

Paper Building Blocks

Primary Audience: Early Childhood, Elementary School

Adapted from babbledabbledo.com

Description: How strong is paper? In this activity, you will try to build a structure using paper folded into triangular blocks. After a structure has been built, test its strength!

Materials:

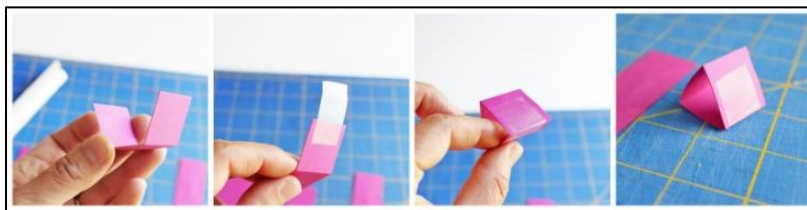
- Paper – thick cardstock is best
- Something to cut the paper into long strips:
 - A paper cutter
 - Or, a straight edge, X-Acto knife, and cutting mat
 - Or, scissors, a ruler, and a pencil to mark cutting lines with
- Scotch tape

Instructions:

1. **First, you need to make your paper blocks.** Do this with an adult's help:
 - a. First, make many small rectangles out of your paper. Each rectangle should be 1 inch wide by 3 inches long. These will be your **blocks**.



- a. Take each strip of paper you cut in step (a) and, using a ruler, draw a line across the rectangle in pencil at the 1" mark and 2" mark. Fold on each mark and bring the sides together to make a triangle. Use your tape to complete the triangle form. Repeat for all of your blocks.



Images from babbledabbledo.com

- b. Now cut several **planks** out of your paper. Cut a few planks of each size:
 - i. 1 inch wide by 3 inches long
 - ii. 1 inch wide by 4 inches long
 - iii. 1 inch wide by 6 inches long

2. **Now it is time to build!** Try making a row that alternates between right-side-up and upside-down triangles. Putting planks in between your rows of triangles will help keep the structure intact! What sort of structure can you build?
3. **Test your structure.** How strong is it? Can you balance cookies on top of the structure without it collapsing? How about a book?

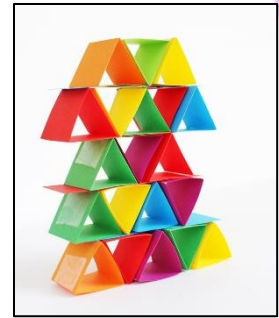


Image from babbledabbledo.com

Extension: Take some time to learn together about Shigeru Ban, a famous Japanese architect. Ban is very creative and has put his skills to work helping others. He built temporary housing units for disaster refugees from cardboard paper tubes! Watch his [TED Talk](#) about his work on paper tube buildings.



Structures by Shigeru Ban, Images from designboom.com

Additional Resources: Reach out the [COSI Department of Science Content](#) if you have any questions or comments.

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