Intermediate Science Microbiology
Pre-Interview

Interviewer: Why did you choose to teach this lesson?

Teacher: Today's lesson is kind of a work day at the end of the semester, so the students have a pretty structured routine everyday. After our routine, when they come in to the beginning of class, it's just kind of a workday to get caught up and finish the assignments before their deadline next Thursday, which is the end of the semester for them. This lesson is kind of wrapping up our unit on microbes and cell biologies. It's kind of an independent ... They've been given enough direct instruction. It's like an independent kind of explore, analyze questions kind of activity today.

Interviewer: What are the learning outcomes for this lesson? How are they related to the larger sequence?

Teacher: Sure. There's actually three mini-lessons going on in within the classroom today. The first one is being able to identify similarities and difference between bacteria, protist and human cells. It's kind of a compare and contrast between what students are observing in the microscope. It's really hands on. It's getting students familiar with the equipment. The second activity is categorizing them, without knowing what they are. It's kind of taking it a step further like, "Okay, these are the descriptions of the microbe you're looking at, so how would you categorize them?" The third one is just an independent note taking activity to prep them for their final assessment.

Interviewer: Is this ... Within the science, is this a part of a larger learning sequence?

Teacher: [00:02:00] It is. For 7th grade, it's an Intro to Biology, so we start very small and move bigger. This is our prokaryote, eukaryote unit. Then we're moving into genetics and learning about DNA and heredity for next quarter. Then we're ending with adaptations and evolution. It's kind of the big picture of change over time, starting at a cellular level.

Interviewer: Using a lot of words I don't know. How's the movement with the ...

Speaker 3: The audio? Good.

Interviewer: How would you describe ... I'm just kidding, I understand [inaudible 00:02:24] ...

Teacher: Thanks for loosening me up, a little.

Interviewer: How would you describe this lesson as meaningful, useful or relevant to students?

Teacher: Sure. I think it's meaningful for students, especially the first activity, because they're actually dealing with equipment. A lot of their idea of science is experiments and equipment, but not really knowing how to use them or the procedures for them. I think this is a good intro for them to get their hands on the equipment and kind of feel it out.

They get really excited when they see something living under the microscope, so that's always cool. What was the rest of the ...

Interviewer: Meaningful, relevant ...

Teacher: Meaningful.

Interviewer: Useful.

Teacher: Yeah, so actually I'm going to find that out today, how useful it is to them. We are trying to connect everything we do to our larger essential question, which is the same in the whole science department. So 6th, 7th and 8th, they have the same essential question that they're answering. I'm actually going to find out how they think what we're doing is connecting to that larger, essential question, today.

Interviewer: And that essential question is ...

Teacher: It is, how do we know what we know about the natural world around us? That's what we decided as a department at the beginning of the year.

Interviewer: Here's another opportunity. What is the big question that you're using to drive student discussion?

Teacher: [00:04:00] Big question, how do we know what we know about the natural world around us? It's also more than that because it's ... We have a lot of, what do students know? What can students do? How do they do it? What are their work habits? It's using kind of all three of those in one class to see if they're actually picking up content performance and good work habits to answer this big question that we don't have an answer to.

Interviewer: How are you planning to check for understanding or assess student outcomes?

Teacher: Sure. Student outcomes, the objectives are always posted on the board, but we try to talk about them at the end of class as kind of an exit ticket. Did we meet our goal for the day? Check ins happen usually with the do later that students do at the beginning. Like a review of things they'll need to know before the activity starts today. It's my chance to kind of peek in and be like, "You got it, you got it. You need a little bit more help. Let's talk it out." The do now is really valuable for me in that way. The microscopes, [inaudible 00:04:53] activities in a small group with myself, that's fairly easy to check for understanding. Let me see ... The independent work is harder to get to. I kind of have to assess that after. The categorizing activity, I also have another teacher with me, who checks in to make sure that students are not totally, totally off.

Interviewer: How would you describe this lesson as engaging for students?

Teacher: As I said, any time there's hands on with any equipment, students are engaged. I think they like the idea of seeing a whole world that we don't normally see or are exposed to.

[00:06:00] Talking about germs and transferable diseases is kind of naturally engaging. To keep them on task is the freedom of choice. Not on task, but the engagement high, they have the freedom of choice to move freely between any activity they want. If they're feeling like they want to listen to music and just do independent, there's one. If they want to get on the equipment, there's another. If they want to work with a partner, they have ... They have choice. I think that keeps the engagement high.

Interviewer: How do you plan to manage student behavior throughout the lesson, starting with expectations?

Teacher: Expectations. Student behavior. I spent a lot of time first quarter not going through content but just setting up routines and expectations for entering class, but also for the Chromebook. How do we use the Chromebook responsibility? I dedicated a lot of time in first quarter to set these up pretty strong. It actually is kind of leftover from the work we've done. Students just know what's expected. It'll be verbalized many times, like, "What are the expectations?" The class will stop if we need to review those. They're pretty good at synthesizing what we did that first quarter to really just make it second nature for them.