

23TH ANNUAL CENTRAL INTERIOR BRANCH POPSICLE STICK BRIDGE BUILDING CONTEST

ENGINEERS &
GEOLOGISTS
BRITISH COLUMBIA



The Central Interior Branch of Engineers & Geoscientists BC is proud to present the 23rd Annual Popsicle Stick Bridge Building Contest at Pine Centre Mall, Centre Court on Saturday April 18, 2020.

In celebration of the National Engineering and Geoscience Month (March 2020), challenge your friends or colleagues to see who can build the strongest bridge out of popsicle sticks and all-purpose white glue.

The bridges are tested with a specially designed machine that applies an increasing load until the bridge breaks (Engineers call this 'destructive testing'). The machine is equipped with a sensor (Engineers call this sensor a load cell) that measures the load that is applied to the bridge. Prizes will be presented for each of 5 categories described in the table below. See the attached rules for further information. This is a fun event for all ages.

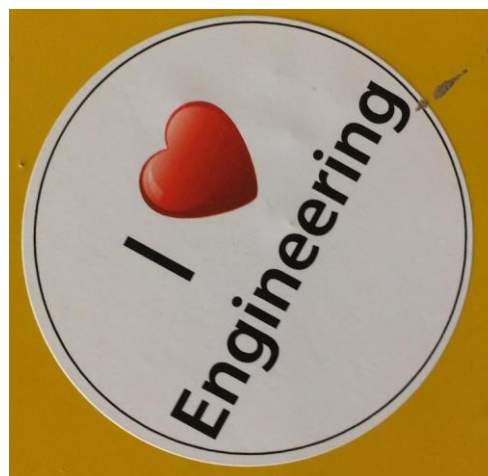
The competition event will take place at Pine Center Mall center court (near the Food Court) on April 18, 2020.

Event Detail	Time
Registration (all categories)	11:00 – 11:45 am or, one hour before the start time for each category.
Opening Ceremony	11:45am
Category 1, Primary (Grades 1 to 3)	12:00 pm
Category 2, Intermediate (Grades 4 to 7)	1:00 pm
Category 3, Secondary (Grades 8 to 12)	2:00 pm
Categories 4, and 5, Professional and Adult	Following the youth categories.

There is no enrolment fee. However participants are encouraged to bring a non-perishable food item for the local food bank. Children must be accompanied by an adult at all times.

Where to get bridge kits:

- Visit us at our community kiosk (near the customer service kiosk) between 10:00 and 3:00 in Pine Centre Mall on March 28th.
- Bridge 'kits' can be picked up from McElhanney Engineering between 8am and 4:30pm Monday to Friday (12-556 North Nechako Road at Parkhill Center).





Bridge Engineering Specifications

1. Maximum of 100 standard popsicle sticks per bridge
2. Popsicle sticks must be left whole.
3. Standard all-purpose white glue only.
4. Bridge Dimensions: (see the sketch in Appendix A for clarity)
 - a. Bridge span (i.e. length): 550mm to 660mm
 - b. Width: 50mm or greater
 - c. Height: 450mm or less
5. The testing machine applies a load to the bridges from the top with a hydraulic ram. Bridges must have a flat spot, approx. 50mm x 50mm at the midpoint top to accommodate the ram.
6. Architectural enhancements (such as color and glitter) are permitted. However bridge engineers must accept that such enhancements generally increase weight without adding strength.
7. Wet glue adds unnecessary weight and reduces strength
8. Bridge builders may submit cool and alternative bridge designs that do not meet these specifications. Alternative bridges will be tested but **are not** eligible for prizes. Alternative designs must also comply with the overall dimension requirements so that they fit into the testing machine.

