

## ASSESSING IMPACT

[EMMA:] So I thought that given that we're about halfway through, at midpoint, it would be a good idea for us to look at our expectations that we picked for the inquiry and see, do we wanna do a check in? We've done a check in for them just to see where they are but do we wanna look at how we're meeting these expectations and remember last year we produced something like this, right?

[NANCY:] Mm-hmm.

[EMMA:] For the students. Do the students need something to have in their hands so that they're aware of all the different expectations and the different subject areas? Because I think they're aware of it in a broad sense, but not necessarily specifically what we're asking them, the expectations we're asking them to meet. I think the overall geography expectations are automatically, they're well into that, right?

[NANCY:] Mm-hmm.

[EMMA:] Okay, like, so describing the possible features of a sustainable community...

[ELLA:] They've organized that.

[EMMA:] They totally, they totally have, right? Like they've formulated questions, they've gathered and organized data, they've analyzed and constructed...

[ROSS:] Maps.

[EMMA:] ...maps.

[ROSS:] Yeah.

[EMMA:] They've interpreted and analyzed data, they're evaluating evidence and drawing conclusions. Like these are like...

[NANCY:] Mm-hmm.

[ROSS:] Yeah.

[EMMA:] ...no problem.

[ROSS:] Then the communication is the showcase.

[EMMA:] Then the communication is the showcase.

[ELLA:] But if we do take a couple of the bigger questions and add them in...

[EMMA:] Right.

[ELLA:] ...then we should be able to cover everything.

[EMMA:] Mm-hmm.

[ELLA:] You can formulate a question, doesn't mean you have the depth. Ask, I think we should ask them direct questions.

[NANCY:] I do too, yeah.

[ELLA:] Right.

[ANGELA:] Yeah.

[NANCY:] Yeah.

[ELLA:] Yeah. Like that.

[EMMA:] When though?

[ELLA:] Now.

[EMMA:] Now?

[ELLA:] Yeah.

[NANCY:] Mm-hmm.

[ELLA:] As they're going along.

[NANCY:] This is like a check in, but also like...

[EMMA:] Okay.  
[NANCY:] ...get that deeper level of thinking and research...  
[EMMA:] So we have to make sure it applies to all of their spaces, right, because...  
[ROSS:] Mm-hmm.  
[EMMA:] ...let's think of like, there's a broad range, some of them are, like someone's doing subway station and someone's doing Ontario Place so we need to think about, the questions need to be broad enough that they can find a way to respond to them.  
[ROSS:] Well they know global urbanization, like the trend towards urbanization.  
[NANCY:] And sustainability, that's...  
[ROSS:] They have sustainability in the first question.  
[EMMA:] So how about something to do with, how does your design reflect what you have learned about global urbanization? What do you think?  
[ROSS:] Yeah. Do you wanna take the one...  
[FEMALE:] So that's geography done...  
[ROSS:] Or what about the one that's at the top there, describe some practices what are, like what lessons can we learn about sustainable living?  
[ELLA:] From blank?  
[ROSS:] So yeah from the global examples...  
[ELLA:] Right, yeah.  
[ROSS:] ...right, so...  
[NANCY:] Yeah.  
[ROSS:] ...what are some, what are the sustainable practices you...  
[EMMA:] But aren't they answering that in question one? What types of actions can be taken to make...  
[ROSS:] Yeah.  
[EMMA:] ...buildings more sustainable.  
[ROSS:] Yeah, that doesn't...  
[ELLA:] That doesn't...  
[ROSS:] ...hit the global...  
[ELLA:] Yeah.  
[ROSS:] ...examples because they may give a bunch of actions but they're not connecting it to the global...  
[ELLA:] Other countries in the world.  
[ROSS:] ...which is the...  
[ANGELA:] Yeah, I like...  
[ROSS:] ...it's global settlement.  
[ANGELA:] ...what lessons can we learn.  
[ROSS:] Yeah.  
[ANGELA:] I think that's a...  
[ROSS:] Or what lessons have we learned?  
[ANGELA:] Then they can pull [inaudible] ... examples.  
[FEMALE:] Yeah.  
[EMMA:] About sustainable living? How about just that...  
[ROSS:] Yeah.  
[ANGELA:] Yeah.  
[EMMA:] ...just that and see what they say.  
[ELLA:] From globalism.

[ROSS:] Yeah.

[EMMA:] From the global examples that you've...

[ANGELA:] I like the idea.

[EMMA:] ...alright.

[ROSS:] And what lessons have you learned?

[EMMA:] Yeah.

[ELLA:] There are a lot of students right now, they had trouble first of all with the global idea, but they're picking a lot of examples. It doesn't mean that they're connecting to why that example works...

[ROSS:] Yeah.

[ELLA:] ...in that space.

[EMMA:] Right.

[ELLA:] They might say right now, oh I like this 'cause this visually looks appealing, that's like the buy-in for engagement is oh, I like the way this looks or this maybe handles one situation, but they don't connect it back to the space that it originally came from so that might do that, right?

[ANGELA:] Mm-hmm.

[ELLA:] As I would said, well this was needed in Tokyo because...

[NANCY:] Because of space issues.

[ELLA:] Right, yeah.

[NANCY:] Mm-hmm.

[ELLA:] So it might actually require further research...

[NANCY:] Mm-hmm.

[ELLA:] ...'cause some of their sources might not go into great detail about why that example works in that space.

[NANCY:] Mm-hmm.

[EMMA:] So would it work though, to show them the expectations and have them come up with how they're meeting the expectations, even in point form afterwards. Like if they were to say, if we were to say to them, like, you know, the, one of the expectations, straight from the curriculum and then ask them how they may...

[ELLA:] How would you show this?

[EMMA:] ...how are you demonstrating this?

[NANCY:] Yeah.

[ROSS:] Yeah.

[NANCY:] That's not a bad idea actually.

[EMMA:] Right? Because then it's not one size fits all it's they get to...

[ANGELA:] Mm-hmm. Mm-hmm.

[EMMA:] ...because the areas are so different and what they're doing is so different and their product is so different, it feels artificial to try and narrow them down to one question for everybody and if you think about the check in that we just did, it was very broad. Right? Very, very broad. They could have answered it in so many different ways.

[ROSS:] Mm-hmm.

[ELLA:] Mm-hmm.

[NANCY:] Mm-hmm.

[EMMA:] So for them, so for that boy Amir who says we haven't even done science yet this year...

[ANGELA:] Mm-hmm.

[EMMA:] ...right? You know, we haven't done science yet this year. It would be great to actually hold up the science curriculum and say...

[NANCY:] Have we done this, have we done this.

[EMMA:] This is the, you know, the inquiry that you're doing, the design that you're doing is hitting the grade eight curriculum in these ways, so how would you like to demonstrate to us that you have met this expectation? And remember we're trying to develop, sort of, habits of mind right?

[ROSS:] Mm-hmm.

[EMMA:] So even if what we see, what they produce for us isn't, doesn't have as much variation as we're looking for, we're developing the habit of mind of how to look at sustainable, you know, development and for in the future when they are urban planners...

[ANGELA:] Mm-hmm, exactly.

[EMMA:] ...we're creating a habit of mind for them.

## **ASSESSMENT AND IMPACT**

[EMMA:] When we're assessing the inquiry and knowledge building, it's actually a process we're assessing and typically, you know, in the past you've probably been used to assessing a product that meets a group of expectations and so it's a bit complicated, right? Because we've got to balance them both out, right? And if you look at the four stages of the inquiry process, which I think are in here, we need to think about how are we assessing what they're able to do as they move through that process. In this design that we're doing now, finding reliable sources is an integral piece to what they're doing. How are you assessing the students on their ability to do that?

[ELLA:] Well that's where you have your checklist, so they should be able to check through where the sources are coming from, why it's reliable, so the reading checklist would work for that.

[ANGELA:] Yeah, and I've done...

[ELLA:] Which would mean...

[ANGELA:] Oh sorry, I've done...

[ELLA:] No...

[ANGELA:] ...some co-creating with them about what, you know, what makes a reliable source.

[ELLA:] Right.

[ANGELA:] And then we've actually come up with that checklist together as a class and then that's what I've been assessing them on as they go.

[EMMA:] How did it go yesterday with the day in the library? Did you see that some kids were able to make, some groups were able to make some good progress and...?

[ANGELA:] yeah.

[EMMA:] yeah.

[ANGELA:] They're all at different places, some kids were working on their surveys and some students were working on looking at all their global examples and trying to choose some as a group to put into their design or looking at their statistics.

[ROSS:] I think the different times that we do them we maybe focus on a different part

of the process so in the beginning we focused heavily on questioning because it's so important, so that might be, even though we have the gathering or organizing of information and the analyzing, the communicating, we may only focus on the questioning part for the inquiry. Where, and then on reflection we may, next time, think we need to do more on analyzing and interpreting because we didn't hit or a lot of students didn't quite get there. So that might be our focus, so the questioning may not be as prominent and so once we see this process through to the end, we can then reflect and plan for next time.

[ELLA:] I thought it was a good push for a couple of those students that were behind to see, you know, screens full with graphs and examples and the rich discussion that kind of pulled them up. There was one group that really put a lot of work into that two periods, they got along a lot better than before.

[EMMA:] Right.

[EMMA:] So if you think about the first stage of what was the question formulating a good question and looking at how you move the student along in that process with coming up with a really good question to guide what they were doing, that was assessment for learning, right? So how did you do that with the students?

[ANGELA:] So every student is a little bit different in how they choose to present things or how they choose to organize their work or write things out, so I'm finding it takes me a little bit more time to assess each student now than it would in the past.

[NANCY:] It's very differentiated.

[ANGELA:] Very differentiated, yeah. Yeah, which is great.

[NANCY:] I really like it actually, yeah.

[NANCY:] And it gives them more guidance.

[EMMA:] Well there's, and it's not, when you're assessing thinking, you're not looking at fixed benchmarks right? You know, we've had to develop a variety of tools to change the way that we assess and that's what we've been doing over the last year is to look at the different tools that we use. So both of you probably, and you Nancy, have really changed how you assess within the last year. The tools that we use to track their thinking are what make assessment easier for us. Because to say that we're individual assessing each student in completely different ways is overwhelming in a class of 32, so it's the tools that we use that are able to track what they're thinking over time.

[NANCY:] I find the most effective thing is to sit down with the group and talk.

[ROSS:] Yeah.

[NANCY:] And that's where I really find the conferencing, yeah. That's what I find is the most effective.

[ELLA:] And conferencing online too is great because for some who are shyer with speaking one-on-one. And they there's a record of that, so you have that record, later on you have go back and reflect on the comments back and forth so...

[EMMA:] And do you find the knowledge forum, because you can track the contributions by the students, is an effective way.

[ROSS:] Yeah, I find students that wouldn't say too much in class can contribute a lot in knowledge forum and you can be very surprised what they're thinking and they use it in different ways but, and often times the thinking keeps going after the end of the project. You can find student who go back to the pages and keep working on them long after the project is finished and the assessment is done, they keep going. Also the, as Ella said, the observations and conversations and student product are the three data

points that you use in assessment anyway, so rather than just looking at the product you need to take those conversations and...

[EMMA:] For sure.

[ROSS:] ...observations, you just see them over time.

[EMMA:] Absolutely.

[ROSS:] And as anecdotal comments.

[NANCY:] Just walking by and listening to them talk and, you know, hearing those conversations even when you're not sitting with them, it's even better actually.

[ELLA:] You can't always be there at every single moment but to have video footage or they can do their own little videos and then you can track their conversations, 'cause sometimes they don't say the same things in front of us as they would sitting in their own group so to just have an audio feed going, you can go back and check some of their contributions that way too.

[EMMA:] So you asked your students what kind of feedback works for them? What did you find out?

[ROSS:] It was a mixture between oral feedback and written feedback, whether that's, but most of the written feedback is online and using Google Docs or their Wiki or knowledge forum, but some of them like the written and others oral feedback.

[ELLA:] And I think it's important to check later as the year goes on too, because some of them are not used to different types of feedback. So if their experience has only been one type of feedback, they wouldn't know that something else would work for them too so, and we keep checking in to see, some of them develop more of an interest in one than the other.

## **EMPOWERED THROUGH INQUIRY**

[ELLA:] The design inquiry model really appeals to the students because they get a chance to take ownership for their own ideas, become the experts. With the inquiry model you get a chance to really see some of that information, you get an inside into their thinking pattern. I've found, you know, specific cases of students who are actually stressed and concerned about their academics and they just need an access point. So before maybe they weren't asked or questioned or maybe people misdiagnosed what was going on with the situation and they were able to see, you can see deeper because there's so many different ways that you can get information from students. Because if you're doing it right, you should be communicating with kids, not only during class time but you have other opportunities outside of class time. You can also work through technology so that kids who often don't share their ideas openly might put it on, you know, social media. They might be posting their ideas on Knowledge Forum. It gives students a very safe place to tag along with somebody and maybe debate a topic with somebody online without becoming heated. It gives them a chance to share ideas and look at groups that are, you know, outside of their small group and tag onto another idea and give them a piece of information. And because it's a process, Knowledge Forum can collect all of those ideas, so you see the process all the way through and so it's not the end product you're aiming for, you actually have all of that work that's always there

all throughout the project. I know many times our students have started with one concept and then other people have given them some feedback and they build on that and move towards either continuing on their path or sometimes they actually end up taking a total 180 and going in a different direction. Often teachers become concerned that maybe students are not going in the direction that they're traditionally used to going. And so they get a little nervous and I've had this too, where you get nervous. So one example might be, I have a group of students who started to plan for building on a particular street in their neighbourhood that has tons of development and so while they're thinking about their design inquiry we're thinking about the needs of the community and if that entire street has been developed then maybe, they have a lot of production, they have a lot of resources coming into that community. So I became a little nervous because I thought, well maybe there are lots of other communities they could explore and so I waited and waited and I started to think back to, what were they achieving before? Before they started the inquiry they might have had difficulty taking seats, you know, sitting in class, following some of the routines, they had difficulty organizing their resources and so on. Now they're interested in something and they have tons of product, they have lots of research that they did, they're really invested in this neighbourhood and this development and so I held back. And then over time they came to that decision that maybe there was too much development there, so then they switched and they moved out to the waterfront and now they're looking at an abandoned streetcar space and we're gonna have a private tour of the streetcar space. So, you know, you have to give them the chance to be able to make good decisions about what they're doing. I haven't really found anyone in class who doesn't really care about their academics. There's always, you know, there's always just barriers in between. Teachers need to understand, give themselves the chance to take risks with students and I'll often find that you're gonna have students that respect you and fall into place and provide, you know, are following along with academics and are striving for the best and thriving within your program. If you give them the opportunity to have voice. I think student empowerment is the biggest way to get kids to check into the system and be part of something like that. I find one of the biggest struggles with the inquiry process is that you have to maintain balance. So because it's sort of a boundless process, there's no limits, there's no walls to, or barriers to the creativity, it can kind of go anywhere and you can use many different tools. Sometimes as a teacher you just have to maintain the balance between your own personal life and getting, you know, the work force so you can have a flipped classroom and that means that you're working online, you're working on Google Docs after school with students. You could be on social media answering questions or sending out surveys and helping kids connect with outside experts and things like that. And so that can kind of take over and what I found with myself is, I've always had sort of balance issues, maintaining balance between these things but when you see students engaged, especially students who were struggling before with engagement, as soon as they become engaged you really, it just inspires you and it keeps you going. So, you know, it's just once you get into that model, you see all the benefits coming back and you'll have to make sure that you balance.

