National Engineers Week Even Foil Bridge Structural Engineering Strength and Foil Boat Buoyancy Testing with Maximum Loads

This "Summer Fun for Everyone" Event on YouTube: https://youtu.be/NS1YY_2BWCQ?feature=shared
This "Summer Fun for Everyone" Event on YouTube: https://youtu.be/gFE_SCYK_Sc?feature=shared

The stage is set at CCPL Strongsville to begin the 2025 Summer Fun for Everyone with NSPE!

Special thanks from Joe Yurko to all the volunteers (L-R): Karen Sherwood, Valerie Congdon, Mike Galgoczy, Joe Spagnuolo, and Tim Protiva. Not shown are the volunteers from Laird Industries: Julia Lewins and Chloe Ziflak who made this event possible!

Mr. Tim Protiva introduces Joe Yurko to begin the Summer Fun for Everyone event! And Joe talks about the engineering challenges for today. We will be doing two exercises. The first exercise is making a foil bridge and applying structural engineering, civil engineering, and material sciences. The team table that builds a foil bridge deck that supports the most weight pellets before failure is the winner!

A few ground rules before students are assigned to the team tables.

We are going to have FUN today!!!

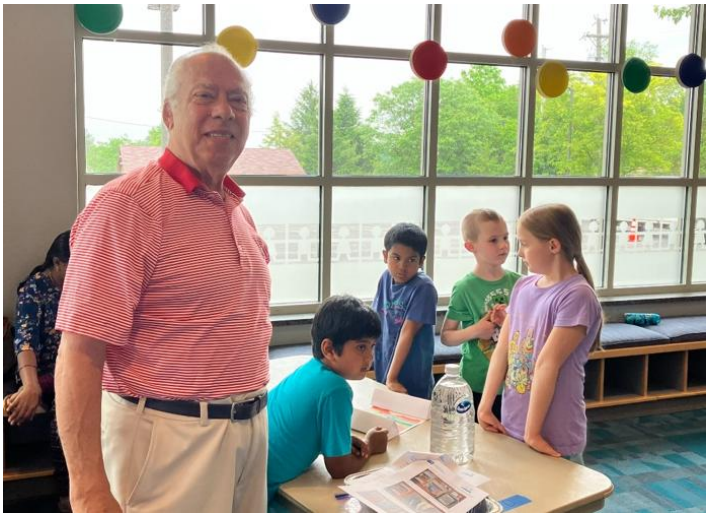
The Gray Team Table and the Red Team Table are already!

The Red Team Table and the Orange Team Table are also ready!

The Gray Team Table is off and running!

The Orange Team Table is off and running!

The Red Team Table is off and running!

