

WEBINAR Transcript
Differentiating Tasks to Engage all Students in
High-Quality Thinking by Usha James

- [Susanna] The LD@School team is very pleased to welcome our guest speaker, Usha James, whose presentation this afternoon is entitled "Differentiating Tasks to Engage All Students in High Quality Thinking." The Ministry of Education has provided funding for the production of this webinar. Please note that the views expressed in this webinar are the views of the presenter and do not necessarily reflect those of the Ministry of Education, nor the Learning Disabilities Association of Ontario. We will also be tweeting throughout the webinar, so if you'd like to participate in this online conversation, you can send us a tweet by using our handle @LDatSchool or the hashtag #LDwebinar. So that takes care of all the housekeeping for this afternoon, let's get started. It's now my pleasure to introduce our speaker, Usha James. Usha spent 12 years as a secondary teacher and five years at OISE at the University of Toronto as an instructor and then director of the secondary program. She's co-authored textbooks, teachers' resources, course profiles, and ministry documents with the aim of providing practical strategies for teachers seeking to refine their practice. Usha has contributed to The Critical Thinking Consortium, also known as TC Squared as a resource writer and facilitator and is currently the executive director. Usha has worked with principals, superintendents, and teachers of kindergarten to post-secondary school students supporting their efforts to improve the quality of thinkers and the thinking of all learners. Welcome Usha, the cyber floor is now yours.

- [Usha] Thank you, and hello, everyone. Thank you for joining us today. I know it's a tough time out there on so many levels, and so I just am so grateful and impressed with your commitment to your own learning during this time. And I am so privileged and honored that you're carving out an hour of your day to be with me. So I truly hope that I can give you something really practical to walk away with and also support you in the efforts that you're making to support all of our learners. So thanks

again for coming today. As Susanna said, we are working today on how do we differentiate tasks in our classrooms to engage students in high-quality thinking. And I say our classrooms, but I have to say that as I've learned more about the framework for thinking and how we might differentiate, I find myself and my four children at the dinner table subjected to all sorts of strategies that I try out on them, as well. So in our classrooms, in our staff rooms, around our dinner tables, how can we support the thinking of all of our learners? We are also on Twitter, so please do feel free to follow or tweet any questions. I may not get to them in the middle of the webinar, as I manage all of the technology, but I'm @UshaJames and TC Squared or The Critical Thinking Consortium is @tc2thinks. And we'd be happy to connect with you over Twitter, as well, or my email is on this front page here, and I'd be happy to connect with any of you afterwards, and I'll put it up again at the end.

I'm going to try to model and walk the talk today a little bit. It'll be hard to differentiate with the framework that we're in right now, but the platform that we're in right now, but I would like to model how we might create tasks and use tasks to engage in thinking, and then walk down a road of differentiation. So in order to do that, those of you, many of you may have been in my previous webinar or might have been exposed to the framework of The Critical Thinking Consortium before. And you may know or may not that we like to start our sessions, professional learning sessions, modeling what we hope people will do in their classrooms or in their staff meetings, and that is start with a question or a challenge. And so in the hour that we have together, I would like to invite you to do the following. I'd like you to select a whole group lesson that if you're a teacher, that you might be teaching, if you're an EA, you might be supporting, as a principal, you might be observing. But select something that is typically for you or what you see as a whole group lesson, in any subject, in any grade level, it doesn't matter.

But that you think, you know what, if I knew how to differentiate this a little bit better, it might be more successful. So that's your first sort of task is I'd like you to select a lesson. And then I'd like you to develop or begin to develop a feasible but effective plan to differentiate it, to support the thinking of all learners. So that's my challenge

to you today, and I'm gonna invite you to start something that we call a Thoughtbook. And we do this with teachers, we also do it with kids, is somewhere on your device, perhaps in a note or on a sticky note or on a scrap piece of paper you have next to you, I'd like you to record your initial thoughts about this challenge. So do you have a lesson in mind, maybe, that you're teaching this week, you're observing this week, that you're supporting this week or next? What is it, and do you have any initial thoughts about differentiating it? How might you do that for, you know, the learners who need it and the different ways that they might need it? What we're gonna do is I'm gonna provide some ideas as we go through the next hour, but I'm gonna return to this question and invite you to go back back to that whole group lesson. What is it that you're thinking about now? I was just in a session 30 minutes ago where somebody was talking about having students look at shapes and organize shapes according to their attributes. Is that the lesson that you are thinking of? Is it a lesson in literacy, what might it be? So just putting that over on the table. I know we've talked through that a couple of times, but I'm asking you to please note it down, and we'll return to it a little bit later. Let's take something that could be a whole group lesson. I've picked something that's easy to use with visuals, given a format. And then let's play with it to see how it might be differentiated, okay? So I'm gonna give you a little lesson or a challenge. There's a photograph on this slide, and clearly, there's been an accident.

