



## APEGBC Burnaby and New West Branch Presents....

# Popsicle Stick Bridge Contest

at Burnaby Public Library, Metrotown Branch

Saturday, March 6<sup>th</sup>, 2010 starting 1 pm

Watch the You Tube video to get inspired <http://www.youtube.com/watch?gl=CA&hl=en&v=wMP1iUv6FtQ>

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### Prizes for the strongest bridge

*Secondary school contestants:*

1st prize: \$100 (gift certificate)

2nd prize: \$50 (gift certificate)

*Elementary school contestants:*

1st prize: \$100 (gift certificate)

2nd prize: \$50 (gift certificate)

### Kits

Sign-up and pick-up kits at **Girls and Boys Information Desk, Metrotown Branch, Burnaby Public Library**, 6100 Willingdon Ave, Burnaby, BC V5H 4N5. You may sign-up as a group with not more than 5 members.

### For further information:

e-mail: [bn@apeg.bc.ca](mailto:bn@apeg.bc.ca)

### Event Schedule

- Registration and submission of bridges: 1 pm - 1:30 pm
- Testing of bridges: 2 – 4 pm
- Prize distribution: 4 pm – 5pm

### Contest Rules

#### Materials

- 150 Popsicle sticks (whole)
- 1 sheet of construction paper for the deck of the bridge
- White glue such as Bondex or Lepages Bondfast glue
- No other materials are permitted

### Rules

- The bridge must span a 500 mm gap, with maximum 25 mm long bearing pads
- Total length of the assembled bridge is not to exceed 550 mm
- A minimum length overall of 520 mm is advised. Bridges spanning less than the 500 mm gap, are disqualified
- Design the bridge to support the highest load possible along a longitudinal loading plate
- Design the roadway portion of the bridge to support a 38 mm x 3.8mm x 300 mm long loading plate
- Design the uppermost portion of the bridge to accommodate a 38 mm diameter-loading strut, vertically positioned at the centre of the bridge, from the loading plate to above the bridge superstructure. Loading location may be changed to accommodate type of loading machine
- The lightest bridge earns extra points
- The maximum capacity of the bridge will be based on the highest of either: the maximum load accepted by the bridge as measured on the load cell during the loading cycle; or the load supported by the bridge at a deformation of 50 mm at the centre of the bridge

### Other “Engineering Day” Events

***Come out to the library on March 6<sup>th</sup> between 1 and 5 pm for many other engineering related events.***

***The events are free for children of all age groups and their parents. You will have the opportunity to meet many professional engineers at this event and see some exciting displays.***