## **INQUIRY CHECK-IN - DECISION-MAKING**

[JAMES:] What's going on with your project? Tell me where you are right now, I want to know as of this day, what's the planning situation?

[STUDENT:] So far, like, this morning what were doing was, we were kind of thinking what we should do next and we were looking at the success criteria on what we were missing and what we could do to improve our project.

[JAMES:] Okay, so how are you deciding who's doing what? Like this morning you said you were looking over, what do you have left to do and how are you deciding that?

[STUDENT:] Tony can you say that?

[STUDENT:] We decided by choosing the person who is like more familiar...

[JAMES:] Familiar with it, okay so we've got...

[STUDENT:] Familiar and experience by the topic that...

[JAMES:] Okay, give me an example so we've got the four success criteria. We got the map part, we got the data analysis and graph.

[STUDENT:] Yeah.

[JAMES:] And then we've got the human and the ecosystem impact. So who's working on the map part?

[STUDENT:] Well the person's not here today but his name's Liam and we, he wanted to do the map part on our ArcGIS but I think we kind of voted on him because he has a lot of experience working with sites like ArcGIS and he's kind of like a computer whiz.

[JAMES:] Okay, so you've got that advantage because you guys have a choice of Google Maps, right? National Geo and Google Earth and also ArcGIS, ArcGIS is the hardest one, you guys feel confident that Liam can do it?

[STUDENT:] Yeah.

[STUDENT:] Well we've seen him work and also there's a lot of things on ArcGIS that we've found all together and I think that we're gonna do really well.

[JAMES:] So wait a minute so, 'cause you're right, ArcGIS has a lot more information and I didn't really push it too much because it's one of the harder programs to use but you guys found some more information on there?

[STUDENT:] We found things like the vulnerabilities and like the insurance companies and stuff like that.

[JAMES:] Alright, so Tony, how are you choosing who's doing the graph part?

[TONY:] I will be doing that because I'm more experienced with the graph technique because last year we had infographics and I was familiar and I'm really good with graphs.

[JAMES:] Okay good, what do you guys think about that? Are you okay with him working on the graphs? Now is he doing it alone or are you working together on this?

[STUDENT:] We're working all together to like check on him if he, to see if he's...

[STUDENT:] We'll collaborate.

[STUDENT:] ...on track.

[JAMES:] Okay so you guys are talking to each other every night right?

[STUDENT:] Yeah.

[JAMES:] Okay, and also because the Google Docs, what's the advantage, what have you guys found so far using Google Docs?

[TONY:] You can work together like on the same page.

[JAMES:] What do you mean on the same page?

[STUDENT:] As in all of us can go in on the Google Doc and change everything and it shows all the revision history of what we did.

[JAMES:] Okay good, that's what I want to hear because that's what I showed you, right? That you can all work on it at the same time and you can see who's doing what as well as I can see what's doing, which is 'cause I'm checking in every night and I'm glad to hear that because that's what I want to see is that you're working together. It's really important that you each check on each other's work, as well add to each other's work, right? How do you guys find working together as a group, because you kind of picked your own groups, right? I let you pick your own, how's it been so far as far as the group dynamics.

[STUDENT:] I think it was, it's been okay so far. Again, nothing's perfect but we're, again, we're collaborating.

[JAMES:] Are you guys fighting at night?

[STUDENT:] No.

[JAMES:] Tony tell me, you hold of Sal, Tony, what do you think's good about this group?

[STUDENT:] One thing good about this is we're talking.

[JAMES:] Okay 'cause you and, I know Liam's not here but Liam would say, I think you guys are pretty quiet, right? So how's this dynamic working out?

[STUDENT:] Well since Sal likes to talk a lot.

[JAMES:] Yeah.

[STUDENT:] And he's like a mini tornado and so he just working.

[JAMES:] Okay, so you and Liam are pretty quiet a lot but I know you have good ideas. Okay and Sal you're stirring things up for them, right?

[SAL:] Yeah.

[JAMES:] You get them going, 'cause I'm worried about the timeline too, do you guys feel you're gonna make the deadline?

[SAL:] Well I think that like if we were going the pace how we were two weeks ago, no. No, but I feel like that we're now we're just, we're just working like a bit harder, we're actually gathering things together and just not messing around anymore and just going straight to work.

## **INQUIRY CHECK-IN - QUESTIONS AND PROBES**

[STUDENT:] We wanted to do, like, something about volcanoes but then they wanted to do something in China and then we ultimately decided that we should do the thing about China 'cause then, (inaudible) they're using a Chinese search engine so then they would be able to find better information.

[JAMES:] Rock really? Rock, tell me about that, what do you mean Chinese search engine.

[ROCK:] There's a Chinese search engine that is called Baidu it's kind of same as Google.

[JAMES:] Okay.

[STUDENT:] Yeah.

[JAMES:] Oh, I think I've heard about that, it's like the equivalent, right? And so you're

finding information from Baidu and are you finding things on there that aren't on Google?

[STUDENT:] Yeah.

[JAMES:] Ah, okay.

[STUDENT:] And so, I hear this right, you chose them to use to do that because...?

[STUDENT:] It's better for our research.

[STUDENT:] Yeah.

[JAMES:] It's better for your research because I know...

[STUDENT:] 'Cause it's there from China.

[STUDENT:] And it's easier for them, it includes them better as well.

[JAMES:] Right, for the language, now you have two action sources working together to get more information 'cause you guys are still searching on our English sites right?

[STUDENT:] Mm-hmm.

[JAMES:] Okay, and so what have you found about that? Is it, does it work, the question?

[STUDENT:] Yeah.

[STUDENT:] Yeah, we've found a lot of information.

[JAMES:] Okay so give me the question, where are you now? What's your main inquiry?

[STUDENT:] If the Great Szechuan earthquake was caused by humans...

[JAMES:] Mm-hmm.

[STUDENT:] ...what does that mean for like how people would react, or the reaction of the people, how people would take that information.

[JAMES:] Okay so I'm gonna play the devil's advocate here to make sure this question is good. So if the humans could control the tectonic plates what does that mean? So what?

[STUDENT:] They can well...

[STUDENT:] Cause earthquakes.

[JAMES:] Cause earthquakes, okay and so what?

[STUDENT:] You said cause earthquakes, they could cause a lot of destruction and kill a lot of people,

[JAMES:] Okay now here's the question, why would somebody want to do that?

[STUDENT:] For, it would benefit construction businesses because they would have to clean it up.

[JAMES:] Oh so you're thinking about who's going to benefit afterwards from that.

[STUDENT:] Yeah.

[STUDENT:] Yeah.

[JAMES:] Okay, that's good. Rock what other reason might someone, if you're looking at Szechuan China, why might somebody want to cause an earthquake there?

[ROCK:] They want to make some money.

[JAMES:] Want to make money, okay, so don't answer them fully, I want you guys to take these ideas and these questions and run with them 'cause they're your ideas but make sure you're always thinking, am I answering the main question, does it lead me back to proving your conspiracy theory, right? And where were you gonna go for the sources, you're gonna go to Baidu.

[STUDENT:] Google.

[JAMES:] And obviously Google, how about primary data?

[STUDENT:] Oh.

[STUDENT:] Want me to speak to this one?

[JAMES:] Yeah.

[STUDENT:] We've researched a little bit and we've found this organization called EERI, like Earthquake Engineering Research Institute.

[JAMES:] Okay.

[STUDENT:] And they did a research report on the Szechuan earthquake.

[JAMES:] Mm-hmm.

[STUDENT:] And they had a lot of names credited so we were gonna ask one of them.

[JAMES:] Okay.

[STUDENT:] And I was looking around on Google and there was this guy named, I don't know how to pronounce it...

[JAMES:] Sure.

[STUDENT:] ...it was like Awewe, and he did...

[JAMES:] Ai Weiwei yeah, famous artist, yeah.

[STUDENT:] And he was an artist and he was doing art about what happened and how the government isn't taking, like, they're not doing that much for what happened in the earthquake.

[JAMES:] Right, actually that's really interesting that you mention that because I would not have guessed that you would have known who that artist was, but because of his research now you know. He's quite famous, he had a big show here in Toronto.

[STUDENT:] So we're thinking of emailing him and asking him for like...

[JAMES:] You should tweet him or email him because from what I understand he replies, right? 'Cause last year the school did a little bit of visit where they did some tweeting with him and he replied so that would be fantastic. Let me ask you a question, how are you deciding who's doing what in terms of the project? 'Cause you've still got another, what, ten, twelve weeks now, what are you, how are you gonna decide?

[STUDENT:] Just depending on what we like we decided, I want to do something about the economy, he wants to work on citizens and he wants to work on the geography part of the project and he's working with Lucas because he can translate what he finds in English.

[JAMES:] Right, okay, and Rock are you, you're probably I'm guessing you're probably gonna do the math right, 'cause that's something you're strong with, but I wouldn't mind if you partner up with someone else too in the group, right? Because then you can also teach him and you can learn from him as well. Why this conspiracy theory, how did you guys even come up with this? 'Cause I, this is the most interesting one.

[STUDENT:] We were researching.

[STUDENT:] Yeah we, I researched a little bit into how it was actually caused and we found out about this Three Gorges Dam.

[JAMES:] Mm-hmm.

[STUDENT:] About it could have added extra pressure to the area so we were wondering and it was a lot of people were saying that it added extra pressure, so then we were wondering like what about, what was, the government made it so what was their thinking behind it.

[JAMES:] Right, because do you think the government knew about this?

[STUDENT:] Yeah.

[JAMES:] Knew the potential to have this disaster? This is really interesting, I mean if you guys find that this is true, what do you think?

[STUDENT:] Marketing exposé.

[STUDENT:] Yeah.

[JAMES:] Big exposé, go public right, W5.

## **INQUIRY CHECK-IN - SHARING THE LEARNING**

[STUDENT:] Well it's kind of like a building that has no use at the moment and is still quite dangerous so nobody can go there and nobody can do anything with it.

[STUDENT:] And unfortunately the material for the building can't be recycled because what they made to, for the building is extremely old, like the material for the building so that's why they can't recycle it, they can't tore it down and as Calcan said, there are no projects or ideas for this building to be developed.

[NANCY:] So you, this is on the waterfront correct?

[STUDENT:] Yes.

[NANCY:] Okay, so a lot of the waterfront developed, like we learned that on our trips right? Had to be, the soil had to be cleaned.

[STUDENT:] Yes.

[NANCY:] So that would be the case here probably as well right?

[STUDENT:] Yeah.

[STUDENT:] It's very dangerous too because if people go inside...

[NANCY:] Mm-hmm.

[STUDENT:] There's wires.

[STUDENT:] ...there's a lot of wire.

[STUDENT:] And wires.

[STUDENT:] Yeah, there's exposed wires, they still have electrical current in them so they can shock people. And since it's so old, the roofs of some parts of the building actually keep collapsing, so people go in, rocks can fall and tumble on them.

[STUDENT:] Yeah.

[STUDENT:] Yeah, so it's really dangerous.

[NANCY:] So it's off limits pretty much, no?

[STUDENT:] And then since the Billy Bishop trip to the airport, we have to take the ferry to the island. The island's a really beautiful area too, so then the hotel, it's also great because it's beside the lake and then it's also near the island so tourists get off to go to the island and it's like a nice attraction there too.

[STUDENT:] yeah.

[STUDENT:] It would be harder to change the outside too since it's a historic building...

[STUDENT:] Yeah.

[STUDENT:] ...you can't tear it down and you have to get certain permits to add things to it.

[ROSS:] Did you find any other examples like the global examples, like where we've been looking for the sustainability and design?

[STUDENT:] Yeah, we found a couple of places in general that have been rebuilt and

revised and we also found ideas that we can have implemented to our space.

[ROSS:] And where are they?

[STUDENT:] Well some of the things that we found were in like Russia...

[ROSS:] Mm-hmm.

[STUDENT:] ...and some of them are like...

[STUDENT:] Sweden, Norway.

[STUDENT:] ...Sweden, Norway and some are even, like, in Canada.

[ROSS:] Can you talk a little bit about those ones, some of those ones.

[STUDENT:] Sure, well most of the ones that I found, I did my research on Pinterest.

[ROSS:] Yeah.

[STUDENT:] And I got pictures and info on them. So one of them is like a tree that's, man-made tree but it works just like a tree. It takes CO<sub>2</sub> in and lets out air but the other cool part is since there's algae inside it, it creates light and oxygen so you can light up the streets and have, and it recycles air just like a 200 year old tree would.

[STUDENT:] I found some reusable toilets.

[NANCY:] Okay. Reusable, what do you mean by reusable?

[STUDENT:] Like, it saves water.

[NANCY:] Oh, like low flow toilets.

[STUDENT:] Mm-hmm.

[NANCY:] Save water, that's a good idea isn't it, yeah. So you're thinking about that?

[STUDENT:] So like if they made a hotel you could use it...

[NANCY:] Mm-hmm.

[STUDENT:] ...and it would save water and people could go to the washroom.

[NANCY:] Exactly, with a low flow toilet.

[STUDENT:] Mm-hmm.

[NANCY:] Right, that's good.

[STUDENT:] Like, like almost like that idea.

[NANCY:] I see.

[STUDENT:] Where it uses 50 percent reused water, that's being cleansed through like a filter and 50 percent new water.

[NANCY:] Okay.

[STUDENT:] And then there's also another thing that I found, green concrete. So it's concrete that uses biological things and recycled concrete and it's actually really good for building and it works just as well as normal concrete but it's like good for the environment.

[NANCY:] It's more sustainable, right?

[STUDENT:] So we wanna make our restaurant kinda stand out, kinda be unique and I think if we, you know, really put it out there that it was a sustainable, like, healthy restaurant, it could, you know, be kinda trendy and get all the high school students and also the older audience involved in it. At least that's what we hope anyway.

[NANCY:] Right, you had a really good idea for the rooftop.

[STUDENT:] Oh yeah, we were doing a greenhouse.

[STUDENT:] Yeah, so we can grow our own food which is that, most of it at least, to supply it to the people that are eating at our restaurant.

[NANCY:] That's really good.

[STUDENT:] So...

[STUDENT:] And actually, yeah, I found a website based in the UK that showed

rooftop greenhouses...

[NANCY:] Mm-hmm.

[STUDENT:] ...and the really cool part of it was that they used heat absorbed from the greenhouses to heat up the houses itself. Like the houses it was on top of, and it saved like, 50 percent on the heating bill and...

