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Ancient farming practices motivate students to grow

By [Scott Hammers](#) / *The Bulletin*

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Waldorf School student Sara Bothum, 9, works Wednesday near one of several “shadufs” made by her classmates. Used to lift water from rivers or streams into irrigation systems, shadufs were originally developed thousands of years ago in the Middle East.

Adam Wickham *The Bulletin*

When a class of second- and third-graders cheer wildly when offered a chance to return to school midsummer for physical labor and homegrown salad, somebody’s clearly doing something right at the Waldorf School on Bend’s north side.

For the last several weeks, the students in Yvonne Babb’s class have been cultivating a small garden using only ancient techniques. Digging with rocks and sticks and pieces of antler, carrying gourds full of water up from the Deschutes River, and measuring the growth of their plants in digits, palms and cubits, the students have managed

Deschutes River, and measuring the growth of their plants in dights, palms and cubits, the students have managed to coax tiny sprouts of wheat and barley from their garden.

Nina Lawler, 8, said it's been a fun project, but farming is not for her.

"I'm glad I'm not an ancient farmer. It would be very hard," Nina said.

Babb said the idea grew out of the students' studies of Old Testament stories, part of a curriculum where each class spends the year focused on the origins of stories of a different faith or culture. Babb came across a photograph of a shaduf, an irrigation tool developed in ancient Mesopotamia, then recalled the underused garden plot nearby. Before long, her students were digging in the dirt and building shadufs of their own.

The lessons combine history and science, Babb said — lately, they've been trying to mimic the contents of a bird's stomach to separate the fruit from the seeds of a serviceberry by soaking the fruits in a variety of substances.

Babb said the goal is to not overburden students with memorization of facts and formulas, but to keep them engaged in the learning process long enough that they'll want to learn the details eventually.

"At Waldorf schools, we don't do a lot of fancy experiments. We play with science," she said.

Students said learning about and building the shadufs has been one of the highlights of the class so far.

A shaduf is a lever, with a scoop or bucket on one end and a counterweight on the other, allowing the operator to lift water from a stream or canal into an elevated irrigation system with minimal effort. Babb's students built their own by lashing together sticks with twine they'd made by braiding raffia fiber. Small gourds serve as scoops, and lumps of clay dug from the river function as counterweights.

The students' shadufs stand only 2 to 3 feet tall, and according to Isabel Carlson, 8, they aren't all that efficient. The gourd scoop tends to float, she said, forcing her to partially fill it with stones in order to move barely a cup of water.

"But we don't need that," Isabel said. "We can use our hands. Our hands are one of the most important tools."

Babb said she relieved the students of the responsibility to carry water up from the river early on to allow them to focus on building an elaborate miniature irrigation network. Pairs of students tend their own small patch, digging out plantable floodplains and reservoirs to store water after Babb turns off the spigot. It's an education in the issues faced by farming communities, she said — downstream farmers have to deal with floods or droughts caused by their upstream neighbors, and students argue over whether to eat the green onions or let them grow larger.

Indigo Sappington, 8, said he's looking forward to coming back to the garden after school lets out.

"It's really fun doing the shaduf and all the watering. I planted two onions, about 50 wheats and 10 squashes just today," Indigo said, pointing to a nearby garden plot. "My mom actually works on that garden over there, so I'll be here a lot."

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