**Engineering a Mountain Rescue Litter Activity –   
Litter Design Worksheet**

**Directions**

**Part 1**

In the space below, draw your rescue litter design, including labels. Think about your design using the supplies that are available to you (materials list shown in Part 2).

When finished, show your design to your teacher/instructor for review and approval.

**Part 2**

Next, using the materials list in the table below, figure the total cost to build your litter.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Material** | **Unit size** | **Cost per unit** | **Quantity purchased** | **Total Cost** |
| Toothpick | 1 | $1.00 |  |  |
| Paper towel | 1 | $2.00 |  |  |
| Popsicle stick | 2 | $2.00 |  |  |
| Straw | 2 | $1.00 |  |  |
| Sponge | 1 | $3.00 |  |  |
| Piece of paper | 1 | $1.00 |  |  |
| Aluminum foil square | 1 | $3.00 |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

**TOTAL DESIGN COST (maximum of $20.00):** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 3**

Write a short (1-2 sentences) description of how your design satisfies the discussed constraints.

**Part 4**

As groups demonstrate their rescue litter design, fill in the table below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Group/Team** | **Mass of Litter** | **Cost of Litter** | **Time to Rescue** | **Stability (circle answer)** |
|  |  |  |  | **stable kind of stable unstable** |
|  |  |  |  | **stable kind of stable unstable** |
|  |  |  |  | **stable kind of stable unstable** |
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|  |  |  |  | **stable kind of stable unstable** |

**Conclusion**

Write a short (1-2 sentences) description of how you would improve your design based on your own group’s testing and based on the observations of other groups’ designs after testing.