

**RIT** | National Technical Institute for the Deaf  
**Tiger Science Challenge**

# **Popsicle Bridge Challenge**

## **Strength Test Instructions**

# Materials Needed

- **Completed Popsicle stick bridge**
- **B-line S hook**
- **Bucket**
- **Weights (water or sand)**
- **Measuring tool (weight scale)**



Be cautious when adding weight to the bucket, add your weight slowly! Do not stand directly under your bridge during the strength test.

# Weighing Procedure

- Set up the B-line S hook and bucket\* on your popsicle bridge. A proper setup should have the hook hanging on the bridge, with the bucket hanging freely from the hook.

*\*The bucket should be approximately 1 foot (12 inches) above the floor.*

- Add your weights to the bucket gradually until the bridge breaks or collapses.
- Carefully remove the weights and bucket from the bridge.
- Measure the bucket on your weight scale.
- Record your findings and observations about the bridge's performance.

After conducting your strength test, reflect on your results and consider what factors may have contributed to the bridge's ability to withstand ability or its eventual failure. Discuss any improvements or design modifications that could make the bridge stronger.

**Have fun and enjoy the challenge!**