So here is the task that I have in front of you, and I'm gonna actually ask you to engage with it in the questions box. It says questions, but you can also put responses there. I hope I'm not subverting the system by saying that , questions or responses. But imagine that in a classroom, I ask you to take a look at the picture of this, something has happened here, it's an accident. And I want you to list all the possible contributors to the accident. And there's two things that I'd like you to think about. I'd like you to think about the possible immediate causes and the possible long-term causes. Eventually, I might ask you to select the most likely immediate and long-term cause and be prepared to justify your answer. So let's try this out. I don't know if this is gonna work, but in the question section of the webinar screen, what do you think are some possible causes? Maybe put what you think is the most likely

immediate cause or the most likely long-term cause of this accident? I'm just gonna give it 30 seconds for everybody to respond in the questions box.

So we've got a number of things coming up. People are saying weather, winds, high wind, the load is too heavy. Human error, faulty mechanics. An unsafe base. We can't quite see if there's a load at the top, is there? Ran out of gas. It was on a bad path, too close to the edge. We've got a whole bunch of different possible causes. So is it poor communication? Maybe, when was the last safety inspection? Was there one recently? Somebody's using their cell phone while driving this piece of heavy machinery? Lots of ideas emerging. Hey, now let's take this activity. I know everybody has not responded, but let's take this activity and deconstruct it just a little bit, okay? I'm gonna suggest that this is an activity that invited you to think and to think critically. And remember this webinar is about how do we differentiate tasks to engage all students in quality thinking? So first, we need to have a task that actually engages people in quality thinking. So that's our step one, ensure that our tasks invite thinking in the first place. So let me define my terms.

When we at The Critical Thinking Consortium talk about a task or a challenge that invites students to think critically, we call that a critical challenge. And there are three real sort of attributes of a task that is a critical challenge. So first, it's set in the context of a problematic situation. And what we mean by that is that it's not quite clear what the answer is. It's not easy to market right or wrong. It's problematic, and we don't mean that it's always a problem, but it's problematic in the sense that it's ambiguous. We're not sure what has happened. We're not sure what the right response might be. We're not sure what the best way is. And part of that is there are multiple, plausible options. So it's not that any answer is okay, but there are more, there's more than one. There are multiple possible or plausible options. So think about the content area that I asked you to think about at the very beginning of this session, that whole group lesson, and you might first think, does it indeed, did that lesson indeed have a question or a task framed within it that was going to invite students to think that was problematic, okay, that was in some way ambiguous. The

second attribute of a critical challenge is that it requires reasoned judgment. So it actually requires students to make a decision.

So it's problematic in that there are multiple plausible options, and in the end, students have to pick one of those options. They have to decide something. So again, thinking back to the curriculum content that you were considering, you know, have you framed a question or a task that requires students to make a decision? So sometimes, I'll give some examples. Sometimes, we might ask students to explain how something has happened. If it's obvious how something has happened or if it simply requires a recounting of what they've learned, we haven't yet invited thinking. If we ask them to determine the most likely cause of something, then we're asking them to come up with a whole bunch of possibilities and decide which of those was most likely. Do you see the difference between those two ways of framing the same question? So a suggestion, before we start differentiating tasks, have we indeed invited thinking in the first place?

And finally, a critical challenge, so the third attribute of a critical challenge is that it requires the competent use of intellectual tools for quality thinking. If you were in the previous webinar that we've done together, you had some introduction to those intellectual tools. I'm gonna go through them again today, and I'm gonna point you in directions that you can learn a little bit more. But as, I'm now the executive director of The Critical Thinking Consortium, but as a teacher who used the framework for many years and I continue to use it, this last bit, the bit about intellectual tools for quality thinking was really what transformed my teaching and what helped me ultimately differentiate because we all need what we have categorized into five types of intellectual tools. Everybody, young children to adults, we all need five types of intellectual tools to be good thinkers. Once I understood what those tools were, then I could watch, when I made thinking visible, when students were grappling with a challenge, I could watch and see who had strengths in which tools and who needed further development of which tools, and that was sort of the key to my ability to differentiate.

And so I'm really excited to share that with you today. We will just touch on many of those ideas today, but I hope to be able to send you in a direction where you can look at more of them. So if we're going to differentiate tasks in order to better invite thinking, first step, let's make sure we've actually framed a task that invites thinking before we try to differentiate it. Once we want to think about differentiation, there's lots of frameworks for differentiation that, as you know, the most popular framework for differentiation and perhaps one of the most, you know, helpful is the framework of Carol Ann Tomlinson's. You know, we can differentiate by product, by content, by environment, by process. So because we can differentiate in these four different ways, I'd like to walk through each of these ways in the context of thinking and what might that look like. So the first and most important step in differentiating is to ensure that we have a clear learning target. We want to make sure that we are keeping expectations high for all of our learners. I think one of the things that we all, all of us who are here at this session and many others worry about the most is that our learners with identified learning differences, learning disabilities, are learners that perhaps need a greater support in certain areas. Their strengths are not recognized to the same degree, and therefore sometimes expectations unfortunately are lowered.

