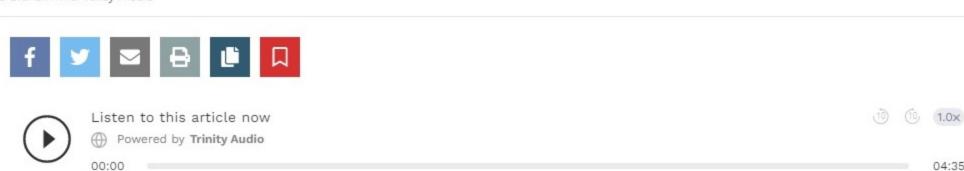
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## Building the best of the worst: Students race for chance to be least efficient

Alex Powers Feb 13, 2022 🔍 0



The Ashbrook Independent team sets off their Rube Goldberg device during the judging portion of the competition on Saturday, Feb. 12. Kylie Graham Mid-Valley Media



Alex Powers

R ivers Albright, a Philomath 6th-grader, pushed a loaded rat trap into position beneath a row of dominoes, next to a claw hammer stood on end and tipping precariously over an aluminum can full of golf balls.

King's Valley Charter schoolmate Maryam Wanly, grade 4, had notes.

"How is the hammer going to work like that? It needs to go sideways," she said.

"We tried it that way," Rivers said.

But Maryam's suggestion worked, and The Sanitation Machine clicked and thumped as marbles rolled down ramps and falling plastic tiles collected in the base of the crude, 5-foot wood-and-cardboard contraption.

SNAP. The students clapped their hands to their ears as the rat trap slammed closed and curious faces from nearby teams swiveled to catch a glimpse.

Wind advisory issued for Corvallis, Albany, Lebanon

OSU football: Beavers to play Florida in Las Vegas Bowl

Goldberg Challenge at Ashbrook Independent School in Corvallis, where middleschool students from Junction City to Sheridan vied for least-efficient to squirt a slug of hand sanitizer onto a paper towel.

Their intentionally complex design was among eight entered in the first-ever Rube

Jannet Kohanek, who teaches 4th- and 5th-graders at King's Valley, found the

Ashbrook staff said they challenged science teachers in five counties to compete.

invitation cast aside in her school's copy room, she said. The timing was perfect.

She said she took on science lessons in the fall and wanted to build a Rube Goldberg

device in her classroom.

"I thought, what! This is our chance," she said.

Kohanek ended up with four. Tools and scrap wood filled her classroom and she

broke a lot of buckets, she said.

taught math over the contraptions in the weeks leading up to the competition.

Ashbrook's team developed a machine that would send a toy car and marble to

activate a pulley that lands a weighted bucket on sanitizer. Ideally, the machine would squirt the sanitizer without human intervention to score points with the competition's judges.

But student teacher Nikkole Duitsman said early in the project, students repeatedly

Now, on competition day, the pulley system needed troubleshooting, the team had

just run out of duct tape, and their rat trap wouldn't snap closed.

redesigned their project after picking weights too heavy for the contraption. They

said.

They had one hour before judgment and they hadn't even made a dry test run, let

"They have a problem where their ball doesn't roll and the car falls off," Duitsman

alone squirted their sanitizer.

Eesa Duerksen, a seventh-grader, waved her arms and sighed at another failed

"We're running out of time!" she said.

Ashbrook head of school Chris Schoberl said all teams started with similar constraints, materials and team stipends from local business sponsors. Teams had to

attempt to get rolling objects down a sloped track.

incorporate a mystery item into their build, revealed at the competition.

Every job that an engineer walks onto has unknowns — unanticipated problems that must be solved, Schoberl said.

"This year, it's a rubber chicken," he said.

having modeled transfer of energy, Schoberl said.

Schoberl said the machines teach high concepts from engineering, math and science. But students have fun and engage with the concept in person.

Even if teachers don't tell middle-schoolers this is physics, kids get out of the project

he said.

"Every single one of the kids gave up a Saturday to do engineering and mathematics,"

At a nearby table, students building a machine they've dubbed The Squirter collapsed to their knees, holding their heads and yelling. Time was ticking and they'd yet to get the contraption to work.

Kohanek said her students had to read texts, analyze designs, and interpret what they had learned in their own concepts. A chance to practice literacy, critical thinking, creativity, problem solving.

that started in January with a lot of bad attempts turned into clanking, snapping,

And then realizing their work as it turned from pencil-sketched blueprints and plans

"Here it is: Look at this," Kohanek said.

analyze designs, interpret what they had learned as their own concepts.

The Unstoppables, a King's Valley team of 4th- and 5th-graders, logged 39 failed

There also was teamwork and project management. Her teams had to read text,

attempts. Then, earlier this month, success.

exploded."

"When they got it to run, everyone cheered. Not just their team, but the room

A Sheridan team, the Delphian School Dragons, won best machine. King's Valley's Golden Eagles was recognized for most creative build.