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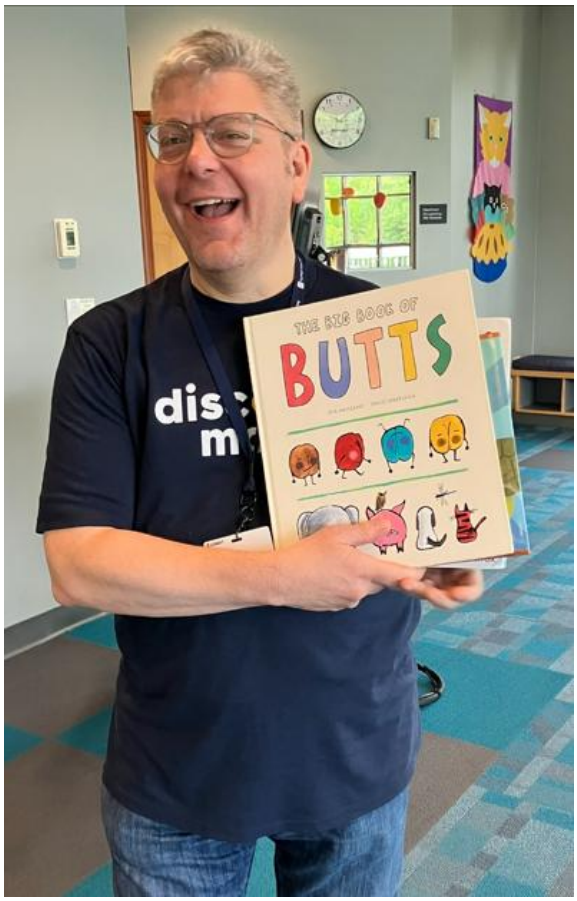
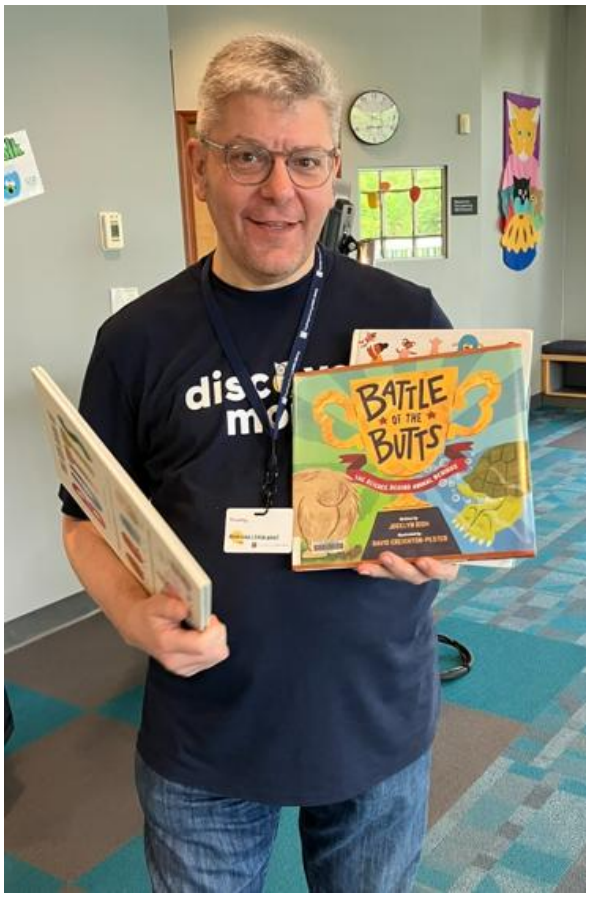
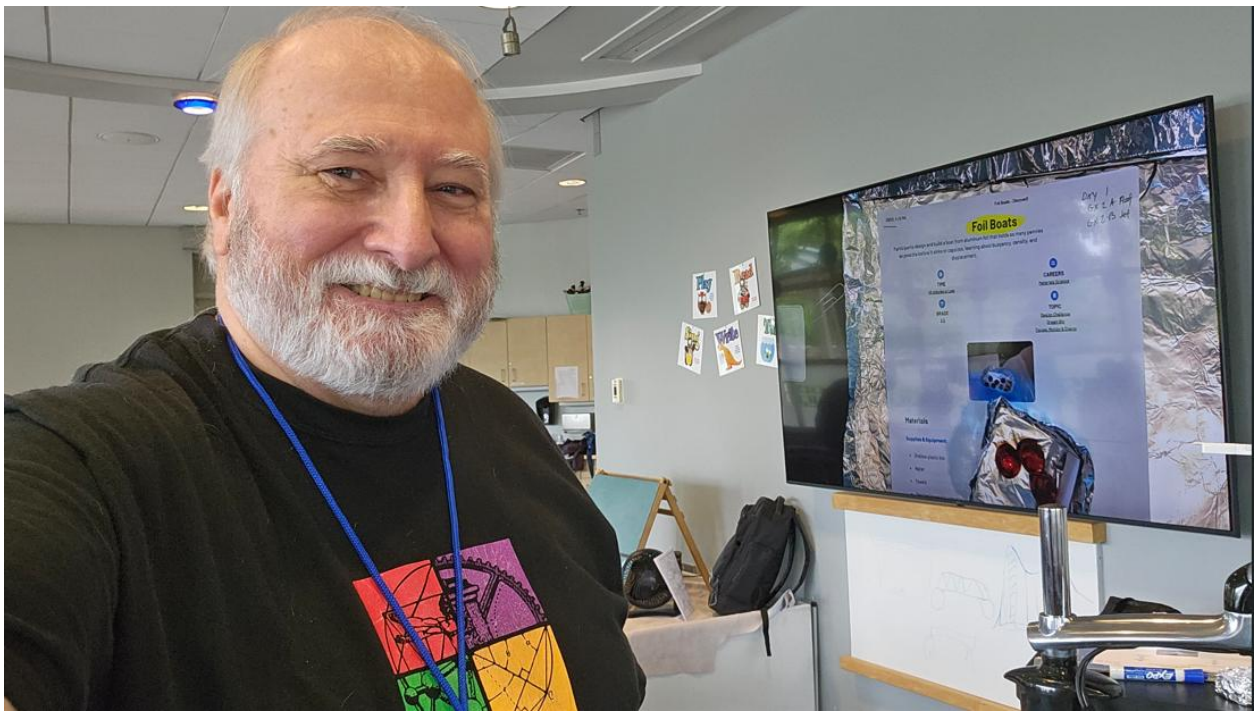