So really important is before we start to differentiate, do we have a high expectation for the thinking, in particular, of all of our learners. We want to engage all students in thinking. And we know that all students can think critically. I often use the example, and we say, you know, "Can students justify their answer, "or can they make a decision and justify?" You know, anybody who is a parent knows that a child will find some way to justify something that they want. Students can think critically when they are invested and given the opportunity, and they certainly can justify why something they say should be accepted over something someone else says. The question is, in a classroom environment, do we keep our expectations high for all students and then differentiate the way they get to that expectation? And so that's sort of a first step. Let's ensure we have clear targets. One of the ways that Carol Ann Tomlinson suggests that we differentiate is by differentiating the product. So I'd like to offer a bit of a nuance there in terms of what do we mean by product? Often, we've said, you

know, you differentiate the product by giving students choice in how they communicate their learning. And I'd like to add a dimension to that because I think that's certainly one way we can differentiate, but it leaves the differentiation to the end of the learning. How do they communicate through the product at the end? And I'd like to suggest that the way you frame a critical challenge, the way you frame the question or a task that actually engages the kids in thinking can differentiate, be differentiated right at the beginning.

So in our framework, we offer six ways that you can frame a question or task in order to invite thinking. I'm gonna really quickly go over the six ways, but I'd be happy to share places where you can go in order to learn a little bit more about those six ways, 'cause we're gonna go over them very quickly. So just as I, earlier on, framed this question, what is the most likely cause, be prepared to justify your answer. There are six different ways that I could have framed that question. I chose one of them. And we can frame any question or task that invites thinking. So let me go through them very quickly and then talk about how you might differentiate. So if you want to get kids to think, you can ask them to critique something. We call it Critique the Piece. And Critique the Piece simply means take something that they're learning about. It could be how to write a paragraph, it could be a solution to a problem, it could be a strategy to get at an answer in math. It could be a particular piece of art that they're studying. Take anything that, and hold it up to the light, and invite students to critique it against some criteria. So we might say to students, "This particular solution to an energy problem. "How sustainable is it, is it very sustainable, "not very sustainable, you know, "on a scale of zero to four?" Or we might say, mm, we're teaching persuasive paragraphs. "How persuasive is this paragraph "on a scale, again, or zero to five, "or not very to very," okay? So asking students to critique one thing based on how well it meets criteria is a great way to invite thinking.

A different way, equally valid way, to invite thinking is to not give them one thing but give them more than one. So give them three paragraphs, and say, "Which is most persuasive?" Or give 'em four solutions, and say, "Which is most sustainable?" So now, I want you to think to a student that you know with a particular, you know,

learning disability, you know, something about them. Which of those would be most accessible to the student? Would it be easier to critique one thing, or would it be easier to judge three things to decide which better meets the criteria? So I'm gonna ask you to just compare for a moment with a student in mind, which, and I'm gonna ask you to respond in the questions box. Which do you think would be most accessible to that student and lead to the greatest success? Critique the piece, look at one thing, or judge the better or the best, look at multiple things, and decide which one best meets the criteria.

So can you put it in the question box, and maybe in a little bit of a, if you'd like, you can put a little bit of a justification of why. Just for those first two. Any responses, I've got one person saying that one thing would be more accessible than looking at multiple things. Depends on their reading speed. Looking at three things would be more challenging, perhaps more complex. So there's multiple ideas about which would be easier or more accessible. Let me offer this. Sometimes when we ask students to critique just one thing, the challenges, they've never seen anything like that before. They have no schema, so their background knowledge is limited. So if we give them a paragraph and say, "Is this persuasive?" If they have no experience with persuasive paragraphs, it's really hard for them to say. And we have students who perhaps can't activate their prior knowledge or don't have the prior knowledge. And many things in schools sort of don't, we don't have, kids don't have the schema for. They haven't encountered them in their everyday life. So in some cases, being able to show three things and say, "Here's three paragraphs, "which one is, you know, more persuasive? "Which one convinces you?" Build schema at the same time. On the other hand, three paragraphs is a lot to read. Okay, three images is a lot to decode. So for some students, particularly, though, when we're talking about working memory, for example, or who need to focus their attention as opposed to look broadly across multiple possibilities, critique is going to be better. So the answer that I'm giving is that there is no better or worst way to frame a challenge. It depends on the student you're working with. And so one of the ways to differentiate tasks in order to ensure we're reaching all students is to pick the way to frame the question that matches with those, that student's strengths or needs are.

