Focus on Energy

Transcript

Motion Energy, Classroom Activity 1

Elicitation Discussion: After watching the introductory energy video montage, 4th grade students discuss their ideas about energy. They have assigned an “E” (for energy) next to any picture from any video clip that they think contains evidence of energy.

One of you guys can talk about one place you put an E and why, one place you put an E and why. So is it Clara?

On the train car because it uses, like, electricity and--

So Clara put an E on the train because she said it uses electricity or gas. Did I get that right? Yeah. Anybody want to add onto what Clara said? How about you, Gabrielle?

I also put an E on the--

That's the train.

--on the train because trains use a lot of energy to move from one point to the other. [INAUDIBLE].

Do you think there's anything alike about what Clara said and what you just said?

Yeah, because what Clara said was that you use energy and gas, and what I said was it takes a lot of energy. I think those two are really alike [INAUDIBLE] electricity or gas is basically the same as [? fuel ?].

Clara, what do you think? Do you think your ideas were similar? Anyone? Let's have another person. OK, [? Elaine ?].

I put a sticker on [INAUDIBLE] because [INAUDIBLE].

Everybody hear that? Food gives you energy, so the girl eating the sandwich got an E.

I [INAUDIBLE] like when she eats the food, it gives her energy because [INAUDIBLE]. I don't really know how it gives you energy, but I just know in the digestive system, in your stomach, it helps you get energy to run and stuff.

Something happens, there's some change inside the body. We don't even need to know what it is. But what's the result?

Energy [INAUDIBLE].

Energy. Go ahead, add on.

I thought the bowling pins deserves an E because the man-- or I'm not sure if it's a man or a woman-- is releasing energy into that ball. So [INAUDIBLE].

OK. So the bowling [INAUDIBLE] says that the bowling got an E because the person who's sending the ball toward the pins has given energy to the ball. Is that how you put it?

He said [INAUDIBLE].

Releasing energy into the ball. [INAUDIBLE] momentum.

He released energy to the ball. Did anybody else give the bowling pins an E for a different reason, for a different reason? Did you do it?

He needs energy to throw the ball.

So he needs energy to be able to throw the ball to give the ball energy. OK. That's related, but a little bit different. Yeah, over here?

[INAUDIBLE].

All right, wait. Let's do the pins. Did you have a different reason for giving the pins an E for energy? Go ahead.

Because, like, the ball is rolling, it's rolling toward the pins.

OK. So the ball is rolling towards the pins. So what's the sign, or what's the clue, that tells you the ball has energy?

It's moving.

It's moving. So the ball is moving, and that tells Clara, right. That tells Clara that there's energy in the ball. Is there any other example of something that's moving and might be a clue? Yeah, go ahead.

Well, the bird I gave E because it's flapping its wings to fly. So, like, as you said, moving things sometimes [INAUDIBLE].

So you associate moving with energy. It might be the ball rolling and it might be the bird flapping its wings. And that's excellent. Want to build on that? Go ahead.

Also, the bird has energy because it's a life form.

So it's a living thing. So do you think most living things have energy?

Yeah.

Yeah.

Yeah.

Anybody else agree with that?

Yeah.

Yeah.

Yeah. Living things have energy. What other pictures would get Es?

The kid riding the bicycle.

OK.

That takes energy because sometimes it's hard if you're going uphill on a bicycle.

Well for me, it's even hard when I'm going on a flat. Yeah, I can feel it. So the kid on the bicycle is a living thing, E for energy. Did you find another?

I think the plant was too, because [INAUDIBLE]. I don't know if the sun has energy, but it [INAUDIBLE] outside [INAUDIBLE] the sun goes [INAUDIBLE].

So the plant. How many people gave the plant an E?

I gave the plant an E.

Give the plant an E. And over here.

Her name [? is Claire ?].

[? Claire ?]. [INAUDIBLE].

Claire. Claire, what was the reason you gave the plant an E?

[INAUDIBLE].

All living things have energy, so it got an E. And Nicole said she gave the plant an E because she said plants grow, and she somehow thinks that has something to do with energy.

Yeah.

It does. And she wondered about the sun having energy. And I've heard somebody muttering around and say yeah, yeah, yeah, the sun, there's energy there. OK, how about that apple? Does the apple get an E?

No.

No.

How many nos for the apple? Nos up. How many yeses for the apple?

[INAUDIBLE].

Could somebody speak for the nos? Why did you say no for the apples? Be a voice for the nos for the apple. Yeah.

Because the apple is just not a living thing. It wasn't really moving or doing anything, and so I wouldn't really say it was energy.

And no one was eating it.

Yeah. It wasn't moving. It wasn't being eaten.

[INAUDIBLE].

It doesn't look alive. It's just something that's sitting there. [? Neil, ?] do you want to say anything for the nos and the apple? All right, nobody yes to the apple. [INAUDIBLE] to the apple.

[INAUDIBLE].

OK. Hold on, hold on. Don't say it until everybody's listening. OK, go ahead. Speak for the yeses.

[INAUDIBLE] apples, and [INAUDIBLE].

All right. So it started as a seed, but now it's an apple, so there's been some growth there. Who was the person who talked about growth, things growing? Nicole. And so now you're saying apples grow. So I gave the apple an E. One more thing to say about the apple.

I used to think no, [INAUDIBLE]. But what she was saying, now I think it's E because when it grows, it's really just planting a tree. But when the tree gives it energy because the sun was little, and so--

And so you think the E has to do with its whole life cycle? Am I saying that right? I don't want to put words in your mouth.

Yeah. it's fine.

It's fine. All right. One more thing about the apple. The apple seems to be a good--

I said no because in the video, in the picture, it didn't, like, show anything about the life cycle or how the [INAUDIBLE].

So what would you have needed to see? What would be the evidence that you would have needed to give it an E?

[INAUDIBLE].

[INAUDIBLE]. [INAUDIBLE] attached to the tree--

Or decomposing.

Or decomposing, or actually growing [INAUDIBLE].

[INAUDIBLE].

And so the apple was alive, and now [INAUDIBLE] not attached to the rest of the tree anymore.

Yes. We would say it's [INAUDIBLE].

Kind of like a leaf falling off a tree.

Yeah.

Something like that.