0.1, the key content and information that comes out of that sentence forming.

Trigonometry is obviously the main content. In particular, I know that there's ratios and formulas around trigonometry that are needed. We're going to have to learn what those trigonometry ratios are. It's also then telling me that I need to calculate unknown angles, and in particular right-angled triangles.

That's the two key points of content that I can pull out of that sentence, and I've jotted those down. What I now need though, is more information, more context about that. My next step is the year level description. Again, I've got the snip there for you, straight off the Australian Curriculum website.

I can cast my eyes over and scan through that, and look for anything that is relating to trigonometry, right-angled triangles, et cetera. From within that, I can see that there is a sentence or information that tells me that students need to find unknown lengths and angles by applying trigonometry.

Now, I'm getting more information about what this calculation with trigonometry might look like. Unknown lengths, unknown angles, we're bringing the broad concept a little bit more refined. From there, I can go to the content descriptions.

The purpose of the content descriptions is to give us more information about those short, brief sentences that are in the achievement standard. I can go through the list of content descriptions, and find the ones that relate to trigonometry and the same process like I did with the achievement standard sentence.

Think about what is the key content and information that's recorded within those content descriptions? You'll see there at step three, that I've written that down. Those content descriptions spoke more explicitly about solving right-angled triangle problems, involving direction and involving angles of elevation and depression.

We've gone from trigonometry as the broad content, the broad term knowledge, understanding, practice that kids need to do, down to knowing more about it being within right angles, unknown lengths, unknown angles, involving direction, and involving elevation and depression.

I've got even more information now, about what trigonometry actually looks like in year 10 maths. From there, step four. To make sure that I am even clear up on that, I can go to the content description elaborations. You'll see the content descriptions come up.

Then over the side on the website, there is a lot... I think it's blue elaborations box. When you click on that, what it will drop down for you is the snips that you're seeing on the screen now.

If would tell me more about more context about what trigonometry applied looks like, so in this instance, we're referring to applying Pythagoras' theorem and trigonometry, to problems that involve surveying and design. Now, this is giving me some ideas about how I can actually apply these trigonometry calculations.

How to apply these angles, and then I can do it through the context of surveying and design type questions. From there, it also indicates the general capabilities. I did notice in the ACARA review, that they're going to refine the linking of the general capabilities to the content descriptions as well, which would be fabulous.

In this particular one, you get the symbols underneath. Those symbols are for numeracy, and for critical and creative thinking. Again, I go through and pull out the key content, the key information that gives me the clarity of what they're talking about.

In relation to numeracy, it pulls up that they need to have spatial reasoning and it needs to be 2D and 3D shapes and objects. I can think about that with my triangles, 2D and 3D triangles, used in surveying and designed to calculate unknown angles and building back up to that big picture there again.

Critical and creative thinking. It's linked for me that they need to be able to organize and process information, transfer knowledge, seek solutions and put ideas into action.

I've got kind of that problem solving sort of information there for me, to help me flesh out a question involving a 2D or 3D triangle, involving calculating unknown angles in relation to surveying and design problems. It's really helping me think about how to actually apply trigonometry, to a meaningful context for students.

Again, I've just gone through and jotted down those key pieces of information. The next step, and the big leap from there is to pull those first five steps. All of those little notes, all of that information into what were referred to as a unit analysis table or a no, do, think process.

This is taking all of that information around the content, and thinking about what exactly students need to know, what do they need to be able to do? What do they need to think about, in order to be successful in that trigonometry sentence from the achievement standard?

It's kind of a consolidation of those first five steps and those first lot of notes that I've got there, into more of an organization around the key knowledge, understanding and practice.

That's going to need to be explored through the teaching and learning of this unit of study. You can see there that I've pulled it into the fact that they need to know the trigonometry ratios, sine, cosine, and tangent, in order to then apply them in finding unknown angles using trigonometry ratios.

When they're doing that process, we need to think to ourselves, "Well, what are we thinking when I'm applying the trigonometry ratios, to make it clear and be able to articulate what we need the students to be thinking about at the time?"

In this particular row, they would actually need to know which trigonometry ratio to apply, in order to get the correct answer or response that they need. We need to make sure that when we're in the teaching and learning phase.

That we're making that metacognitive process explicit to them, around the decision making that's going on in our brains as a teacher, around which trigonometry ratio I'm using. That we're actually getting them to think about and articulate their thinking around that as well.

We know that they need to know angles of elevation and depression, because they're going to have to calculate them. First of all, they're going to have to know what they are and how to identify them, in order to then be able to apply the trigonometry ratios to calculate them.

