

15: 7th Science Cells PreInt

Teacher: This lesson is going to be a start of another benchmark. It's a very, what's the word? Fun lesson that the kids like to do. A lot of the kids come in at different levels as far as experience with different things for science, and for many of them this is like the first time to use their microscope, and so it's very exciting for them to use the new equipment. They actually get the chance to see what living things are made of so that we're actually looking at the different benchmarks that we're looking at for science, so the first one about the cell theory, one part is about being made of cells.

Our next benchmark that we'll be starting on is about the structure and function of different cells, so we want them to see the different cells, and then hopefully, eventually they'll see that there's a difference between them. They're going to be exploring, literally, so they haven't really learned much about cells, except for that there's a cell theory. That there's parts to it. Yeah.

Some of our learning outcomes today are to actually use the microscope correctly. They've been learning the parts. The students come in with different levels of experience, so some have never, ever used it and some have used it before, so give everybody a chance to try to catch up to each other, hopefully. One of the benchmarks that I'm going to stress to them is the common, core benchmark of follow precisely a multi-step procedure [00:02:00] when carrying out experiments, taking measurements and performing technical tasks. That's one of the common, core benchmarks.

We're going to stress that to them, that it's not ask Mister [Pi 00:02:15] [literally step 00:02:16] what to do next, or what am I doing next. It should be, "I'm going to read it, try to understand what I'm reading, and if I have a question I can ask to clarify, but not necessarily tell me what am I supposed to do next." Hopefully they can build some independence.

The other goal would be to actually learn about cells and see that living things are made of them, see that plants are made of cells. I don't know if we'll get to animals today, which is basically going to be humans. They like doing that too, so that would be great ...

Speaker 2: Cheek cells.

Teacher: ... if they can. Yeah. Cheek cells. That way they can start comparing the living things to each other, see that they are both made of living cells, that there's some kind of commonality, and maybe come fourth quarter they'll understand that there is some kind of connection there for evolution and that type of things, but right now just to understand that the cells are and what they look like, that they do look different, and there's a reason for that.

I try to mix both informal and some formal assessments there, so informally I'll walk around see how they're doing, give feedback if I need to. Formally the actual labs worksheet that they are filling out, eventually they will have to take an assessment. It

won't be for another couple of weeks for this particular benchmark, but they have another assessment next week that's just about the cell theory, so seeing that we're made of cells should hopefully help them remember that, at least that part of the cell theory. [00:04:00] At least one of the three parts hopefully.

Being a Character Counts school we have what we call the six pillars, and it's been ... I believe every feeder school into our school has those six pillars, so we stress the same six pillars which are trustworthiness, responsibility, respect, fairness, caring, and citizenship. We emphasize it and reinforce it in every class. The students know that those are the types of things we should be demonstrating. In addition to that we've done some lab safety. We did some rules. We did a test on that earlier this quarter. Every group also has a job, or actually I've assigned jobs to every group. Within the group everybody has a job to do for their group. One of them is a safety monitor. They're going to monitor everybody in their group, you know they're wearing their safety gear.

One person will be monitoring the time. One person will be monitoring or getting the supplies from the baskets, that type of thing. They all have their own job, and they all know that they're all expected to help to get the job done together.

I guess the big idea I'm trying to hope for them to get is what is a living thing, basically. We did a lesson earlier, and people still think that DNA is living or water is living. The students will come in and say that. We want to get an idea of what is really living things, what is a cell. Is it really in everything that we consider a living thing? Is there some similarities between [00:06:00] the different living things? The plant and an animal looks very different, but there is some similarities, right? I hope they can at least see that, at least by the end of the lab which may not happen until tomorrow, but I want them to see something like that.

Then hopefully next quarter [there's 00:06:19] another thing about functions of cells, so why is the onion cell that we're going to look at not green, but the leaf cell that we're looking at green. There's a reason for that. They're both from plants. Hopefully they can make that connection next quarter ...

Speaker 2: [crosstalk 00:06:34] contrasting and comparing the different ...

Teacher: ... about what the function is. Right. Compare and contrast. For students this is going to be a little bit almost too engaging. Hopefully not. We want to get to the actual content, but just the first time they get to wear their gloves, because we're going to be using a chemical, or wearing their goggles it's like, "Oh, we got to look at each other through our goggles." They love to do that. They love to look at the microscope. We did our first microscope lesson for the year yesterday just practicing with a newspaper, and some of them spent the whole time just trying to figure out how to use it, play with it, so they're very engaged in doing that type of thing. Playing with the ... I shouldn't say playing, but using the equipment.

Speaker 2: Exploring.

Teacher: Exploring. Getting the chance to see something new. Yeah. Then, actually looking at things they usually are familiar with, you know their own body, their cheek, their onion [inaudible 00:07:44].

Getting them to see that a living thing is [00:08:00] made of something else, and I guess eventually to see that a plant and an animal have similar characteristics. Even though we look very different we are still made of cells. Maybe in fourth quarter they should make some kind of connection that there is some kind of common ancestor way, way in the distant past. Maybe we did come from something. That is a very difficult thing for them to come up with. To see it now is just nice to see that there is living things, know what the difference between a living thing and a non-living thing is, and just to see the different cell theory that we've been learning about in action as far as made of cells, and then build for next year, next quarter where we actually look at the functions of the different cells.