So we could ask them to critique one thing. We could ask them to judge amongst multiple options. Some students, we might ask them to rework, so we might give them a terrible example of something and say, "Rework this so it better meets the criteria." That's a different way to invite thinking. So I won't go through all six ways, but I'd like to suggest that differentiating what Carol Ann Tomlinson has called the product can extend to not just to the actual, tangible product students are developing, but actually, what is the product of their thinking? So what is the task in front of them that they need to complete? And when you understand different ways to frame that task, that might be one way. I'm gonna send you back to the Thoughtbook I asked you to look at at the beginning. What's the whole group lesson that you had in mind, and is there something you're thinking about that might help you differentiate it? I'll give you a quick example. I had a teacher I was working with in the north, who was working, who was just an indigenous languages teacher. And she had students of varying abilities to read or speak the particular language that she was teaching. And what she ended up putting in place were something akin to, you know, centers, I guess, of sorts.

So she had kids working in small groups, but at each, in each group, they had the same learning target. Their target was to, you know, understand a particular aspect of the language. There was a particular theme they were working on, to understand a particular aspect of the language. But in one group, she was giving them captions and pictures and saying, you know, "Does this caption match this picture?" In another group, she was giving them multiple captions, and she was saying, "Which of these captions "best matches this picture," they all in the indigenous language she was working with. And the third group, she was giving them a terrible caption and asking them to rewrite. So notice the various levels of complexity depending on the way you frame the challenge. So I hope that gives a little bit of an idea of how you might differentiate based on the way you frame the challenge. If we go back to our original challenge, what is the most likely cause, one of the things I said that is important for all critical thinkers is to use certain intellectual tools in order to arrive at an answer, that help with critical thinking. What are those tools? I'm gonna give you

a little bit of a taste into them, and then how they might help us differentiate. We, as I've said, have identified five intellectual tools that all kids need in order to be a good thinker. So what are those tools? First, background knowledge. You can't think about nothing. You have to think about something. So in order to be a good thinker, you need background knowledge. The question is not do kids only have the background knowledge, but can they actually draw upon accurate and relevant information that's required by the challenge?

So we know from many of our students with learning disabilities, the ability to draw on accurate and relevant information in the moment is the issue. They may have the knowledge, but can they access it when they need it? And so that's a tool that we can watch for as we make student thinking visible, and we can help support in certain ways. Secondly, are students using criteria to make decisions? So if crucial to thinking is that ability to make a decision when faced with multiple options, how do you make that decision, you need criteria. So that's a second tool that students need. They need criteria to make decisions. If they don't have criteria, they just go with their gut instinct, or they go with the first answer that pops into their head. How do we slow them down and say, "What are the factors you're considering?" And, you know, again, there are multiple reasons why students do that. They're overwhelmed by the evidence, they're anxious to get the right answer. They don't deconstruct the possibilities. So we can watch which students use criteria, which students don't use criteria, and then we can teach them how to use criteria.

Third, students need to understand the vocabulary terms that we are using when we're talking about thinking. So we use terms, especially in EQAO, but we use terms all over the place that say things like, "Justify, explain, use evidence. "What's your conclusion? "What are some clues, what are observations?" You see, those types of words, those are all thinking words. It doesn't matter what subject you're in or what grade you're in. Those are the types of words we use when we talk about thinking. An important intellectual tool is the understanding of what those words mean. And so when we frame a critical challenge, we make student thinking visible. We listen to

them grapple with a problem, we can figure out who understands those words and who doesn't. When I say justify, who's just explaining?

Fourth, students need thinking strategies. That's a fourth type of intellectual tool they need to be good thinkers. They need thinking strategies so that they know how to start. They know what to do first, they know what to do second. They know how to organize information. And we know many of our students, especially who are organizationally challenged, how you take mounds of information and organize them in a way that we make sense of it, those are thinking strategies. And finally, all good thinkers have certain habits of mind or personal characteristics that help them work through a challenge, whether it's perseverance or open-mindedness or flexibility, these are the intellectual tools, these five intellectual tools, that everybody needs to be a good thinker. So now what I can do if I wanna differentiate is I can go back to the task I was going to plan for tomorrow, my whole group lesson, and I can look at it through the lens of these tools. So for example, the task I gave you at the beginning, what background knowledge would be helpful for you to have if you're gonna be successful? If I plan that ahead of time and I think, huh, people will have to know, like, what this is, what a construction site is. You know, what it means to drive construction material. Maybe they don't know how to drive construction equipment, but they need to know just some of the factors, they need to know this is a crane. They need to maybe know, you know, what wind, weather factors might have come into play.

So there's some background knowledge, and if I know that ahead of time, that that's gonna be helpful for a student, I don't have to necessarily teach it up front, but I can wait and see who needs it and teach it to those, you know, explicitly who might be struggling. I also can capitalize on students who have strengths in that background knowledge and invite them to share that. I have to think ahead of time about what thinking vocabulary is gonna be needed for this task. So when I look at what's in the yellow here, I can see certain words that if kids don't know what they mean, they're gonna be stuck right away, so many words. What's a contributor, what's an immediate cause? What's a long-term cause? What does the word possible mean?