[NANCY:] Yeah that would do that.

[STUDENT:] Yeah.

[STUDENT:] ...so that was a very cool idea that I think we could implement into the design of it. And originally we were supposed to get all our food from the greenhouse but we kind of realized that's a bit unrealistic.

[STUDENT:] yeah.

[STUDENT:] Oh, yeah.

[STUDENT:] So, but there's a lot of like, organic meat markets and stuff like that...

[NANCY:] Mm-hmm.

[STUDENT:] ...all throughout Toronto so we could just...

[NANCY:] Mm-hmm.

[STUDENT:] ...maybe set up a deal with one and...

[NANCY:] If you try to go local, like you know how they have that local food movement...

[STUDENT:] Yeah.

[NANCY:] ...where you just source from local farmers and...

[STUDENT:] Yeah, exactly.

[NANCY:] Yeah.

[STUDENT:] So if we set up a deal with local farmers and stuff like that it would probably work great and...

[STUDENT:] It doesn't have to be a barrel but it's pretty much a thing that can collect rain.

[NANCY:] Yeah.

[STUDENT:] And then pretty much it can filter it through pipes and stuff through the building and that would let us use, like, most of our water can be used from that.

[STUDENT:] Solar power could do a whole heck of a lot, it could heat water as well as make electricity. So by the way we cut the heating bill with the greenhouse...

[NANCY:] Mm-hmm.

[STUDENT:] ....as well as having like solar energy, we could almost, like, have it run itself.

## **LEARNING FROM THE REDESIGN**

[STUDENT:] The ugly building behind this is the Malting Silos and it's been abandoned for 20 years now.

[STUDENT:] It you look around it's not the most colourful or the most funnest community, even if you did look at it in the summer.

[STUDENT:] Since it's a danger hazard 'cause lots of pieces fall down, it'd be a lot more better if we built something.

[STUDENT:] We decided to make this part and the parking lot into a café, a music studio and a park.

[STUDENT:] I feel like we learn more about each other and the space round this area because before we didn't even know the Malting Silos existed or there was a school in that area and after a lot of studying and researching, we figured that that area has a bit of problems 'cause it doesn't have things that are closer to it and most of the people in the area don't really know what they have. So something like this would help them, like, learn more about each other and get more connected with their neighbourhood.

[STUDENT:] We're gonna take, because that part's gonna be all taken down...

[STUDENT:] Right.

[STUDENT:] ...the flower shade and water fountain would be around that area.

[STUDENT:] There's gonna be swings and slides and that's the butterfly garden and this is just the cement path here, basketball court and the water fountain.

[STUDENT:] For the music studio on the roof it's gonna have four wind turbines on each corner and solar panels surrounding, like, covering the whole roof.

[STUDENT:] And their other water system is for our basketball court, we're gonna have cork as the ground which lets the water seep through and then it goes through the treatment system.

[STUDENT:] We learned about water systems and sustainability. Like how the rain water collection could help reuse water and using solar panels could generate electricity and using wind turbines that would really help energy conservation.

[STUDENT:] We feel like what we designed would bring more attraction to the space.

[STUDENT:] Bringing something more green and eco-friendly and something that can connect everyone together would make a lot of people more happier.

## **RELATIONSHIP**

[EMMA:] Influence certainly is the probably the most valuable tool that I have at my disposal. And if I were to try and define how I influence others it would be definitely through relationships. There is no manual for that and if you were to try to follow a manual, I can tell you that kids who are 12, 13 and 14, they see right through that in a second. It is about the genuine emotion and affection that you have for these students, the belief in their potential, the belief in their capabilities. If you don't have a growth mindset about the students in your building then you can't even get out of the gate. And for me, for every child that walks through the door of my office, I see the adult that they are going to become. You know, this is my third, sort of my third year of students at Queen A and each year I think, I'm not actually going to be able to develop as strong relationships as I did the year before because I've never had relationships with students that strong before. There are so many different facets to running a school that as a principal it's a real challenge to be able to focus on those relationships. To address that, I spend as much of my time as I can with the students and talking to the students, not as my students, but as another individual. In respecting their opinions, in getting to know them, far beyond what they're learning in the classroom but who they are, what makes them tick, what motivates them. It's not coming from a place where I have, you know, an intended target at the end. I don't have an end goal in mind except to get to know them as individuals and I have such a short time with them I need to really make this a priority in my day or it's just, it's not going to happen. You know, to actually explain to someone

how I do it would be so difficult because for every single student it looks so different and it comes from within who I am and what I want for them and so it's such a challenge to say, you know, to give advice to other administrators to say, well you know, try this, try that, try this 'cause it just doesn't work that way. It comes from how you perceive yourself in the building and what you perceive your role to be and then acting instinctively in that way.

## **STUDENT-LED CONFERENCE - ACTION-ORIENTED INQUIRY**

[STUDENT:] We've been doing a lot of great things regarding our project that's combining all subject areas so it's not just different projects in different areas, it's one big project that has everything in it. We've been doing a lot of work and collecting, accumulating data from lots of places and we're using it in real life perspective.

[FEMALE:] Mm-hmm.

[STUDENT:] So we're thinking of lots of things in global scale as well. We've been using Google Drive where we can communicate with the teachers and I can communicate with my math teacher, all my teachers, to share my ideas, get feedback and we've been using Knowledge Forum. For example, this is a page, we looked at a movie called "Strip the City of Dubai" and then we had some questions. So the first step of our inquiry was to have questions which can lead us to another step which is researching more of our questions. And we need questions that have deep meaning and that are used to acquire understanding and not just a retell or a literal question. So we have these questions that we thought were really good and then we bounced ideas off of each other. So we built on the questions and then we expanded. We're not just getting the answer, but learning and going through many places and areas, finding more about it. So, and then we used Wikispaces where we can all contribute ideas, but then I have my specific, my own Wiki where I can write my work and do my work and show it to my teachers there. We've been using Twitter. We've been following lots of great programs and people around the world. I've been following World Heritage, I've been following Archives of Ontario, Toronto Waterfront, I've been following Architecture Design and specifically I've been following the official website of TTC because we chose the Sherbourne Subway Station. We did Sherbourne Subway Station because it's the most highly dense town, Saint James town right beside it and Sherbourne Station, it doesn't have accessibility.

[MALE:] How did you get that idea initially?

[STUDENT:] Well the idea was actually because I have, well I have a sister who is one year old and we found it difficult to go to places using the subway. There, it's always a problem to get the stroller down the stairs. I may live in a town where there's accessibility of that subway station, but as long as I don't have accessibility in the station I want to get off to, there's only certain stations that I can access. And since Saint James town, I mean Sherbourne Station is a photo ID station, it's ridiculous the way people have to get there. At least an escalator going down would be a good idea, so that's why, that's what we did in our survey. In our survey there were a bunch of questions that we wrote and we would survey people about it. There was one question I wrote, do you think there's any improvements needed in the station?

[MALE:] Mm-hmm.

[STUDENT:] So do you think if it were to be redesigned, what is it that you think should be considered adding? We made a QR code and QR code generator where we could find little codes...

[NANCY:] Mm-hmm.

[STUDENT:] ...and URLs that we could just give them for them to do the survey online.

[ROSS:] I just, I suggest, I didn't help them with it, I just suggested and then they went away and did all the work, it was just an idea but her group took that.

[MALE:] Yeah, I also asked yesterday about how many data you got from one side and from the online those, using those media or these...

[NANCY:] 'Cause people are in a hurry and it's a really good idea.

[STUDENT:] Yeah and we requested the TTC websites and the huge websites that have lots of followers to retweet it. We tried to be as non-biased as possible but...

[MALE:] Yeah, absolutely.

[FEMALE:] Mm-hmm.

[STUDENT:] ...but, but there's bias that always creeps in and skews the data but we tried our best and we made lots of graph and analyzations regarding the survey.

[FEMALE:] Mm-hmm.

[STUDENT:] While we were trying to figure out where we get the blueprints, we contacted the TTC Help Desk. They led us to another place where we could contact, that led us to another place, so after six phone calls and several departments and transfer from here to there, we couldn't get any blueprints because they said they wouldn't allow it for security purposes after 2001. So then we asked maybe if we could have a tour of the station.

[FEMALE:] So you tried to get those blueprints, or school tried to get that?

[STUDENT:] Well I made the phone calls and I tried to get it. We've been using a lot of technology as you can see. One of our success criterias is good use of technology. We're using Google Drive.

[FEMALE:] Mm-hmm.

[STUDENT:] We're using Google Forms, where we used the survey and I specifically have a SurveyMonkey account where I survey, and I got that idea from you.

[ROSS:] Is that something, so at home do you talk regularly about what's going on at school.

[FEMALE:] Yeah, normally yes, yes.

[MALE:] Yes. Yeah we do. Yes,

[FEMALE:] In the evening before dinner when we all, you know, either come back from work or from school then, a certain time we talk about what we did in the whole day, yeah.

[ROSS:] So all three of you talk...

[FEMALE:] Yes.

[ROSS:] ...each person.

[FEMALE:] Yeah. Even with my little one.

[ROSS:] Yeah. Even with, yeah.

[MALE:] Yeah, and Pravithi always like to share things at home.

[FEMALE:] Mm-hmm.

[MALE:] Yeah, even if we do not have time, she says, oh come on you need to see

this, you need to listen to this Mom...

[FEMALE:] Yeah...

[MALE:] So she's really good at that.

[FEMALE:] Yeah.

[MALE:] Yeah.

[FEMALE:] Yeah, even in the kitchen sometimes. I walk in the kitchen and she comes to me and yeah, starts to share everything, you know. And she sometimes blame me, you know, mom you are not listening to me, you are not listening. I am listening you now. Yeah that kind of sharing, yeah.

[ROSS:] And you find there's connections between then different areas of study or expertise.

[MALE:] Yeah, I was very impressed with her project work because it has, like Pravithi mentioned earlier, all the components, all the subject areas connected so that was a...

[FEMALE:] Mm-hmm.

[MALE:] And I, to be honest, I also was learning from her survey and her data interpretations. Only yesterday I ask her, how do you do this thing, predict this thing in Excel, can you do teach me? And she showed me how to do it.

[ROSS:] Yeah.

[STUDENT:] Yeah, so for the math component we are doing lots of ratios, we're doing measurements, we're doing data collection, graphing. For the science, we're making a water systems included into the stations so we're thinking of maybe washrooms, water fountains, different areas where we're looking at global examples of everything, how we could use the ideas. Or maybe if they're doing it better then we can use it, if we're doing it better maybe there's things that we could get ideas from each other.

## **STUDENT-LED CONFERENCE - HOME SCHOOL COMMUNICATION**

[RYAN:] I can contact you and Twitter is another way I can contact you.

[MALE:] You delete?

[RYAN:] Yeah, I have.

[MALE:] That's nice.

[AUSTIN:] And what would be, where would you on your document, is there anything that I would leave that you would see to know if you're on the right track or to know that you can improve or to move on from there?

[RYAN:] Yeah, you give descriptive feedback when I share it to you, you write it on my document right under the paragraph I wrote and I'll ask you to give me descriptive feedback and I use that descriptive feedback to change a little bit and try to make it more better and more strong.

[AUSTIN:] Mm-hmm. I mean, could you just show your dad an example of how you would use descriptive feedback or where there might be some descriptive feedback in...

[RYAN:] Mm-hmm.

[AUSTIN:] I think right there.

[RYAN:] Yeah, I saw that.

[AUSTIN:] Oh.

[RYAN:] Yeah, I wrote my response here and he said, like, this is good, particularly the last part where you talk about damage from water, flood water. Here Mr. Kjørven told my partner and I to address how to address physical geography to look for damage to levies and land that happened from the hurricane. New Orleans is below sea-level and all the water couldn't have just drained away, yeah, there was some way they had to, like, take all the water and put it back into some lake.

[MALE:] And he give it online feedback right?

[RYAN:] Yeah.

[MALE:] Okay, that's nice.

[AUSTIN:] So Ryan, when he works on his document at school and as he's mentioned he shared it with me so I can view it from my home as well, from my computer.

[MALE:] Yeah, yeah, I sometimes in my home.

[AUSTIN:] Mm-hmm.

[MALE:] When he used to work, I saw it.

[AUSTIN:] Oh really? Yeah.

[MALE:] And he say, Mr. Kjørven is online and he's giving some feedback.

[AUSTIN:] That's great, so you're sharing this with your father?

[RYAN:] I am yes.

[AUSTIN:] That's very good, that's wonderful.

[RYAN:] Yeah, and each section has criterion for example we just did a few weeks ago, we did data analysis.

[AUSTIN:] Mm-hmm.

[RYAN:] And I took some information, I made some graphs, I used Microsoft Excel which Mr. Kjørven taught us how to use. I wrote, like, my opinion about the grass and expressed what I know and what I want to know and what I tried to know.

[AUSTIN:] It's very important to have a good rapport, it all starts with trust so, you know, when we trust each other and we, I think for him to trust me as a teacher that I'm leading him in a positive direction but also you know, for the trust from my angle as well, I guess.

[MALE:] Yeah, it's a, a two way process I think, because when the parents have a faith that teacher is doing good to his kids, the parents become cool, I think, in their mind. Is the big thing.

[AUSTIN:] I think what's, what also is important with this is that just the application for, as Ryan's father said, when he went home and he was speaking about this, he sees it in a real life context where he's looking at inquiring about something and he's eager to share that with his father as in what he's searching for.

[MALE:] And one more thing, I saw he using, it is a Arc GIS?

[AUSTIN:] Arc GIS, yeah.

[MALE:] Arc GIS, I didn't hear this one. He told me that Mr. Kjørven is teaching him this one.

[RYAN:] And...

[MALE:] It's, it's...

[RYAN:] ...and he's also learning it because, like, basically everyone in the class is still learning it so it's new to everyone in the class.

[MALE:] It's a sharing thing.

[RYAN:] Yeah.

[MALE:] [Laughs.]

[AUSTIN:] 'Cause it's a...

[MALE:] It's new.

[AUSTIN:] Yeah exactly, Arc GIS is a mapping software that is a, it's quite elaborate but I mean we're exploring it together, the students and I, it's something that we're all, it's new to all of us. So we're all exploring, we help each other out, some of us are on different levels and in different paths on it so you know, sometimes Ryan will discover something that he'll come over and help me out with whereas I'll figure out something that I'll be able to help another student out with. But it's something, it's definitely a cool software that we're exploring together.

[MALE:] Yeah and for grade sevens to learn it is complete new.

[AUSTIN:] Mm-hmm.

[MALE:] Because it is, as I know, it is higher grade student stuff.

[AUSTIN:] Yeah.

[MALE:] The GIS stuff.

[AUSTIN:] Yeah.

[MALE:] But he got it, [laughs.]

[RYAN:] And I'm using the Arc GIS to make a swipe map, you can see before and after of all the damage it has done, Hurricane Katrina has done. And then you can, like, view and you can make some conclusions just by seeing it how what's the difference and what, how they responded to Hurricane Katrina.

