Before we begin:

- We want to know who is here! Please introduce yourself in the chat: Name. School.

- Please mute your microphone to reduce background noise.

- We will leave time for Q & A. **Please submit your questions via the Google form that will be shared in the chat.**

- This presentation, along with the questions and answers, will be posted on the WESO website.

wesoscience.org

Official Rules

- At the tournament, the event will be executed according to the published FINAL Event Description and subsequent clarifications posted on Discord blog.
- If comments made during this presentation contradict that which is found in the event description or blog posts, please contact us at weso.events@gmail.com
- The written Event Description will be updated, if needed, with clarifications arising from this presentation.

Goals for this event:

01

PHYSICS
Learn about structural forces, engineering, design, gravity, weight, and construction techniques.

02

TEAMWORK/ FUN
Encourage positive interactions and good sportsmanship!

Event Basics

- GRADES: 2 and 3
- TEAM SIZE: 1-2 participants/grade
- DURATION: 40 minutes

The detailed event description can be found at: https://wesoscience.org/events/

EVENT FORMAT

Overview

- Material Selection

- Bridge Building

- Written Prediction of Cargo held

- Bridge Loading

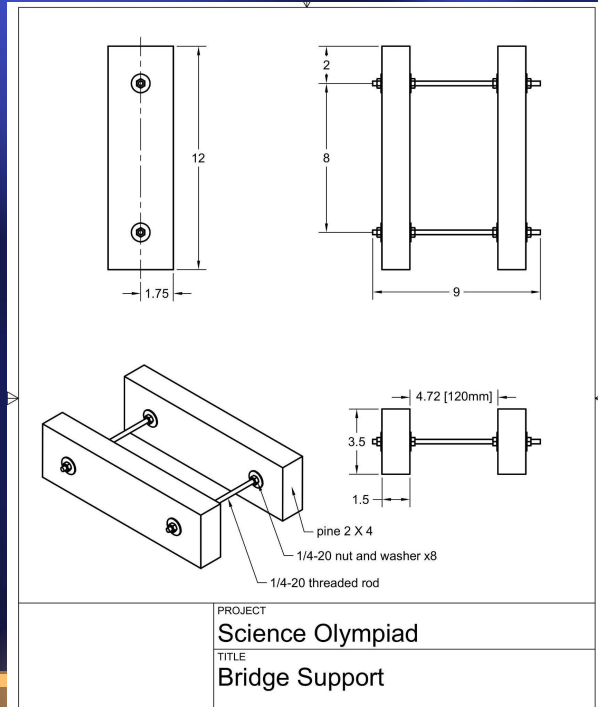- Scoring & Tie-breaking Criteria

EVENT FORMAT

Materials

- 10 g Play Doh (any color)

- 20 strands of Barilla long pasta (spaghetti OR linguine OR fettuccine) The long pasta will not be known before competition. All teams will be given the same type of long pasta.

- 8 pieces of Barilla shaped pasta. Selection will not be known prior to competition but may include elbows, farfalle, penne, rigatoni, etc. Teams will be called up separately to choose their 8 pieces. The 8 pieces do not have to be the same shape.
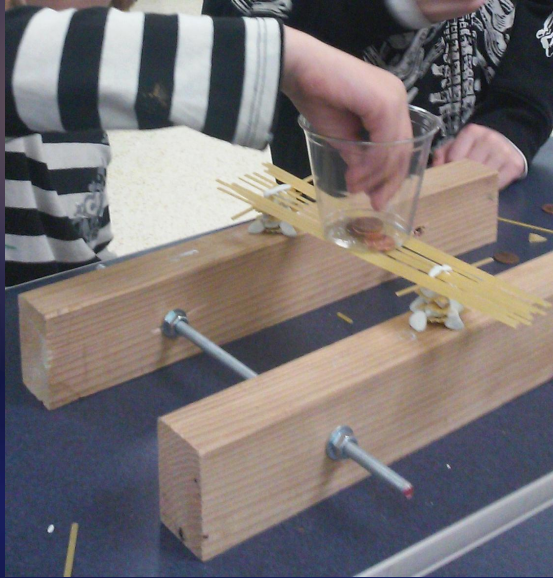
Bridge Construction

- Bridge must be at least 2.5 cm high and 2.5 cm wide. Rulers will be provided.

- Pasta bridges will span 12 cm and will be built on bridge support platform (provided at competition)

- Play Doh may be used to join the pasta pieces, attach the pasta to the wooden bridge support platform, and/or help stabilize the loading cup.

- Students may place the 9 oz plastic loading cup on the bridge during construction.

- At the end of the 20 minute build time, teams will make a written estimate of how many nickels their bridge will hold.

EVENT FORMAT
Bridge Loading

- The bridge will be loaded from its highest point.

- Cargo (nickels) must be loaded one piece at a time.

- Bridge will be loaded until failure

- Failure is defined as not being able to maintain the load. This may occur if the pasta breaks, the bridge falls from the support platform, if the load slides off the bridge, or if the bridge bends enough that it makes contact with the 'ground'.

EVENT SCORING

The bridge holding the most nickels wins.

Tie Breakers

If there is a tie for bridge capacity:

- **1st Tie Break Criteria:** Accuracy of prediction. The team whose estimate is closest to actual load wins tie break.

- **2nd Tie Break Criteria:** Narrowest bridge

COACHING ADVICE

- Allow the kids to experiment with building different bridge styles with a variety of pasta and loading the bridges to failure.

- Ask them about their bridges: What made the bridge stronger or weaker? How did the Play Doh or shaped pasta help in building a bridge?

- Work on building bridges that meet height and width criteria

- Practice building bridges with each different long pasta type. Practice building within the 20 minute time limit.

- Practice loading the bridge carefully. Bumping the platform or dropping cargo may cause the bridge to shift or collapse.

- Make sure they support each other.

- Most importantly, make it fun!

QUESTIONS NOW?

- **Please submit your questions now using the Google form that was shared with you in the chat.**

- **We will answer live and post all questions and written answers to the website following the meeting.**

Thank you for serving as an event coach and helping us bring back WESO to our community!

Questions after tonight?

Discord

WESO Discord Server

- **Every WESO event will have its own channel**

- **Join the WESO server to submit your questions in the event chat**

- **Event supervisors or WESO board members will monitor the discussion and answer questions**

- **Event coaches can use the chat to exchange coaching ideas**

- **Go to** wesoscience.org/events/ **for details on how to join the WESO server and guidelines for its use**