After we completed the foil boat exercise, Tim has two GREAT books to read to the students at half time!


UNDER-PANTS?

Thank you, Tim, for the OUTSTANDING read of those two books and getting the students up to a feverish pitch to begin our second exercise for today!



Joe Yurko introduces the second exercise for making foil boat and applying Marine Science in shipbuilding for maximum Archimedes buoyance resulting in a design much like a barge. Also, a demonstration with chemical engineering showing how carbon dioxide can be used for foil boat propulsion.

The Gray Team Table and Red Team Table begin their task.

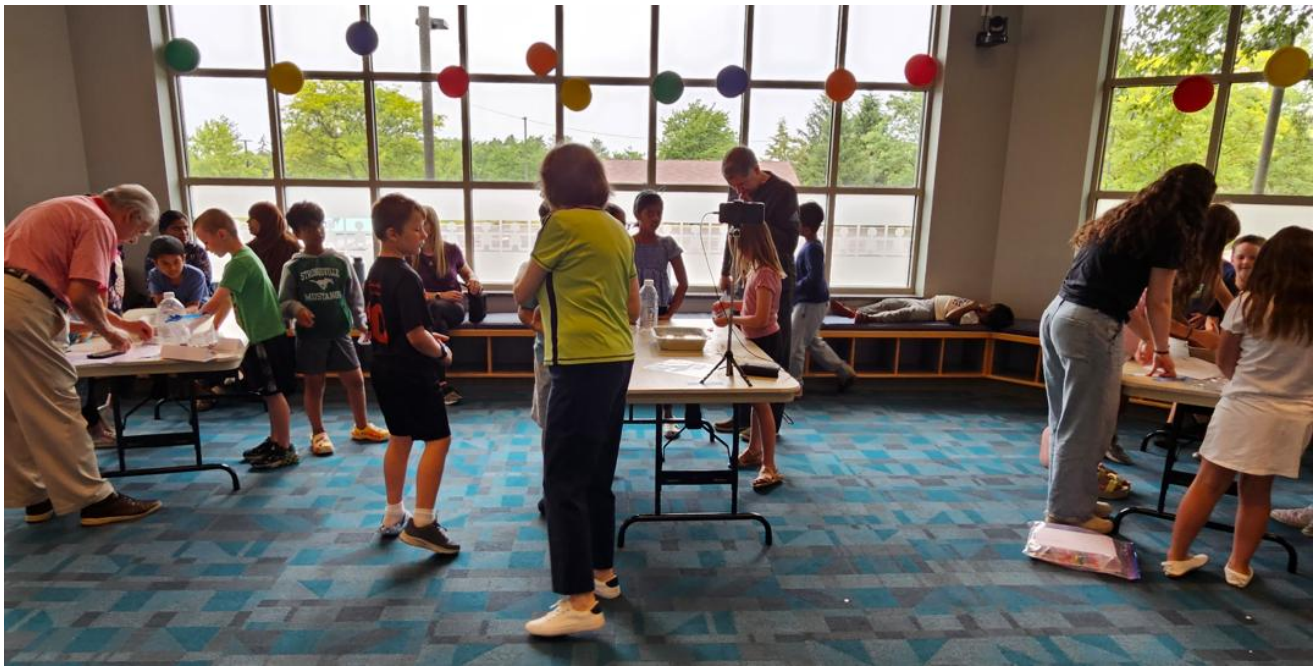
The Blue Team Table and Green Team Table follow with beginning their task also.

The Orange Team Table is in the running on Exercise 2 tight in the pack of contenders.