Again, we want to make it explicit through the teaching and learning, our thinking around, "How am I identifying which angle is the elevation of depression... the angle of elevation and the angle of depression?" Making that explicit throughout.

We then need them to be able to read and interpret diagrams, being the triangles and the different parts of them. They need to know that information, to be able to then be able to calculate those unknowingly. They're going to need to apply a formula that involves hypotenuse, opposite and adjacent.

They're going to need to be able to identify which parts of the triangle those are, so they can take the appropriate numbers and put them into the formula and calculate with those. Again, making all of that thinking explicit as well. Ultimately, what this does for us is draw out that key information.

Then we can use this table to actually create our lessons across the unit now, and actually develop our learning objectives and our success criteria in each of those lessons. It should align to that, and so it's multipurpose form.

In our context, we give this to the students as well, so they know upfront exactly what's expected of them in relation to knowing, doing and thinking, where it aligns to the assessment item and the guide to making judgment.

Then we highlight and tick off, as we move through this knowledge and understanding and practice throughout the unit, to ensure that we've covered it all. They need to cover it all, to be successful.

If we miss something, then we're ultimately denying them the opportunity to be successful against that achievement standard, come the summative assessment at the end. Again, we can use it to support us with our formative data tracking and our decisions around differentiation as well.

We can get students to reflect again, to know their strengths and weaknesses. We can use work samples from them, formative data to analyze how they're going against this knowing, doing and thinking. Then what responses we might provide from there. What we can do then in relation to the supplementary adjustments space.

For those from the previous webinar, would know that when we're applying supplementary adjustments, we're not changing the complexity of the curriculum content.

It still remains that year 10 trigonometry, but we can do a variety of things around year 10 trigonometry that it's quite flexible, to open it up to students at the supplementary adjustment level. In this aspect, we can go back to the general capabilities, the content description elaborations.

That can support us, to look at ways that we could bury that critical and creative thinking aspects. We could change the complexity of that. We could reduce it to support students, or we could even extend the critical and creative aspect, to push students further who are doing quite well in the content.

We could do the same around the numeracy one as well, reducing some of the numeracy barrier, by going back down the continuum or increasing it for students working beyond. We could go to the content descriptions and look at the different contexts, and this was surveying and design.

We might know that the students really interested in basketball for example. We actually get a lot of angles out of basketball shots and that sort of thing. We could actually look at individualizing the motivation and the interest level for students, through that sort of thing.

Changing the literacy demands is a really big one, in relation to supplementary adjustments. We're not assessing a student's ability to read questions, and hand write responses and actually draw triangles.

We could provide some supplementary adjustment around those things, by providing diagrams, using speech to text, getting them to use apps on their iPad. Where they're just dragging and dropping to show things, and that sort of stuff. Lots can be done around that supplementary space.

Before we go into looking at what we then do for substantial and extensive, which is more of the main focus for today, I'll pause for a little bit. Give you an opportunity to pop in any questions that you have.

I'll take a moment just to scroll back through, and have a look to see if anyone's popped anything in there already. Please feel free to add some now, if you would like me to respond to anything that you didn't quite understand, something that you need to know more about where I got something from, anything like that.

Yeah, so ICP, again, who creates them? That's completely individual school process. I see ICP as a whole other... it could be a whole other very long webinar. We did touch on them briefly, or actually in a little bit more depth in the previous webinar, around the importance of how serious an ICP is.

How rigorous that process should be, to ensure that a student really does actually have a significant cognitive impact and can not do any of the thinking, knowing, or doing at their grade level, before we even go to looking at a different year level curriculum.

There should be of rigor around that. The classroom teacher should absolutely be involved, because they're the one that's got the student in front of them, for their lesson, for their subject and knows exactly what supports have been put in place and what the student output is.

Going into the process. Again, think big, start small. In our school, we do this for every unit of study, across every subject area across 7 to 10. It's done on mass. We're actually in the process of doing it now, in preparation for units of study in term three.

We didn't just start there. We started way back years ago, just with English, maths and science, and even within those just one year level. We built the skill of key people, to be able to lead those processes. They picked one year level. Year 10 maths for example, to align with what we're talking about today.

That person might have gone along, and started modeling this alignment process with year 10 math. All of the year 10 teachers would come along to this planning meeting, and they would go through this process. They stayed with them and did that with them for quite a bit of time, and built their capability.

They then started branching out into other areas, until I think it was around 2017. We got to the point of it being across every curriculum area and every grade level, so you're building the capacity. We all come together. I teach year seven science this year. All of us, year seven science teachers got together last week.

We came together to do this alignment process, to talk about what things we could differentiate, what our supplementary adjustments might look like for students now in year seven cohort. If there was anyone requiring substantial adjustments, et cetera, and go through the process together.

