Stellar academics: Forum stresses importance of astronomy education

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With the 21st century well upon us and technology ever-improving, astronomy might just be a stepping-stone for Hawaii’s keiki to the future.

However, finding ways to get kids interested in astronomy without scaring them away with scientific jargon, equations and numbers is a challenge for public, charter and private school teachers alike.

"Students need interesting ways to learn because the book thing just doesn’t work and that’s not the way the world is going," said Una Burns, a geometry, science and chemistry teacher at West Hawaii Explorations Academy. "We live somewhere where (astronomy) is right to teach, yet people are unaware of it, though there are so many job opportunities — higher-level jobs that are not in the tourism or hospitality industry."

About a dozen people, including a few teachers, attended the Galaxy Forum 21st Century Education — Get to Know Your Place in the Universe workshop held Saturday morning at the Ellison S. Onizuka Space Center. The forum, a program of the International Lunar Observatory Association, strives to incorporate astronomy education into academic curricula for students of all ages from preschool to college.

"Astronomy and galaxy education belong right up there with the other sciences in school," association president Steve Durst said. "Without galaxy education and astronomy we would have a much smaller, narrower understanding of reality. And, if you have a smaller horizon, you’re choices and options are limited."

At the workshop, Kumiko Usuda, Subaru Telescope’s outreach scientist, explained that teaching children about the size of the Earth in relation to the Sun and other celestial bodies is easier when a student can compare it to something they already

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understand, such as if Earth were the size of a green pea, the Sun would be as large as a 30-inch beach ball.

Usuda, who fell in love with promoting astronomy education after teaching her daughter’s preschool class about five years ago in Hilo, said astronomy education is an important aspect of any curriculum as the math and problem solving skills a student learns can be applied in many areas of life.

“Astronomy, I realized when doing research, teaches students how to think very logically and see other points of view. Using those skills, kids can think smarter and choose their better path in life,” Usuda said. “Astronomy is a very interesting and exciting field. To see other worlds is very important as it is on Earth to see different countries, cultures and people to enlarge our view.”

Burns, who attended a similar forum sponsored by the association last year, said the project ideas she’s learned in the workshops have worked well with her students.

One such example is the school’s scale model replica of the Milky Way galaxy, which she said was inspired by a 2009 association workshop featuring Honaunau resident Jon Lomberg’s living Galaxy Garden.

In addition to budgeting for materials and constructing the garden, students had to calculate distances and sizes in order to build the school’s galaxy to scale and to fit within its allotted area. Following Saturday’s workshop, Burns said she’d like to expand the school’s galaxy garden in the coming year to include the Milky Way galaxy’s nearest neighbor, the Andromeda galaxy.