mystery science

Grades K-5
Mini-Lesson: “Could you make a real lightsaber?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Jay! When I was a kid, I loved watching science fiction movies like movies about the future, or space travel. I loved seeing all the imaginary vehicles and tech gadgets they had, like droids that talked and walked like humans and incredible spaceships. Like the USS Enterprise from "Star Trek." Oh, and this is one of my favorites, the lightsaber, I loved watching "Star Wars" and I still do. In fact, one of my favorite trips was to Disney's Hollywood Studios in Florida, where I actually got to see them make a toy lightsaber that looked like the real thing, so cool. Someone named Xavi has a question for us about lightsabers. Let's give Xavi a call now.

[Video Call]

- Hi, Jay!

- Hi, Xavi!

- I have a question for you. Could you make a real lightsaber?

- That's a great question.

There are just so many inventions in movies and on TV. That would be so much fun to have in real life. Like the lightsabers used in the "Star Wars" movies or machines that can take you back in time, like the one in "Lego Movie Two." Oh, and don't forget about these hoverboards from the movie "Back to the Future." Wow. Wouldn't it be amazing to actually have one of those?

Before I go on, I'm curious. What amazing inventions have you seen in the movies or on TV that you wish were real?

VIDEO 2

I'm not sure what you answered, but I know what I would have answered when I was a kid. A "Power Rangers" watch communicator. I had a toy "Power Rangers" watch, but it wasn't the same as having a real one. If I had a real one, I could talk to my friends whenever I wanted, I could call for help if I needed it. But here's the thing. When I was little, there was no such thing as phone watches, but scientists and inventors saw them on TV, or in the movies like I did, and were inspired to figure out how to make them real. And they did. Now phone watches like this one are becoming more and more popular. And phone watches aren't the only inventions that were pretend before they became real. Check out these computer tablets. They may not seem like a big deal to us now, but back when the movie "Space Odyssey" came out, computers were really huge and you definitely couldn't carry them around with you. But scientists were inspired by movies like this, and they eventually figured out how to make book-sized computers real. Some of you may have even used a computer like the ones in "Space Odyssey" to make video phone calls. 60 years ago, the kids who watched "The Jetsons" when it first came out would have never imagined that people would actually be able to see the person they were talking to on the phone, and now we do it all the time. VR headsets, self-driving cars, jet packs that help you fly—there are just so many ideas from movies and TV shows that scientists were inspired to make into real inventions. One of the coolest inventions in my opinion is definitely the lightsaber from the "Star Wars" movies. And ever since "Star Wars" came out, scientists have been wondering, "Could we actually make a real lightsaber?" We know that there are toy lightsabers, you may even have one at home. Those keep on getting more and more real-looking every

year. And there are even people who make their own lightsabers, ones that look just like the ones in "Star Wars." They have a handle and a light, and they look almost exactly like the real thing, but we all know it's still just the toy. I mean, a flashlight has a handle, and it lights up when you turn it on. So is a flashlight a lightsaber? No. So what's missing? What would it take to make something much more like a "Star Wars" lightsaber, but in real life? Let's think about what a lightsaber actually does. A lightsaber is a sword made out of light, or energy, or something, but it's weird because it's some kind of beam of light that can actually do things, like it can hit another lightsaber and stop it, or it can cut through a metal door. But that's what we haven't figured out yet. How to make some kind of light energy that can do the things a lightsaber does in "Star Wars." But scientists are coming really close. Check this out. Scientists from a company called Hacksmith Industries have figured out a way to make an energy sword that can actually be used like a tool. Just like a real lightsaber, it can cut, melt, and burn through almost anything. See how it's cutting through that door? Whoa! Some people think that this is the closest anyone's come to making a real lightsaber, but it's not quite there yet. For one thing, you have to wear a backpack full of a gas called propane to use it. You don't need a backpack to use a real lightsaber. And see the energy beam shooting out of the front? If you hit it against something, the beam will just pass through it. It's kind of like the flame on a torch, or the spray of a water hose. If you hit something with it, the saber will pass right through. But the energy beams on the lightsabers we see in "Star Wars" are solid. When Luke Skywalker's lightsaber hits another lightsaber, it doesn't go through, and it also makes that huge crashing sound we're all now familiar with from the "Star Wars" movies. So could someone make a real lightsaber? Not yet, but we might be really close. So in summary, movies and TV shows have inspired scientists to actually make some of the inventions they've seen in the movies, like phone watches and tablet computers, and though we have lightsabers that light up and make sounds, and even cut

through things, we still haven't made a lightsaber that has a solid beam of energy like the ones we've seen in "Star Wars." But who knows? Maybe lightsabers could be a real thing in the next few years. That's all for this week's question. Thanks, Xavi, for asking it!