## **USING MULTIPLE REPRESENTATIONS TACKLING REAL WORLD PROBLEMS**

[STUDENT:] This is our showcase presentation and we are doing the project of the Sherbourne Subway Station. Our question today is how to increase accessibility in the Sherbourne Subway Station. We looked at how we could redesign it, we went to the Archives of Ontario, we called thousands of TTC departments, we couldn't get the blueprints so we had to go there and we measured it using a trundle wheel and then we redesigned it.

[STUDENT:] In the Sherbourne Subway Station there are four separate areas, so this is the top floor where most people come and go which leads down to the main floor where people pay their fares. And in the main floor, we've added four washrooms and two elevators that would increase the accessibility.

[STUDENT:] The stakeholders, the people that are impacted by our decisions are us as the designers and people who are differently-abled, so people with disabilities, people with strollers, wheelchairs, all of them. I've helped countless people down the stairs with their strollers, their shopping carts, it's a great new sustainable way to handle a TTC subway station.

[STUDENT:] So we surveyed people. We took the feedback from them and the responses and we made graphs, these are only two of the eight questions that we've asked. So this one is about the types of improvements needed in the Sherbourne Station.

[STUDENT:] So we used QR codes to give out the survey to the people who didn't have time to do it. This has been a lot of hard work, it's a lot of research is required and we did cover a lot of areas so I hope you found our project meaningful and I hope you

will support the idea of accessibility and sustainability in this design, thank you.

## **ACCOUNTABLE TALK - CREATING CULTURE**

^M00:00:12 [Sarah:] The accountable talk starters that we used to sort of initiate Hot Topics gave the kids the tools, sort of the oral language tools, to help build conversation, help build dialogue, help build knowledge. [Austin:] Hot Topics is so deep. For one, I mean when I was in, when I was in school we called it current events. You would pick something from the newspaper, come in and share it for five minutes, and then that was your thing for social studies. Hot Topics allows both the student and teacher to address something that's in the media, something that's hot and affecting the world, the country, the province, the city, the classroom, and us to learn about it together. Okay so is everyone looking this way? Jeffrey's going to do his Hot Topic now. [Jeffery:] So race into space, opening new horizons. [Austin:] So it's not something that I'm the expert. In fact I'm not the expert. A lot of these things all here I listen to, you know, the world at six on a podcast on the train in the morning. Whereas the students are looking up these things on the internet, researching them, putting together some questions and coming prepared to ask questions to the class, to build knowledge. But also to provide the background that is there. So it's an engaging process that they're able to lead on their own. During this, in preparing these questions, students facilitate a discussion with other, with their peers. And with those questions, students build knowledge together by building on each other's answers, by creating more questions, and by sharing, you know, by looking at the material critically. By sharing what they may know and learning to build that dialogue. The class will talk. We put them in small groups. They talk in their groups. The facilitator will move within those groups and then bring it back and say these are some of the themes I heard from each of the discussions. [Sarah:] And now we see a shift towards just talking in a way that helps build knowledge. [Student:] We have a lot of stuff to do on Earth, like as in right now we have cancers. We have like, we have lung diseases going on on Earth, and we have like, like we have national disasters relief and people are in need right now. [Austin:] You get this mature discussion, which is just that. There's no right or wrong answers, but students, you know, understanding the question, understanding the themes and speaking from their heart and, you know, an educated response. ^M00:02:36 [Student:] Scientists can already just send out a camera and check what's, ^M00:02:40 and they, and check what's around. ^M00:02:43 They can even find like one star and then estimate what's around it. ^M00:02:47 [Student:] Like I saw this picture, right, It's like where an estimated I don't know how many years, ^M00:02:52 but a couple decades where in like, we'll be like Saturn with space garbage. ^M00:02:58 [Student:] In a way there's like pros and cons to it. It could help, but in a way it's selfish. It could help people's level of education, but it can also distract people from what's happening on Earth. ^M00:03:10 [Student:] No, no, I was going to say it like all of you agree that there should be limitations. ^M00:03:14 [Student:] Yeah there should be. ^M00:03:15 [Student:] Wait Todd, do you still agree? ^M00:03:17 [Sarah:] Accountable talk has been really fundamental too for helping building community in the class because it facilitates that positive discussion. ^M00:03:28 It facilitates camaraderie because of the nature of the sentence starters.

^M00:03:34 [Student:] I wish Mars would be like Earth. ^M00:03:37 [Student:] If you're in a happy environment, like you're learning, like it can change you as a person. And like you can be like more positive, stand higher, like have your head up most of the time. ^M00:03:48 And then if you walk out and you hang around people, they'll start to act like you. ^M00:03:52 And they'll just help build the community and make it a better place. ^M00:03:55 [Austin:] Learning to take turns, to respect each other, to respect each other's answers, to wait their turn and then to have that time where of 31 people in the class, it's their turn to speak. ^M00:04:06 And their opinion is valued. ^M00:04:08 I think has been a huge learning experience for everyone. We're very good at using accountable talk to speak as a large group. ^M00:04:16 And I don't want to put any of you on the spot. 'Cause yeah I apologize. I feel like I kind of put you on the spot there. ^M00:04:21 And I apologize for that. But let's, use accountable talk phrases that we are comfortable using and open this discussion up to the whole class just so we can use some of those examples. ^M00:04:31 [Student:] We're talking about very negative like the Earth ending and stuff. But we don't necessarily know that it's for sure going to end. ^M00:04:38 So why don't we think about the positives about Earth that we have now. ^M00:04:41 [Sarah:] Anything that is going to empower students and engage students is something I want to be a part of. And I saw very quickly that that's what happened. ^M00:04:51 You know, when we started Hot Topics, it was motivating, inspiring, engaging for kids. So you know, I'm all over that. ^M00:04:59 [Austin:] Having these discussions isn't even something that I thought at the beginning. ^M00:05:03 At the beginning it was about something hot, something interesting, and using accountable talk. ^M00:05:08 And this is where we've gone as a class. ^E00:05:11

## **ACCOUNTABLE TALK GROWING IDEAS**

[JAMES:] When I see the kids working and knowledge building, as a teacher, I feel great because that, I think, is my role. I don't come into this thinking that I am the keeper of all knowledge and I'm Mr. Britannica. My job is to show them the roots, the pathway, the thinking processes and not even to show them so much as to say, you have them, but just to trigger them and to release them and let them discover them on their own. I think that has a longer lasting effect that stays with and resonates with them longer when they feel that they've discovered and all I've done is just guided them along the way. We're only a week into the project now and you guys have been brainstorming I presume, right? Tell me about it, where are you, have you selected your disaster that you're gonna work on and what the project is?

[STUDENT:] Yeah we picked tornadoes to do because we just felt like we were most interested in that topic instead of the other ones that we were originally talking about.

[JAMES:] So you guys all sat down and had a voice in saying, I wanna do this, I wanna do that, and then what did you do? You sat and just kind of chatted about each one?

[STUDENT:] We found out more about tornadoes than the other.

[STUDENT:] Yeah.

[JAMES:] Okay, then, are you guys interested in tornadoes.

[STUDENT:] Yeah.

[STUDENT:] Yeah.

[JAMES:] Because this is your project right, this is something you're driving so you've got to be, you wanna do it and I'm giving you that choice and that freedom to choose what you wanna do. I sometimes think if I were to teach this class in a more traditional sense, where I'm coming up and telling the students what we're learning, I think students, like I have this one student Salimon and he just constantly shoots out ideas. And one might look at it and say Sal stay on topic, stay focused, stay... but when we do, when we have this framework of knowledge building, all those ideas, they're valid ideas, they're his ideas. It's not for me to say that these aren't good ideas but what's wonderful is that we let the rest of the class take these ideas and say, what can we do with these? How are they good? Then Sal, he feels that he's part of the class, he feels that he's learning, he feels that what he thinks and what he says has some merit and at the same time, by that process of knowledge building of having accountable talk where the students challenge him to explain it further or they build on it, it's a way for him to learn which of his ideas are good. I have this up not just here in the back, I have it here prominently in the back but I also have it spread out throughout the room. We have what I call transitional phrases for accountable talk. Now accountable talk, even when I explain it to the kids, they're not sure what it is. It's a way of taking that, I call it like that pizza dough of information, and stretching it out to build something bigger. I find a lot of the communication skills at the middle school level, they're still being developed. And so for example, a student might say, well I think this opinion about something and the other student in the class might just shout out, you're wrong or that's not true. I disagree with Bobby, and then that just shuts the door down on any learning and taking it any further. One of the great things of accountable talk is that in the classroom, it opens up the discussion to be about the idea, not about the student or the student's idea specifically. Because when we challenge something that somebody said and we keep it personal, it becomes that person to person discussion. When we say, I would like to, I would like you to expand on the idea, the ownership changes to become the classroom's idea and from that it kind of opens the playing field for everybody to have a chance to grab that ball and build on it, throw it back at somebody, bounce it around, feel it, whatever it is, change the ball. But that learning becomes everybody's and I find that really benefits the atmosphere in the room for learning because the students lose that inhibition that, oh I might say something and it reflect poorly on me. But now it's a safe learning space and they're willing to give out new ideas and then as a teacher, I can take those new ideas and we just flourish. You know, I've been thinking about something the other, since we've started this inquiry and I came up with this analogy. It's like going on a trip with your family, I have a family of kids here and I can say to them, we're taking a holiday and we're going here and this is what bus we're going on or car and this is how we're gonna get there and this is the route and all that stuff. And yeah, some of the kids might love to do that. But the way we have it now where they choose, I think of it this way, they're choosing the destination that they go for the holiday, they choose what mode of transport we're gonna get there, they choose what stops we're gonna make along the way, what, where you go for burgers and fries, where we stop for the bathroom. Maybe they see something on the side that's interesting and they wanna switch and we never get to that destination but I think if you presented that to kids to say, where do you want to go on a holiday and you have carte blanche, will they be engaged and will they want to plan it out? Absolutely. And I see that analogy as how we're doing the inquiry and at the end of the day, they're still learning how to plan and book the hotel and research the

destination and then ultimately enjoy the destination but it's their choice not mine, and I'm just there to make sure they don't get lost. When I decided if I wanted to become a teacher I had this ideal vision of what teaching meant. And Queen A has given me that opportunity. I look at it as a conduit, a faucet almost, where I can take everything that I've been really lucky to experience in life, good, bad, and give it back to the kids. And so as being a teacher, I feel that, it's now my tenth career and I think this is the career I'm gonna keep for the rest of my life because this is what I should be doing with my life. It's a meeting of the kids who want to learn, want to be helped in terms of learning about life and how to succeed. And on the other side we have administration that supports that, that believes in student-led learning, that believes in what the teacher brings to the classroom and gives me the freedom, although I check everything over, I'm given the freedom by our principal and vice-principal and our superintendent, to, they trust me. I think that would be the word to say, they trust me to do what's best for the kids.

## **AUTHENTIC LEARNING - FINANCIAL LITERACY**

[JAMES:] You know we all have classroom jobs and I was starting the class off a few years ago and I thought, you know, do we just pick names or assign classroom jobs and I thought, wait a minute, you know, myself coming from the business world and having my own business and I've interviewed dozens of people in my lifetime, I thought, why not bring something more relevant to the kids, more real life, what I'm preparing them for. And that is, eventually as we all do, having a job interview. I post an ad up on the wall and it's just like a newspaper ad and it describes the jobs and how many positions, and they choose the job that they want and they write a cover letter to match it and then they apply. And it's a competition, just like the real world. Thank you very much for coming in to see us today.

[STUDENT:] No problem, my pleasure.

[JAMES:] I know you're applying for one of the positions we have open...

[STUDENT:] Yeah, supplies manager.

[JAMES:] Supplies manager, correct. And in doing it, I realized none of the kids have ever filled out a resume or a cover letter before. And I thought, okay, I can tie this in with the curriculum, I can teach them how to write persuasive letters and a proper business letter. I could teach them how to write a resume and to draw on their own experiences. I had a good chance to look through your resume and the covering letter, very impressive. I'm very curious to hear a little bit more about some of the things you wrote about in here and I'd like to just get to know you in person because here in our family or business as I like to call it, we work very closely together and it's very important to have the right people for the right job. The kids end up using this resume when they get to become 14 and 15 and they're applying for their first real job at The Ex, they take this resume that exists and build on it. Why should I hire you for this job?

[STUDENT:] You should hire me for this job 'cause I'm not only doing it to get the paycheque, but I'm doing it to benefit everybody in the class' learning 'cause if everybody has more supplies they're obviously going to learn better, which will benefit everybody if we can go through lessons faster and end up learning more.

[JAMES:] They see that there's a real life relevance to what we're learning in school.

Tell me about your education, I was reading here that from kindergarten to Grade 6 that you learned some things which might be helpful, but you tell me about that.

[STUDENT:] Yeah, I have always done pretty well in math which will be a useful tool for figuring out how many pencils or whatever to order.

[JAMES:] Okay.

[STUDENT:] Pencils, erasers.

[JAMES:] Math is important, very important.

[STUDENT:] Yeah, but also during school I've learned some people skills which are most, could arguably be even more important.

[JAMES:] There's a sense of pride and ownership that each student has and it fits in with my philosophy in the classroom of us being a family, whether it's a business or a classroom and when I had my business it was the same thing. We all owned the business and we all had that desire to make it succeed. And I see that in the kids, the jobs which are cleaning the boards, cleaning the classroom itself, taking care of supplies, they do it with a sense of pride not because they're told to, but because it's our family business. What about graphing, how are you with graphing and how are you with charting?

[STUDENT:] I am pretty fluent, I can use Excel. I've put graphs on some projects before including the most recent one and the Grade 6 infographic.

[JAMES:] Okay, that's a good asset, because here we keep track of our inventory, we chart it on Excel and we want to know what we use, how quickly we use it and what we need to order and so if you know Excel well, that's a good asset to have. How about your typing skills?

[STUDENT:] Well I don't have, I type with these fingers only, but it's pretty, I can still type relatively well.

[JAMES:] Mm-hmm.

[STUDENT:] And I would be willing to learn fluent typing using all fingers.

[JAMES:] Okay, so if I offered you that training, you'd be willing to take that?

[STUDENT:] Mm-hmm.

[JAMES:] Now, that'd be on your own time though?

[STUDENT:] Yeah.

