THE EDUCATION FUND

FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

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Ideas With IMPACT

idea packet

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PUMPKINPALOOZA!

P U M P K I N P A L O O Z A

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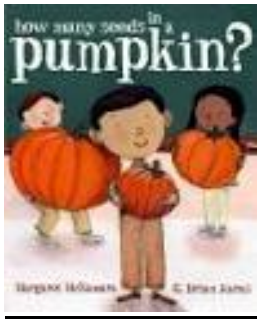
Background

This project comes from a love of literature, a love of science, and a marriage of the two. As a media specialist and garden leader, it was important to find books that supported the science classroom and drive home the importance that gardens have in the curriculum.

One such book is by Margaret McNamara, entitled How Many Seeds in a Pumpkin? After reading this book, I knew that it had science lab written all over it.



If you want some help with the read aloud, here are two options. (But you are better than YouTube!!)

https://www.youtube.com/watch?v=tdViPybeP3c (read by a child)

https://www.youtube.com/watch?v=bTP0PvPk_wM (read by Mr. Luke)

Goals and Objectives

The goal of this unit is to present an interdisciplinary lesson featuring a seasonal item that will capture any child's interest. Working in cooperative groups is a key element to this project. Content vocabulary is reinforced, and the learning is in the hands (literally) of the students.

Standards

SCIENCE

SC.1. N.1.2
Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.

SC.3.N.1.6 Infer based on observation.

SC.35.CS-CP.1.4 Collect, organize, graph, and analyze data to answer a question using a database or spreadsheet.

SC.3.N.1.3 Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.

MATHEMATICS

MAFS.2.MD.4.9 Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object.

Materials

Book, How Many Seeds in a Pumpkin?

Pumpkins, various sizes, 1 per group

Scale to weigh pumpkins

Tape measures, 1 per group

Plenty of newspaper for each group

Paper bags, 1 per group

Spoons for scooping, 1 per child

Data sheets, 1 per group

Pencils, 1 per group

Clipboard, 1 per group

Name Tags (for job assignments)

Sharpies, 1 per group

Trays, or shallow box, 1 per group

Pumpkinpalooza letters

Knife, for adult use only

Folding table for working outside, optional

Pumpkin flavored goodies to taste test

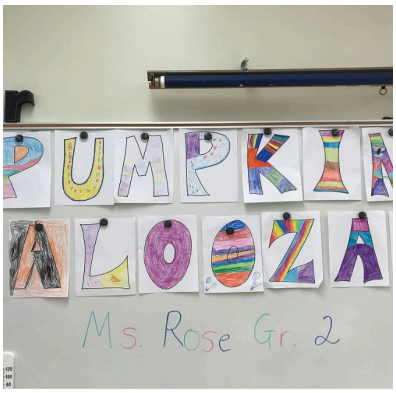
Classroom Preparation for the Project

This can be done over a course of 2 days, and I have also done it in one day. Admittedly, it is much easier with a self-contained classroom, but can be equally successful in departmentalized situations. A volunteer (parent/para) makes the lab easier to complete.

When autumn begins, I start bringing pumpkins to the classroom to 'decorate.' One at first, and then one or two more as the weeks pass.

Day One:

I ask the students for some "help" with an art project that I am doing. Each child gets a sheet of paper with one of the letters from the word Pumpkinpalooza. There are 14 letters, so a few students got random pictures of fall leaves, pumpkins, etc. The students decorate the letters any way that they wish.



Day Two, part one:

The next morning, I read the story aloud and there is lively discussion about the personalities of the students in the book as well as the outcome of the story.

Day Two, part two:

On this same day, while the students are at lunch or in a special, I display their colorful PUMPKINPALOOZA letters on the chalkboard/whiteboard. The materials for the lab are set up on a table, and the pumpkin foods/goodies are on another table. Of course, they are excited to see their art displayed and we begin Pumpkinpalooza!

Students are assigned to groups ahead of time. If the students are accustomed to group work, then they can decide job responsibilities within their group. If they are new to this, then you can decide to assign jobs instead.

The four jobs are: Team Leader or Facilitator; Materials manager; Recorder; and Reporter. I write those titles on name tags so that everyone knows their responsibility.

The Recorder gets his/her data sheets and clipboard. The Materials Manager gets a paper bag, spoons, tape measure, tray, and newspaper.

The first task the group has is to name itself. Then they begin to make predictions based on the questions on the data sheet. I also ask them to count the number of ribs on the pumpkin and mark them (slightly) with a Sharpie. The students will compare actual vs. predicted weight, circumference, and number of seeds.

I have used the school's scale in the clinic as well as my own scale to weigh the pumpkins. For the circumference, we use tape measures, as seen in the picture. Lastly, they estimate the number of seeds in the pumpkin. Even though the book gives a good indicator of how to make this prediction (the more ribs on a pumpkin, the more seeds,) the guesses are interesting to say the least.

If I do not have a volunteer or adult assistant, I cut the tops/stems off the pumpkins ahead of time and place them back on the pumpkins. If I do have an assistant, I will leave one uncut to demonstrate cutting off the stem.

The students spread out the newspaper and begin to scoop out the seeds and place them in the paper sack. The spoons are used to scoop out the "guts" and this can get to be a bit messy (and fun.) There are lots of giggles and oohs when doing this.

To take the math element further, they count the number of seeds. The kids decide as a group how to count. Some count one by one, some group in 2's, 5's or 10's. With younger students, we reference sets and skip counting, and they eventually come to the realization that it is easier to tally the total when it's done in sets.

Culminating Activity

After clean-up and reporting our findings, we have a mini pumpkin feast. Trader Joe's has the best selection of pumpkin products but get them early because they disappear quickly!