What does most likely mean? What does justify mean? There are so many words in this task that some students are going to have strengths in and understand those words, and some students are not. What criteria are they going to use to select the most likely cause? So why does it make it more likely that it's the wind and less likely that it's a heavy load, right? How do we weigh those two things against each other to see which one might make, might be more likely given that we don't know anything about what's happened here, right? It's a conjecture.

And finally, thinking strategies and habits of mind, what thinking strategies might students need? Some students are gonna jump to an answer, and you're gonna need to slow them down and say, "Wait, list all the possible causes." Other students are gonna get stuck in listing all the possible causes and never get to an answer, so they might need different thinking strategy. These intellectual tools are crucial to being a good thinker, and as a result, when we think about differentiation, we need to think about how to differentiate the tools. So let's go back to our visual by Carol Ann Tomlinson. So product, content, process, environment. When we look at what she meant by content, we can match it to the intellectual tool of background knowledge and say, "Okay, if I'm gonna differentiate background knowledge, "I need to make student thinking visible "and determine who needs how much background knowledge, "when do each of them need it, "and how are they going to acquire it?" So some students may be able to start the challenge without any background knowledge, me giving them any background knowledge, and that's gonna what's engage them the most. Other students are gonna be paralyzed because they don't have any, they don't think they have any background knowledge, and we need to teach them how to activate it. Do we need to do that for the whole class, or is that gonna frustrate some? So how do I know my students so well that I know who needs what background knowledge, when do they need it, and how are they gonna access it? Do all of them need to watch the same video to get the background knowledge? Would it be better if some of them looked at images and some of them read text? As long as they've got the same learning target around the thinking, does it matter that some of them are reading text and some of them are looking at images and some of them are listening to something?

So differentiating according to that particular intellectual tool, background knowledge. Similarly, when we look at what Carol Ann Tomlinson said about differentiating process, it matches the four other intellectual tools. So we can differentiate thinking strategies. I can say to a group, "Look, you guys tend to jump to conclusions, "so I want you to write out at least 10 possibilities "before you pick one." Another group, I can say, "I know you guys are going to come up "with lots of ideas, "but given what happened last week, "I know it's gonna be hard for you "to come to a conclusion. "So here's my challenge to you. "I want your thinking strategy to be, "I want you to pick an idea in the first minute "that you're talking together, "everybody pick one, "and then I want you to spend the next five minutes "looking at which of those seems to be the most likely "because I know it's hard once you come up with 10 ideas "to pick the top one. "Just pick one, and then let's look at them." Or maybe I say, this group, "Here's a thinking strategy "for inferring from an image. "I want you to circle all the clues right on the page." This group, "I want you to use the five W's chart "to help you look deeply at the, you know, "who is in this image, what's in this image, "why are they doing what they're doing, et cetera." So we can differentiate thinking strategies.

Similarly, we can differentiate who has to learn what thinking vocabulary. Sometimes we don't do any whole group lessons at all, and none of the kids understand what we mean by justify or explain or cause or consequence. On the other hand, sometimes we do a whole group lesson where with, in reality, 80% of the kids already have that, and only 20% of the kids need that learning. So we can teach the vocabulary required in a small group instruction type of way. And finally, we can differentiate the criteria that students use. All students do not use, need to use the same number of criteria. The more criteria you use to make a decision, the more complex it is. So if we're looking at what's a great solution, or if we're looking at what's a great strategy in math or we're looking at who's the best, you know, who's a great friend for this character, if we have four criteria that are helping us make a decision, that is far more complex than having two criteria to help. The learning target is the same.

Everybody needs to consider evidence and has to think critically to make a reasoned judgment and justify it. However, the number of criteria you use increases the complexity of the task, so why not differentiate it? We won't spend a lot of time going back to that, but something that I'd like you to consider. I have a short video I would like to show you. I hope we'll have time. I wanna make sure we have at least 10 minutes for questions at the end, so we're gonna try. The question becomes, we've done all this bit about differentiating. The question is, I keep saying to you, "Watch closely, and decide, as students grapple "with a challenge, what they need." So I thought what we might do is practice by watching a short video. And as you watch the video, you might think to yourself, which of these intellectual tools could we actually see in a product? So when they write something or create something at the end of a unit, will we see their background knowledge, yes, probably. Will we see how they used criteria to make decisions, maybe. Will we see whether they understood certain terms, possibly. Will we see the thinking strategy they used, probably not. So some of these things we might have to assess through observations and through conversations.

So that being said, let's watch a short video. It's a short video of three people grappling with a challenge, okay? It's a math challenge. It's not quite a critical challenge, but imagine that on the test, you've given them this question, seven times what equals 28. And here's the answers they've given you. Student A has said seven times 13 is 28. Student B has said seven times four is 28, and Student C has left it blank. So when I ask you what does each student now need, how are you gonna know? Like, do we know for sure that Student B has a good grasp of the context? Do we know that Student A totally misunderstands multiplication? What do we know? So I'm suggesting we need to watch them and then decide how to differentiate. So I'm gonna ask Susanna, or maybe I'll be able to, okay, no. She's gonna do it . So to show you the video, and see what you think, what does each student need?

