

FAST FORWARD: SOUTHWIRE

VO: What is electricity?

JAVEESE: What is electricity?

CHARLES: It's a concentration of electrons...

ALICE: Electricity? It makes your lights turn on.

CHARLES: You know...centralized towards one source.

CAROL: Electricity is magical...I think.

BESS: I don't know...I don't like being put on the spot like that. (LAUGHS)

CHARLES: Man, that's a tough question, wow.

JAVEESE: Electricity is simply power.

CHARLES: You're not gonna put that in the video are you?

(TITLE SEQUENCE)

VO: Welcome to another episode of Fast Forward. Today we're visiting North America's largest wire and cable manufacturer—Southwire, located in Georgia's own Carrolton. Yep, they have ducks.

We're gonna get back to that electricity question in just a second, but first let's find out a little more about this company.

GARY: When you turn the lights on, you just automatically expect them to come on, and Southwire plays a big role in that.

STEVEN: Southwire Company is a manufacturer and leader in electrical wire and cable.

JAVEESE: We are the largest producer of wire and cable in North America.

CHARLES: Basically, at a very minimal sense, they take electricity from one point to the next.

GARY: It's very likely that the TV or computer you're watching this on now is being powered by wire produced by Southwire.

VO: So now you see why we need to know what electricity is. Otherwise, these wires might not have anything to do.

Simply put, electricity is a form of energy consisting of the flow of electrons between 2 points, described by 3 basic properties: current, voltage, and resistance.

(ELECTRICITY SOUND EFFECT)

VO: And now that we've got cleared up, let's find out what some of these more youthful looking folks are doing here.

KRISTA: This summer, I was sitting at my house and I got a call from one of my principals. He said, "Hey, you wanna come work for Southwire?" So, I started coming here at the beginning of the year and all the kids that come here to – we work on engineering projects, and we help in any way we can. So, if you're wondering what we do here at Southwire...we fix problems.

VO: You see, Krista is part of Southwire's Engineering Academy. I'll let these folks tell you about it.

CAROL: The engineering academy at Southwire has been really fun.

CHARLES: It's kind of a partnership between Carrollton High School and Southwire.

GARY: and once they get in and they see that math equals measurements on a machine, or they get to do something fun like robotics– the light bulb goes off, and they say, "Wow, I understand science."

CAROL: We pair up our students with some of our engineers and then we give them a big project – something that we have to do. And we say, "You guys, jointly figure it out." So we have our junior engineers, if you want to call them that, and we've got out engineering mentors, and they're solving real problems.

VO: There's that problem-solving thing again. It seems to be a theme here at Southwire. And it gives us a chance to talk about something called—Root Cause Analysis (RCA).

KRISTA: This teachable moment, brought to you by Southwire. (BELL DINGS)

DeASIA: Root Cause Analysis is basically asking the question why until you can't ask it anymore.

You ask why something happened, and then you ask why it happened, and what caused it to happen, and why did that happen. Basically you get to the root.

ALICE: We want to... by the root cause analysis that we perform...is we want to fix the problem once and for all.

DeASIA: Before you even knew it, you were performing a root cause analysis.

If you wanted to go to a friends house, and you couldn't go, you asked, "why?"
Then your parents said, "Because they didn't have gas."
Then you asked, "Why?"
And then they said, "Because it's too late."
Then you asked, "Why?"
Well basically you ask why until you get the answer, yes.

VO: These students at the Southwire Engineering Academy really are fixing problems. So tell me, what are your favorite subjects?

SAM: Math comes fairly easy to me.

BESS: My favorite subject is chemistry.

DeASIA: I'm better at science than at math.

CARTER: My least favorite subject is English.

ALICE: My least favorite subject is English. It's just not my cup of tea.

MITCH: It's generally opinion based and...Don't think it should be a class. (HUGE LAUGH)

VO: All kidding aside, I can understand that. You folks like things with black and white answers. But can we dispel this myth that all engineers are dull?

STEVEN: I'm an engineer, so I'm pretty boring.

VO: Not helping. Anyone else?

CHARLES: How I like to explain my job to people is I get to play with Legos all day,

VO: Better.

CHARLES: but I get to play with very expensive Legos. We can be very creative and create our own things, build things, and ultimately help the company be profitable and make money.

VO: So being an engineer is actually a very creative job. I like it.

There's just one thing we haven't covered yet: How do you make wire?

GARY: It comes in as copper rod...

pull it and sort of stretch it...

GARY: Draw it down into different gauges of wire.

JAVEESE: And in most cases, cover it with insulation.

CHARLES: Package it, and then ship it out the door.

STEVEN: And that's how you make wire.

CHARLES: (HANK HILL VOICE) and that's how you make wire.

GARY: (ELVIS VOICE) That's how you make wire. Thank you very much.

STEVEN: Was that really supposed to be Elvis? (LAUGHS)

(END TITLE SEQUENCE)