

EVENT 3: PENNY BRIDGE

(Dated 9/2021)

OBJECTIVE: To design and build a bridge constructed solely of pennies.

RULES:

- a. The bridge is to be designed and constructed by the team on site.
- b. The team will supply the pennies (US currency)
- c. The bridge is to span a minimum distance of 7.0 centimeters with the entire span having a minimum height of 1.30 centimeters.
- d. The bridge may not be attached to any surface.
- e. The bridge is to be constructed solely of pennies, (USA legal currency), that are supplied by the team.
- f. The pennies may not be fastened together by any means, i.e., adhesives, tape, solder or hardware.
- g. The bridge must have a roadbed of contiguous pennies that can enable a penny to slide across the span.
- h. The pennies may not be altered in anyway, i.e., cutting, notching or sanding.
- i. A form may be used to hold the structure together during the construction process
- j. Pennies may be removed during the construction process.

COMPETITION AND SCORING:

- a. The competition area may either be an all-purpose room cafeteria or a typical high school classroom containing tables or desks.
- b. The team will have 20 minutes to construct their bridge.
- c. Once the team has constructed their bridge, they will notify the judge(s) that they are ready for judging.
- d. The bridge must be stable and be able to stand on its own while waiting for and during the time the bridge is judged.
- e. During the judging process the height of the span will be measured, a test structure will be slid under the bridge and the number of pennies used to construct the bridge will be determined.
- f. The test structure will be a 7.0-centimeter wide and 1.3-centimeter high rectangle that must be able to slide under and through the span of the bridge without touching any part of the bridge.
- g. The bridge built with the smallest number of pennies wins.
- h. In case of a tie, the bridge with the greatest height at the center of the span will win.

$$\text{SCORE} = \frac{(\text{Number of pennies of winning bridge})}{(\text{Number of pennies of your bridge})} \times 100$$

Testing procedures & scoring may need to be modified if the Olympics is held virtually.

Updates to the rules and Forum discussion / questions with answers are available by going to the NJAAPT website: njaapt.wildapricot.org (top menu, "Events" and "Forum"). It is the team's responsibility to periodically check in or inquire about changes and clarifications to the rules.