Module 5: Designing Learning

Video 5a: Defining Deep Learning

When we've been working with educators in the province, a common question we get is what could this look like? How can we do this work? What we offer today is just our way that Heather and I have designed learning, and we share that just as a way for you to see how do we link some of the pieces together. We hope that we show how we tie in curricular competencies, content, big idea, essential questions. We hope that you'll notice that it reflects the provincial assessments that we shared in terms of layering text, those really important ideas.

Before we jump in, we want you to just consider what is deep learning. Take a minute on your own and just consider when you hear deep learning, what does that mean for you? Then after you had a moment to do that or a couple of minutes, then talk to a partner, if you're working with a partner or a team and just compare your answers. How do you define deep learning?

Video 5a: Conditions for Deep Learning

So now that you've considered what your definition of deep learning is, we want to consider what the research offers us. Research suggests that we should help students see how things are interconnected, solve real world problems, learn from each other and from people in the community and beyond the school community, and feel like they're making a difference, that they're doing something that matters in the world, to be able to connect with experts and develop expertise, and then to have opportunities to share their learning in authentic ways.

This synthesis was developed by Dr. Leyton Schnellert at UBC and Faye Brownlie as they considered some research from 2009 by Willms, Friesian, and Melton. Now that we've considered deep learning and what the research suggests, we want you to consider what are the conditions that enable deep learning? We'll ask you, if you're in a group, to do a technique called placemat.

In placemat, each person has a section of the placemat where they're going to write down all of their ideas. If Heather and I were working together, I'm writing my ideas, Heather's writing her ideas, and if we had two other partners as indicated on the diagram, we would have four people generating their ideas. That's step one

Then after that, you'll notice that there's a section in the center, and that's where we're going to put our common ideas or we're going to put things that are unique to each of our placemats there. For example, if Heather and I both had relationships written down in our own sections, we'd move relationships to the center of the placemat just once or maybe once and tick it, so we know that that's something that's come up multiple times. We're kind of creating a synthesis in the middle of all of our placemats in terms of the conditions for deep learning.

Then if you want an activity to extend, that would be to look at if you were to rank those are those conditions into like your top five, negotiate what that would be. How would you get those top five conditions that you agree as a team are the most important conditions for deep learning. We'd like to give you about maybe two minutes to think alone and then 10 minutes to negotiate as a team to the center, and then maybe take another five minutes to rank those and then we'll come back.

Video 5b: Design Considerations

What we'd like to do next is now look at how we kind of, with deep learning in mind, how do we plan and what do we do on purpose to create those conditions for students to engage authentically in the curriculum?

You'll notice that we have identified eight planning considerations that we kind of hold, Heather and I, in mind as we look at designing learning. I think it's, this is just us, this isn't the way, it's a way. Considering learning standards, your classroom context, connections to core competencies, assessment, we look at multiple entry points.

We really want to make sure that we're considering inclusion and all learners being in the work, indigenous worldviews, and perspectives, essential questions, and as we talked about before, big ideas kind of being that overarching way that kind of helps us organize the learning.

So this is a learning sequence that we've designed, and we did it around science and ELA because we wanted to reinforce that there's a lot of opportunity in this curriculum, the way it's designed, for cross-curricular approaches. This is to represent science and ELA seven. You'll notice that we've got the big ideas, we've identified big ideas from both science and ELA that we can weave together.

Then here you'll notice that we've identified curricular competencies that we're focusing on. Just like we've talked about in other segments of this series, we want to make sure that we're identifying what are we trying to get better at with our students. In this case, from the science curriculum, we're looking at evaluating, and from ELA we've identified two curricular competencies. These are the things we are working at intentionally to try to develop with our students.

It doesn't mean that the other curricular competencies aren't happening, it's just, this is our focus for development, and therefore this will be our focus for our assessment. Kind of like what you said earlier about the light on the stage.

Yeah. Shining the ..., we have all the actors on the stage, and we're shining a spotlight on one or two. These are the ones that we're purposefully trying to identify and develop.

Then, of course, content matters. We can't do any big thinking without having some content. These are the identified pieces of content that we'd be developing.

Now, we wouldn't be able to do all of this in a lesson. We are going to show the first lesson of several that would follow, but we're just setting things up. But this is our intention in terms of all three layers of big ideas, curricular competencies, and content that we would be building many lessons towards.