[JAMES:] Okay, but we'll pay for the cost of the training, okay. I do pay them and I print out, I have some other ones, some old ones here. So I make a mock cheque, like a real bank cheque and their name is on it, it's the Queen A Bank, Queen Alexandra Bank. Of course, this is just for fun and I pay them, actually I theme them, so this is a Christmas one, and this one was for Diwali so, and then this one, a first one, this was on the birth of my son, I put him in there. But I pay them, each one they get their own cheque, it's non-transferable and it's signed by me and they get it at the end of the week if they've done the job properly. And they collect it and it's a token amount and then they can choose from, I have this which is a catalogue that I make for them and it's, but I find for them even that experience of shopping online or buying something, they're 12 years old and they don't have that experience. So if they can learn from this, they can learn how to budget, how to save up, how to evaluate which, what do they really want and then at the back of it, I make them fill out here, an order form. So again, something that they've done for the first time. And submit an order form, and there's math in here 'cause they have to calculate how much they have, and they even with the items that they can choose from, they have of course, some fun things like popsicles or locker mirror,

lollipops, we have a skateboard and we have things for themselves, things for the class, iTunes card, and I love this page a lot because this page is all about charity and I encourage them to take a look at it. And it's their money, they can buy whatever they want with it, but it's very heartwarming to see that some of them do choose to buy a charity and help somebody else out and in fact, the class has saved up, they pooled their money, totally on their own. One of the students approached the others and they pooled their money and they've given me enough money to buy a goat for a village and that's 360 Lim dollars and for an individual student, that's a lot and for them to all contribute, when you know as a 12 year old, they're tempted to wanna buy that Nerf gun, that says a lot about the character of the kids in the classroom.

## **CREATING A SENSE OF BELONGING**

[EMMA:] So any tour of Queen A has to start right by this mural because this mural is the story of Queen A in one shot. When I got to the school, this entire wall here, we're standing in the Learning, we call it the Learning Commons of our school, was a dark brown colour from the 1970s. And no inspiration, just plain dark brown. And this mural all happened within the first few months because we needed to inspire the students. When, this is the place where they gather, it's a real meeting place for our students and we wanted to inspire them. And this is entirely student-driven. I wanted a mural that was going to really show the strength of Queen A, and the strength of Queen A, well what I tell everybody, is the diversity of Queen A. And so one of the students had seen an image like this in an arts store and so we created our own. So this, these are the communities of Queen A. We designed this map, we planned out the names of the communities, these are where our students come from and at the centre is Queen Alexandra. And so the students painted this entire mural. This was, the students who painted this are currently in grade eight, they started here in grade six and they did all of it. They drew it, they painted it, they conceived of it and my only role, I got to paint the A and I asked them to leave that for me and that's my contribution to it right here. So any walk would have to start right here. You may notice that the hallways of Queen A are quite unique. We don't do scholastic posters, we don't do store-bought pictures, the pictures that you see on the walls in our school are all our own students. So every month I create a poster and the poster is themed to what the students are doing at the time in their classroom, something we're recognizing, the time of the year it is, so for instance, this is one from two months ago. Infinite diversity and infinite combinations symbolizing the elements creating truth and beauty. This is, this speaks to who we are at Queen A. So all around you, you see pictures of students because for me, increasing student voice at Queen A has been my primary motivating factor, my primary motivation since arriving here. Right here we have a gallery of student work, so this is inquiries that the grade sixes did and it began with an inquiry question. We had a learning goal and they created their own infographics and we like to showcase what the students are doing. We're so proud of what they're capable of and we put it here, front and central in the front hallway. Some of the other things that you might not be able to see when you're walking through the halls are the, you know, the music that we play over the announcements that's chosen by the students. We give the students, our student

council has so many activities that they'd like to do that they have, I show them their school budget, they have controls over spending, all kinds of things like that. And everywhere around, I'm trying to get photos of my students in as many spots as possible. This is yet another example of where the students can express themselves. So this is their "Before I Leave Queen A I Want To" board, so chalk is available and at any time the students can come up and express what they want to do at Queen A before they leave. And it's a direct message to the administration, to the staff about what the students are thinking. What you see at the moment is an art installation that one of the Grade 8s is working on. We're doing an urban design project at the school and they're redesigning space and this student is exploring a new skyline for the city. And so during art class he comes down and works on that and one of the special things for me has been to see the respect that the other students have. This is chalk, anyone could come along at any moment and destroy what's here, what's on the board, but they don't because there's such a sense of community in the school and of respect for each other that this is left as it is. Some place I don't spend very much time but I am gonna show you is my office because I am really proud of my office and it's a pretty neat place to be. So I'm gonna take you in there, most of my time I'm in the halls, I'm in the classrooms, I'm spending time with students but this is my, what I call home. And for me the principal's office should be a place where the students can come and feel relaxed and comfortable and I've really tried to make it feel like a room in my own house. And I've tried to show who I am as a person, right? I've got travel photos, I've got photos of my own children and I've got, you know, pictures of the students, former students right here in the office. So I think if you were to ask some of the students at Queen A, they would tell you that coming to my office is actually kind of fun.

## **DEVELOPING DESIGN THINKING**

[STUDENT:] This is our inquiry redesign project and basically we had to choose a space and we, a new space that didn't help economy socially or environmentally and we had to choose how to redesign it. So our site is near the intersection of Cherry and Commissioner Street. Cirque du Soleil comes by there around the summer and it's right behind there so we're not interrupting Cirque du Soleil. So we wanted to replace the abandoned green space with a community centre.

[STUDENT:] The population is around 53,000 and about 13 percent of the population are children so we decided to build a recreation centre based off of that.

[STUDENT:] So the reason we chose this space because the issues are that it's completely bare, there's nothing there and since it's near the waterfront we thought it would be a waste. We looked around the world and we saw these waterfronts that looked really nice and Toronto itself has developed a waterfront in some areas but we thought it was a shame that this area wasn't developed at all. So over here is where Cirque du Soleil comes around and this large green space over here is our area. Our plan was to create a recreation centre that was, well we stuck with the basics and like added a general pool, basketball court and all that, but we took a different twist to it and we added an indoor park which we thought would be really exciting 'cause we, no one

really has them around as much. As well as we would have an outdoor park, so it would be a larger space too. And our space is quite large so we can fit a building in and that.

[STUDENT:] Our first question asked was what type of building do you want in this area? And about one third of the responses were community centre and playgrounds so we decided to incorporate both of them. So community centre indoor and a playground/park outside.

[STUDENT:] Our development would be both good socially, environmentally and economically. Economically because it would raise the GDP of that area itself and it would also make the reputation better because the only reason people usually come there, there's this little bridge over there, they'll go across and that's where Cherry Beach is and right across from our space is T&T and those are the main reasons why they travel there. So we thought if there was something more of an attraction people would visit more. And then socially because it would actually, people would actually have something to do in that area and then it wouldn't just be like a soccer field 'cause there's many soccer fields around that area, so we took a different approach as I said before, we added an indoor park. It would accommodate all ages. And environmentally because we would have things, like water systems that would purify the water and at the end of the day if we didn't use that, we can just send it to the lake and yeah, thank you for listening.

## **EDUCATORS AS CO-LEARNERS**

[JAMES:] Well I think, Sarah, you would agree with me that one of the most, and I appreciate it very much, one of the most critical pieces of having a knowledge building community in the school is having that support from the administrator or administration because I think as teachers, as a group of teachers we're all ourselves on a spectrum of learning how to teach with this pedagogical styling and not only have you supported the idea and the program itself but you supported, I think we've seen that you support individual teachers...

[SARAH:] Mm-hmm.

[JAMES:] ...to bring them up to a level where we can then bring that to the kids.

[SARAH:] For me, one of the most important things that you've done is, sort of walk alongside me and, you know, work with kids, actually withdraw kids and work with them to help promote their success. You'll tell us you'll support us and you do support us in whatever capacity we need support and that includes me coming to you and saying, you know, I'm really struggling with this, how can I make this work for kids? And we talk about it, we hash it out and then you support me in that and withdraw kids and work with them and help create something that's so precious and meaningful to them.

[JAMES:] Mm-hmm.

[SARAH:] It's fundamental, like, the role of the principal.

[JAMES:] Mm-hmm. And something that you just said, Sarah, made me also think about the, in the same way that we allow the kids this freedom to do inquiry into what they're interested in, you have allowed us to, that freedom to teach the inquiry in a way that, you know, we'll come to you and present it and you'll say, roll with it, it sounds good, let's see what happens. And so we have inquiry at all levels.

[SARAH:] Yeah.

[JAMES:] It's a vertical inquiry, isn't it.

[SARAH:] That's right, that's right.

[JAMES:] In the whole school.

[SARAH:] Yeah, we all bring to it, like, our individual...

[JAMES:] Right.

[SARAH:] Right, focus, our individual abilities and it's like not cookie-cutter at all...

[JAMES:] Right.

[SARAH:] ...it's we're all doing it.

[JAMES:] Right and we share information right.

[SARAH:] And we, yeah, right.

[JAMES:] And that's something that you promote is that we get together and we collaborate and building knowledge off each other in terms of how we're...

[SARAH:] That's right, and giving us the time, right?

[JAMES:] Mm-hmm.

[SARAH:] The time to do that within the school day and of course it extends beyond the school day but within the school day which tells us you value, right?

[JAMES:] Mm-hmm.

[SARAH:] That time and, the time we're putting into it.

[JAMES:] Mm-hmm. I don't think it would happen if we didn't have...

[SARAH:] No, no, absolutely not.

[JAMES:] The leadership that we do.

^E00:02:36

^B00:03:04

[EMMA:] I think from my perspective, you know, what we're asking our students to do each and every day is to be risk takers. We're asking them to take a chance and to change the way that they've learned and risk taking is always challenging and one of the key ways to support that is through modelling. So if we're going to be asking our students to be risk takers, we must be risk takers. And the only way that my staff, my teachers will be risk takers is if they feel supported at all levels of that and they do see me cultivating that community of risk taking by myself, you know, taking a risk and not knowing if it's going to work. So, you know, a really good example of that would be last year we had a conversation about increasing engagement, you know, in the assemblies and we talked about what if we allowed the students to tweet through the assemblies? What would that look like? What would that sound like? What would that feel like? And we didn't know and, you know, the day of that assembly I was incredibly nervous, I hadn't taken a risk like that within the school level for a long, long time. And I was giving devices to, you know, 300 adolescents and saying, this is your voice, use it and we are going to broadcast it for everyone to see. And it was, you were there, it was an amazing experience, it was fabulous but what was key to that was my staff saying, okay Emma's taking a risk here, she doesn't know what they're going to do with this and we're just gonna go for it and see what happens and that's what we've been asking our students to do and that's what I've asked you to do as teachers and so I have to model that myself and it's been real, it's not conditions that I'm setting up in order to develop certain, you know, habits of mind of my teachers. It's real, it's authentic, it's genuine. It's is this working for our school? Are we increasing the engagement of our students? Are

we promoting student voice and how are we doing it?

[JAMES:] And you haven't forgotten about the people in between that layer who make sure that the kids are doing that, are having the voice by giving us a voice and giving us that latitude.

[SARAH:] That's right.

[JAMES:] And support and it's...

[SARAH:] Mm-hmm. It's integral.

[JAMES:] It's integral.

[SARAH:] Mm-hmm.

## **ENGAGING IN THE PROCESS**

[ROSS:] We're gonna be going down to the library this morning for the first period, so we're gonna go down and we're gonna meet. All of the Grade 8s gonna meet together and Miss. Nichols is gonna talk to everyone just to check in where you are in your project. The engagement level of my students is very high because they've had choice over what they are interested in. We have many students who continue to pursue their ideas even though, you know, it's the end day has passed but they still have questions that they want to advance and that's really something that is very empowering and exciting to see that students want to keep going.

[EMMA:] A child only needs one caring relationship with an adult to change their trajectory and it is my responsibility to make sure that I've done everything I can to either be that adult or to facilitate the other adults in my building to be that person for that child. And we may never know the impact that we have on these students because it may not be this year, it may not be next year, it may not be for ten years, but I know in my heart that it is making a difference to these students and to me that is the essence and the beauty of what I do each day. People are surprised when I speak to relationships with students because often the principal gets really caught up in the management of the school and there's so many different facets to running a school that, as a principal it's a real challenge to be able to focus on those relationships. But it has to be, if this is where you want to go with it, it has to be your number one priority and you have to recognize that each and every day when you walk in the building. This is very exciting because a month ago we gathered in this spot to begin our journey of innovation and as you recall, at that time we talked about the opportunity you were gonna have to redesign a place in Toronto. A place of your choosing and a design that you would choose. If you recall, we started this whole thing by looking at the why, you chose a space in Toronto that you felt needed to be redeveloped and you looked at why. Why does it need to be redeveloped? Does it have poor accessibility, is it not sustainable, is it not being used? Is it no longer appropriate for the community that it served? And then you started thinking about the what if, what if we did this? What if we changed this? And that's the stage that you're at right now, you're in the big what if stage. I know that as impatient as you are, you might be wanting to cut through the middle. One straight line up through the middle. Here's the problem, here's what I think the answer is, let's just do a straight line up the middle, why spend time going out and back in again? But it's the process by which you're gathering up information from

around the world that you'll be able to come back and pick the absolute best design and as you know from all the interest you've been generating from people outside in the community, the design that you chose, the design that you are going to choose, you might see come to fruition years from now. You hopefully have your math teacher, you've got your art teacher, you've got your homeroom teachers and they're going to be coming around and helping you no matter what stage you're at in the process. Okay, so if you have a laptop, find a spot for you to work, if not you can get one from the back. So what you see in this room right now, we call this our academic press day and so we have these days periodically through the term and it brings all the students together. So what you're actually seeing is about 120 Grade 8s who have come together, they're all working on their own inquiry, their own, in their small groups but they're doing it in this one common space. And the reason we do it in this common space is because it really builds a sense of community, gives a real sense of purpose to what they're doing. They're able to interact with different groups with each other. We've got the teachers who teach these classes here to help them, move them along to the next stage and it does, creates a real buzz.

[ROSS:] You'd be able to go in and see, like, what the before was like, right? 'Cause you saw it was all ripped out?

[STUDENT:] Oh.

[ROSS:] Can you imagine that, going back and think...

[STUDENT:] Like what are these (inaudible) for?

[ROSS:] I think they're turning it into a hotel.

[EMMA:] You're doing the abandoned subway station, right?

[STUDENT:] Yeah.

[STUDENT:] Yeah.

^M00:04:43

[EMMA:] And we're going on Friday?

[STUDENT:] Yeah.

[EMMA:] To see that?

[STUDENT:] Wait, it's this Friday?

[EMMA:] Yes, the PA Day.

^M00:04:48

[STUDENT:] Oh, so what time we have to come to school then?

[EMMA:] Right, so we're gonna meet Miss. Kirk and go down to it 'cause she's arranged to have a special tour of it. Do you have any ideas yet of what you're going to put there?

^M00:04:58

[STUDENT:] A cultural restaurant.

[STUDENT:] Cultural restaurant.

[EMMA:] A cultural restaurant? And museum? What culture?

^M00:05:04

[STUDENT:] A multicultural, we've been doing, like, surveys on what ethnic, ethnical background area.

^M00:05:11

[EMMA:] Oh, okay.

[STUDENT:] So, like, we know.

[EMMA:] Did you do an online survey or you did an in-person?

[STUDENT:] Both.

[EMMA:] Both?

[STUDENT:] We're gonna print it off and then put it online.

