

TELLURIDE DAILY PLANET

Inside Today: The View, p3; News, p4; Voices, p12; Business, p14; Sports, p18; Orbit, the back page

WEDNESDAY

SEPTEMBER 7, 2016

VOLUME 22, NUMBER 107

www.telluridedailyplanet.com

NONPROFITS

PINHEAD INSTITUTE EQUIPS STEM ROOM

*Mix of programs
planned*

SPECIAL TO THE PLANET

The Pinhead Institute has teamed with the Telluride School District to equip and operate a new, dedicated STEM (science, technology, engineering, math) room at Telluride High School as part of the school's recent expansion project.

Funded and facilitated through a public-private partnership between the Telluride-based, non-profit Pinhead Institute, a Smithsonian Affiliate, and the local public school district, the 1,000-square-foot facility (Room 222) will initially be fitted with high and low tech equipment ranging from 3D printers, computers and robotics kits, to a bike repair station.

"Bike repair is engineering for everyone," said Sarah Holbrooke, Pinhead's executive director. "With this new station, we're offering local kids hands-on, engineering experience with something they are already familiar with and excited by."

Holbrooke noted that the first class being offered in the STEM room, "Science of Construction and Design," taught by Derek Engebretsen and incorporating bicycle maintenance into the curriculum, is fully subscribed.

"In this class we are going to help students learn to solve problems creatively, but also with a logical framework," Engebretsen said.

"Bicycle maintenance is one of many ways of presenting students with problems that need fixing, but it also gives us the opportunity to incorporate a service element. We are hoping to partner with the library's pink bike program so that the kids can eventually help out with the maintenance of older bikes in that fleet."

Through hands-on investigation and open-ended exploration with these and other materials, students throughout the region will be guided to proficiency in skills viewed as essential for success in the 21st century workforce. These skills include creative thinking, teamwork, reasoning and problem-solving, among others.

"Pinhead is becoming the region's go-to organization for promoting and providing STEM education here, so we weren't surprised but we were delighted when Superintendent Mike Gass came to us and asked us to be part of this amazing opportunity for kids," Hol-

See **PINHEAD**, Page 29

Pinhead Institute equips STEM room.

PINHEAD, from page 36

brooke said.

"We are excited for the partnership," Gass said.

In order to complete the facility, Pinhead has committed to raising \$100,000 over the next four years to purchase the equipment needed to run both in-school classes taught by public school teachers, and afterschool and vacation classes taught by Pinhead staff and volunteers.

In return for outfitting the room, Pinhead will have priority use of the facility for afterschool and vacation programs from now through the 2019-2020 school year.

"People in the community have been embracing this idea with enthusiasm, and I feel confident we will meet our fundraising goals," she continued. "We are always open to more ideas for funding and sourcing so I invite suggestions."

As the STEM Room launches this month, Pinhead will offer a mix of free and for-pay afterschool programs there. These include a First Lego League Robotics club meeting from Sept. 12 through

Dec. 8, 3:30-5 p.m., on Mondays and Thursdays. Open to all interested 9- to 14-year-olds, the free program challenges students to think like scientists and engineers as they build, test and program autonomous robots to solve a set of missions during this year's Animal Allies Challenge. The season culminates with a regional robotics competition in Durango.

For the second year in a row Pinhead is also facilitating FLL teams throughout the region in Norwood, Naturita, Nucla, Ridgway and Ouray, thanks to grant support from the Telluride Foundation. Those seeking to participate or volunteer as coaches should contact Holbrooke at sarah@pinheadinstitute.org.

For five Tuesdays beginning Sept. 13, students 6th grade and up are invited to participate in the Smithsonian Affiliates free Youth Capture the Colorful Cosmos astrophotography project from 2-4:30 p.m. Supported by the Harvard-Smithsonian Center for Astrophysics, participants will take and colorize their own images of stars

and galaxies the same way that professional astronomers do. Finished photographs will be part of an exhibition mounted by Pinhead later in the school year.

Additionally, Pinhead instructors will be available this fall to meet with students of all ages on Thursdays beginning Sept. 8, 6-8 p.m., for a series of 3D Modeling and Printing drop-in workshops. Suitable for novice and experienced makers, students will learn to model in Solidworks and to operate a Form Labs stereolithography printer. Cost is \$20 per session plus materials (price varies according to project).

These initial STEM Room programs supplement the nonprofit's programming at its Pinhead HQ facility at the Cimarron Lodge. There, it will offer a range of computer coding, general science and robotics classes, as well as art and science collaborations with the Ah Haa School for the Arts, throughout the fall semester and beyond.

For more information or to register, visit pinheadinstitute.org.