**Reverse Egg Drop Activity**

TEAM MEMBERS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TEAM NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Using the listed materials, sketch a drawing of your reverse egg drop device in the space below:

Fill out the material order form with the Quantity (number of each item) and total cost for that item (Cost \* Quantity). Add the totals to ensure you do not exceed $100.

**YOU HAVE $100 TO SPEND. NO BONUS POINTS FOR SAVING $**

*Use the materials carefully, as they will not be replaced if you damage them*.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Material** | | **Cost ($)** | | **Quantity** | | **Cost x Quantity** | | |
| Toothpick | | 1 |  |  |  |  |  |  |
| String | | 2 |  |  |  |  |  |  |
| Paperclip | | 2 |  |  |  |  |  |  |
| Cotton ball |  | 2 |  |  |  |  |  |  |
| Duct Tape (1 ft) |  | 3 |  |  |  |  |  |  |
| Straw |  | 3 |  |  |  |  |  |  |
| Pipe Cleaner | | 4 |  |  |  |  |  |  |
| Rubber band | | 4 |  |  |  |  |  |  |
| Paper (1 sheet) |  | 6 |  |  |  |  |  |  |
| Newspaper (1 sheet) | | 10 |  |  |  |  |  |  |
| Cardboard (1 piece) | | 15 |  |  |  |  |  |  |
| Cup | | 15 |  |  |  |  |  |  |
| Balloon | | 20 |  |  |  |  |  |  |
| Paper Tray | | 30 |  |  |  |  |  |  |
|  |  | **Total Cost**  = | | | | | | |

EXTENSION QUESTIONS:

1 - Describe how your device protected the egg from cracking. What material was most important in your design? What material that you used was least effective?

2 - Knowing what you know now, how would you improve upon your design to make it work better on the next try? Draw a picture if it helps!

3 - What material would you use in another design that you did not use today, and WHY?

It can be a material that was not offered.

4 - When else might an engineer need to think about what materials they use in their products? For example, engineers who design computer mice might need to choose a material that can be clicked repeatedly over long periods of time.