

In the 1960's NASA had a mission to get a man on the moon. Scientist George Land devised a creativity test that proved to be of exceptional accuracy in guiding NASA to find the most creative engineers and managers. Land used this test on a group of five-year-old children and found that 98% of the kids tested on the creative genius level. Ten years later, he tested this same group and found that students' scores as geniuses had dropped to 12%. In testing over 280,000 adults, Land found only 2% of them rated as creative geniuses. Land attributed these significant decreases in creative intelligence scoring to a systemic "de-genius-ing" of our students.



## The Universe Within Sparks The Creative Genius In Every Kid!

In response to a national creative intelligence deficit, The Universe Within world-building course was developed by Mat Bevel Company, Patagonia Public Schools and University of Arizona School of Mathematical Sciences. Our team uses Mat Bevel Company President Ned Schaper's world of Beveldom and his life-long creative practices as the framework for teaching students how to think outside the box while learning STEM (science, technology, engineering and math). Lessons align with Science, Engineering, Math, Theater Arts, Visual Arts and English Language Arts Arizona State Standards.

Students play the role of world-builders, developing positive virtues and powers for their characters, solving major social and environmental problems and constructing handmade multi-dimensional replicas from their worlds from recycled materials. They learn about scientific observation, engineering design, technology, geometry and physics through doodling, sculpture and kinetic art, and how to more confidently present their ideas and lessons they've learned to peers and the community through theater and storytelling.

Mr. Clovesko-Wharton, who taught the class to third and fourth graders at Patagonia Elementary School, said, "The Universe Within freed students' minds from the shackles of antiquated paradigms. The course literally rewired thinking in my classroom." Third and fourth graders who took the curriculum told us:



**"The Universe Within was a creative project that made me feel good about myself by being even more smart. It helped me get more imagined! I barely knew geometry and physics, but now I know much more. I didn't know that I could do so much, but the class helped me with my creativity." -Priscilla**



**"The museum made me feel awesome because I'm part of creation. The Universe Within course was fun and I liked that we got to use our imagination and use cardboard, because cardboard never messes up. I just rip, rip, rip the cardboard to make my tools and my headdress. My social issue was saving the ocean. It was relaxing to take my energy out on creating and solving problems." -Daniel**



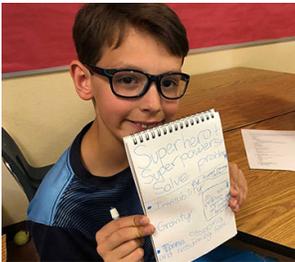
**“My favorite part of The Universe Within was making our headdresses for my character Angel Lover because you got to create with your imagination. I use my imagination more than I did in the past. This helps me succeed with problems I need help with. I rarely have to ask my friends to help give me ideas. The ideas come and I see them now. -Vivi**



**“I like The Universe Within because I liked creating things. I liked how I was able to create the hat and a poem for my character, Calm Knight. We got to design and decorate our worlds and all our hats in a completely unique way. There were no limits and no right or wrong.” -Diego**



**“The Universe Within helped me express what my mind was thinking and it was fun to invent. When I invented my headdress ...it came out crazy but inspiring. I put hair on my headdresses, eyes and a mouth made from recycled items. There was a mini person hiding who was my character. She was hiding but she wanted people to know she was there because she was part of my creation.” -Erika**



**“The Universe Within helped me find myself. I found the very creative side of me. To make a character and write a presentation about the character, you had to be creative about it. The headdresses were very creative because you have to make it look cool, and also be functional.” -Kannon**



**“My favorite part of The Universe Within was creating our headdresses and wands. I liked making things. My character tried to help people who were mad at each. My heart wand helped people work things out. The Universe Within was the first time that I learned about geometry and physics...how things move.” -Losorem**



**“What I really liked about The Universe Within was that I got to build things with my hands. I also liked watching the videos. I got to see how other people think and how creative they are. I thought Ned’s creativity was good and he built really, really cool and interesting things.” -Alex**



