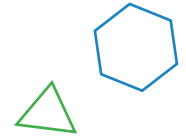


Name:

The Strongest Paper Column



Objectives

In this activity, you will work individually to:

- Create different paper column shapes
- Test how much weight each paper column can support

Activity Overview

Do you think an ordinary sheet of paper can hold a book? In this activity you will find out by creating differently shaped columns out of ordinary sheets of paper. Different shapes of columns will support weight differently. You will test the strength of your columns by balancing books on top. Will your columns support the weight?

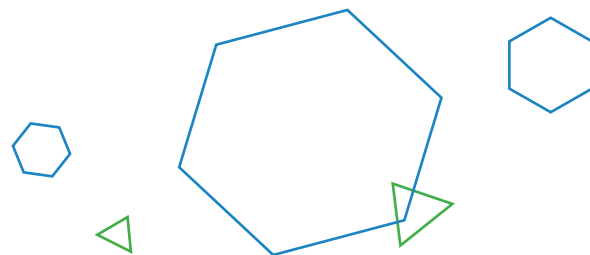
Key Vocabulary

- **column:** a support structure that usually holds up a part of a building

Materials Needed

Per Scholar

- Three sheets of plain copy paper
- Tape
- Lightweight books
- Camera (optional)



Activity Instructions

This activity is meant to be completed in one 30-minute session.

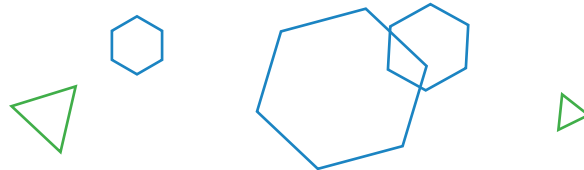
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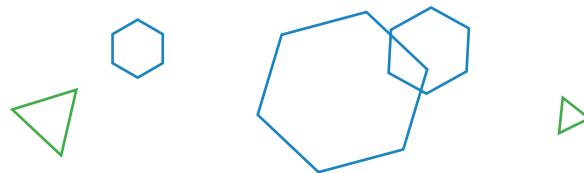
Create Paper Columns: 10 minutes

1. Create three different columns as follows:
 - A cylinder. Roll the paper into a long tube shape and tape the edges together.
 - A triangle. Fold the paper in three equal sections and tape the edges together.
 - A square. Fold the paper in four equal sections and tape the edges together.



Test Your Paper Columns: 10 minutes

2. One at a time, stand each paper column upright. Place a lightweight book on top of the column and observe.
 - Can the column support the weight of the book?
 - Which shape best supports the weight of the book?
 - What happens when you place the book on the column?



Share Your Findings: 10 minutes

3. As a whole group, discuss which column worked best to support the weight of the book.
4. Take photographs of scholars' work (optional).

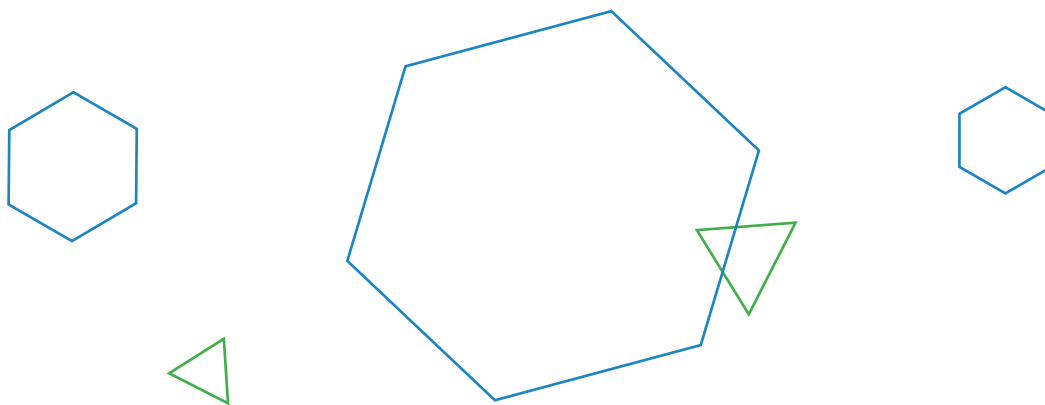
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Name:

Questions for Discussion

- What shape was the strongest paper column?
- Why do you think each shape had different results?
- Have you ever seen columns in a building or structure?



TEACHER NOTES**Before the Activity**

- Younger scholars may need support folding and taping the paper into column shapes. Model folding and taping the paper for the whole group and assist as needed.

During the Activity

- Scholars may wish to work in pairs to have an extra set of hands to experiment with supporting the books and columns in different ways.

After the Activity

- As an extension, allow scholars to experiment with using different types of paper to make columns. For example, how does the experiment change when using a larger or smaller piece of paper? How does the experiment change when using card stock instead of copy paper?
- Take photographs to document scholars' work. Post pictures on a wall for scholars to enjoy.