Then, so we're building the capability of people, who can then go off and lead these processes. It's not just the original people anymore, that are being the coaches in that instance. It's not a whole extra unit of work, as someone has mentioned there. That's right.

It's actually coming back to that job embedded contextual process. Working with a teacher, with their actual unit, with their actual students. Modeling and going through that gradual release process with them, demonstrating how to go through the steps.

Why it's better for the students to be engaged in their regular age-equivalent content, why it's better for the teacher, they can't teach two separate units, et cetera. Again, starting with the why, the why and the how, when they've got that will. That desire around the work, moving toward the skill and staying with them.

Walking beside them and modeling through this process. Now, we're clear on the age-equivalent content. You have to be, before you can make any decisions about adjustments.

We really need to know exactly what the age-equivalent content is demanding, what it is, before we can then think about how we can support students through it. That's really important, because you'll get lots of those questions.

Particularly at the supplementary level, where people were saying, "The student can't get more than a C, because they got [inaudible 00:32:59] or they got an extra step, cheat or whatever the case may be. That's completely untrue. That is a big myth.

If you have the clarity of the curriculum, you would know that nowhere on there are we assessing handwriting in this instance. We're not assessing their ability to read in this instance. Any support I provide around any of that, has no bearing or weighting on how the student is graded.

The curriculum clarity process at the age-equivalent learning area, is a really important process in getting people to understand that and what we're actually making judgements against. The great flexibility then, that does actually exist outside this trigonometry content, that I am actually assessing.

I can do all this whole other gamma of things to support kids. We really need to start strong there and have that clarity, so that when I'm making decisions about adjustments, I know exactly why I'm making those adjustment decisions. I know that it is not impacting on the curriculum intent, if we're applying supplementary adjustments or that if I am making decisions at the substantial and extensive level.

That they are still linked to the content and the context of what the rest of the year 10 class are going to be doing, and what I'm going to be delivering as a teacher. You'll see, were up to steps seven and eight. I've snipped those little bits of my handwriting for you.

At this point, we're into that substantial level. We're pretending that we've got a student in this year 10 maths class, that is accessing curriculum at a year five level. We're making the assumption that that is appropriate.

That a rigorous process has sat around that, and that they do actually authentically need to be having this substantial level of adjustment applied to their curriculum content.

What we do now, is at step seven, we go back to that, know, do, think process and all of that information that we've funneled down into for that unit analysis table. We think about, "What is the key content that's sitting in there at the year 10 level?" You can see I've put that out in some bullet points.

It was about length. It was about angles. It was about triangles. It was about solving numerical problems, and it was about finding unknown amounts. That was the key mathematics content and concepts that were going on. What I can then do, is go to the year five curriculum from that.

Look at what content aligns with that. What are they doing for length in year five? What are they doing for angles in year five? Et cetera, through that process. You'll see in the square brackets, that that's where I've recorded what that content looks like at a year five level.

In relation to length, at year five, they're looking at perimeter and area. In relation to angles, they need to be able to measure and construct angles when they're in grade five.

Triangles, they're actually still doing 2D and 3D representations, which is exactly what our students in year 10 need to do, based off the information we have for them. They need to solve simple problems, using all four operations and a range of strategies in year five, when they are solving numerical problems.

Using addition, subtraction, multiplication, division. Doing that using algorithms, using mental models, using concrete materials, so a range of strategies to be able to do that. When they're finding unknown amounts, they have to do that using those variety of strategies to work out the quantity that is missing there.

Similar content, just at a different complexity level. We can go through and see how that aligns. For the year fives, this content came out of measurement and geometry, and out of number and algebra. I'll show you where I got that from. We can go to the achievement standards' sequences.

The Australian Curriculum provides those. What they are, the whole blocks of the achievement standards in its own box, across the continuum. You've got all of the achievement standards for prep, all of the achievement standards for year one, year two, year three.

It doesn't pull the content out into its separate sentences. It takes a lot of scanning. There is no direct alignment, et cetera. When they provide it for the content descriptions, they've done that for us. They align them nicely, by individual sentences across content.

They haven't done that for the achievement standards. Those sequences of achievement that I spoke about, I've done that. I've done it with the achievement standard information.

I've pulled out all the parts of this achievement standard, from foundation to year 10, that aligned to units of measure for example, and put them horizontally. Then I've also included bits of information, when we get those lovely gaps in the math curriculum.

Where it says, "This content starts after year six, or it begins after year three? All of that sort of stuff. I've put in little prompts, around which other components of the mathematics curriculum we can go to in those instances.

