



Name: _____

Date: _____

Building a Safe House

Your team has the task of designing a house that will withstand hurricane-force winds. You must follow the specific directions below.

Building Materials-Teams may only use the materials listed below.

2 large sheets of card stock or construction paper

4 straws

Glue or glue stick

Plastic wrap

Aluminum foil

Styrofoam tray

Ruler

Scissors

4 paper clips

Note: Aluminum foil may be used for support only, but not for the main building material. If your group needs to purchase an extra sheet of construction paper or card stock, 5 points will be deducted from your final score. If your group needs to purchase any other materials, 3 points will be deducted from your final score.

Construction Constraints

Your house may be any shape but it must:

- be 2,000 cubic centimeter or more
- include at least 2 windows and 1 door

You must draw a top view and a side view of the house you want to build, and list its dimensions. Use the following formulas to make sure your house meets specifications. Your house design needs to be approved before you begin to build. On your design page, describe the science principles you will use.

Volume formulas:

Rectangular solid or cylinder: Area base x height

Cone or pyramid shape- $\frac{1}{3}$ volume of original shape

Sphere- $\frac{4}{3} \times \pi \times r^3$

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“Building a Safe House” bonus career worksheet

Use the space below to brainstorm a list of careers that would be associated with building a safe house. You will earn one point for each valid job.

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