Student Electricity Inquiry, Gr. 6

Girl: **[00:00]** Well, at the beginning, we were basically just given a bunch of batteries, some light bulbs, like, a few little buzzers and a couple wires. And I knew when we sat down, I was like, "No, this is never going to work. What are they trying to make us do?" They were going, "It's, like, it's going to be, like, a test and fail thing." And a couple of minutes later, a couple of kids had gotten to make one of the buzzers work. And then later kids were trying to figure out how the lights worked. And so we started to, like, clip the wires together. And slowly as we did this in every class, before—we would take up what we had learned before, take up notes people had—that—written, and we just kind of worked from that. And we built our knowledge off what we were seeing, not as much what we were reading or watching. But I think that was a really cool way to start this. I liked it.

Boy: **[00:45]** The electricity, just building onto Auvy(?)—because we were, we were all, like—all sorts of wires and stuff. And, "So what do we do with this?" We're trying to make the fans, the light bulbs and the buzzers work. Okay. So, some of us knew already that to make something work you'd needed a circuit. And so people were trying to figure it out. They were putting wire—one wire connected to the battery, one connected to the thing. They were trying to figure out the circuit. Wasn't really working.

[01:17] But then, when so—people, like, they got the circuit, and the buzzers went and the fans. And then even a couple classes later, I know a group discovered that, that you can actually put more than one thing in a circuit. Like, you can put—so they put a fan here, a buzzer here and a light bulb here and the battery here, and they had wires attached to all of them. And it, like, they all worked.

[01:49] Maybe—and they also—maybe they're weren't as powerful as the other things, but they still all worked. From that, questions came up. Like, all sorts of questions about magnetism, like positive and negative charges. And we actually kind of did a unit within a unit about atoms in electricity. And so we learned about how—if an atom were the size of a football field, then the nucleus would be the size of a marble. And—but the nucleus is super dense. And we learned that through a video.

[02:28] So basically, the video said, "If the nucleus is a 1 cubed foot, 1 cubic foot, then it would weigh the same as 7.2 billion cars.

Male: Oh my goodness, that's amazing.

Girl: **[02:42]** Well, we wanted to learn from our mistakes. And so we would show what we did, even if it didn't work, even if it worked or even if it sort of worked or, something like that. And so, in the—like, when we just started doing this, it was, like, the same for Auvy and Hank. And we just, like—we started with, just taking a couple of wires, looking at some batteries, seeing how this kind of worked. We were like, "Oh, this is not going to be fun. This is going to be so boring. Like, ugh." Like—but after a while, we were, like, kind of getting interested.

[03:17] We would be like—we were like, "Oh, this is really cool! So if we put—clip this with this, it might work." And—and it was like, "Aw man, it didn't work." And sooner or later, we were, like, advancing and we were seeing how it works. And we

were, like, clipping it(?) and—"Oh, that's going to work for sure." And sometimes we worked with metal plates. And sometimes we worked with shoes to make circuits. And sometimes it didn't work and stuff, but.

Boy: **[03:41]** Because you don't have a circuit, you need—it's …

Girl: Two wires.

Boy: It's an incomplete circuit. You need—because the circuit's basically—think of it—circuit, circle, get it? So it was kind of—like, it has to be a circle with two wires. Maybe it's because they didn't learn from their mistakes. And so maybe they just tried to do it again. And—but it—they didn't learn from their mistakes. And I think that's the most important thing.

[04:07] My mom read a book on this. You have to—like, in life, there's going to be failures. And it's not a measure of how smart you are or how good you are. It's, like, how you're able to cope with things and get right back up.

Male: Good(?).

Girl: **[04:26]** Well, it depends. Like, sometimes, like in Math, I'll be like, "Oops, I didn't know that," or something. But, in electricity, when you do, like, when you try to make circuits and it doesn't work, you've just got to, just keep on pushing until you get it right, because, like, you can't just give up, because you're not going to learn anything from doing that. If you keep on trying—of course, maybe it might not work, but sometimes it probably will. And like, you've just got to get back up and you've just got to do it.

Girl: **[04:58]** Yeah, I know that everything about this is—at the beginning of the year when we were first taking notes on electricity and atoms and stuff, I—we were taking, like, quizzes online. I took this little quiz, and even when I got the answers wrong, you can take notes from wrong answers. You can say, "It didn't work for this." And I think that sometimes if you just give up, you never know why it didn't work. Or sometimes, it was a factor that you factor in or something, and it could have worked.

[05:27] And so I think it's important to always go back. And even if something does work, to maybe see if you could make it work better or how you could disable it. And I think that, yeah.

[END OF RECORDING – length, 05:43]