Speaker 1: How do we know if it's actually inquiry in mathematics and not just a really good problem?

Speaker 2: So I asked my class are we as clean and green at Tiffany Hills as we think we are, and I think we all asked our classes the same question to see is it a problem solving question? Is it inquiry? Will they find the math or will they sort of go in another direction? And I know for my class I came to the conclusion it was an inquiry question because my students came back to me with more questions, and bigger questions, and started to become passionate about it. They didn’t pull out a ton of math, but they did find ways to bring math into it like weighing the garbage, finding the volume of the garbage cans, talking about the cost to remove green bins. So I think that, that kind of a question would spark a really good inquiry that I could pull a lot of curriculum into.

Speaker 1: So if you carried it further then the math would just sort of happen?

Speaker 2: Yeah.

Speaker 1: Those kind of questions would come up?

Speaker 2: Yeah, instead of me having to pull out of them I think they would sort of authentically come up with those problems in math themselves to solve.

Speaker 3: So they were generating ideas. I found the same thing, the students started generating a diverse set of ideas where I thought this is awesome, we could go so many places with this. And it's funny because the older students were actually talking about the same thing, weighing the garbage and then we started talking about how much the school actually has, like each classroom and what's happening with the garbage, what's happening with the Clean and Green team at our school? We're not composting any of it. So all of these items that we're actually anticipating started to come out of this and to me it wasn't really --when we look at problem solving and inquiry yes it's a huge--there's a problem at the core of it but there's so many pieces not that the students can now explore.

Speaker 4: What's interesting too is your class both talked about mass--excuse me--my class maybe because they're younger, because I have more 3s than 4s. I have hardly any 4s. They could not see the merits in weighing paper. They just thought that was the most crazy notion to weigh paper. They wanted to count individual papers.

Speaker 1: And that's how they would know?

Speaker 4: That's how they would know because we talked and we kept asking them well how would you measure it? How would you measure that? So very, very different responses from different grades.

Speaker 1: How do you know when--you start your discussion and then the students are asking questions whether it's math related or not. How do you know they're going to land? Or maybe you don't know ahead of time and you just sort of take what they give you but how do you know you're going to land in the area of a piece of curriculum that your students are needing to know? How do you know that they're going to get there?

Speaker 2: For me I sort of frame a question that I know curriculum could come out of and to be honest I kind of hope for the best. I just wait and I let those questions come out authentically and maybe that's just me asking a leading question or bringing in a material, a book, or a video that might have information that can spark something for them and then those inquiry pieces really come out of that and then that sparks their own passion which is--

Speaker 3: So it's like provocation and I think if it's not going a certain way and I have a big idea in mind that I'm looking to cover in curriculum, if it's what I'm getting from the students or what the students are actually coming out with is not where we want to go or where I see it I just start with finding more provocations in a variety of them and I think students do need a foundation and a base to work off of. We can't expect them to come up with ideas on their own.

Speaker 2: I think at this point we've built a class community where we all learn from each other whether it's from a knowledge circle, or a number talk, or in another subject we all are learning from each other so to value each other’s ideas and questions, and sort of build on those all the time kind of takes the need from me. It allows me to take a back seat and allows them to sort of drive their own learning and then as a teacher I go into the curriculum and I find where it fits, and it always fits somewhere right? We have so many subjects, our curriculum’s so big that we're always able to put learning in somewhere.

Speaker 4: I think the charts we made at the beginning of the year when we were still very early in the year we made the charts to put up around the room with all the science and social studies curriculum. That for me has been really useful because as we did come across a link to the curriculum I was able to write it on the charts. It's got the grade 3 and the grade 4 curriculum and it's just been very helpful for me to see where the curriculum is and where they're going because it's not sort of right now we're going to do this curriculum because it's messier. It's all over the place.

Speaker 2: It helps them see their learning too, right? Like oh, we're learning about stable structures right now. Oh that's cool, let's learn that a little bit more where sometimes they don't see the learning as learning. They see it as playing, or building, or fun which is what we want them to see it as and then when we so no, but you are learning then they realize and they want to continue with that. So I think those charts have helped me a lot too.

Speaker 1: And I think that starting with either the provocation or the inquiry question they will see that it's not just math and you said that you were starting out with more broad questions, not number related. Questions that they were asking but they can see that and you can see that there writing in there, there's thinking, there's reading and then there's all those 21st Century skills that we've been talking about, right? We've been talking about collaboration and initiative, and risk-taking, and innovation and all those skills that we want them to be growing into and developing because that's the world, right? That's what's coming out of their work together.