

ENGAGING THE PUBLIC IN PLANETARY SCIENCE THROUGH EMERGING TECHNOLOGY AND NEW MEDIA. S. Becker¹ and L. Johnson¹, ¹New Media Consortium, 6101 West Courtyard Drive, Building One, Suite 100, Austin, Texas 78730, samantha@nmc.org.

Introduction: Mobile devices, natural user interfaces, social media and many other emerging technologies are already pervasive in the U.S. and have become effective mechanisms for informal learning experiences. Programs that leverage or integrate these tools have the power to bridge the gap between the science education and the public. For over ten years, the NMC Horizon Project has been researching, identifying, and documenting creative uses of emerging technology for teaching, learning, and creative inquiry. This presentation will explore several successful in-practice examples and offer models and ideas for raising scientific awareness and literacy in the general public.

Some background on me: As a writer, I grew up with a learning path already carved out for me by the teachers who had already identified me as the "creative" type. What a lot of people did not know was that I was naturally curious about science—everything from dinosaurs to genetics to our solar system. Unfortunately, there were no science programs or courses that engaged my creative style of learning. Simply put, there were no interdisciplinary efforts for people like me. Fast forward to life after school, and I rather haphazardly made myself a career in the sciences. Today, I am the lead writer for the *NMC Horizon Report* series, and in the research process I am excited by the increasing number of programs that are emerging to tackle the gap between the humanities and the sciences.

Some background on the NMC: The NMC is an international not-for-profit consortium of learning-focused organizations dedicated to the exploration and use of new media and new technologies for learning, research, and creative inquiry. Launched in 2002, the NMC Horizon Project epitomizes the mission of the NMC to help educators and



thought leaders across the world build upon the innovation happening at their institutions by providing them with expert research and analysis.

The resulting *NMC Horizon Report* series serves the higher education, K-12, and museum communities across the globe in their desire to understand the impact of emerging technologies on their chosen field or

discipline. The series provides insight into the technologies that are most likely to make a significant impact, based on the consensus opinions of a self-nominated advisory board of thought leaders in education and technology.

In 2012, the New Media Consortium partnered with three science institutions and organizations in Spain (CSEV, IEE, and UNED) to produce a new *Horizon Report* edition devoted to analyzing the technologies, trends, and challenges impacting science, technology, engineering, and math education—the *Technology Outlook for STEM+ Education*. When the advisory board (diverse panel of science educators and experts) convened to identify the content for the report, the NMC fig-



ured that most of the discussions would center around technologies and topics that strictly had specific applications in science education, including remote labs, open hardware, etc. We were extremely surprised that these education leaders were instead drawn to topics such as social media and personal learning environments—tools and concepts that transcend disciplines and ultimately emphasize collaboration, communication, and personalization in learning. It became clear that engaging people in science education could be a matter of examining these emerging technologies and associated media and how they can pique curiosity in people.

Exploring science education projects: What separates the *NMC Horizon Report* from other analyses of the educational technology landscape is that in every edition it features a diverse array of projects and programs that concretely demonstrate how technologies are being used to make learning more engaging. From citizen science to one-to-one learning models to the integration of gaming mechanics, there are a number of seminal projects in various stages of readiness that could inspire similar efforts or scale to expand existing projects. In the presentation, we will highlight such examples and examine what makes them effective models for bolstering public engagement. While the technologies themselves are powerful, it is ultimately the attitude and innovative thinking behind the tools that fosters success.