- No, no, Smoky, don't, don't, don't do!

- Aw, come on, one donut.

- Don't, I haven't got enough. I can't afford it, I just made 28 of these things.

- Well.

- I mean, after all, seven officers I gotta feed, and I have just enough to give 'em 13 a piece.

- You what?

- 13 a piece.

- 13 a piece?

- Yeah.

- For seven officers.

- Yeah.

- Each gets 13? You've only got 28.

- That's right, I got 28 donuts and seven, 13, I gotta give 'em to 'em.

- Seven 13's is 28?

- Yeah.

- That's ridiculous.

- It's gotta be right.

- Seven times four is 28, not seven times 13.

- Seven times four is 28?

- Sure.

- Seven times four is 28. Must have gone to a cheap school. I mean, seven times, seven times 13 is 28.

- That's ridiculous.

- I'm gonna figure it out here.

- What's the matter with you?

- Now, I've got this all figured out, no kidding.

- You have?

- Yeah. I figured it out myself.

- Prove that to me.

- I'm gonna prove it to you, don't worry.

- Ridiculous.

- [Costello] No it ain't, no it ain't.

- Aw, come, come, come.

- [Costello] No it ain't, and it's not ridiculous.

- There's no sense to your argument.

- [Costello] Is that so?

- Go ahead.

- You'll see. Now, there are seven officers.

- That's right.

- There's a seven. And I'm gonna divide and prove it to you. Now, 28 donuts.

- 28 donuts. Now, wait a minute. You claim the seven goes into 28 13 times?

- Mm hmm.

- Prove it to me.

- Now, seven into two.

- What do you mean, seven into two?

- Seven will not go into two, no matter how much you try.

- We know that.

- You couldn't even push that big seven into that little bitty--

- Certainly not.

- Therefore, we can't use the two.

- What are you gonna do with it?

- I'm gonna let Dizzy hold it. Dizzy, you hold that two for me, would you please?
Thank you, I'll use it later, mm hmm.

- [Abbott] What is this all about?

- Now, seven into eight, one.

- One.

- Now, we're gonna carry the seven.

- Carry the seven.

- Gonna carry the seven.

- So carry it.

- It's getting a little heavy, so I'll put it right there on the end. Seven from eight?

- One.

- One. Now, a minute ago, we didn't use the two.

- [Abbott] What do you mean?

- I'm gonna use it now.

- Use it?

- Dizzy, give me back the two. Thanks, heh heh, put it right down there.

- So?

- See? Now, seven into 21?

- Three times.

- Three times. Seven, 28, 13.

- Oh, now wait a minute, come here. You ever go to school, stupid?

- Yeah, and I came out the same way.

- Aw, nevermind that. Multiply this.

- Yeah.

- [Abbott] Put down 13 up there.

- Put down 13?

- Yes. Now you claim that each officer gets 13 donuts.

- They gotta get--

- Now, wait a minute. There are seven officers? Put down seven.

- Seven.

- Draw a line.

- Sure.

- Now, seven times 13 is what?

- 28.

- Prove it.

- Seven times three.

- 21.

- Seven times one?

- Seven.

- Seven and one?

- Eight.

- Two.

- Aw, no, come on.

- It comes out right, happens all the time.

- [Abbott] Well, it shouldn't come out right.

- It's gotta come out right, or I go to the brig, that I know.

- [Abbott] Just a minute, just a minute.

- Mm hmm.

- Yeah. We'll add this up. Put down 13 seven times.

- Okay.

- We'll add it up--

- That's one.

- we'll figure this out.

- Two.

- Two.

- Three.

- Three.

- Four.

- Four.

- Five, six.

- No, now wait a minute, minute.

- Oh, I forgot Dynamite.

- Yes.

- Don't wanna forget Dynamite.

- No, there's seven officers. Now, we're getting it. Now, you came, all this added up amounts to what?

- 28.

- Give me the chalk.

- No, you're thinking it's not gonna come out right.

- Sure, sure, there's something wrong. There's three, six, nine, 12, 15, 18, 21.

- 22, 23, 24, 25, 26, 27, 28.

- Aw.

- See?

- All hands on deck, all hands on deck. All hands on deck.

- I mean it.

- [Usha] Okay, I'm just gonna, thank you. Okay . Okay, is everybody back, are we back?

- [Susanna] Yes, we're back.

- [Usha] Okay, thank you. And seeing my screen, just making sure, yes, okay. So now if you were to, having watched them, if you were to say, what do we notice about the students now that they've grappled with this challenge? I'm gonna just take a minute and ask you to tell me a little bit about, let's say Student A. So he's the one

who thought seven times 13 equals 28. What do you know about him, what does he need? Where's the gap in his learning? What's his strength, first of all, and where are the gaps in his learning?