Registration Rules:

- One team or individual per bridge.
- Contestants are encouraged to register in advance to speed up registration on the day of the event.
- All bridges must be weighed in at the registration table prior to testing

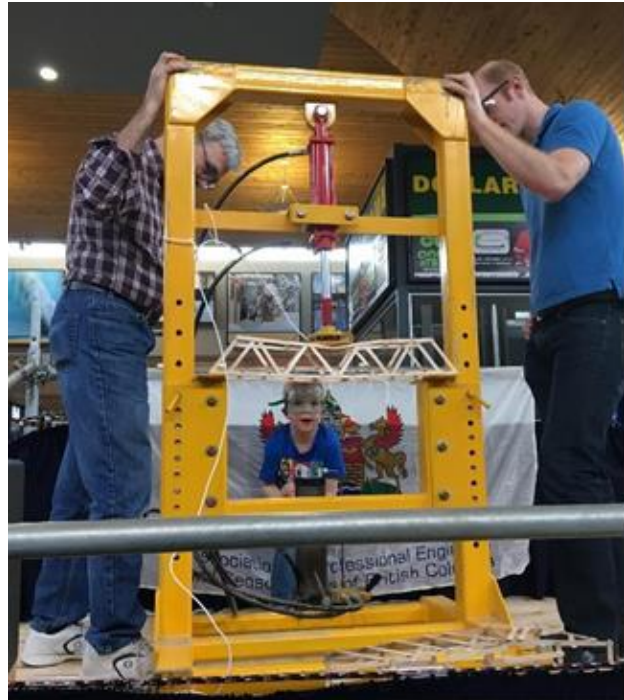
Judging Criteria

- Bridges will be inspected for compliance with the rules during registration.
- Bridges that don't meet the rules will not be eligible for prizes. However, disqualified bridges may still be load tested as long as they fit into the testing machine.
- Bridges will be judged for innovative design, build quality and style during registration.



Bridge Testing

- Contestants operate the hydraulic pump that loads and then breaks the bridges.
- Contestants and officials near the loading area must wear protective eyewear (provided).
- The maximum load that a bridge carries is recorded by an electronic load cell and displayed on a screen for everyone to see.
- Score is based on maximum load divided by bridge weight, also known as the load/weight ratio.
- In the event of a tie (equal load/weight ratios) the lighter bridge will win.



Prizes

Prizes will be awarded as outlined in the table below:

Category	#1 Primary (Grades 1 to 3)	#2, Intermediate (Grades 4 to 7)	#3, Secondary (Grades 8 to 12)	#4, and #5, Professional & Adult
Prize	1 st place \$150 2 nd place \$100 3 rd place \$ 50 Prize for Innovative Design, Quality, Style	1 st place \$150 2 nd place \$100 3 rd place \$ 50 Prize for Innovative Design, Quality, Style	1 st place \$150 2 nd place \$100 3 rd place \$ 50 Prize for Innovative Design, Quality, Style	To be determined Prize for Innovative Design, Quality, Style

General

- These rules are also available on our website: <https://www.egbc.ca/Events/Events/2020/CI1APR20>
- Email any questions chair.ci@volunteer.egbc.ca

23rd Annual Popsicle stick Bridge Building Contest
REGISTRATION FORM



Participants may build bridges as individuals or as a Team. Please indicate the category that you are registering for (one form per bridge please).

- Category 1: Grades 1 through 3
- Category 2: Grades 4 through 7
- Category 3: Grades 8 through 12
- Category 4: Adult Open
- Category 5: Professional

Category: _____

Name of Bridge Engineer(s)	Age	School (if applicable) and Category

Please provide a name and e-mail address for the Team Leader who will coordinate your team. For Categories 1 and 2 your team leader must be an adult. (This will allow us to contact you with further information regarding the contest if required.)

Name: _____ Email: _____

- Submit the completed form by email to ***chair.ci@volunteer.egbc.ca***
- registration by April 12th is encouraged to help event organizers and to secure your spot
- There is no enrolment fee to enter the contest; however, we encourage participants to bring a non-perishable food item for the local food bank.

Have Fun!