Where I got that information in relation to what students are doing with angles and lengths, et cetera, at the year five level, is I went to the trigonometry at year 10 on my green grid diagram, of the sequence of achievement that you can see there.

I slid across to where it should be at year five. This is where I hit one of those vacant blocks, barriers that often happens with maths. You can see in other areas, like the units of measure, you could actually go to the year 10 one and slide, there's something there from foundation through to year 10 for everything.

Sometimes you get lucky and there's something directly there. Other times, you hit these little walls. You'll see that I've given the prompt then, that I actually put my vision up and down. I'm looking for that length and angle stuff that I've pulled out.

I've got that clear clarity of year 10 and the content being covered. I've pulled out those key dot points of content. Now I'm scanning up and down the year five, to find where that content might align under a different content banner.

That's where I found it, in some measurement and geometry and in some number area as well. You're just seeing... there's two pages to this document in real life. You're just seeing one slide of that, but obviously looking up and down the whole content.

That's when going up and down, they're scanning for my length, scanning for my angles tuff, scanning for my solving numerical problems. That's where I got that stuff directly, that's written in those square brackets. I didn't just come up with that. I didn't have to think long and hard about it.

It was actually right there in front of me, when I scanned up and down that document and finding those things. Remembering I could only do that, because I had clear understanding of what year 10 are doing and be able to make those matches with the content.

My next step then is to amend the, know, do, think table. We've got that filled out for year 10. We know that well and what students need to do. Then when students are doing trigonometry ratios, what does that look like for the students at year five?

This is where we can go in and take that information from the square brackets, and apply it to the, know, do, think table. You can see for the first example there, that I've taken that trigonometry ratio. Being able to calculate with them, and think about which one we need to apply.

That's what students at year 10... that's their complexity expectation. Through that alignment process, I've been able to identify that this student accessing year five curriculum, needs to be able to solve simple problems using all four operations. Instead of solving problems with complex trigonometry ratios.

They still need to find unknown angles in year five. They're still working with angles, and still calculating defined, missing pieces of information. That stays similar. Again, using all four operations, as the less complex application to trigonometry ratios, which are more complex in the year 10.

They then need to be able to explain those strategies that they've used, to find the unknown angle. We get that from their curriculum. In their instance, we're looking at, what is the total? What is the known amount? What operations could I use? Which bits are missing? That sort of thinking process.

Very similar to what the student's doing, trigonometry with triangles out there. They're trying to figure out, "Which angle is missing? How on earth do I calculate that? What bit do I apply? What numbers go where?" The same thing for the student at year five.

Again, it's just using addition, subtraction, multiplication. We might have more simple missing number components. Again, we can display that even in a 2D or 3D triangle for them, as it comes from their curriculum.

What we then do, once we've gone through and adjusted that whole table, I haven't done it all. That's actually part of the guided practice that you're about to engage in. You're going to have a go at doing one of the rows of the, know, do, think. From there, the final step then is to adjust the assessment item.

Taking the year 10 assessment piece, and reflecting those changes at the year five throughout the questions. That might mean we need to tweak the information that's given in triangles. We might need to add some values in or take some values out.

We might need to change the question itself, so you're not obviously finding an unknown angle, applying a trigonometry relation ratio. You'll not be asking the student to measure, what is the unknown angle? That's something that they have to do at year five.

Again, always starting with the age appropriate piece, the age appropriate content and curriculum and making the adjustments to it. Going through it, we might need to delete things, add extra things in, change wording, step things out a bit more, et cetera.

An example of that is this little triangle that we have here. We might have the question around that. We know that the interior angles of a triangle equal 180, we would have gone through that for weeks in our teaching and learning process. Therefore, what is the value of A?

The student would have learned what the right angle means, 90 degrees. They've been given the 13 degrees. They know it all adds up to 180 degrees. Thinking about adding addition and subtraction, to figure out what that missing line in that equation might be, being the A angle there.

Whereas for the students, doing year 10 as it is, they would have these in relation to calculating with the trigonometry ratios. Using the different angles and the different lengths, et cetera, information they have.

It might just be adjusting those triangles through that complexity level, not huge, big changes necessarily throughout. Okay, another little pause for me to check again. Don't be shy, drop your questions in. That's the big step, going from year 10 curriculum to year 5 level curriculum.

Showing you that all the information you actually need, is contained in the curriculum information you saw. From when you come from a good place of clarity, and you know exactly what that content is, you can find it and match it at the alternate year level.

Which then gives you the information to go on and change the questions in the assessment item, and alter that know and do. I'm not sure what someone means when you're working from a maths textbook. You should still be applying your actual curriculum.