So I invite you to put it in the questions box, if you would like. What do you notice about Student A? Where is his strength, and what might he need? Do we have any thoughts? When I've spoken to people in the past, yes, absolutely, he can add. We know he can add. He's very confident. He can show his learning, his thinking in three different ways, but he's having some difficulty, certainly, or needs to understand better place value, right? He doesn't quite understand the algorithms that he's using. He has them, but he's missing some key steps in them, absolutely. He doesn't seem to understand the size of numbers, you know, what's possible and is that a feasible answer or not.

Tell me a little bit about Student B. What is his strength, and does he have any needs? Are you confident in his understanding of multiplication? He got the right answer. Is there anything you're worried about him? Some people might say, "Well, he seems to have it, yeah." It may be rote learning. He seems to know that seven times four equals 28, but does he have conceptual understanding of it? He doesn't seem to be able to explain. He can't communicate his process. We don't even know how he arrived at the answer, somebody said. You know, was it, was it even a fluke? But he does seem to know. He seems very confident that he knows his multiplication. He understands. He even says, "It doesn't make any sense." So he has a sense of what it means for an answer to make sense, but he isn't able to explain what that is.

And what do we know about Student C? Nothing. We don't know anything about Student C. So when we go back to thinking about differentiating, and I hope that was fun. I find that a fun video. Please feel free to use it. You can find it on YouTube if you just Google Abbott and Costello, "Seven Times Four Equals 28." Sorry, "Seven Times 13 Equals 28." But when we think about differentiating, we also need to think about what are we noticing about students when they grapple with a challenge, and

how is that informing how we group them the next day, or even how in the moment, who are we pulling aside to do a little bit about place value? Who are we pulling aside to teach a little bit about a reading strategy?

So the suggestion overall, and just to sort bring this to a broad sort of closure, is first, let's make sure we are framing tasks that truly do invite thinking, that they invite students to grapple with a challenge, they are critical challenges. Then let's think about how we might, the different ways we might frame that task to make it as accessible as possible, to keep our learning target high, that we want all students engaging in thinking, but we wanted to make it accessible as possible, and there are six different ways that we might do that. Third, how do we watch as we make their thinking visible and assess their use of those five intellectual tools? And then fourth, how do we group students or teach them explicitly those intellectual tools to the ones who need it, and how do we leverage the strengths of those who have those tools, okay? Those are the things that I hope that provide some ideas, some hints into how we might differentiate student thinking.

I would love to invite some questions. Clearly, this is just the beginning and a little bit of a taste of how we might differentiate tasks to engage all students in quality thinking. I hope it gives you some ideas about your whole group lessons and how they might be differentiated to support all students' thinking. And I wonder and would love to hear a little bit about what you're thinking now, what are you wondering about, whether you have some questions or some ideas that you would like to share. So I'm gonna pass the mic back to Susanna, and I think she's gonna facilitate questions.

- [Susanna] For the presentation. We always love it when you come by and share your knowledge and expertise with us. So as Usha mentioned, we're gonna move on to the question and answer period. If you do have a question, I'll read your question out loud. If your question doesn't get answered today, then we will be able to submit it by email or through Twitter. So I have a couple questions starting with about the intellectual tools chart. "Do you find that there is one intellectual tool "that is really

common, "commonly an area of need for students with LDs, "or is it sort of across the board with all students?"

- [Usha] That's a good question. I do think that, I think there's, it is across the board, for sure. But I do think that there's a couple of things. One is, again, with the background knowledge, it's not so much about having the background knowledge, it's about accessing. And so in particular, again, working memory, when that's an issue, or the ability to hold instructions in, you know, only verbal instructions in one's head. Those kinds of things have to do with background knowledge and how might you present it in multiple different ways. When text, you know, somebody mentioned at the beginning the issue of the speed of reading text, that's an issue of background knowledge, right? So do they need, how much background knowledge do they need in order to actually engage in the challenge? There's so many different, oops, there are so many different elements that have to do with background knowledge that aren't do they have it , it's how they get it. And so I think that's something to really pay attention to. And then the second thing that I would really raise is thinking strategies. So I think we do a lot of work around reading strategies and math strategies, and I think particularly in many of our learning strategies, classes, for example, we're trying to teach, you know, a variety of different strategies. So I think that's something we already recognize as an important intellectual tool. I think that we don't always name the strategy as a thinking strategy that helps you work through a challenge. We don't always name the challenge. So we might be teaching students a thinking strategy, but they don't actually know in which challenges or what contexts to apply it. And so that's, I think, something that we can consider as we're teaching student strategies, help them be meta-cognitive about when is this strategy going to be applicable. And also, how do they carry that in a little toolbox of some sort, like, whether it's a written toolbox. Or I had a group of teachers who actually had kids with recipe cards boxes on their desks, and every time they had a different strategy, they popped it in the recipe card, and when they were stuck, they would just go to their toolbox and, you know, sift through them, say, "What could help me?" so I think we do teach thinking strategies, but we don't necessarily teach students how to access those thinking strategies. I don't know if that answers that question. I hope it does.

