

Super Structures FAQ (Frequently Asked Questions)

General Questions

What does each team need to do?

Each team needs to use the materials provided to build a tower that will support a cup filled with pennies in the time allowed. The tower must have a place to anchor the cup using the string and pencil provided.

How will we decide which one is best?

The towers will be rated based on a score determined by multiplying the height of the anchor point in cm by the mass of the pennies held in grams.

Example: A tower with an anchor point of 32 cm that holds 200 grams of pennies would earn a score of 6400 points. Another tower that has an anchor point of 34 cm that holds the same weight would score 6800 points.

How tall does it need to be?

Towers may be as tall as the teams can build using the materials, but the anchor point must be at least 20 cm from the table. Use your materials the best way you can to get the anchor point as high as possible.

Example: The tower might be 40 cm tall, but if the anchor point is at 32 cm that is the measurement used to calculate the final score.

How big (wide) does it need to be?

The tower must be wide enough to fit a testing cup inside, but there will be different sizes of cups available. Your team picks the cup they will use.

Can teams look online for ideas or practice at home?

Teams may look online for ideas or practice at home with different materials but will be limited to using the materials provided by the teacher.

Materials

Are teams allowed to bring materials from home/other?

No, teams can only use the materials provided by the teacher.

Are teams allowed to share or trade materials?

No, teams cannot share or trade materials.

Can teams use materials they find on the table or floor?

No, this would be scavenging and not allowed. All found items should be turned in.

Are teams allowed to modify items, such as cutting them in half or putting holes in them?

Yes, teams may modify items, but no refunds or exchanges allowed if something breaks or no longer works.

Can teams return items that are broken or damaged?

No, once the team takes an item, they must keep it. No refunds or exchanges allowed. Get creative to find new ways to use materials.

Will there be any Trading Posts days (i.e. trade supplies we don't need for those we do need)?

Yes, trading post deals will be available on Building Days 2 and 3. All items traded must be in original form and not modified. Trades may only be made with the teacher - NOT other teams.

Building Questions

How long do we have to build?

Teams will be allowed 3 class periods to build the device. However, if a team does not get the planning page approved on time, that team may not have a full three class periods to work.

Are teams allowed to use the testing cups during building?

Yes, teams may use the testing cup to see if it will fit inside the tower.

Are teams allowed to add pennies to the testing cups during building?

No, teams are NOT allowed to test their towers using pennies during the building days. The teacher will provide some practice cups (with different masses) that can be used to see if there are any problems that need fixed before testing.

Do all team members have to help build the tower?

Yes, everyone should work on building the tower – planning and construction.

Can teams work on their towers during lunch, RtI, or after school?

No, teams will only be allowed to work on their towers during science class.

Can teams take their towers and materials home to work on them?

No, teams will only be allowed to work on their towers during science class. All towers and materials must stay in the science classroom.

Testing Questions

Our structure will not stand up on its own. Can we hold it or tape it to the table?

No, the structure must be able to stay upright on its own. It cannot be held during testing or taped in any way to the table.

Can the testing cup be set on top of the tower or on a platform inside the tower?

No, the testing cup must hang from the anchor point.

Can the testing cup touch any part of the tower?

Yes, if the cup is not being supported by the tower. It should only be supported at the anchor point. If the cup falls and is sitting on a side or brace, testing would be over.

Which size cup do teams have to use?

Teams may pick the cup they want to use for testing. While larger cups may hold more pennies, the smaller cups might work better for taller towers without a lot of room in the middle.

When is testing over?

- (1) The testing cup touches the table,
- (2) The testing cup is resting on (or supported by) any part of the structure, or
- (3) A penny falls out of (or off) the cup.

Are teams allowed to adjust the tower, cup, or pennies during testing?

No, adjustments can only be made before any pennies are added to the cup.

Can teams add a handful of pennies at a time?

No, pennies must be added one at a time at a normal pace. Trying to put in a lot of pennies at one time or dumping a bunch in when it is close to done will result in a zero score.

What happens if our tower collapses during testing, but the cup is only supported by the anchor point and is not touching the table?

Testing can continue, but teams may be asked to slow down when getting close to the maximum load.

Do all the team members have to put in pennies?

No, the team may decide to have just one person put in pennies or they can take turns.

Grading Questions

If our tower does not work and ends up in last place, will our team earn an F?

Your team's grade will depend on more than just how well your tower does in testing. IF your team does well on all the paperwork (planning page and analysis), uses their time wisely, and gives a good effort, your team should not earn less than a B for the project.

If our tower ends up in the top ten, will our team earn an A?

Your team's grade will depend on a lot more than just how well the tower does in testing. A team could be in first place, but if they do not complete the paperwork with good answers and explanations they could end up with a D or F.

What should teams do if they have someone who is not helping with the project?

The team should let the teacher know that someone is not helping. Remember, helping may look different for different teams. Some people are good at building, while others are good at keeping track of materials and writing notes on the worksheets. Work together to make this a successful experience!

What happens if a team (or a member) is not using their time wisely AFTER being warned?

The team (or the person) will be assigned the alternate project. He/she will not be allowed to participate in the group's project.