**“The visit to the museum showed me things that people just throw away can get back to use. We can use plastic again and again rather than throwing it away. The class taught me that if you have stuff, you can’t give up just because something failed. You have to work with what you have and keep going to see what happens. The group exhibition gave me a chance to perform with my class and share what I’ve created with others.” -Jazlyn**

**WATCH STUDENTS’ STORYBOOK: <http://bitly.com/TheUniverseWithinStorybook>.**

## Meet Our Team

**Dr. Bruce Bayly**, Professor of Math at University of Arizona, President of The Physics Factory and Board Chair of Arts Integration Solutions, helps translate the world of BevelDOM into STEM-friendly, fun lessons for The Universe Within coursework. He's the host of The Universe Within curriculum opening videos. He and his team of scientists and educators have travelled around Tucson and the country in his bus sharing their enthusiasm for physics with students, teachers and community members.

**Stephanie Tammen**, instructional designer at University of Arizona's Office for Digital Learning, is lead consultant for The Universe Within multimedia curriculum. Stephanie's goal is to improve and bring innovation to STEM education. She has a multi-disciplinary background with a Ph.D. in Biochemical and Molecular Nutrition and a postdoctoral fellowship in curriculum design and evaluation.

**Luis Carrión**, an award-winning producer/videographer with University of Arizona's Office for Digital Learning, is consulting and producing new multimedia e-learning videos to help distribute The Universe Within full coursework with broader audiences. Luis is the recipient of eight regional Emmy Awards for his video productions, and considers himself to be first and foremost a storyteller. His work distills complex academic concepts into productions that use audio and video in an aesthetically appealing presentation.

**Aiden Fishbein** his multimedia director for The Universe Within curriculum opening videos. Aiden is a writer, filmmaker, animator and all around maker. His time spent in the marketing space has taught him to marry creativity with strategy to deliver both exciting and impactful media. His heart, however, beats for education.

**Ellen Fisher**, Educational Technology Coach at Salpointe Catholic High School in Tucson, Arizona, is helping to create effective virtual engagement tools, digital content and an online distribution system for schools and organizations that serve youth. A former teacher and administrator, Ellen is a Google Certified Trainer, whose passion is working with educators to create engaging lessons using the incredible technology tools available today.

Patagonia Public Schools Superintendent **Kenny Hayes** oversees staff contributions on best practices and coordinates activities with elementary students who serve as peer mentors for the multimedia curriculum.

**Randi Trantham**, middle school science at Patagonia Elementary School, is helping with instructional design for the multimedia curriculum and testing at pilot sites. Randi has a Bachelor's in Biology and a Master's in Curriculum and Instruction with an emphasis in secondary science education from New Mexico State University.

**Thom Jordan**, musician, mathematician and software developer, programs interactive 3D geometric games on the computer to improve students' divergent thinking during lessons. Thom created curriculum for Ear-sketch, a National Science Foundation funded platform that introduces basic coding skills to underrepresented students.

**Ned Schaper**, kinetic sculptor, performer, poet and President of MBC, performs theatrical productions from his magical world of BevelDOM for video, teaches video motion and mechanics lessons and translates his Available Resource Technology (A.R.T.) practices and kinetic art models into classroom activities. A recipient of a 2017 Arizona Commission on the Arts research and development grant, Ned Schaper's virtual reality footage of the museum and theater is part of the "idea box" for The Universe Within.

**Lars Marshall**, broadcast producer and Educational Video Producer for MBC, edits introductory classroom videos for each of the 40 lessons.

**Paula Schaper**, researcher, communications specialist and Vice President of MBC, serves as project manager, facilitating and orchestrating all facets of the project with team members, including developing lesson plans and documenting the project. During the 2020-2021 school year, she'll host The Universe Within tele-education show, sharing new perspectives on creative problem solving, intuition, resourcefulness, original thinking, perseverance, purpose and much more through interviews with community and industry leaders.