

Proud to be Your Local Choice For



High-Speed Internet • Digital Phone Service • Satellite TV and more!
Providing exceptional service & support in McMinnville and the Willamette Valley.

340 NE Ford St. Downtown McMinnville 503.883.9200 www.onlinenw.com

Enter keyword to find website articles

[Click here to search newspaper articles since 1999](#)

Logged in as [subscriber@newsregister.com](#)

[my profile](#) | [logout](#)

- [Classifieds](#)
- |
- [Business Directory](#)
- |
- [HomeFinder](#)
- |
- [Advertise](#)
- |
- [Subscribe](#)

- [Home](#)
- [News](#)
- [Sports](#)
- [Community](#)
- [Opinion](#)
- [Obituaries](#)
- [Blog](#)
- [Visitor Info](#)
- [Events](#)
- [Archives](#)

- [Local News](#)
- |
- [State-Region](#)
- |
- [Local Sports](#)
- |
- [Features](#)
- |
- [Special Sections](#)
- |
- [Community Links](#)
- |



On the waves with science

Jan 11, 2013

[Share](#)

[By Starla Pointer](#)
[Of the News-Register](#)

In an effort to protect their boats from tsunami waves, Duniway Middle School sixth-graders built some massive docks from Lego blocks. Some had three flat sides; some had sides that curved; some had roofs while others were open to the air.

“We’re trying to make it as strong as we can,” said Ian Huffer, as he worked with Trevor Wertz and Alex Toro to create one of the docks.

Trevor noted, “It also needs to be high.”

Finished with the U-shaped construction, the boys carried it to the edge of the wave pool at the Evergreen Wings & Waves Waterpark. Other teams from their class lined up their docks as well.

Then the waves came. The first one barely moved the docked boats.

The second, as is common with a series of tsunami waves, was much stronger. It capsized several boats and dumped their cargoes.

As the waves continued to smash into the Lego structures, loose blocks tumbled into the surf.

Ian, Trevor and Alex’s dock lost its entire front wall. Their boat and its cargo washed away.

Under the instruction of Tim Morris, an educator from Evergreen, the sixth-graders tried again.

“Thicker walls this time,” Alex suggested, as he, Trevor and Ian doubled the number of blocks shielding their boat. They tied its mooring line more securely as well.

They set the dock at the edge of the wave pool and turned it at a 45-degree angle so the water would hit a corner, rather than a flat surface. When the tsunami returned, the waves wobbled their boat and shifted its cargo, but caused little damage.

“Yes! Yes!” Ian cried, jumping up and down.

All of Duniway’s sixth-graders went to the water park this week as an extension of their science lessons.



Marcus Larson

Ian Huffer, Alex Toro, Jonathan Mimila Suarez and, not shown, Trevor Wertz and Zane Fodge, incorporate diagonal cross pieces in their cube-shaped structure to give it more strength



Teacher Guy Duncan said the field trip, paid for by the McMinnville Education Foundation, afforded students real-world experience with waves.

They've been learning about waves, tsunamis, water pressure and water in general in their classrooms. But it's one thing to read about waves; it's another thing — with much more impact — to feel them, see them and watch them destroy a Lego dock.

“And they get to have a little fun,” Duncan said.

It's great to have the Evergreen Waterpark and its educators so close by, he said. To have the same kind of real-world experience without it, students would have to bus to the coast, which would cost a lot more for transportation and expand a great deal of educational time. Or they could go to the wave demonstration pool at Oregon State University, which also would take more time and money.

The OSU pool is designed for research, so its waves move more slowly. It doesn't capture sixth-graders' attention the way the wave pool at the water park does.

In addition to seeing a miniature tsunami in the wave pool, the sixth-graders had two more lessons at the water park.

At one station, educator Jenna Halsey taught them more about the science of waves.

Students learned about the crest and trough, or top and bottom of a wave, and about wave length, wave height and amplitude. Then they lined up, held hands and demonstrated those new vocabulary words — an exercise somewhat similar to a crowd doing “the wave” in a football stadium.

A tsunami is a series of those waves, Halsey said.

Tsunamis are usually caused by earthquakes, when the earth's plates slip and grind into different positions. They also can be started by underwater landslides or, occasionally, a meteorite splashing into the ocean.

The starting point of a tsunami doesn't see much action, Halsey said.

The energy moves outward in a circle, sending a series of waves in every direction. As the waves reach shore, they slow and build up, creating a wall of water that crashes into the shore.

If a tsunami is coming, she said, head for higher ground. “If you're on the coast and you feel the earth move, don't wait until you hear the sirens. Just go,” she said.

Students knew why: They had studied the destructive 2011 Japanese tsunami and learned what damage it could cause.