[EMMA:] Okay, great. What are you working on today?

[STUDENT:] Maps for...

[EMMA:] The maps?

[STUDENT:] ...geography.

^M00:05:23

[EMMA:] Okay. Alright, so Friday we're going down though.

[STUDENT:] Yeah.

[EMMA:] Right, okay great.

[STUDENT:] When it loads it'll say Dundas, so go to base map.

^M00:05:33

[EMMA:] As I've been walking around the room, I've been able to see my students acting as architects, acting as mathematicians, statisticians, acting as urban planners because each of the groups is redesigning a space in Toronto and they are bringing in a lot of components into that. This design that they're doing it's authentic, it's relevant, it's engaging, it's their community. This is, you know, urban education at it's best because they are redesigning Toronto and so they want to be on task and learning in this time. It's loud, it's noisy, there's a lot going on here and, you know, as you switch from a classroom of compliance to a classroom of engagement you have to be prepared to let go of that and that's where we are at this stage in our school is that we wanna take these risks, we want to see what will happen when we bring them together like this. It wasn't easy to get to this point with the teachers, they needed to let go of some of the conditions that they might have set in place in their classroom. So we do a lot of work on accountable talk, a lot of preparation with the students about what, who are you accountable to and why are you accountable because at the end of the day they're responsible for their own learning.

## **ENGAGING STUDENTS THROUGH SOCIAL MEDIA**

[EMMA:] By far the scariest thing I've done has been to enter the world of Twitter, so @queenA\_ms, that started January, about a year, January a year and a half ago and I jumped into Twitter and it was my mission to tweet one positive thing about the school everyday for as long as I could and here I am, you know a year and a half later, still tweeting. And for me Twitter has been such a valuable tool to communicate with the students. They open up on social media in ways that they might not speak to you face to face and to be able to be a part of those conversations with them, using that tool, has been instrumental in cultivating relationships with them. You know, I have never been really involved with social media before I started Twitter, I'm not on Facebook but for me this has been an amazing journey and about, shortly after I started on Twitter and started tweeting about the school, we decided as a staff to see what it would be like to tweet our school assemblies. So in October of last year we took the plunge and we put a device in the hands of every single one of our students and took them into the gym and said, we're having a student a month assembly, you're gonna tweet right through it

and we're gonna broadcast behind us on the screen, what you have to say about each other and about the school and about the assembly. And I felt like I was jumping off the edge of a cliff and it was incredible. You know, 185 pages of tweets at the end of a one hour assembly, those kids have a lot to say and what they had to say about each other, about themselves was amazing. I've kept that document for myself as, you know, as an artifact for how a risk can really pay off and I didn't know it was gonna happen at that assembly and it was an amazing experience and since then the vibe, the energy, the buzz in our assemblies is like nothing you've ever seen because we've handed over the assembly to the students. Is it quiet? No. Is it tidy? No. Are the students compliant? No, but they are engaged and they are active participants and they are having an amazing time and they love every minute of it and for me, it's worth it. Letting go of that control, that being a little bit scared every moment of the assembly, it's worth it for what I get back from the students.

## **INCLUSION THROUGH KNOWLEDGE FORUM**

[ROSS:] So I've notice a number of students who have had difficulty in the past in a regular homeroom who have managed to integrate into our homeroom and flourish because their ideas are respected and valued. They're able to share those ideas using Knowledge Forum and the knowledge building circles in a way that their ideas are valued and it helps to build community knowledge and the idea of diversity, sometimes those students can come up with fantastic ideas that other students would not consider. Knowledge Forum allows students to recognize promising ideas in their own work, their group's work and also their classmates' work. Because they're looking at multiple views, so they don't just concentrate on their own work, they're looking at the whole community, they can identify those promising ideas by identifying ideas that they feel need more investigation. And they may take those, they can separate those from the body of the ideas to take the really deep questions and things that would take them forward in their learning. Knowledge Forum helps me track their thinking by seeing evidence of their understanding and the deepening of their understanding over time which I would not be able to track in other ways. Sometimes when you have a conversation with the students or a group of students, you don't always catch their deepest understanding but Knowledge Forum allows them to go back and to build on those ideas over time and track their thinking and track their understanding over time. The use of technology helps develop student voice in my classroom by giving voice to students who may not be comfortable sharing those ideas orally, I think of students who are maybe quiet or shy who have fantastic ideas, but would not verbalize them. Maybe they would do that in a small group but in a large group setting their ideas would get lost or wouldn't be shared. Knowledge Forum allows them to share those ideas and sometimes those ideas are the most powerful ones that we get, they help to advance the community knowledge.

## **INQUIRY MATTERS - PARENTS' PERSPECTIVE**

[MALE:] I think the thing that really draws us to inquiry based learning is to see the way the curiosity and imagination of our son gets engaged. This is something that we've noticed particularly because he's had years in school when he's been bored. When he gets bored he can muddle through, pass his courses, but he's not growing, he's not learning, he's not developing the way he's capable of and with Mr. Lim's classes the past two years here at Queen A, we've just been enthralled by the way his curiosity's come alive, his imagination. He looks forward to coming to school, all of this is huge watching him personally and I think for both of us I think it's something that we share, I think, as teachers as well. I think it took Liam a little while actually, when he came into Mr. Lim's class here to accept that really he was one of the drivers of his own learning. I think he expected it to be a more conventional, more passive experience for him and the idea that he could define some of his own projects, that he could find sources, that he could do his own research and talk it over with his teammates on his project, this, once you took it for serious that this was real, that was a huge turning point for him. And I think it makes him a more mature child, but also somebody who's pushing his own limits a lot more than he would in a conventional classroom situation.

[FEMALE:] I really think this project let him grow, you know, I watched his capacity grow if that makes sense. He took the initial question, they had to go back to the drawing board and come again with a new idea and then just the hours of research and thinking and kinda distilling their ideas so that they had something to present at the end. And then the whole process of presenting which was a whole new learning curve needless to say, so that has been a lot of fun but I just watched him grow and I really appreciated it. I thought it was great.

[FEMALE:] One of the things that we've actually learnt about Liam in the last couple of years has been that he's taken some responsibility, he actually knows how to take responsibility for some of his own learning and we see that kind of maturity in him which is not something that I would have expected at this age.

[FEMALE:] I think my son's a very social person naturally, but working with a team and recognizing strengths of others. And acknowledging that he has, he's articulate, a lot of things come easily to him but I think there's still a part where you need to still learn how to work with team and draw everybody in and utilize everybody's strengths so that you do your best.

[FEMALE:] And it's made it more fun for him, I know, I think that's really something that gets downplayed too much in school and it should be, school should be fun. It should be a place where you kind of find the real love of learning.

[FEMALE:] In the world today, you need to have a lot of different skills and to be able to be very adaptable.

[FEMALE:] Inquiry based learning which is something they're doing at the university level too, more so, is something that should be integrated way earlier into the student's education.

[MALE:] Ourselves at the university level, it's something that I think we then take back and try to incorporate as well. A lot of us are thinking about those modes of learning because if the expression life long learning is real, then that's gotta mean they're learning the habits of becoming researchers, critics, commentators, analysts, all of that for themselves. And why not start as early as we can?

## INQUIRY CHECK-IN - COLLABORATION

[STUDENT:] Well with the research or while I was going over our ideas, I noticed that some things were repeated but that's like, sort of good so we know that it's not false information, that's like sort of showing that we're triangulating our sources.

[JAMES:] Oh, that's good. So but repeated, but not from the same source?

[STUDENT:] Yes.

[STUDENT:] Yes.

[JAMES:] That you looked at it. So you 're checking each other's work as you're going along right?

[STUDENT:] Yeah, definitely.

[JAMES:] Okay, so we set this up to use Google Docs and Google Drive and Mindmaster(ph) so that you could now, have you guys been checking each other's work?

[STUDENT:] Yeah.

[STUDENT:] Yes, definitely.

[JAMES:] Okay, and how often do you go online?

[STUDENT:] ...about....

[STUDENT:] Everyday.

[STUDENT:] Yeah.

[JAMES:] Everyday? Okay, and do you talk to each other when you're...

[STUDENT:] Yeah.

[STUDENT:] Yeah.

[JAMES:] ...remotely working.

[STUDENT:] Like say someone posts something on the Google Docs, we always make sure to check everything to make sure it makes sense...

[STUDENT:] Mm-hmm.

[STUDENT:] ...but not yell at each other.

[JAMES:] Okay, so not, so you're not yelling at each other, making sure everything's good.

[STUDENT:] Yeah.

[JAMES:] Okay. Tell me what the, where's your question right now, what is the main question?

[STUDENT:] We used to have like a different one and it was talking about, like, what were the positive effects other than, like, death.

[JAMES:] Okay.

[STUDENT:] But now we've, like, switched it and yeah.

[JAMES:] Okay so tell me about that because last time I checked in, what's your disaster?

[STUDENT:] Hurricane Katrina.

[JAMES:] Hurricane Katrina, right? And what was, you said there's, what were the positive impacts.

[STUDENT:] Oh yeah well...

[JAMES:] And then you've switched it now.

[STUDENT:] Yes.

[STUDENT:] Yeah.

[JAMES:] Okay, why?

[STUDENT:] Well we didn't think the other one was, like, that thorough so I was talking to my mom about it too.

[STUDENT:] Yeah I was, like, at home and I was telling my mom, I was showing her on the computer and she was asking me, she's like, that question, I don't think that's a good question and I was like talking to them and we all decided that will be a good fit to change it.

[JAMES:] Okay, interesting, yeah.

[STUDENT:] Also while we were changing it, we were like posting up ideas and then slowly deleting one by one and then we finally got to our inquiry question which was what were the positive and negative effects on humans, the ecosystems and the physical geography and the proximity and how did they react to it.

[JAMES:] Let me ask you about the map, who's doing the map?

[STUDENT:] Eritan.

[ERITAN:] I'm doing most of the map.

[JAMES:] You're doing the map, and why are you doing the, why is he doing the map and which program are you using?

[ERITAN:] I'm using this program called Google Engine.

[JAMES:] Okay, so one of the four I showed you right?

[STUDENT:] Yeah.

[JAMES:] So why are you doing it?

[ERITAN:] Why am I doing it? I don't know, I was chosen to and I picked it, partly by myself too and it looks like a fun software to use. It wouldn't just be work, work, work, it's quite fun to use.

[JAMES:] Mm-hmm.

[ERITAN:] I messed around with it a bit, figured out how it works and then I got the hang of it and...

[JAMES:] So you're kind of the expert in the group now, for the Google Maps.

[STUDENT:] Yes.

[STUDENT:] Mm-hmm.

[JAMES:] And you guys trust him to take care of it.

[STUDENT:] We all...

[STUDENT:] Yeah but we all, if he needs help we would try. Right now he doesn't really seem to need that much help, I think he's doing really good with it...

[JAMES:] Mm-hmm.

[STUDENT:] ...but we're ready to help him when he needs help.

[JAMES:] Okay, that's great. Let's talk about the data, the math because you know this...

[STUDENT:] Mm-hmm.

[JAMES:] ...project requires science, geography, math...

[STUDENT:] Yeah.

[JAMES:] ...language. Let's talk about the math, where are you guys with the math?

[STUDENT:] Oh, well we all, like, send each other tests like Eritan's doing the map, I'm doing the graphs and so far I'm doing really good with graphs. I'm like sorting it out, I have a Q chart, I have the...

[JAMES:] Mm-hmm.

[STUDENT:] ...and then we're sorting out the who is where, no...

[JAMES:] The who...

[STUDENT:] Yeah.

[JAMES:] ...what, where, when,...

[STUDENT:] Yeah.

[JAMES:] ...why, the application, yeah.

[STUDENT:] Yeah, and then I also have a graph about how many people died in the countries and like we're relating it to the other countries and like how much it would cost.

[JAMES:] Right, are you making sure that your data relates back to your main inquiry question?

[STUDENT:] Oh, yeah.

[JAMES:] Right, remember guys, everything, all the sub questions, all the data, all the maps, everything need to related back to answering that main inquiry question, right? We're down to the last couple weeks, what's the plan? Have you set the goals?

[STUDENT:] Definitely.

[STUDENT:] Yes, definitely.

[JAMES:] I mean 'cause all I've given you here is the end date, I'm checking in with you but I need you guys to make sure you have a plan for the next couple weeks.

[STUDENT:] We've set our due date for December 16th.

[JAMES:] Three days earlier.

[STUDENT:] Yeah.

[JAMES:] Good for you. Good for you, and when will you practice the presentation.

[STUDENT:] I think that I was gonna start the script yesterday but then the library was closed so I'm gonna definitely start the script today...

[JAMES:] Mm-hmm.

[STUDENT:] ...and I think that we can, I'm gonna like be the main presenter so I...

[JAMES:] You're gonna be the main presenter? You guys okay with that?

[STUDENT:] Yeah.

[STUDENT:] Yeah.

[JAMES:] Yeah? Okay why you?

[STUDENT:] Because I have...

[JAMES:] Remember everything's always why and so what, right? Why?

[STUDENT:] Mm-hmm.

[STUDENT:] I think that I have really good oral speaking. I have confidence in when I speak so I would be a good choice.

[JAMES:] Okay, and who's gonna be working the projector in the back?

[STUDENT:] Well I also, I'm also a good oral speaker so I'm sort of gonna like help him a little bit...

[JAMES:] Okay.

[STUDENT:] I don't know about...

[JAMES:] You guys okay with that then, you okay in the back? Okay fantastic and I think you guys are in good shape, okay.

[STUDENT:] Yeah.

[JAMES:] Make sure you, as you have been doing really well so far, send me any, if you make any new files, make sure you share them with me.

[STUDENT:] Okay.

[JAMES:] I've been able to look at your Google Docs and your Google Maps and your Mindmeister but anything else let me take a look at.

[STUDENT:] I sent you also the word wall, I have a (inaudible).

[JAMES:] Yes, you sent me the word wall, right? So that way I can keep track of everything and give you guys feedback on the go.