If you're getting questions from a maths textbook, photocopy them, redraw them out on a mini whiteboard, make the changes that way. If that's not what you're talking about, please add more information, so I can respond more appropriately to that question.

The cognitive verb, someone's asked a question there, remains five level. That has to stay at that curriculum complexity of where the student is actually accessing what they're being assessed against. That will vary obviously between year 10 and year 5, the level of the cognitive verbs.

Like justify, explain, describe, all those things may be different. The year 10 kids are doing the 10 version. The student accessing year five, is doing the version that's contained within their curriculum level. Yeah, so someone's brought up history.

You'll find the science example on there, as a great reflection of what the history one's going to look like. As I said, it's close to going up there as well. We know that in subjects like science and history, you might do a particular concept one year and then you don't do it again.

Like World War II for example, you might study that in one year of the history curriculum and never again. When I've done the alignment sequences of achievement, of the achievement standards for those, I've highlighted and shown what the process is there. It's still very similar. You stay with the content.

World War II in history or whatever it happens to be, and you change the other aspects that sit around that. If you check out the science one, you'll see what I mean by that. There's always the key phrase, like World War II, but then they have to do stuff about World War II.

All that stuff stays the same, and you insert whatever the year 10 topic would be there. This reminds me to bring to the point that these students... there is a big difference between a student accessing year 10 curriculum, with adjustments to year five in this example, compared to a student accessing year five curriculum.

They are two very things. When we are talking about curriculum adjustments, we are talking about adjustments to the students' regular grade level curriculum content. They are not in year five. They are not doing the year five content. They are doing the year 10 content, with adjustment to a year 5 complexity.

The student has already... they've been in year 10. In this example, they've already progressed through year five. They've already gone through the year 5 curriculum, the year 6 curriculum, the year 7 curriculum, but now in year 10.

This process is about applying substantial adjustment to year 10 curriculum. Not being in year five, doing your five curriculum. Two very different concepts, it's really important for people to get their heads around when doing this.

We so very often see people and teachers picking up year 5 units of study, and thinking they can just deliver those alongside the year 10 one. The student's not in year five, they've done that year five content five years back. Now in year 10, they need to do trigonometry content, with adjustments to a year 5 complexity level.

Yep, so the cognitive verb complexity comes straight from the curriculum. Whatever is written in the achievement standard, what extra information is from the content descriptions. It will tell you if kids need to explain, justify whatever it happens to be. It will be contained in that information.

Yeah, absolutely. Learning your letters and your numbers, literacy and numeracy skills that can still be developed through this. Say this in this example, that the student is accessing year two, still needing practice around letter formation and knowing numbers.

We can actually go on and the numeracy continuum, find where the student would be and see that we can actually support that. They're not being assessed in this particular instance, around their ability to independently read numbers. We could read those aloud to them.

We could use other concrete materials to help them explain what they're doing, and the concepts that they're applying. We can be getting them to practice their handwriting skills, by writing out things that are associated with the year 10 maths content, et cetera.

There's still... literacy and numeracy sit separately. We're still seeing so many kids being placed on different new levels of curriculum, based on literacy and numeracy capability issues, which is not the reason they should be on different year level curriculum.

We can support that through any learning area. It's about their ability to be able to actually do the thinking, the knowing and the doing of the actual content, not the literacy and numeracy skills. Okay, so we'll move on again for now, but there will be time again. One last question session at the end.

Now, I'm going to explain the little activity that we're going to get you to do. In a moment, we'll send you into some breakout rooms. In Zoom, what that means is, we can pop you into little groups with much smaller numbers. You get to hang out there and talk to one another kind of by yourselves.

There'll be lots of little breakout rooms going on, and it automatically puts you into ones randomly. Once you're in there, you need to access that extra handout that was given to you. That's where you will find the information that you're now seeing on the screen.

If you don't have it, hopefully someone else in your little group does and they can step you through it. Ultimately, what we're going to get you to do, is you to have a go at changing that middle row of the, know, do, think table.

For year 10, it's still sitting at angles of elevation and depression, calculating angles of elevation and depression. On your handout, you've also got the information typed out, that I had hand written out. The year 10 content with the square brackets, with the year 5 content in it.

You've got the typed out version of that on your handout, so that you can refer to that. To think about how you would reword and change that middle row of the know, do, think process. What I've then also provided you, is a triangle question. It's one from a year 10 complexity level.

Taking the information that you would change in your, know, do, think strip, how will you then apply or change this year 10 question to reflect the year 5 level of complexity.

We're going to send you off for about 10 minutes, to give you a good opportunity to say good day to one another. Read through what it is you need to do, and think about how that role changes down to a year five complexity. Then we'll give you a warning that you've got a minute or two left, and we'll bring you back.

