Transcript for Video Clip 8.3

Teacher/video ID:	Scott Knight, 8.3_stella_et_knight_L5_c3
Content area:	Energy transfer
STeLLA strategy:	Make explicit links between science ideas and activities (SCSL strategy F). Link science ideas to other science ideas (SCSL strategy G). Highlight key science ideas and focus question throughout (SCSL strategy H).
Context:	Students use energy-flow diagrams to show how energy moves and changes (transfers and transforms) in a simple system or object.

Video Clip 3

Time Code	Speaker	Discussion
0:00:01.6	T	All right, I'm going to show you something here. And we show you how we keep track of energy here just a little bit.
0:00:12.6	T	Here's a … Donovan, here's a gizmo that we use in class quite often—my remote clicker. But we also use the laser beam from it from time to time [to] point stuff out. Whatever.
0:00:22.1	T	But—
0:00:22.6	SN	That's a light.
0:00:23.6	T	All a laser is, is—
0:00:25.5	SN	Energy.
0:00:26.6	SN	Light.
0:00:27.1	T	Well, it's light … It's ultrafocused light. But we know that light is one of energy's costumes or vehicles.
0:00:34.3	T	Look. This doesn't work. I know you know this. You have so many experiences. But this gizmo's not going to work at all …
0:00:43.6	SN	Without energy.
0:00:45.4	SN	Without the batteries.
0:00:46.2	SN	Energy source.
0:00:47.4	T	Tell me about this battery a little bit.
0:00:48.3	SN	How do they trap energy?
0:00:49.9	T	Try to talk in terms of, I don't know, potential, kinetic, transfer, change, costumes.
0:01:01.1	T	Any of that? Just real quick. What do you think?
0:01:03.9	SS	Ooh.
0:01:04.9	T	Donovan, I'd love to hear what you have to say.
0:01:07.3	SN	I think that it doesn't … the light … the laser beam doesn't work if the batteries aren't in because that's the only source of power that it has.
0:01:15.6	T	What kind of power would you call that?
0:01:17.8	S	Um …
0:01:18.0	T	Think about what we've learned about, Caitlyn.

0:01:23.9	T	Is it kinetic energy?
0:01:25.3	SN	Mm-mm.
0:01:27.3	SN	It's just—
0:01:27.6	T	Well, I don't see anything moving.
0:01:29.5	S	It's energy.
0:01:30.2	T	I could … I could add kinetic energy to it. But that's not what powers the light.
0:01:33.7	S	It's kinetic energy.
0:01:35.7	T	There's a transfer going on here. What would you call that?
0:01:41.2	T	Look. If I put the power in back here …
0:01:48.6	T	I don't have a laser coming out of there yet. Now I do.
0:01:52.3	T	Could I have a laser coming out of here? Oh, sure, just as soon as I choose to. Just as … just like Mumford pushed himself down the hill.
0:01:59.2	T	What kind of energy would you call that inside that battery there? Or the battery itself, I should say.
0:02:05.3	T	Coley.
0:02:05.9	SN	Electricity.
0:02:09.1	T	What do you mean by "electricity"?
0:02:11.5	S	Well, to run it has to have electricity for, like … like, for example, a lightbulb. Just like a laser beam.
0:02:19.8	T	True.
0:02:25.8	T	This is an electrical object, that's for sure. This isn't plugged into the wall, though.
0:02:31.8	T	Can't argue with electricity.
0:02:34.6	T	All right, Max.
0:02:36.1	SN	I act … 'cause I have … I know batteries are made with some kind of acid.
0:02:40.5	T	True.
0:02:40.9	S	And that's chemical energy.
0:02:42.2	T	True. But listen, kids. Energy. Here's how … here's how I'm trying to teach you to think, Jacks.
0:02:48.4	T	Potential. Kinetic. Potential. Kinetic.
0:02:54.8	S	Mm-hm.
0:02:57.8	T	I can make the … I can make this go whenever I want. The energy's there just waiting for me. It's all stored up in there.
0:03:06.2	T	Anna?
0:03:07.3	SN	Potential energy?
0:03:08.8	T	She says potential. I wish Taylor was here; she's my potential genius. What do you think … potential?
0:03:16.0	SN	Potential?
0:03:17.3	T	You know what? Electrical energy, yeah.
0:03:21.2	T	There's chemicals in there that make that happen. Electrons moving around. Circuits, closed circuits.

0:03:28.5	T	Potential energy? It's one of the disguises. When we store energy, we call it *potential*. Same thing as Mumford being up on top of that hill. Hey, take a look at this one.
0:03:39.7	E	[Inaudible]
0:03:42.0	T	So what do you think? What's … I see sound.
0:03:44.3	SN	[Inaudible]
0:03:44.9	T	So kinetic to sound?
0:03:46.4	SN	Yeah.
0:03:46.8	T	Anything else?
0:03:48.4	S	I don't think so.
0:03:49.2	T	We'll see here.
0:03:50.0	S	[Inaudible].
0:03:52.3	T	Oh, wow, look at that. Let's see …
0:03:54.9	T	see if there's any other evidence here.
0:03:56.4	E	[Inaudible].
0:04:00.4	SN	Well, there's air.
0:04:01.6	T	What's the air doing?
0:04:02.7	S	The air's pushing the bag flat.
0:04:05.9	T	Is that energy?
0:04:07.4	S	Yes.
0:04:07.8	T	It's moving. What kind of— So my hand is kinetic energy. Yeah, we're making this sound, but we're also doing something else there.
0:04:19.1	T	You label that for us.