Video 5b: Introducing the Unit
We would start with essential questions. Again, we talked about how this is common for many educators in the province, reflected in our provincial assessments

For us the essential questions are how do we balance a growing economy while supporting biodiversity? Our second question, how do diverse perspectives contribute to our community and society?

We're going to take you through a lesson where we just show you kind of how we would design the learning to look at a before learning piece, a during learning piece, and then what students might be doing in that after learning piece. Again, like Heather said earlier, this is one lesson that would be the beginning of a unit that would lead into multiple lessons and then possibly launch into inquiry.

The slide that's coming up right now, you see a list of bulleted words. How we would actually use this with our students is we might have three words come up out at the beginning, have students work with a partner and talk about what are they noticing in those words, what does it make them think about. Then, we might have three more words come out, now what are you thinking about? We're really just trying to surface vocabulary, activate prior knowledge, give students the opportunity to try on the vocabulary and see what connections they're making.

We would do this four or five times with vocabulary that is coming up in a text that we would be using. The whole time we want students to be kind of thinking about and predicting where they might be going next in their learning.

We might then show an image. The image would be something, again, connected that would have the students maybe look at it and go, "Hmm, how does that connect to whatever I already know?" We've had these, this group of words, now we have this image.

So now with my partner, now what am I thinking? What might we be learning about? We may have students make a prediction. We may have students share what led them to the prediction that they have. Given the image in words, what are you thinking? But that would be the way that we would maybe bring students into the work.

Then the final image that we would share is just to actually reveal what the topic is. We haven't at this point actually told students what it is that they're learning about. We haven't set any context for them. They've been just predicting and they don't have the essential questions. They don't have the essential questions either at this point because we're trying to build that interest before we launch into the topic.

Video 5b: Setting the Context
From this image, we would have students identify that this is, first of all, about caribou. This was designed in a community where this was quite a relevant topic and is in many places in British Columbia.

Then we would start to set the context around what are the things that we're going to ask you to do? We have things that we would ask students to do on a daily basis that are all scaffolding

towards something much larger. We want them to understand what the larger piece is that their scaffolding to.

In this case, it's to justify recommendations as to whether the regional district of the central Kootenays should continue to fund and actively promote the mountain caribou recovery effort. This is a provincial conversation that that's happening and a federal conversation that's happening because of the wide range of the caribou. This is a topic that's relevant for many communities in BC, but this was particularly relevant in the regional district and central Kootenays.

As I mentioned, we would want to break that big task down because that's quite a large undertaking, especially for a grade seven level. We would want to break that down. For the today's purpose, for this one lesson, we're asking students to consider multiple pieces of text.

Their job will be to write to explain the four viewpoints. We'll present them with a social viewpoint, a cultural viewpoint, ethical, and environmental, and then they'll justify which is most important to them at this point because we know that they're going to develop deeper understanding over time.

We don't want them to be, to form their full opinion after just one viewing of four different pieces of text. We want to give them a chance to say, "This is what I think right now," and it will be reshaped over time.

One of the things we talked about before was, Heather talked about the iterative process, of have kids having multiple opportunities to get better at the curricular competencies and by scaffolding learning the way we're doing. Students get to practice, practice, practice those curricular competencies over the course of the unit and throughout this particular task to build those skills, so that when, ultimately, we look at that snapshot of assessment, students have had the chance to be successful and really demonstrate their understanding.

You'll notice the curricular competency that we selected was around evaluation, the one from science was around evaluation. At the heart of evaluation is justification. You'll notice every time we have students speaking with each other, any talking prompt or any write that they're doing, we're asking them to justify their thinking because that is central to evaluation, and that is the curricular competency that we've identified, that we are developing and assessing in this unit.

Video 5b: Supporting the Learning
Whenever we have a task for students, the thing that they're going to be doing, we want to help them break it down so they know what they need to do on purpose. As a group we could discuss, what do you need to know to do this task well? What are the pieces, the foundational pieces that you need to have? What do you need to include to do this well? Then, what does it mean to explain and justify? Again, justification and getting the explanation really clear is part of our evaluating a curricular competency. You'll notice that we're trying to align those pieces as many times as possible and as explicitly as possible for students.

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On the screen now, you'll see a thinking sheet on perspectives that we've included. We want students to have a tracking piece that allows them to jot down their thinking. On here you'll see down the left side we have the different perspectives, and across the top we have important information and synthesis because the ELA curricular competency, one of them where we're looking at, focuses on synthesis. Again, we want to make sure that the tool that we're using to process information is in line with the curricular competency that we're trying to develop.