We'll share the ideas and the thinking that went on in your little individual rooms, together. Have a go, talk to one another, turn your cameras on, turn your mics on when you're in there, because you're in smaller groups and it won't lag as much for you. Chat through it.

If you're struggling, that's absolutely fine. When we come back together, you can talk about that and maybe I can more explicitly go through some steps that you weren't sure of. I'll hand over to Letitia, and let her press the magic button to zip you all off into your little rooms to go through that.

Now is an opportunity for you guys to enter into the chat, about the decision making that you went through in relation to that middle row of the, know, do, think process. Students in year 10, calculating angles of elevation and depression.

Using information we know from the year five curriculum, what did you come up with in relation to what a five student would be working on? The student accessing year five curriculum... sorry, would be working on at this level of the, know, do, think. If people can pop in what they discuss, what they came up with.

Yeah, so measuring and constructing angles, adding and subtracting two and three digit numbers. We might have angles that are just made up with those smaller number amounts, to give them a practice of doing that. Yeah, and then looking at, what angles can I identify?

They would be able to identify right angles, with the symbol and what other angles are given to them. That's a good one for the thinking column. Being able to draw and measure the angles instead, using the protractor.

I know that when you go to the content descriptions for year five, it does explicitly say, "Using your protractor to measure angles." That's where you get more of your refined information from. Yeah, using the formulas to calculate length and width.

When the other students are calculating lengths of a triangle side, we can get them to be doing that, but with rectangles and squares. Thinking about, "How do I go about drawing an angle? What's my first step. How do I use and apply the protractor?" Excellent.

Yeah, be able to talk about why they're measuring a particular angle and how they're doing that. Fantastic, so now thinking about that question. That's the year 10 question as it is. I've snipped it straight off a year 10 exam.

How might we change that then, to reflect all of that great information that you guys have come up with around measuring, drawing, creating angles? The year 10s are finding the angle of depression. The student accessing year five, what might we get them to do with that triangle instead?

Yeah, they can still measure the angle of depression, but they're going to use a protractor instead of applying the trigonometry ratios to calculate it. Excellent, and we can even still gauge using that terminology.

The student's still going to hear all this vocabulary, all of these words that we're using throughout the teaching and learning. They might be very familiar with the word depression, and be able to identify angles of depression.

We would make that if we actually had a real life student, to know how they would cope with that level of vocab and whether we keep it as depression, or whether we change it to some different terminology that we've taught them throughout. Excellent, so you can see, it's not necessarily always huge, big, different changes.

That there's quite a good link most of the time between the content. We know that all of the content... even complex things like trigonometry, come from somewhere. It starts with knowing about triangles, being able to measure things. Being able to identify angles.

All of that earlier complexity that leads us toward being able to do trigonometry, is more of a complex process. In the previous session, we've delivered on this as well. People also brought in, being able to apply this in the classroom by actually looking for angles in the physical environment.

They could go around the student and identify angles, snap photos of those, pop them up on the board. Use their projector to calculate the angles. Then the students in year 10 could be using the exact same photograph, to use their trigonometry ratios, et cetera.

Say it applies in the classroom. That's a whole other webinar, is taking this, know, do, think at the different complexity levels and what that looks like into lessons. You can see from the assessment question, how that might actually play out in an actual lesson around it.

Loren Swancutt:

Using the similar triangles, but doing different things with them, using peer tutoring. Using stationed teaching, so that you get an opportunity to teach at the different complexity levels. Using tiered lessons, so everyone starts off using protractors. Great practice for lots of kids in year 10.

A bit of something different, but it's something fun for them as well. Seeing if they could then measure it with a protractor, and see if it matches the measurement that they actually got by doing the trigonometry ratios.

You can still bring this content and align it in, and teach it at the different complexity levels in the same lesson with the same teacher, delivering the content. Let's have a look now, at a student accessing extensive adjustments.

We know from the first webinar, that this student is accessing individual learning goals that occur prior to the prep or foundation achievement standard. That's someone that is accessing the extended general capabilities of literacy, numeracy and personal and social capability at level one.

Which is the level prior to prep or foundation. Again, big, huge, rigorous process around actually identifying that, being authentically needed. We're ultimately talking about students who aren't yet intentionally communicating, and therefore building those skills.

Also, students who may have significant barriers around verbal communication. Again, as I mentioned in the first webinar, there's big warnings around some of the myths and the bias that we might bring to that.

Just because the student isn't verbally communicating, doesn't mean that they have any cognitive issues or that they're not able to do thinking and doing with their grade level content. We might just need to be more creative, about how we can get them to actually communicate what they truly know and are able to do.