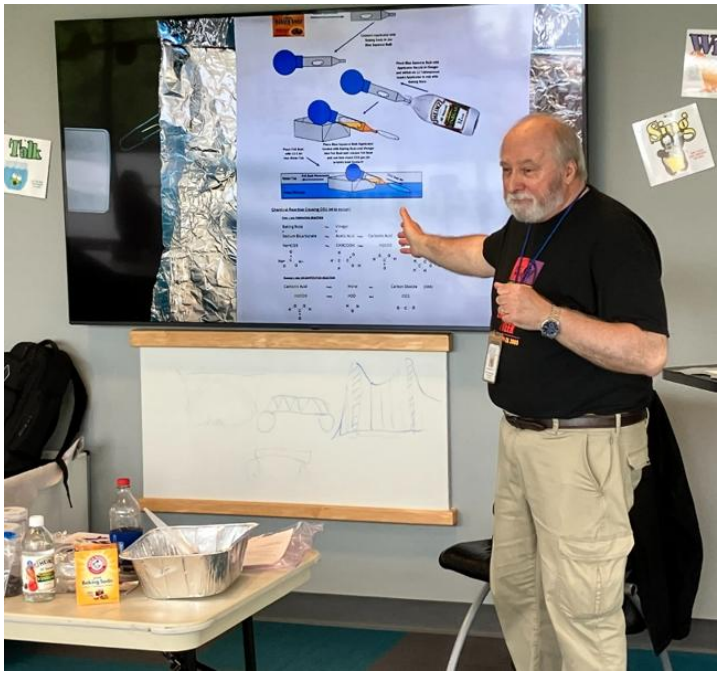
The Orange Team Table making progress testing their foil boat.

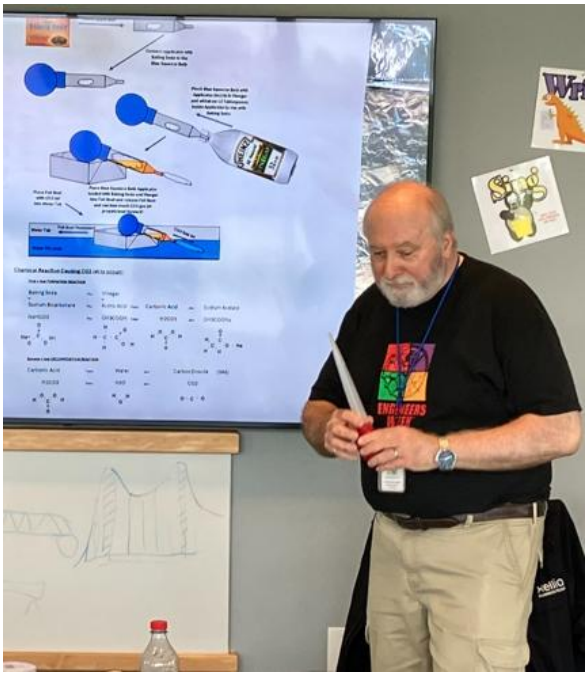
The Grean Team Table is making progress also.

The Blue Team Table is also in the running making progress on Exercise # 2.