- [Susanna] Yeah, I think that was great. So another question from the audience. This one came from a secondary school teacher who says that they struggle with how to differentiate without making students feel judged or embarrassed. Let's say they use the Critique the Piece task differentiating by having strong students use four criteria and some who are maybe struggling using two or three criteria. It might cause an awkward situation. What do you say--

- Yeah.

- [Susanna] to students who say, why am I different?

- [Usha] Very good, it's a great question. And that's really at the heart of our beliefs, but not just beliefs, but how to operationalize this idea of differentiation in a way that preserves self-esteem and focuses on strengths and takes a strengths-based approach, right, not a deficit approach. So it's an excellent question. There's, I'm gonna say two things. One is I wonder about, one of the things I try to do in my classroom is early in the year, and I guess now that it'll be early in second semester for secondary, is get kids used to multiple different groupings and the idea that people will be working on different challenges in the course. And that, I think, is really key at the beginning without necessarily intentional grouping at the beginning, but rather that in this classroom, yeah, some people are working in threes, some are working in two, and it just changes. Sometimes working in a U-shaped configuration, sometimes we're in groups of four. Sometimes some people are working at the whiteboard and other people are working at the computers.

Like, I think that I really tried later in my teaching career to make sure that if I created sort of a climate where it was, nobody thought twice about working in groups because we established that from the beginning. Then when we started doing intentional, and I used flashcards at the beginning to just create groups, you know. They were random groups, and they just got used to the fact that, you know, they would walk in, and some days, the desks would be in a totally different configuration.

I think that that helped. And then the second thing is, certain things I think are worthwhile being additive. So criteria is one of them, and I think you really, that's a good thing you point out there. I would never wanna say, "This group used four criteria," "This group used two criteria." But I would be interested in maybe starting with two criteria and then giving them the time to grapple with it. And when people think they've, [Audio cuts out] other criteria into the next thing, now, what do you think? Does this change your ranking?

- [Susanna] That sounds great. We had a very eagle-eyed viewer notice that you didn't touch on differentiating environments. There was a little bubble that said community thinkers. Could you just explain that little slide?

- [Usha] Yeah, I think that, sorry, I wasn't super explicit about it. I think that when we talk about differentiating environments, we have traditionally talked about inside classroom, outside classroom, right? So, you know, withdrawal from, especially for LD students, right, withdrawal from the classroom into special classroom, partial withdrawal, et cetera. I would like to suggest that inside the classroom, how do we group students, how do we change the environment within the classroom for some students? So that might be, as I said, configuration of desks. Are they in a vertical learning surface, or not? What are the materials they are using? So just thinking about how, within my classroom, we are a community of thinkers, and inside of that community, how might our micro-environments of learning be mildly different?

- [Susanna] All right, thank you so much. I think that's all we have time for today. So we're gonna end our question and answer session right now. Should you have any further questions, please either email us at info@LDatSchool.ca or use the hashtag on Twitter, #LDwebinar, and we'll ensure to get those questions answered. So we do have more--

- Thank you so much.

- [Susanna] webinars coming up throughout the year, so at the moment, we don't have anything on the calendar, but if you stay tuned, you will find out about our next upcoming webinars. The best ways to hear about these upcoming webinars and our new resources on the site is to either follow us on social media, so you'll see our Twitter and Facebook on the screen there. You can find us at @LDatSchool on both of those sites, or you can also, alternatively, sign up for our newsletter, which comes out once a month. That way, you'll never miss a webinar or a new resource ever again. And one last thing, please mark your calendars and save the date to join us at LD@School's seventh annual Educators' Institute, which will be held on the 18th and 19th of August this summer. If you are an educator or researcher passionate about helping students with learning disabilities and wanna share your expertise with educators from across Ontario, we're currently looking for presenters dedicated to inspiring all educators who work with or support students with LDs. If that sounds like you and you're interested in presenting, please visit the web page listed at the bottom of the slide, or just visit www.ldatschool.ca, and click on the Educators' Institute tab at the top of the homepage. On behalf of the LD@School team, I would once again like to thank Usha for the presentation and thank all of our participants for joining us. Just looking at the questions, I see of a lot of, "This was amazing," "When's the next amazing webinar?" So thank you to all our viewers. Please remember that we will be sending out presentation slides and a short survey tomorrow morning. The feedback we receive from these surveys is really important information that we use to produce future webinars, so if you do have the time, it usually takes less than five minutes, we would greatly appreciate you filling out that survey. And we'll be sending out the link to the recorded presentation in approximately three weeks after transcription and closed captioning has made it an accessible video. Thank you again for participating in this webinar, and enjoy the rest of your day.

- [Usha] Thanks, everyone.