

Mystery Architecture *NC 2021

1. **DESCRIPTION:** At the beginning of the event, teams will be given instructions for designing and building a device that can be tested using predetermined supplies.
2. **TEAM OF UP TO:** 2 (1 builder & 1 engineer)
3. **APPROXIMATE TIME:** 50 min
4. **EVENT PARAMETERS:**
 - a. Each team may bring 1 pair of scissors and MUST have a measuring device, preferably one that can measure at least 1 meter.
 - b. The following items are the only allowed supplies for the day of competition. Competitors are responsible for supplying their own resources.

Any Amount	Limited quantity
copy paper, new or recycled	5 toilet paper rolls
paper plates, any size	5 paper clips, any size
scotch tape	5 popsicle sticks
rubber bands, any size	1 empty cereal box, any size

5. **THE COMPETITION:**
 - a. Each team will need to have a teammate (the builder) with their camera on in the assigned breakout room or hangout for their competition. The Engineer does not have to be on camera and will be helping give directions and support to the Builder, but will not be constructing a device.
 - b. The students will not know the task until they begin the competition.
 - c. The instructions must identify a Primary Dimension, a Secondary Dimension, whether the device must support a load, and the required duration of load support.
 - d. Unless specifically stated in the instructions, devices must be freestanding and must not be attached to a tabletop, floor, ceiling, or other support.
 - e. Students may not stand on tables, chairs, or other people to construct their devices.
 - f. If the device must support a load, a load will be announced at least 1 month in advance and will be a common grocery item (e.g. 439g can of beans). The event supervisor will direct the participants when to place the official load in/on the device.
 - g. The supervisor will review with the team the data being recorded on their scoresheet.
6. **SCORING:**
 - a. Highest or lowest score wins depending on instructions.
 - b. The Primary and Secondary Dimensions will be measured in cm to the nearest 0.1 cm by the competitor and confirmed by the event supervisor. Devices requiring a load will be measured both prior to and after placement of the load once the duration time concludes, if successfully held.
 - c. Devices without load requirements will be ranked in order of Primary Dimensions as per instructions.
 - d. Devices with load requirements will be ranked as follows:
 - i. Tier 1: Devices which support the load will be ranked in order of Primary Dimensions after the placement of the load.
 - ii. Tier 2: Devices where the load, or its underlying material, contact the table or the competitor is unable to measure the height due to movement of the load will be ranked by Primary Dimensions as measured before the placement of the load.
 - e. The Secondary Dimension will be used as a Tie Breaker if necessary.
7. **EVENT RESOURCES:** Sample tasks will be posted on the event resource page.