Again, we're assuming in this case, there is rigor around this process and that the student does actually need complexity at this individual learning goal area. On there, you'll see the two big squares that are snipped straight from the literacy general capabilities at level one.

In this case, level 1D. In the first webinar, we talked about how level one's actually got some sub levels within it and the student progresses through those. Randomly, hypothetically picking a student accessing literacy level 1D. Then the smaller snips from the numeracy general capability level 1A.

What we would do, similar to an achievement standard, who would scan through and find the bits that stand out to us. Having got great clarity around year 10 maths, and what we're doing in trigonometry. We can scan through and think about, "Oh, that will link to year 10 trigonometry. That will link," and we highlight the parts.

Knowing that this information or these goals, is this student's entire curriculum. They are doing this within English, math, science, et cetera. It's those different contents that give them the variety and the space, and the different vehicles to actually learn these skills.

We don't have to cover all of these things all the time. We will be covering them different bits at different points, across different learning areas. We don't have to make direct connections with everything. We can scan through and find the relevant things.

Having gone through that myself and looked at it, pulling out the illustrations will obviously be a good link for us. Using triangles in the real world application, and also in drawings and illustrations. Being able to comment on objects, so triangles being the object.

The different instruments like of protractors, and things that the students are going to be utilizing in the class. Being able to ask questions about those things, about the triangles, about the materials that they're seeing.

Being able to respond to questions about it. Then of course, some really strong links with numeracy, given that we're doing mathematics in this instance. Being able to demonstrate [inaudible 01:00:46].

Speaker 1:

Loren, on my screen, you've just frozen and we have no audio either.

Loren Swancutt:

[crosstalk 01:00:55].

Speaker 1:

Oh, you're back.

Loren Swancutt:

Oh, I'm good?

Speaker 1:

Yeah.

Loren Swancutt:

I'm not getting the warning, okay.

Speaker 1:

Just like maybe a minute or two [crosstalk 01:01:04].

Loren Swancutt:

Okay, so we think about then how we apply that through the context of triangles. Responding to questions about triangles, asking questions about triangles, being able to sort and match triangles. Being able to describe the length of triangles.

We're applying all of these individual learning goals, skills through the context of what we know around length triangles, et cetera, that's going to take place in year 10 trigonometry. For these students, in terms of assessment, it doesn't have to be more formalized.

We can collect portfolios of evidence, capture them in videos and photographs. All that sort of stuff, of them doing these skills through trigonometry. Bring that back to the multidisciplinary table, with the team to review what the student is demonstrating and when we need to progress them on.

Always with the aim of students accessing extensive adjustments, to work toward accessing the prep or foundation to year 10 sequence. Now, a little bit of opportunity to pause again briefly and have a bit of reflection. This is rhetorical, or you can pop your responses into the chat if you like.

Thinking about what you have learned, how you feel about this might be something completely new. You might have had some aha moments. You might be able to hang it on something that you've tried or done before, and make some connections.

Then thinking about what you will do as an action, in response to the learning that you've undergone today. As I said, rhetorical or you can add it in the chat, if you like. You can certainly add any other questions. I'll head back over and have a bit of a check, to see if anything's been popped in there through the last little bit.

Add any other new ones that you have as well. When you lost audio, I tried to rehash a little bit of what I thought I would have said in the moment that you lost me there for a bit. If you need me to go back to the extensive adjustment stuff again, please let me know and I'm happy to re-talk about that for a bit.

Yeah, so a really good example. I love that, of why it's so important to presume competence, because it is very easy to make assumptions. We go through that mindset and the bias, and the social prejudice that has occurred across decades of human experience.

As to why it's really quick for us to judge about a person's cognitive capacity, based on what we perceive the disability impacts to be. I really love that example that Elizabeth has popped on there, and the importance of opening up all content like trigonometry, chemistry, Shakespeare to everybody.

It's all great rich curriculum learning opportunity for all of us. We'll never know what sparks a student's interest, and it's the least dangerous assumption to open that up for them.

Yeah, so someone is... Letitia, has popped in a question there on behalf of somebody. That same concept applies. Like I explained, that the student is not doing year five curriculum. They are doing year 10 curriculum at a year 5 complexity. That goes across all learning areas, not just maths.

Yeah, and it's that complexity. Again, if you go to the science, you will see the science example that I've got. In a couple of weeks, check back again. There will definitely be a history one there, I promise you, that will demonstrate that.

You'll see in the science sequence of achievement from our website, that I've highlighted that content that changes. Like they do rocks one year, and then they don't do it again or whatever. I'm drawing on my memory about science curriculum.

