

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Space Culture – Public Engagement in Space through Culture (9)

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STAR WARS AND STEM – USING SCIENCE FICTION IN PUBLIC ENGAGEMENT AND
EDUCATION

Abstract

Many people don't think science when they think of Star Wars or realize the close relationship that Star Wars and NASA have. They also don't realize how it can be an important teaching tool in two major ways: 1) to capture the interest of kids and make an otherwise ordinary science lesson a bit more fun, and 2) to educate everyone about the space program by showing them the parallels between NASA and the movies. And we don't stop at just science; depending on who the audience is the world of Star Wars encompasses politics and culture, something that is a relevant discussion for the future of space exploration and what could happen if several countries end up on the Moon or Mars and what is currently happening with the International Space Station. We also use Star Wars to teach kids about other careers outside of STEM – for example, what types of people does it take to make a movie like Star Wars? You need artists and musicians and writers, well we need those kinds of people here at NASA, too; it takes all kinds of people with many different talents to make a space program work so we try to teach kids that just because they aren't a math whiz it doesn't mean that space isn't for them. We also educate the public about the parallels between NASA and Star Wars; things like how Luke Skywalker's lightsaber flew on the Space Shuttle and how much Robonaut, a "droid" on ISS, resembles Boba Fett. We tell them about NASA spinoffs and other things that are making Star Wars technologies and worlds become real life, like ion engines or biomedical devices or a real exoplanet named Tatooine because of its twin suns. And finally we educate through hands-on experiments in physics and engineering. From operating and learning about robots to hovercraft and the similarities between the fighter craft in Star Wars and real-world fighter jets, Star Wars in the Classroom also teaches about space travel and artificial intelligence. We believe that Star Wars is an excellent educational tool for both kids learning science and to get kids and the public in general interested in the space program. We've been doing outreach and hands-on learning, speaking about how Star Wars inspired us to work in the space industry and about the parallels to NASA. So far it's been a success.