



### Vermont Scientists Featured in VPT's 'Emerging Science'

Vermonters might be surprised to learn that Vermont has an aerospace community working to launch a satellite into lunar orbit. That mathematicians are using Twitter to gauge the mood of societies. That local scientists are sequencing the genome of a creature that is so like humans it may have a role in regenerative medicine.

Scientists based in Vermont are working to expand human knowledge and solve problems everywhere from down the road to outer space. Vermont Public Television introduces viewers to their remarkable neighbors in its "Emerging Science" project. The project features broadcast and online programs, community events and educational resources to help teachers spark students' interest in scientific careers.

**A new season of three TV shows will premiere Wednesday, Oct. 26, on VPT** and on demand at [vpt.org](http://vpt.org). Focusing on science Wednesday evenings, VPT will air a new episode of "Emerging Science" at 8 p.m. and repeat the previous week's episode in the 8:30 p.m. slot. "Nova" and other science programs follow at 9 and 10 p.m. in the broadcast schedule.

Vermont EPSCoR (Experimental Program to Stimulate Competitive Research) is the project's funder. Located at the University of Vermont, Vermont EPSCoR supports Vermont scientists and business leaders through funding, outreach and technology development.

On the Oct. 26, 8 p.m. premiere, "Emerging Science" tells the remarkable story of researchers at four Vermont schools collaborating to send a tiny, 10-centimeter satellite called a CubeSat into orbit around the moon. In this post-shuttle era, NASA's EPSCoR program helps fund work on dramatically cheaper ways of exploring space, including CubeSat research at institutions around the country. At Vermont Technical College, Carl Brandon leads the effort to design and build Vermont's satellite. He predicts Vermont will be first to launch a CubeSat into lunar orbit. Colleagues Danner Friend at Norwich University; Jeff Frolik and Jun Yu at UVM; their students and students from St. Michael's College are working on the propulsion, navigation and communications that will enable the CubeSat to gather information. The program will re-air Nov. 2, 8:30 p.m.

On Wednesday, Nov. 2, at 8 p.m., "Emerging Science" meets scientists at work to make sense of the cyber world people now inhabit. Mathematicians Chris Danforth and Peter Dodds at the University of Vermont and their students use masses of Twitter data to measure the happiness of society. At Champlain College, Elaine Young explains the social media explosion and the basic human need to connect. Marketing professional Nicole Ravlin guides her clients in using social media in business. Jonathan Rajewski of the Champlain College Center for Digital Investigation and Renee Hall of the Vermont State Police explain the importance of following digital fingerprints in solving crimes. The program will re-air Nov. 9, 8:30 p.m.

On Wednesday, Nov. 9, at 8 p.m., a sea creature called the little skate is the star of the show. A consortium of scientists in the Northeast, including James Vincent and Kelvin Chu at the University of Vermont, find that its genome is strikingly similar to humans'. They are trying to understand how it regenerates body parts and why humans lost most of that ability as they evolved. Rachel Phillips, who has a serious genetic disorder, watches the research on regenerative medicine in the hope that it can save her life. Research on the Little Skate is made possible through funding from the National Institutes of Health, National Center for Research Resources (NIH NCRR) and funding from NSF EPSCoR provided the fiber connection to enable the research to be conducted by the regional partners in the consortium. Leveraging funds from both agencies enabled the cyber-tools and the research to be shared by many regional researchers dedicated to the project."

- - This is a case where 2 federal agencies funded this very important project - NSF funded the fiber. NIH funded the research. It's a project with many stakeholders. The program will re-air Nov. 16, 8:30 p.m.

Producer Anya Huneke said, "Working on 'Emerging Science' showed me how science in Vermont has changed from the days when individuals here could contribute only a piece of a puzzle. With the communications technology available now, Vermonters are doing big-picture research."  
Executive producer of "Emerging Science" is Kathryn A. Scott.