



The Association of
PROFESSIONAL ENGINEERS AND GEOSCIENTISTS
of the Province of British Columbia
PEACE RIVER BRANCH

ANNUAL POPSICLE STICK BRIDGE

TESTING CONTEST

R L Angus Elementary School Gymnasium, FORT NELSON

Saturday February 12th 2011, 11:00 TO 2:00

(Registration between 11:00 to 12:00, Contest between 12:00 and 2:00)



1st Prize:\$50.00

2nd Prize:\$40.00

3rd Prize:\$30.00

4th Prize: \$20.00

5th Prize:\$10.00

Brian Grabowski Memorial Trophy Excellence in Bridge Design & Innovation goes to the winner's school with the Winner's name engraved on the trophy with year & load.

Categories:

- 1. Junior: Grades 3, 4 & 5**
- 2. Senior: Grades 6 & Over**
- 3. Open : Teachers, Parents and others including K, grades 1 & 2**

Additional cash prizes may be awarded. Certificates will be given ingenuity in bridge design

Prizes will be awarded for the top finishers in each category, per entry (not per person).

Categories may vary depending on participation.

Everybody is welcome to enter a bridge, but may not be eligible for a prize.

No prize money for the Open Category. Kindergarten, grades 1 & 2 and very young

participants will be entered into the open category. Recognition given for parent & child entries

The contest goal is to construct the strongest bridge possible using only 100 Popsicle sticks and the white glue provided. Ties will be decided by bridge weight. Some specifications for the bridges are included in the contest rules; otherwise, the design of the bridge is left to the competitors. There is no limit on the size of a team, but each team must have an adult sponsor to register

Contest Fee: Waived for 2011 as a result of sponsors

Sign-up: Questions call Allan Zackodnik at 250-787-9117 or email to: zackodnik@telus.net

Fax registration to 250-794-5380 attn: Mandy Nelson (OGC) or email to Mandy.Nelson@gov.bc.ca

Deadline: Sign-up target deadline is January 17th, (allows APEGBC Peace River Branch to assemble excel spreadsheets of participants prior to the competition)

Supplies: Supplies delivered to participating schools by (ASAP). Each entry will receive a package that includes Popsicle sticks and glue. **FOR Extra Supplies:** contact Allan Zackodnik or Jason Vissers (Spectra Energy) 250-233-6242

Can't reach Allan or Jason to get questions answered : Call Mandy Nelson at 250-794-5239

CONTEST RULES

CONSTRUCTION:

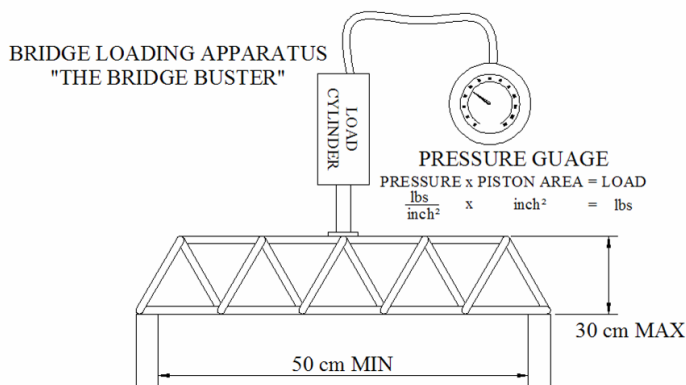
1. Each contestant will receive 110 Popsicle sticks, a 4 oz bottle of white glue, and construction paper for the bridge deck.
2. The bridge must be built of **a maximum of 100 popsicle sticks** and the white glue from the package supplied. The construction paper provided in the registration package may only be for the deck of the bridge. No other materials are permitted to be used.
3. Popsicle sticks may be cut.
4. A “Matchbox” / “Hot Wheels” sized toy car must be able to be rolled across the bridge on the bridge deck. The car is approximately 3.5 cm wide and 2 cm in height.
5. The overall height of the bridge must not exceed 30cm.
6. The bridge must span a **50 cm gap** (i.e. the space is 50 cm wide, so the bridge must be wider than 50 cm to allow its ends to sit on flat surfaces on either side of the space.
Hint - “Ends” bearing length should be between 1 and 3 cm long).
7. In addition to the bridge deck for the car, the bridge must also have a loading platform. This is to allow top loading/weight to be placed **on** the bridge to test its load capacity. The loading platform at the top of the bridge must consist of a **minimum** of 4 square centimeters (2 cm x 2 cm). Contestants should consider that a larger platform might make it easier to load the bridge. Maximum size of the loading platform is 15 cm x 8 cm).
8. Minimum bridge width is 4 cm. Hint – bridge width should be no more than 15 cm maximum.
9. The **team name** and **category** must be clearly labeled on the bridge.

TESTING THE BRIDGES:

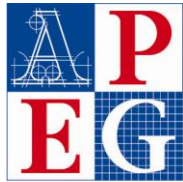
1. Prior to the start of competition, contest judges will:
 - Weigh each bridge to ensure that a maximum of 100 sticks are used.
 - Examine each bridge to ensure that only popsicle sticks, white glue, and construction paper are used, and that the paper is only used for the bridge deck.
 - Check each bridge to ensure that it has a loading platform as per specifications.
 - Check each bridge to ensure that there is a deck and that a “Matchbox” car can pass over the bridge. (Attempt to roll a “Matchbox” / “Hot Wheels” sized toy car across the deck of each bridge).

Bridges not meeting these requirements may be disqualified from the competition.

2. Each bridge will be tested by applying force to the loading platform (see illustration below). The winner is the bridge that holds the heaviest load prior to failure. In the event of a tie, the lighter bridge will win.
3. Please note that testing will result in most or all bridges being destroyed during the contest!



HINT: A FLAT BRIDGE LIKE THIS IS NOT VERY STRONG, YOU NEED MORE STRUCTURE. TAKE A LOOK AT SOME REAL BRIDGES FOR IDEAS, THEN GET CREATIVE.



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PEACE RIVER BRANCH

Professional Engineers
and Geoscientists of BC

POPSICLE STICK BRIDGE BUILDING CONTEST **ENTRY FORM**

TEAM NAME: _____

SCHOOL: _____

CATEGORY (Junior, Senior, or Open): _____

ADULT SPONSOR NAME: _____

ADULT SPONSOR PHONE: _____

TEAM MEMBERS:

NAME (First and Last):	AGE:	GRADE:
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Use 100 of your popsicle sticks (to build a bridge) and construction paper (to act as a deck which will let a small toy car cross a *gap of 50 cm*, and which will hold as much weight as possible. For complete information, please refer to the contest rules and information sheet.

Categories:

- 1. Junior: Grades 3, 4 & 5**
- 2. Senior: Grades 6 & Over (Cash prizes)**
- 3. Open : all others including k, grade 1 & 2 (No cash prize awarded but bragging rights granted)**

Categories may vary/change depending on participation.

Everybody is welcome to enter a bridge, but may not be eligible for a prize.

****Target Deadline for sign-up is January 17th 2011**

Fax Entry Forms to 250-794-5380 (Attn: Mandy Nelson) or email to Mandy.Nelson@gov.bc.ca

PLEASE NOTE: MOST OR ALL BRIDGES WILL BE BROKEN IN TESTING.