## **INQUIRY-BASED LEARNING**

[JAMES:] Well through this inquiry project I am seeing evidence that the students are going much deeper into the subject matter, I mean the goal is to teach them the processes but when the subject matter is something they've come up with, they care about, what's coming back to me is evidence of research, of thinking, of evaluation that's going further, I think, than I can motivate them by telling them what to do. We did a similar project last year of inquiry and there was a shift, it was just a shift, I wanna say it was a monumental change in the level of empowerment the kids felt that by the end they, not felt, they believed they were experts. Not only were they experts in the subject which they chose, they were experts in the process of researching it, they were experts in communicating it, they became experts in making the presentation and they became experts in presenting. And it was very evident from the beginning of the project to the end and how they would speak about it so proudly. It was very evident from the beginning of the night of the presentation fair to the end when they were a little bit nervous but by the end they felt that they were the experts in that topic. And the level of confidence, especially at this critical age when they're becoming young children to teens, and I think that goes so far to take them on an upward scale of learning, again, is to have that self-belief in their abilities. And that really shone through last year when we did that and I'm seeing that evidence play out this year from the kids that did have the benefit of doing inquiry last year compared to some who didn't. One of the driving reasons why I do knowledge building with the children, we have a term for it in the classroom, but essentially we're looking at the world around us and we're learning from each other and we're building and we are opening their eyes to see possibilities to not be limited to have a level of confidence in knowing what they see because they've seen it before, we've talked about it before, they've heard it before. I'm teaching them that you can get something from other people in a respectful way and you can share something with other people and that being knowledge and that being skill. And even being the ability to draw the best out of somebody, because as a teacher I think my role is to prepare these students, these young adults to be adults who have choice, who have empowerment, that the children also have this lens to look through life of critical thinking, of collaboration, of citizenship, believing that they have a voice, that they have value to change the world. I see the skills that are, I think, most crucial to them in high school and as an adult is independence, self confidence in their ability, a level of curiosity that takes them beyond just the first level of just finding something out but to actually create information. I see skills that they will take to life in terms of working with others in the sense of drawing out the best of each person within their group which later on will be in their high school and in university and in their workplace, to work as a team. Which is what is important right now for the 21st century and beyond. Self-

assessment I think is something very important that we have to teach the kids. And that's maybe something where they haven't gone to that territory before and as a teacher I do show them the way, because, speaking for myself, your best critic is yourself. If you don't hold yourself up to a level of improvement, of achievement, a higher standard, to me that's the impetus for you to improve and that's what we want to leave our students with, which is a legacy of always wanting to improve to really embody that term of life-long learning. To rely on someone else to tell you what's right or what's wrong, that takes away from the ownership, that takes away from the value of it. Just like when I finish something I can say, I built this, this is mine and it's the best that I can be, the best that I can do, that is the driving force.

## **INTEGRATION - MUSIC AND TECHNOLOGY**

[SAHRA:] Oh nice and what about this one? What's that? I really like to collaborate with the teachers that I work with on staff and being the music teacher you don't always get an opportunity to do so. But I started to think about what they were doing in their homeroom classes and in the Grade 8 I know they were doing an inquiry project on redesigning spaces all throughout Toronto so I thought it would be a wonderful opportunity for them to think about what they want that space to sound like, that's different than what it is already. So taking the sounds that they hear in the space now, creating a soundscape, and putting that into a musical composition but then imagining what they hope those sounds to be after they've recreated the sustainable space. And it really, it's a beautiful way to add music to a project. You guys are gonna turn it into a restaurant, right? So yeah what were the sounds that you thought you'd hear there?

[STUDENT:] People.

[SAHRA:] People.

[STUDENT:] Voices.

[SAHRA:] Voices, what else?

[STUDENT:] There's more people there, there's probably a lot more walking...

[SAHRA:] A lot more walking?

[STUDENT:] ...'cause this is the restaurant, you could hear, like people cooking...

[STUDENT:] Yeah.

[STUDENT:] Yeah.

[STUDENT:] ...as well too.

[STUDENT:] And what kind of, like, emotion or mood? Once they have the sounds that they've heard or that they've imagined, we'll be putting them into a software called Hyperscore and it's a way to compose music that's not putting notes on a staff, it's more taking motifs and lines of melody and putting it together and then assigning an instrument to each melody or harmony piece. And they're gonna get to take part in a concert that's, many different Toronto schools are involved in and they get to showcase their piece of music. And what I'm hoping is that Queen Alexandra will be showcasing, like, the sounds of Toronto. So spaces in Toronto, redesigned, sustainable, so I hope it's gonna be a beautiful thing.

[STUDENT:] Sounds good.

[SAHRA:] That [laughs], that's neat, right?

## **MARY JEAN GALLAGHER - AN INTRODUCTION**

[MARY JEAN:] In today's highly connected information age, educators have a moral obligation to empower students with the skills and dispositions of lifelong learners to support and teach them to become creative critical-thinkers, collaborative globally connected problem-solvers and responsible citizens who strive to make the world a better place. Educators at this school connect curricular expectations to the interests and needs of their students. Students have choice in topic and in how they research and present their learning. They're fully committed to their learning because they recognize that it is relevant to their lives. They see the value of what they're learning and they see that it is transferable to other context within and beyond their school. In this resource you will meet educators who design and support powerful learning experiences that engage their students. They provide in the moment assessment and instruction to meet student needs and push learning forward. Students have ready access to information. The focus at this school is on both the process and content of learning. Students learn about themselves as learners and they learn how to work as a team, challenge each other's ideas and build new knowledge together. You will meet a principal who is deeply committed to working with her staff to make this a reality for the students at their school. She takes risks and expects the same from her teachers and students. She believes in them and empowers them with the tools they need to succeed. She and her teachers are co-learners and co-designers of learning experiences and spaces as well as co-assessors of the impact of their work. They build relationships based on trust, high expectations and strong moral purpose. They see their students and parents as partners in the learning. Teachers' rules vary depending on student needs, they move in and out of learning as facilitators, guides, co-learners, co-designers and instructors. You'll hear teachers speak about the struggle they experience as they learn to share the responsibility for learning with their students. They're fully engaged throughout the teaching learning cycle as they constantly create and support opportunities for students to learn independently to struggle and to make mistakes. This resource documents Student Engagement in Authentic Inquiry, students ask real questions and tap into a variety of primary and secondary resources. They learn to be critical thinkers and creators of new knowledge. They move to new levels of learning as they expand their understanding of the world by questioning ideas and building on the thinking of others. Technology accelerates learning and connects students with experts across the globe. It provides space for ideas to live, be revisited and be improved. Students engage in integrated learning throughout their inquiries. They identify problems and seek solutions, they study blueprints, collect and analyze data and work collaboratively as they delve into their findings. They recognize each other's strengths. They learn to manage their time and tasks and critically review each other's work. They develop conclusions and new ideas and then design representations to communicate their new learning with peers, parents and community members. Teachers and students assess constantly to determine next steps to maximize learning. They discuss what's working and what is not and ask how they might do things differently. Students cope with challenges and learn to be responsible, to manage their

time and to have the courage to take risks and make mistakes. Students learn to linger over ideas to dig deeper for meaning. They learn to have an open mind, to value different perspectives and to think independently. They learn to be action-oriented, always asking, 'how can I make this better?' They learn to express themselves clearly, to disagree and challenge in an agreeable way and to think creatively and critically. This resource demonstrates both how to achieve excellence in student learning, well-being and equity and how public confidence deepens when parents and community members understand and value a neighbourhood school committed to providing rich learning experiences for its students. Everyone learns to appreciate the struggle that new learning brings to the fore. Thank you for taking the time to engage with this resource. You can find other related resources at [learnteachlead.ca](http://learnteachlead.ca). I congratulate you on your professionalism and look forward to future opportunities to share Ontario's success stories, thank you for your role in making that happen.

## **QUEEN A MIDDLE SCHOOL - A GROWTH MINDSET**

[EMMA:] I've been, you know, a teacher for 23 years and when I landed on the doorstep of Queen A, I felt that I was given a gift. A gift of opportunity to make a significant change. I look at the students in this building and I see the future leaders of our country. Others might look at Queen A and the communities we serve and categorize them as a have-not community, for me these are the have communities because if anyone who comes in this school and spends 15 minutes talking to the students here, they see the potential for what these children have to offer and it has been my duty and my purpose and my mantra to allow them to flourish in the most positive way that I can. Because I look at them and I just want the best for them and I want them to want the best for themselves. And the change we've undergone at the school, in a variety of way, most primarily through knowledge building have put those tools in the hands of the students.

[EMMA:] So I've been at Queen A for almost two years, not quite two years, and when I arrived at the school I had a very conscientious, committed group of teachers who were working so hard to make a difference for the students in their building. I immediately, relatively quickly sat down with the teachers and said, so what do you want to do here? What change are we going to make so that we don't have, you know, particular students spending every period just hanging around in the hallways and not participating in school. And so we looked at student voice and we looked at building community and pretty much everything that I have done since being at Queen A has been targeted to develop both of those things. Inquiry and knowledge building are an excellent match for those because it allows the student to direct their own learning, it allows the students to set their own goals, it allows the students to learn from each other in ways that I don't think they ever thought possible. And by having the entire school focus on one initiative, which is knowledge building, it brings the staff and the students together in a way that I didn't recognize immediately but that would be such a strength, to see the school through that one lens would allow everyone to really understand where we're going and why we're going there. This one approach which has in many ways, encompassed many of those other educational trends, but this one approach has

really allowed the teachers to focus their own professional learning and for the students to focus in a way that I didn't think was possible when I first started.

[EMMA:] It's not about me as the principal, it's not about my staff which is great, it's about those students 'cause they are an amazing, incredible group of individuals and they have fantastic families. Anybody who comes within these four walls, they can feel it, they can see it and they know that these students are going places and it's only a matter of time before that message gets out there.

[STUDENT:] Here at Queen A.

[STUDENT:] We are creative.

[STUDENT:] Here at Queen A we are diverse.

[STUDENT:] We are caring and non-judgemental.

[STUDENT:] Here at Queen A.

[STUDENT:] We are very energetic.

[STUDENT:] We are getting prepared for real life.

[STUDENT:] Here at Queen A we are a family.

[STUDENT:] We are exciting.

[STUDENT:] Here at Queen A.

[STUDENT:] We learn to love people around us.

[STUDENT:] We are a new way of learning.

[STUDENT:] Here at Queen A we are a family.

## **SHOWCASE PREPARATION**

[EMMA:] So tonight we're having our second annual Inquiry Showcase, we began this last year and this is our second time doing it. What's different about tonight is that we've got all three grades involved. So Grade 6s, Grade 7s and 8s, they're all coming here tonight to present their inquiry work. So I've got 210 students roughly, everyone's been involved in an inquiry, a collaborative inquiry and they're really excited to share their work with their families, with their parents, with, we've got community members coming and even with each other so it's really gonna be fantastic.

[SARAH:] So if you look around you see for every white panel, we have to have a projector, a computer, some chairs and that's what we're working on right now.

[EMMA:] The atmosphere in the school is pretty electric I have to say, there's really a whole buzz around the building because this is a chance for the students to make their work public. So often education is about taking their work and it gets shown to a teacher and maybe shared with their classmates but we're making our work as public as we can. And so there's a real sense of anticipation by the students, they really rise to the challenge. We keep our expectations high for them and they meet those expectations. So while a lot of the preparations are getting the students ready, they're getting their presentations ready. There's still a lot of things behind-the-scenes that have to happen. When you're gonna run this many presentations at the same time there's a lot of coordination that needs to happen. So we needed over 40 data projectors, you know,

and I only own, our school has 10 so I needed 30 more so that's sort of banging on the doors of neighbouring schools, calling in favours, gathering together 40 projectors, then you've got your extension cords, your power cords, making sure the WiFi's working. Many of the students are using the Internet for what they're doing and it really had to be a coordinated school effort today to get all the spaces ready and set for what we're doing. We've got three Smartboards on the go tonight as well, so it's really all hands on deck and all the teachers had to sort of kick in and get things ready for tonight. So as an event planner, a lot of it happens right at the last minute as you can see. So I'm making sure that all of my Grade 7s have access to power for their presentations. So tonight in the library, all of my Grade 7s, there's about, oh gosh, I don't know, 110 kids? Are doing presentations of their inquiries and everybody needs a station so I'm just doing some last minute plugging in and setting things up.

[SARAH:] A little stressed right now but it's gonna be great.

[FEMALE:] Yeah.

[SARAH:] Very exciting, kids are excited, we're excited.

[AUSTIN:] Yeah, kids are really excited, they've been working on these projects for the past three and a half months. Researching, practicing, going through different steps, it's integrated with language, science, geography, math. So this is kind of a culmination of the term's work and they've all done an excellent job and they're really excited to present it and I'm excited to see the success that they'll bring tonight. It's new, it's fresh, we've never done this before, so the kids are gonna come in and practice their presentations now, so they're gonna be all set for tonight.

[STUDENT:] We're just going over our whole presentation and it's just, fixing what we're gonna be saying when we're presenting to the parents.

[EMMA:] It's a bit of a risk because we're involving all the students in the school and we've never tried to do that. So we actually have, you know, over 150 presentations running simultaneously and I don't know what that is going to look like. I know that I'm anticipating that we're gonna have a really high parent turnout, we've certainly done that in the past and the kids are so proud of what they've done that they want their parents here tonight to show them what they've accomplished over the last few months.

[STUDENT:] We hope that they actually enjoy it because I think a lot of them know how much work we've put into it. And we had to find a way to, like, put it into, like, a five minute or ten minute presentation. It was pretty hard to do but we finally did it.

[STUDENT:] Took everything and left in may different places.

[STUDENT:] So memorize this and this, okay? 'Cause you're not gonna have the script.

[STUDENT:] And don't repeat the same thing twice...

[STUDENT:] I know.

[STUDENT:] ...like you did before.

[STUDENT:] And don't have the script when you're presenting. Yeah, all our parents are coming. They're gonna be watching us and then we're gonna present for an hour and then we're gonna have a break. ^E00:04:19 ^B00:04:24

[STUDENT:] It affected region like an explosion.

^M00:04:27 [JAMES:] Okay so I'm gonna show you, can you guys hear me very well? So imagine tonight it's going to be at least twice as loud as this. ^M00:04:33 So it's not like in a room, right? You need to come in here Winnie what you're doing is great, but you need to speak out this way, can you hear me now?

[STUDENT:] Yes.

[JAMES:] Okay, so that volume right there is perfect okay? So say it again, nice and loud. One time in the school you're actually allowed to shout, use your visual alright? Remember you three are standing a bit stiff right now.

[STUDENT:] Yeah.

[JAMES:] Right? So move around, we did that in class...

[STUDENT:] Alright.

[JAMES:] ...this is actually okay but Winnie if you step in front of him, point to this, talk to the crowd, step back, work together as a team. You're dancing up here, you're performing and you're dancing, not individuals, okay?

[STUDENT:] [Inaudible.]

[STUDENT:] Okay, move up. That like...

[STUDENT:] Michael where should we hang this up?

[STUDENT:] I got it.

[STUDENT:] I suggest right here.

[STUDENT:] Stand because this is gonna be too high. The projector's gonna project around here.

[STUDENT:] Trying to be enthusiastic, so it's not boring and like ^M00:05:30 Aaron said, keep our shoulders down and always make eye contact with the audience.

[EMMA:] So the reason it seems just so chaotic is 'cause we've never done this before, we're doing this with the entire school at the same time and that just puts the pressure on so lots to do.

## **STUDENTS TALK ABOUT INQUIRY**

[STUDENT:] Our goal is you make a question and then we're gonna try to answer that question and then on a certain day, we're all, like, we're gonna have like a big science sort of fair, but inquiries.

[STUDENT:] They, it leaves a lot to you really, you, it's about you asking questions and then finding the answers.

