



From left, Owyhee Combined School students Aunna Woods, Lucas Thomas and Kursti Strawbuck wear protective glasses while watching an annular solar eclipse near Pyramid Lake, Nevada in 2012.

Photos by DeeDee Dann

Darkness in Daytime

Owyhee teachers and students eagerly await total solar eclipse

By Dianna Troyer

Owyhee Combined School teachers and students are counting down to August 21, when they will watch the first total solar eclipse in the contiguous 48 United States since 1979.

"It's a once-in-a-lifetime opportunity: a total solar eclipse right here in the neighborhood," says DeeDee Dann, a science teacher at the school in northern Nevada on the Duck Valley Indian Reservation. "How awesome is that?"

She and Barbara Pete, a special education teacher, will take students on a field trip to Treasure Valley Community

College in Ontario, Oregon, to watch the celestial show.

During the 1979 solar eclipse, Barbara was riding the bus to school.

"The eclipse went very fast, and I didn't get to feel the full effects," says Barbara. "This time, I'll be prepared with my viewing glasses and witness the entire eclipse."

The upcoming eclipse is visible from Oregon to South Carolina, with total darkness occurring about 11:27 a.m. and lasting about 2 minutes, depending on the location in a 60-mile wide swath across Idaho. Prime viewing areas are northwest of Boise.

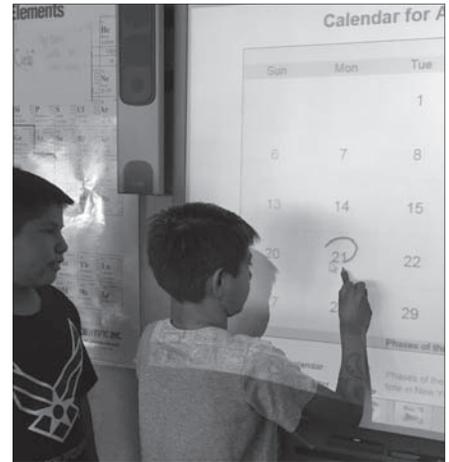
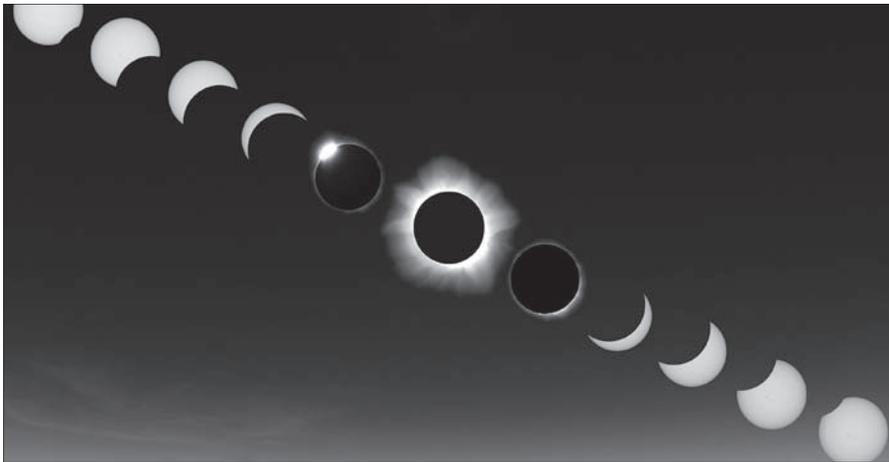
During summer school, DeeDee asked

her students from second to fifth grade what they thought of the August eclipse.

"They said they wanted to watch it, asked how it was invented and how it happens, said it looks like a ring, and wondered about going to another planet and looking down on the Earth and sun," she says.

DeeDee and Barbara have organized a solar eclipse field trip previously, but it was an annular instead of a total eclipse. They took members of the Owyhee Science Club to watch it at Pyramid Lake 40 miles northeast of Reno on May 20, 2012.

During an annular eclipse, the moon in its orbit is far enough away from the



Clockwise from top left, a composite from the November 14, 2012, eclipse seen in the South Pacific near New Caledonia. Avery Allison, left, and Ashton Prior mark the class calendar to remind them of the total solar eclipse in August. From left, Lacy Roa, Rayana Atkins and Melodee Atkins point out where the moon's shadow will fall as it crosses the United States.

Photo composite by Rick Fienberg

lasting 10 to 15 seconds. As the moon almost blocks the sun, a small crescent of sunlight still shines through the moon's jagged mountains to form irregular patterns resembling beads. When only one bead is left, it looks like a diamond ring.

Once the sun is completely blocked, the outer layer of its atmosphere, called the corona, shimmers as it encircles the moon.

In the deep twilight, planets and stars appear. Just to the left of the eclipsed sun, a star called Regulus is visible. Mercury is farther to the left. To the right, Mars can be seen, while Venus is farther right.

To protect your eyes from the sun's harmful ultraviolet radiation, special glasses should be worn. The eclipse can also be watched safely through a homemade pinhole camera.

The eclipse can also be seen under the shadow of a tree. As the sun shines through the spaces between the leaves, the eclipse can be seen while watching the sun's image on the ground.

"Students shouldn't miss it," says DeeDee. "We're looking forward to it." ■

See videos of total solar eclipses and other information at www.eclipse.aas.org or www.greatamericaneclipse.com.

Earth that it does not completely block out the sun. During a total eclipse, the moon orbits closer to Earth, so it completely blocks the sun.

The moon casts a shadow across the Earth due to a remarkable coincidence of nature. The sun is about 400 times as far away from Earth as is the moon, and the sun is also about 400 times as large in diameter as the moon.

"We really enjoyed watching the annular eclipse," says DeeDee. "It didn't really get much darker, but with our protective glasses on we were able to follow the path of the moon across the sun. I was surprised about it getting noticeably cooler for the few minutes the moon moved in front of the sun."

The eclipse was one of several educational activities. Students also visited the Nevada State Museum, The Discovery Center and the Pyramid Lake Tribes Cultural Center.

Along with watching the upcoming

August eclipse on the college campus, related activities will be scheduled.

"It will be another science club activity for us because school will start the following week," says DeeDee.

Driving 200 miles to watch the eclipse, the Owyhee students and teachers will become shadow chasers, a name given to people who travel to watch a total solar eclipse.

Devout shadow chasers have their daytime dreams fulfilled fairly regularly if the eclipse happens to be in an easily accessible location. On average, a total solar eclipse occurs every 18 months somewhere on Earth.

During a total solar eclipse, shadow chasers are rewarded with several visual phenomena: Baily's beads, the diamond ring and the corona.

Baily's beads—named for British astronomer Francis Baily, who described them—can be seen just before totality and just after totality ends, each time