

Eisenbacher, Lo, And Moore Outreach The Competition

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Joe Eisenbacher, Sarah Lo, and Ian Moore emerged from Mr. Duhrkopf's Physics room yesterday victorious after Wednesday's first annual Soda Straw Arm Project. The competition started on Monday when teams were formed and began work on their soda straw arms. Over the three days, teams competed to design and build the arm that would reach the furthest distance before it crimped or bend under the weight.

Ground rules were laid out on the first day with each team limited to 20 jumbo plastic straws, and 20 straight pins. After the arm was built from these 40 pieces, the teams would attach an "S" shaped paper clip, solely for the

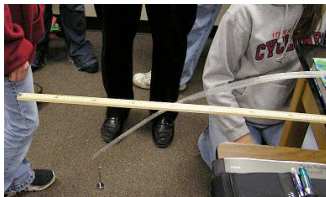
purpose of suspending a 50-gram mass from the arm. The arm



was to be held to the table by only one team member, with their palms placed on the tabletop and no parts extending past the edge of the table. The length of the arm would be measured using the horizontal distance from the edge of the table to the placement of the weight after it held for ten seconds.

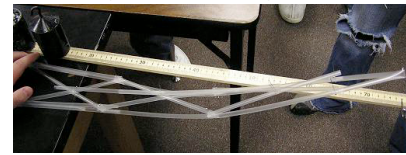
Monday and Tuesday consisted mainly of testing. Each team attempted to learn the limitations of their materials and attempted to find a design to follow. As is expected with a competition kept in close quarters such as this, many groups were concerned with the progress of others and kept close tabs on each other's testing performance and designs. Although every arm would end up to be unique in its own way, a few common design patterns seemed to emerge these first couple days.

Five of the eleven groups ultimately went with a straightforward design, consisting mostly of straws somehow pinned together in essentially a straight line, extending the furthest outward possible. While these designs were



usually these longest, they also allowed the most room for bending, which ultimately would shorten their results.

The remaining six teams designed arms that were much wider; five of the six consisting mainly of triangles

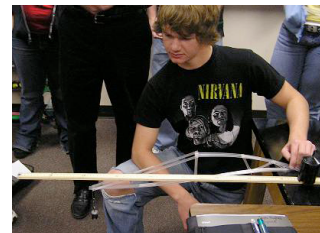


or X's. While these designs were usually shorter than the early mentioned "straight line" design, they also were firmer, allowing less room for bending.

Every group competing did test their designs rigorously and made many changes as the event went on. Trials would expose the weakness in a design or a flaw in the materials. Areas of crimping would be noticed and then either replaced or addressed in the next build of the arm. One of the common solutions among teams was to place one straw within the other, strengthening that particular area of the arm. Also many teams would choose to begin with their arm only partially off the end of the table and then slowly extending it further as time went on to ensure they were scored for their furthest possible distance.

After the testing was finished, the results were compiled and each team saw how they stacked up against the competition.

Although there was plenty of trash talk and banter, most teams could agree on one thing. "At least Dan didn't win!" explained Katie Naberhaus.



Place	Distance	Team
1st	61cm	Ian, Sarah, Joe
2nd	60cm	Dan, Nate, Nick
2nd	60cm	Annie, Courtney, Nicole, Dusty
4th	57cm	Shuan, Cassia, Kellie
5th	56cm	Christian, Kyle, Michael, Addison
6th	55.5cm	Eric, Patty, Nolan
7th	54cm	Adam, Katie, Marj
8th	53cm	Sam, Emily, Brenda, Kayla
9th	52cm	Kathy, Michelle, Lisa
10th	50cm	Derek, John, Tyler
11th	43cm	Natalie, Gretchen, Kelsey