



## DELAWARE Structural Engineering (Middle School & High School)

### TOOLS & MATERIALS

**Tools and Materials (1 per team)** - For the 2020 Structural Engineering contest, participants are required to provide their own toolbox and materials. Each toolbox must include identification (school name, address, and advisor cell phone number). The size of the toolbox must be no larger than twenty (20) inches (508 mm) length x ten (10) inches (254 mm) width x ten (10) inches (254 mm) height to contain tools needed to fabricate a solution/entry. Only approved cutting devices such as listed below will be allowable in 2020. Examples of approved cutting tools include: [Kelvin Balsa StiKutter](#); [Pitsco Easy Cutter](#); [Pitsco Timber Cutter](#); [Midwest Easy Miter Box Set](#); [X-traSafe Safety Cutter, Single – Crewsafe XSCU](#).

**Tools** - Each Team is required to bring the following tools:

- \_\_\_ two (2) pair ANSI safety glasses\*
- \_\_\_ up to two (2) cutting devices (see sample images of allowable device styles)
- \_\_\_ Insta-Cure+ / Super Glue / CA or similiar
- \_\_\_ Uncure or Debonder is recommended
- \_\_\_ INSTA-SET Cyanoacrylate Accelator is recommended
- \_\_\_ two (2) 12" rulers
- \_\_\_ two (2) pencils and sharpener
- \_\_\_ one (1) roll masking tape (¾ inch wide)
- \_\_\_ one (1) cutting surface that prevents table top marring
- \_\_\_ straight Pins
- \_\_\_ abrasive sheets, sponge, or emery board(s)
- \_\_\_ wax paper large enough to cover 11"x17" or larger

\*In lieu of safety glasses, prescription eyewear may be worn.

**Materials** - Each team will be **PROVIDED** the following materials on-site in 2020.

- \_\_\_ balsa 1/8" x 1/8" x 24" (10 sticks per Middle School teams ONLY)
- \_\_\_ balsa 1/8" x 1/8" x 24" (12 sticks per High School teams ONLY)
- \_\_\_ balsa 1/8" x 1/4" x 24" (12 sticks per High School teams ONLY)
- \_\_\_ drawing paper with ¼" or 1/8" grids for sketching the structure
- \_\_\_ pin board

Once tool box sizes are evaluated, teams will self-examine their competitor's tools and materials using this Verifications Sheet. If there is a dispute, a judge will be summoned to determine a final ruling. Any disallowed tools or materials will be held by the event coordinator until the contest is complete.

**Participants without the toolbox and materials will not be allowed to compete.**