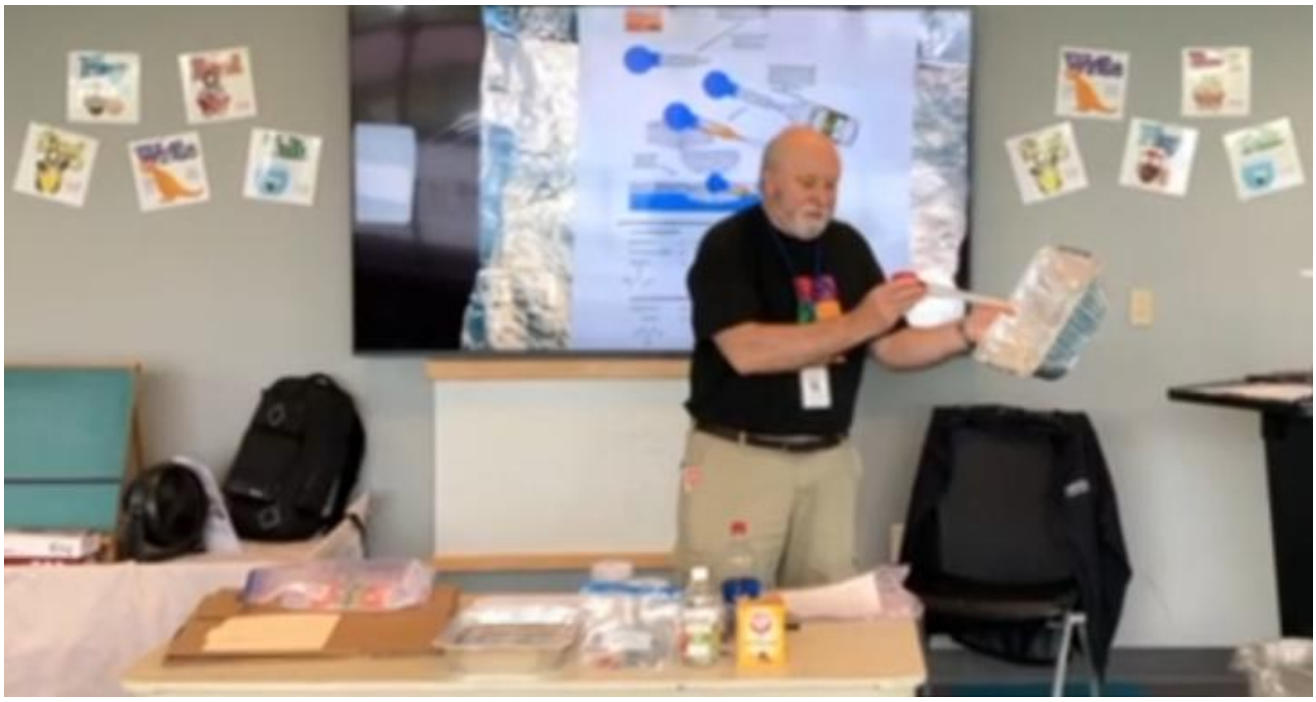


The foil boat Archimedes buoyancy test with glass weight pellets floating in a water bath.

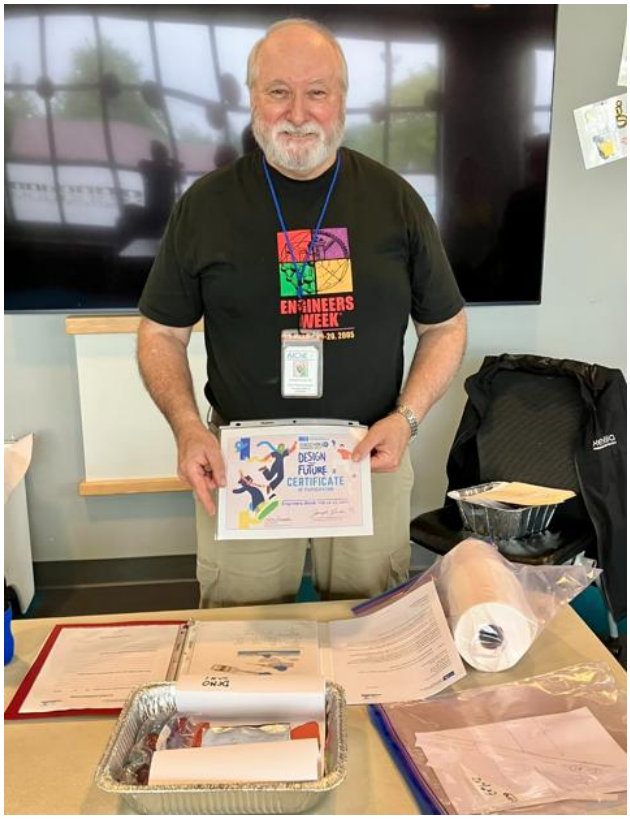




Time for the chemical engineering demonstration for foil boat propulsion with CO2!



With a mixture of Baking Soda (Sodium Bicarbonate) and Vinegar (Acetic Acid) we have the rapid generation of CO2 inside a basting tube-jet to provide propulsion for the foil boat!



National Engineers Week Participation Award for all the future student engineers!

National Engineers Week Appreciation Award for Mr. Tim Protiva for hosting our event!

That's a Wrap for today!

Special thanks from Joe Yurko to all the volunteers (L-R): Karen Sherwood, Valerie Congdon, Mike Galgoczy, Joe Spagnuolo, and Tim Protiva. Not shown are the volunteers from Laird Industries: Julia Lewins and Chloe Ziflak who made this event possible!