



## Sample Blog Post

*This short piece – best as a blog post – exemplifies how communicators might use Explanatory Examples that illustrate how effective informal STEM learning programs work. This strategy is designed to increase knowledge about what explore STEM in their lives outside of the classroom to fully understand and become fluent in these subjects. By working through interesting and practical challenges with STEM methods, tools, or ways of thinking, kids develop a better command of these subjects and can do more with them.*

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If we want the next generation to be fluent in STEM, we have to take an immersion approach. Children of school age spend only 20 percent of their waking hours in school – the other 80 percent is spent outside of school. To allow for the level of exposure and experiences needed to develop fluency in STEM, we must ensure that all communities offer ways for students to engage with these subjects afterschool. And, this time must be spent doing the kinds of things we know make a difference in fluency: exploring, discovering, and learning by doing.

In a program in New Mexico, middle schoolers from all kinds of backgrounds, including children from rural areas, actively experiment with a computer programming language to create and test models of complex systems, such as the environment, or outbreaks of diseases. These models are then used to run simulations of “what if” scenarios to answer questions about real-world concerns, with local examples to make the learning come to life. For example, as part of a unit on epidemiology, students develop models to test if a disease would spread throughout their local school population given the layout of the school building, the number of students, the movement of the students, the virulence of the disease, and the number of students initially infected. In addition to learning and practicing important thinking skills that are important in many subjects, such as testing hypotheses and thinking abstractly, they also develop specific programming skills, such as creating scripts that perform certain tasks automatically. The students leave with a new set of skills for tackling social problems, from health to ecology. In fact, when asked how they would investigate a community problem, 80 percent suggested using computer modeling and simulation as a technique to investigate the issue. This is the kind of information-age mindset we need to develop in all our youth. And this is also great example of how the need to solve real-world problems builds new skills and more ability to use concepts – just like having to get around in a new country helps to develop fluency in a language.

The Growing Up Thinking Scientifically program is just one example. There are many more – and because these resources are so important to our communities, we should all learn more about them, and support them. Many afterschool programs will be sharing their stories in the days and weeks ahead in connection with the Lights On Afterschool annual awareness event. Be on the lookout for stories about afterschool STEM programs, and share more about them with your social networks!

[544 words]