

**Emergency Shelter**

# **Objective:**

**6-8**

Design and build an emergency shelter that’s sturdy and big enough to hold a person.

# **Brainstorm and Design**

Think about these questions:

* What features would make for a good shelter?
* What would be fairly speedy to build? Remember, this is an emergency!
* How will you make a sturdy frame?
* How will you connect the poles that make up the frame?
* How will you attach the cover of the frame?
* How will you get in and out of your shelter?
* Sketch your ideas for a shelter on a piece of paper

# **Engineering Connections:**

There are many reasons people might need temporary shelters. Natural

disasters like hurricanes, earthquakes, floods, fires, and tornados are some

of them. Millions of people around the globe have had their lives disrupted by

these disasters. At one time, emergency shelters were flimsy tents; but today,

engineers have come up with an amazing variety of high-tech designs that can

be built quickly, easily, and cheaply so that people have a safe place to live.

Engineers have also designed shelters for firefighters who have the

dangerous job of battling wildfires. A fire shelter has an outer layer of

special aluminum foil that helps reflect heat away from the shelter. Then

there is another inner layer of foil with a layer of air in between to provide

protection. In an emergency, all the firefighter has to do is grab two plastic

handles and shake the shelter open—just like a pop-up tent. It’s saved the lives of hundreds of firefighters!

# **Construction Materials (Per Team):**

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| **Materials** |
| 2-4 cardboard sheets (about the size of copy paper) |
| 16 5-ft bamboo plant stakes (or another size if unavailable) |
| 3-4 large garbage bags cut open into sheets |
| Scissors |
| Duct Tape |
| String |



# **Future Improvement:**

1. What methodology did you use to create your shelter?
2. What was your most important material in your design? What material was least effective?
3. What material could you use to improve your design? (Could be a material that was not offered.)
4. What would you do differently next time?

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