“What do you think of when you hear the word ‘tsunami’?” Halsey asked them.

“Big huge wave. Crazy. Destructive. Boom. Powerful,” sixth-graders answered.

At the third station in the water park, the Duniway students had a chance to engineer and build a structure related to a more gentle use of water — a tower designed to hold a container of water above ground, so it would flow to homes through the power of gravity.

Sixth-graders worked in teams to build towers from straws and tape.

One team started with a tall, four-sided pyramid featuring a water container perched at the very top. But they ran out of material, so the reservoir tipped and fell when water was added.

Instructor Robert Jordan said the design was good, as triangles are strong. But even the best designs don't work if you run out of materials or funds and are unable to complete them.

Another group created a trio of towers, each with a triangular base. Together, the three towers cupped the water reservoir.

It also collapsed because it wasn't quite complete.

The third team built a cube, then reinforced it with diagonals and straight cross pieces. It held up the longest, but eventually fell because one wall of the cube had less bracing.

Next time, students said, they would include more diagonals and triangles — and they would make more judicious use of their materials.

Would you like to comment on this article?

Only online subscribers may comment on articles. [Click here](#) to see how you can subscribe.

Already a subscriber, please log in



Yamhill's Gallery
Fine Arts, Gifts & Crafts

NEW YEAR CHEER!

GIVE A GIFT BASKET TO FAMILY & FRIENDS THIS YEAR

901 N. BRUTSCHER ST. - NEWBERG | 503-538-1311

The advertisement features a large, overflowing gift basket filled with various items including wine bottles, jars, and packaged goods. A red ribbon is tied around the basket. The text is overlaid on the image in a stylized font.

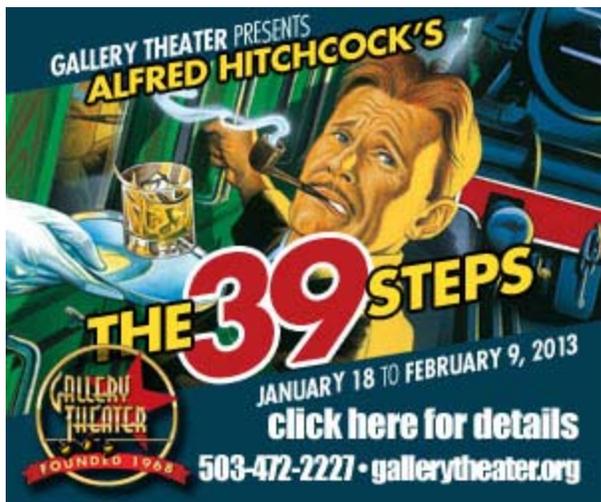


Looking out for your well-being, it's what neighbors do.

PROVIDENCE
Newberg Medical Center



The advertisement includes a photograph of a family of four (a man, a woman, and two children) sitting together outdoors in a grassy area. The text is positioned to the left of the photo.



[Most Read](#) | [Most Commented](#)

- [McMinnville firefighters battle residential structure blaze](#) (4345)
- [Mac boys fade vs. Tigers](#) (4015)
- [Laid-off Oregon man wins \\$1 million in lottery](#) (3736)
- [Oregon state parks may curb smokers by 2014](#) (3490)
- [Letters to the Editor - Jan. 18, 2013](#) (3347)
- [A Long shot gives Mac a victory](#) (3337)
- [Jags overpower McMinnville boys](#) (3318)
- [Oregon sheriff says he won't enforce new gun laws](#) (2732)
- [McMinnville shows off model schools](#) (1988)
- [Jake Blair taking it one goal at a time](#) (1965)

OTHER PLATFORMS

- [Deals of the Day](#)
- [Mobile Text Alerts](#)
- [Facebook](#)
- [Twitter](#)
- [RSS Feeds](#)

SUBMIT INFORMATION

- [Valley Eye](#)
- [Send Us Your News](#)
- [Submit Letter to the Editor](#)
- [Contact Newsroom](#)
- [Contact Digital Media](#)

ADVERTISING / CIRCULATION

- [How to Advertise](#)
- [Contact Advertising](#)
- [Contact Classified Advertising](#)
- [Subscriber Services](#)
- [Contact Circulation](#)

CORPORATE INFORMATION

- [Contact the News-Register](#)
- [About the News-Register](#)
- [About Oregon Lithoprint](#)
- [Website Privacy Policy](#)

© News-Register Publishing | © The Associated Press

The News-Register and NewsRegister.com are owned and operated by News-Register Publishing Co., P.O. Box 727, McMinnville, OR 97128.

All rights reserved. This material may not be published, broadcast, rewritten or redistributed.

[Web design](#) & [powered by LVSYS](#)