Then, so then I've highlighted and shown you how that works. That if we are doing rocks at year 10... not that they are. I think that's at an earlier grade level, how you would then apply that at a year five complexity, given that year five might be doing... I don't know, some content completely different.

It demonstrates on my sequence of achievement, how you go about doing it in those subjects where the content does change like that. Yeah, so just recovering the individual learning goals from the general capabilities. If you go to the Australian Curriculum website, drop down the box, you'll see maths, English, blah, blah, blah.

Then over here, you'll see the general capability. You got the literacy one, the numeracy one and the personal and social capability. In there, you can look at it on a screen or they also provide it as a PDF document. You'll get it then as more of a sequence process.

You'll see that level one is the first level, and it'll indicate prior to foundation. Then you'll see those fields at foundation. It goes into year lots I think, through to year 10. The goals that I snipped off there for the extensive adjustments, are straight out of that PDF document.

That's the curriculum that that student is working on, across all learning areas. Yeah, so in Queensland we call that a highly individualized ICP. We love the acronym, so HIC ICP, someone that's working prior to the foundation level. How much time? As I said, it took me an hour to do this.

For me, not having engaged with the year 10 maths for a very long time, but again, six years experience of doing it, when we do it as a team. Again, it's not something I recommend that you do, just do on your own, unless you're very competent and skilled in it, because the power comes from the team.

You can do it much quicker as a team. When we come together, we always do the grade level one first. Then say we've got an 10 year seven science. We might have a student accessing year three curriculum, a student accessing your five curriculum for science. We would stay together and align to those levels.

Two of us might break over and do the year three one, two of us might broke over and do the year five one. We're still there to bounce ideas, report everything down and go over it all again quickly at the end. We stay and do it all together. Again, it's around an hour, an hour and a half. As a team, that's a once off before each unit.

You've got your assessment completely adjusted and modified, you've got clarity about what the content looks like at the different levels, ready to set you up into that next unit before you teach it. It doesn't have to be labor intensive.

It will be through the learning process, because it's going to be clunky for you to pull the pieces together. Once you become more automatic at it, it's quick, quick. If you're someone who already teaches that content area, you know your content well.

Your before and after, where students are coming from and where they're going quite well. That's quicker as well. Yeah, and then in the first webinar, we spoke about that we reflect the change in the know and do. We reflect the change in the assessment questions. Then we also reflected in the guide to making judgment.

We start with the year 10 one in this example, guide to making judgment. We reflect the different complexity in there, knowing that the C is the achievement standard. We'll take that wording straight from the achievement standard, and make it our C.

Then we vary the E, by tweaking what's already there from year 10. We modeled that a little bit more in the first session as well. Yeah, highly individualized curriculum for extensive adjustments.

As I mentioned, there's lots of issues with students being kept at different level, but even, they should still be doing... even if the school has kept them at a prep level curriculum, on an ICP for multiple years in a row, they should have still been in actual grade one, grade two, grade three, grade four classrooms.

They still would have evolved in the content. Also though, once you know better, you do better. We don't just keep with what may have happened to the student in the past, just because it was done.

If we know that this is actually the better way of doing it and what... we should be doing it, we change and start doing that, so that the instructional casualty and the neglect around whatever happened in the past, can actually start to be rectified in what we've learned and what we're doing now.

Yeah, we try and keep the materials looking the same. Particularly in high school, because we know the social implications that sit around it all, which is why we always say, "Stay with the year level and make adjustments."

Just changing a question and adding an extra little A into a triangle, doesn't stand out as being completely separate, which is really important for the self-esteem, the social connection of students. Keep things looking age appropriate and as similar as possible to what students are doing.

Again, the person with the questions asked about prefixes and suffixes. I get the student to do the practicing of the letter formation, with the prefixes and suffixes that are being explored in the class, et cetera.

That's the other problem with, we're in year 10 maths, I wouldn't even go and touch the year 5 unit of work, because that's when you lose that age appropriateness. That's when you go back to that developmental stage, which isn't appropriate for this student anymore.

That's where you'll lose the alignment and lose the connection, and lose that clarity of being able to draw it all together as one adult in a room, with that diversity point of view. All right, I'll have to leave you there. Hand back over to, Leticia to take you through the final slides.

Thanks again for coming along. I really appreciate it. Please head to the website. As I said, there are some guides there with screenshots and things, very similar to what we did today, for you to reflect on.

You can also contact me through that website as well. You'll find a generic contact box or the email there as well. I'm more than happy for you to get in contact, if you have any more specific questions after the end of this webinar. Thanks very much guys.