**Newspaper Tower Power**

Each student makes a tower using two sheets of newsprint and inches of masking tape. The object is to build the tallest tower that will resist being blown over by a hair dryer aimed at top 1/3 of the tower’s tallest point at a distance of 2 feet

**Team : 2 students**

**Time Limit: 20 minutes to build 20 minutes for judging**

**Materials List**

* **2 sheets of newspaper**
* **masking tape** **10 INCHES**
* **scissors**
* **meter stick**
* **pencils**

**No part of the Newspaper structure may be taped to the floor or table on which it is placed for testing. The TALLEST tower that remains standing (withstands the wind - i.e., hairdryer) WINS**

**Vocabulary/Definitions**

|  |  |
| --- | --- |
| *buckling*: | When a column fails by bending at some point in the height of the column, usually towards the midpoint caused by a vertical force. |
| *lateral force*: | A force that impacts a structure horizontally (that is, wind and earthquakes). |
| *deflection* : | The amount a structure bends or moves from its "at rest" position. |
| *civil engineering* : | The field of engineering pertaining to non-moving structures such as roads, sewers, towers, buildings and bridges. |
| *bundled tube* : | The design principle that the Sears Tower is built on. The building is basically a collected bunch of tubes, with all the supporting columns of each "tube" located on the perimeter of the tube. This structure is very good at resisting wind loads. |
| *tube-style support*: | Implemented on building such as the World Trade Center, Sears Tower, and many newer structures. The majority of the supporting columns are mover to the perimeter of the tower instead of spread throughout. This allows open expanses of floor space on every floor. |