[STUDENT:] The inquiry really helped me in my oral skills, yeah, and then I felt very confident and confident in what I was doing.

[STUDENT:] This year we're all together and like, community-based, not like here's a book, study it, test on Friday. It's like you're here, we're a community, work as a team and we're gonna accomplish more together.

[STUDENT:] You follow an outline but you also get to do a lot of it yourself and I find that very cool because I like being a kind of independent person and if I am working with a group, it's good to be able to discuss your ideas with the group, it's good to be able to make ideas with the group.

[STUDENT:] I sent an email, see if they get back to us just say, hey, like, we're some students, we're doing a project on the tavern, maybe we could take a tour or you could just tell us about some of the history of the tavern. My inquiry is on, well it's on sustainability, but the location we're doing is the Maple Leaf Tavern at Gerrard and Pape. It's a kind of relatively small low-rise sort of building that has actually been around for about a hundred years and has been abandoned now for about two or three. And it's

just been under utilized. They're kind of halfway through renovating it now but it seems to be kind of stuck in a half-renovated state and has been that way for quite a few months.

[STUDENT:] And we're planning to change it into like a bar or a pub type-restaurant. And we're going really for, like, sustainability, so, like, solar panels, rain barrels, eco-friendly. We're also thinking of having, like, a green roof where we can grow our own food.

[STUDENT:] It's very near the high school, Riverdale Collegiate and the way I'm hoping it could affect the community is, it's going to be a very healthy, like, natural foods restaurant and I'm hoping it could kind of turn the diet of a lot of the kids at Riverdale around from just fast food.

[STUDENT:] We want a healthier diet for the community, 'cause the only stores there are, like, a food court and McDonald's, which isn't very healthy, so we're planning to make a healthy alternative for the students at Riverdale.

[STUDENT:] My project is about 8 Park behind 200 Wellesley Street East and the place is not really safe, like, people they are consuming drugs there, just say it. And small kids, they are getting influenced by it because there's a playground right beside it and there's crimes happening over there so I felt, we felt like that place really should be renovated. It is a very crowded neighbourhood and the income is, the economy of the neighbourhood is not really good. So I think people will like it there, they will feel more secured, they'll feel comfortable there and kids, they would be able to walk around, especially girls, without any difficulties. We're working on it and everything's hopefully what we're doing would be accomplished.

[STUDENT:] I get to learn what I want to learn, almost, if I, 'cause you pick your location, like I picked a location that I wanted to do and then I looked into that and researched it.

[STUDENT:] You are leading your own learning so what you give in is what you get out. So it's different because, like, you get to research, like, popular things that you like. Like, it's not like you have to do this, report on this, it's more, find your own thing that interests you and then tell the class about it with questions and try to create a discussion.

[STUDENT:] The cool thing about this school is that it's such a, like, diverse population. It's very cool just seeing how these groups mix.

[STUDENT:] Queen A changed my view towards Canada. As soon as I came here, oh my God, I loved it. Teachers, they were so supportive. Friends, amazing. Queen A made me realize that the people around you are also important. It's pretty great to belong to this school actually.

## **SYSTEM SUPPORT**

[MIKE:] So I think you ask a really good question about why is it important that we have a combination of relationships and rigour in the classrooms and for me that's, those are the two watch words that I pay attention to a lot. I pay attention to the kind of work that kids are doing around building deep knowledge and deep understanding through an inquiry model, but I also believe that it's through that model that we develop

effective relationships with kids. And my work in the family of schools for the past three or four years has been really focused around both of those themes. Inquiry, can we follow the leads of our students and our teachers, around their own professional practice, but around our students' engagement in what they want to be participating in and can we through that build effective relationships where we're co-constructing. We're understanding the student from the student's perspective. We're co-constructing the relationships and that doesn't always mean that they're conflict-free relationships, but it means that we're building the kind of relationships that we want our kids to be fulfilling as adults and as contributing members of society later on. So it's been a really interesting journey for us as a school and as a superintendent to see what the rest of the schools in the family to pursue, what does inquiry really look like? Authentic inquiry at the school level. We've been really focusing on the ways that we can support learning from a professional learning point of view in terms of leadership development and teacher development and a couple of years ago I was given the suggestion that if we're trying to support inquiry for students, we should be doing that for ourselves as administrators. So we transformed our family of schools' model from a committee-based model to an inquiry-based model where groups of administrators and leaders work together with each other to learn about something that they know is important and that they want to learn more about but that will also have an added benefit for students. So we've divided our inquiries, our professional learning into both achievement and well-being sets of inquiries. So we have a literacy inquiry group for administrators and leaders, we have a numeracy group for administrators and leaders, but we also have a mental health committee to focus on the well-being piece of it. And so that's been one way of giving witness to what the leadership in the family wants to pursue and that the huge payoff has been for the students because as principals learn more about inquiry and delve into it more deeply, it's much easier for them to work with their staff around what is authentic enquiry look like in their schools. I've wrestled with this for a long time, how do you transmit one idea that works in one particular context to another school in another community in another entirely different context and we do it in some ways, strategically because we can say, we're going to visit schools so that people can see. We also locate meetings for example, in different schools. The more opportunities that schools have to interact with each others' schools, the better. The other thing that I do certainly is consistently message over time what it is that I've worked on as a vision for both myself but also for the board and for our family of schools and that is again, relationships and rigour. It's how do we build relationships through effective instruction and the spread part of it by necessity has to be authentic and it has to be grassroots and so one idea that takes place here at Queen Alexandra may look entirely different at another school. The way that I approach that in terms of my own superintendency is to encourage innovation. And I say one of the cultures that I want to build, however that's defined in whatever school you're in, is to have a culture of innovation and a culture of inquiry. So by giving people permission to innovate and to inquire deeply and by pursuing that and by me monitoring it from the point of view where I can get to here the narrative of what's taking place, I then share the narrative. And I think that's what I encourage my administrators to do too, is to share the narrative of where their school has been, what that journey's been like and how they think it might apply in different places. Knowing, of course, that we don't know whether it's going to apply in other places because again, that's the context, but giving people permission to innovate is very important. One of the

key messages that I give to people is, as Lucy West has certainly said, if you already know the answer you're not learning and when you approach something that you don't know, there's obviously you're going to have some trepidation because it's a new experience and if we can't expect that of ourselves, it's very challenging to expect that of our students because we're not tuned into their emotions around what that might feel like. What we've discovered is that when teachers do work together and take that risk no matter how small it be, it is or might be, what we find is that they not only discover that that may not be what they really thought they were going to learn, but they've learned a whole bunch of other things in addition to that. And the reflective piece is why we have inquiry groups in every school so that they can reflect together on what they thought they were going to learn, but in fact what they did learn and that's been very powerful. It's not, the learning often isn't what we thought it was going to be, but it's rather, I learned this in addition to that, or I was completely wrong in what I thought was going to happen, but this is what I learned as a result of it.

## THE SHOWCASE

[EMMA:] I think the tipping point for me was the evening about a year ago tonight. So we had three grades involved in inquiry and they had prepared their inquiry projects to be unveiled on a night just like tonight. When you throw a party and you don't ask for RSVPs you really don't know what's gonna happen and you get that little knot in your stomach, you think, but what if nobody comes? What if we've done this all wrong? What if I really misjudged things? And the night of that showcase when this room that I'm standing in right now was packed with parents, that was a real tipping point for me. It really heralded to me a sense that this is what the community was looking for and the kids were so proud of what they were doing and the parents were so full of good wishes that I knew that I was onto something that was gonna work here. There are not kids in the hallways, you go into the classroom the kids are happy, they're engaged, they're participating, they want to show me their work. So now when kids come down to the office, it's not about them, you know, throwing an eraser across the room 'cause they're bored, it's about, I wanna show you what I'm doing. Have you seen my question? Can you help me with this? So when we design our inquiry we are using curriculum expectations from a variety of different subject areas. If you look at the Ontario curriculum there's a lot of little small expectations that fall under the big ideas. We are focusing on the big ideas. In math we draw the expectations from all five strands, we pull them together and by combining them into this interdisciplinary project, we are able to hit all the curriculum expectations. What we're going for is the math that they're gonna be using in real life. I've been tweeting all day and I will continue to tweet tonight, it's, I've got a lot of sort of followers that aren't necessarily part of the Queen A community but are part of the broader Toronto community. So followers that have, sort of, jumped on board when we've been involved in our design projects, you know, from the TTC, Waterfront Toronto, architects, you know, Greencity, all kinds of people. So I'll be tweeting and we'll see what happens.

[STUDENT:] I feel a little nervous but I know that it's gonna be okay in the end so I just try to get through it.

[STUDENT:] The idea is that to bring water from the rain down to the side, after it's going to be in the container like after those [inaudible] they have two ability. The first one is like, because they're glass they, like, attract the sunshine, when the sunshine get here, the sunshine pass through and get in an air pocket. And in the air pocket, the air pocket are going to hit the water so the water is going to be hot.

[STUDENT:] Our main focus was to get what people really wanted to see in the community and as you can tell from our survey, this is really what the majority of people wanted and we really believe that this would be sustainable which means something that will last a long time, that is eco-efficient and is beneficial to everyone in the community and the economy and the environment because we have lots of cool features that help the environment and we really want to bring the community together. And our site would also create jobs for many people in the community because we checked the board profiles and there are some people who are unemployed so we with that this would help people who require a job.

[STUDENT:] We also have a children and adult area so it would be separate. So like, the children's area would have a sound proof wall so like it would really disturb the adults when they're reading and it would be peaceful for them.

[MALE:] Good idea.

[AUSTIN:] They're just, they're excited, they love it. Like you can see that they're learning, you can see that they're proud of their work and that they can see that, you know, the substance to it.

[STUDENT:] For our blueprints as the way we're gonna lay it out, we have our skating rink here with the sensors. This is gonna be our splash pad, this is where we're gonna have a red tent shop for people that don't have skates and you can also book the ice if you wanted now. And this is our green space with the stone walkway and swings and like a flower garden for you to look at.

[STUDENT:] That was great actually.

[STUDENT:] We didn't expect it, that it would go so great. We were very nervous, but it's a relief now.

[ROSS:] I think it's such a great opportunity for the students to present the work and the learning that they've done and to share with their parents and being able to talk with parents and connect with them and, it's a really positive feedback from the parents. They really like what's going on and love interacting with the students.

[STUDENT:] So some of the impacts we hope this restaurant would have if it, you know, came to be a thing is reducing the fossil fuels by, like use of fossil fuels by growing most of the food on the roof. You know, using renewable energy so again, it doesn't use up fossil fuels, doesn't release any harmful fumes. So we use renewable energy of course, being the solar panels and the greenhouse itself is very cool because they can actually help heat and cool the restaurant itself and save 15 percent of the energy bill for it.

[FEMALE:] There's a lot of energy here, like just coming into the building. I'm waiting for my husband to show up I was like, oh my god everyone's so excited and the kids are jazzed and I'm proud. I'm proud of them and I'm proud of the principal and the initiative of this, it's very involving.

[STUDENT:] So this is the rainwater we collect, and then it goes up into here, filtrates through there and then it like, all the dirty rain water filtrates into there.

[STUDENT:] Before we chose this idea, right, we had to make a graph, we had to

survey people from like the city to see what they preferred to see at Ontario Place. When we did our graph, I mean when we went to do our survey, we went to Ontario Place to see if there's anybody there, but there was nobody there since the place was abandoned and they, the security guard told us, they kicked us out, they said we weren't allowed here, it's under construction, it's dangerous. So we decided to go to the Eaton Centre and when we were there many people on the survey, 22 people and a lot of people wanted an amusement park and a nature park so we added, so we put those two in our park.

[MALE:] They're learning very good because I saw another project, we go over there, they tried to reconstruction about the underground. The Queen E station or something they say, so this is also I find a good idea they're doing. And this one also...

[FEMALE:] Yeah this one also.

[MALE:] ...they are thinking also very good, you know, because Ontario Place used to be a very, you know, popular, all the people are going. Now isn't like, it closed right? So if they do like better way so people can go even environmentally, it will be very good, this thing, you know.

[AUSTIN:] It's definitely a success and I think that from here, going back to the classroom tomorrow with a sense of accomplishment of what they've done today is something we can definitely build on.

[STUDENT:] Me and my group are actually planning, just for fun, to go to the place and propose this idea because we really are proud of it and we really think it would be a good idea. We got lots of good responses from the parents, they were saying how they would actually love to go there so I'm pretty proud of it.

[ROSS:] The energy's amazing. There's so many students and community members around and you know, we've been going for over an hour and they're still coming in and they're still going around. We have students from Grade 8 here but we have parents from Grade 6 and 7 and we have the students coming and going so they've gone to visit the Grade 7s and then we have Grade 7 students who are coming to visit the Grade 8s.

[SARAH:] It's fantastic, wonderful. And the kids, I think, are so proud and so pleased and they've worked so hard and I just had a discussion with a parent and she was saying she couldn't believe how well researched they are but also integration of technology and the knowledge and also mentioned the thoroughness of the presentation so that makes me happy.

[STUDENT:] As you can see, the bottom shows the country and this shows the scales of the death counts and you can clearly see that Indonesia has the highest death counts estimated out of all 14 countries.

[STUDENT:] Early this morning we were just setting up and now seeing everyone having their inquiries up and like people presenting is kinda like woah. You can just see everyone talking and having a good time, smiles on their faces everywhere.

[STUDENT:] So here are our graphs and charts which relate to the math part of our project.

[JAMES:] The boys and the girls, they are doing fantastic. It's actually quite interesting as what I thought it would be, they're nervous. But they're also realizing that they have potential and they have power and you can see which each and every presentation they're getting better, more confident, speaking louder. It's a fantastic journey for them, this is the first time they've ever done this in their life and I think the takeaway from tonight is that they realize how difficult it is, what has to go into something like this and

at the same time, this is the reward of feeling proud about themselves, not just some grade.

[STUDENT:] I learned that my dad was actually in the natural disaster that we're doing. He told me all about it. He almost got hit by a coconut, he stepped out there, he saw in the distance a boat fly by, he told me that. So this isn't just a project for me, it's a personal thing.

[JAMES:] The parents who only see again a grade, but now they actually see their child and I think in their eyes, they envision their child grown up doing this in front of a boardroom and I think that's something that inspires both the parents and the children to continue on.

[SARAH:] I mean I expected it to go really, really well. I really did and I expected the kids to rise to the occasion and they've done so.

[ROSS:] It's a lot of planning and a lot of effort and it seems at times you think, you know, is it all worth it? But then when you have an evening like this, you see really like why we do it and it's just such an amazing feeling to be part of a school community like this.

[EMMA:] Ten minutes into tonight, you couldn't even move around. I always wonder what my next, am I ever gonna be amazed again by what happens at Queen A because I feel like I get to this peak and the top and this is it and then I have another event and I'm just so incredibly proud of my students and my staff and I realize that there's just so much more awaiting for us that there's gonna be another time so it was amazing, it exceeded my expectations, the night was fantastic and it's time to go home.