This graphic organizer allows us to support students in multiple ways as well. If we wanted to make it more accessible for a student who maybe isn't going to be focusing on all four perspectives, they might be focusing on one perspective, and we could zoom in on that particular perspective. Or perhaps we have three filled out and students that are doing one. There's multiple ways of us supporting students. It could also include images and words, not just words. Having some way for students to hold their thinking is an important way to allow access into the activity.

Until this point, we've been setting up the learning, and now we would move into the phase of actually introducing new learning for students. We want to layer in as many different pieces of texts as well. We operate with the expanded definition of text, which means that anything that we're viewing or consuming and processing is considered text. That includes video, images, infographics, typical pieces of printed text, lab experiments, word problems in math, any of those things are considered text.

In this case, we've got a video giving some background information and the environmental perspective, we've got an infographic that is providing, again, the biologist perspective, but also includes some other pieces around graphing and some statistics.

Then we've got students reading in triads. This is where they're able to read three different pieces of text.

These texts can, again, be adapted to have different reading levels, different accessibility points. For this it could be a newspaper article, could be a legend or could be, what, I think something from like a Ministry of Environment website. These could be anything, but I think what is important for us to remember is, when we put students in triads and we're using multiple pieces of texts, it does allow us the opportunity to have kids matched with certain kinds of texts. Again, that could be a graph, it could be another infographic. There's so many ways for us to create that information in the triads so that all students can feel included and they can be part of the conversation to share their thinking and their understanding.

We had to be strategic about which pieces of texts that we pulled because we want the four perspectives to be represented. We were thoughtful about having one piece of text written by an Inuit woman to provide a cultural perspective, we have one that's written by a local news agency around the economic perspective for a community, and then one that brings in the ethical piece around how we approach conservation.

Video 5c: Starting with Intention

One of the things we hear from folks when we talk about structuring learning this way is where do you find all the resources? How do we do this?

Honestly, for Heather and I, once we have a sense of what does the lesson design look like, what are our essential questions? We go to Google to find our images, infographics, articles. I think it's ... there's so much information available on so many sites, you just have to make sure you don't get stuck down a rabbit hole trying to spend too much time doing it. But for us, we find that there's so many accessible pieces that allow for layering of text.

I think it was the frame of knowing that we were doing the four different perspectives that allowed us to really discern which pieces of texts would be most relevant, and then knowing that our audience in this case was grade seven, trying to find texts that was appropriate for grade seven readers.

Now that students have had a chance to work through their new information and they've looked at the multiple perspectives, or maybe for some students one perspective, we would then take them into the tasks that we want them to do for that day.

That task is, write to explain the four viewpoints. Again, that could be one, two, three, depending on the student, social, cultural, ethical and environmental, and justify, which is the most important to you so far.

We talked about that earlier. We want kids to have the opportunity to know that this matters to you now, but as we add more information, it's okay to change and have a different idea down the road as long as we're focusing on that justification.

We'd want to remind students of how this is connecting to their overarching tasks, what's the bigger picture that we're trying to move towards? But then we would give students an opportunity to actually write to justify their current thinking.

In terms of how would we assess this? Well, if this is the first day, we're just trying to build an understanding with our students around what do we mean by those curricular competencies? Then setting some criteria around what does development look like, how do we know we're getting better at those curricular competencies? This would be strictly formative at this point.

We may use the samples that we have from students to generate criteria that we will then use to set students up to be more deliberate and specific in a further day's lessons.

Video 5c: Summary

We just provided an example of how Heather and I would do this work if we had that, if we were sitting down to design for students, this is how we might do it. We have so many amazing educators in our province that are sharing just amazing examples of the work. Twitter is alive with examples from folks. We know that many districts have educators posting on websites, and so lots of examples with learning mats, UDL. We encourage you to look at what's out there and find what fits best for you. But really consider what are the things that we're doing on purpose for kids? How are we structuring and scaffolding learning to make sure that students have the

opportunity to be successful in whatever it is we're focusing on. Then when we do that assessment piece, how do we know students are getting better at what we intended? What's our evidence for that? Then how do we share that with students and parents? I think it's tying all of those pieces together.

Additionally, I hope that you noticed in the lesson, as I said out at the beginning, that the way we designed with essential questions and layering text and focusing on curricular competencies, again, aligns with our provincial assessments. Even though this is a grade seven lesson, we're still modeling the way that that learning can work in helping students feel more confident and comfortable with their learning.