** Be mindful and be aware of any allergies!!!

Additional Activities

A few times I have taken the seeds home to roast and brought them back for the kids to taste.

Also, the pumpkins could be used for carving jack-o-lanterns for decorations.

Assessment

The student data sheets are used for a grade. I also ask the students to write a reflection on what they learned, what surprised them, and what they would change if they did this again.

Last Words

Personally, the key to this lab is to have some fun while getting messy with pumpkins. Preparation is imperative to a successful lab.

Resources

<u>Best Pumpkin Prices</u>

Trader Joe's

Walmart

Sprouts Farmer's Market (grocery story in Miramar)

Publix

Local Pumpkin Patches

<u>Pumpkin Foods</u>

Trader Joe's

Sprouts Farmer's Market

Some of the foods we tried were:

pumpkin spiced popcorn

pumpkin tortillas

pumpkin salsa

cider

pumpkin biscotti

pumpkin ice cream

This year we are trying:

pumpkin seeds

pumpkin hummus

pumpkin brioche

pumpkin waffles

<u>Other Materials</u>

Spoons – thrift stores
(good ones on Hallandale Beach Blvd. and East Hialeah)

Paper bags – ask for paper, not plastic at your local grocery store

Clipboards- ask your garden lead teacher or Dollar Tree

Shallow boxes – recycled from grocery store

Tape measures – Dollar Tree

Name tags- Dollar Tree or use address labels

Data sheets- attached

Letter sheets – attached, if you don't want to draw your own

P U M P K I N P A L O O Z A

DATA SHEET

Group name_____

Facilitator _____

Materials manager _____

Recorder _____

Reporter_____

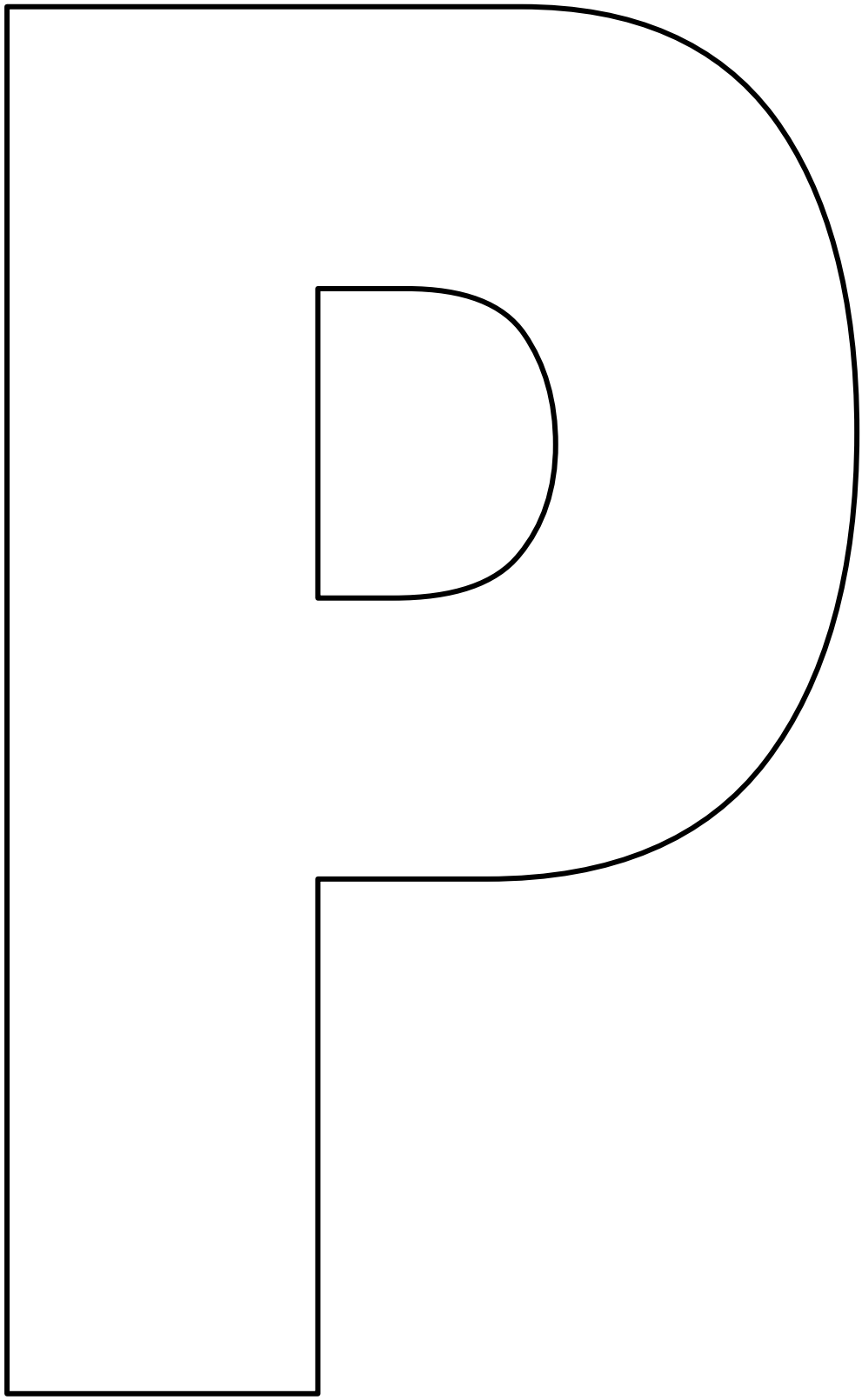
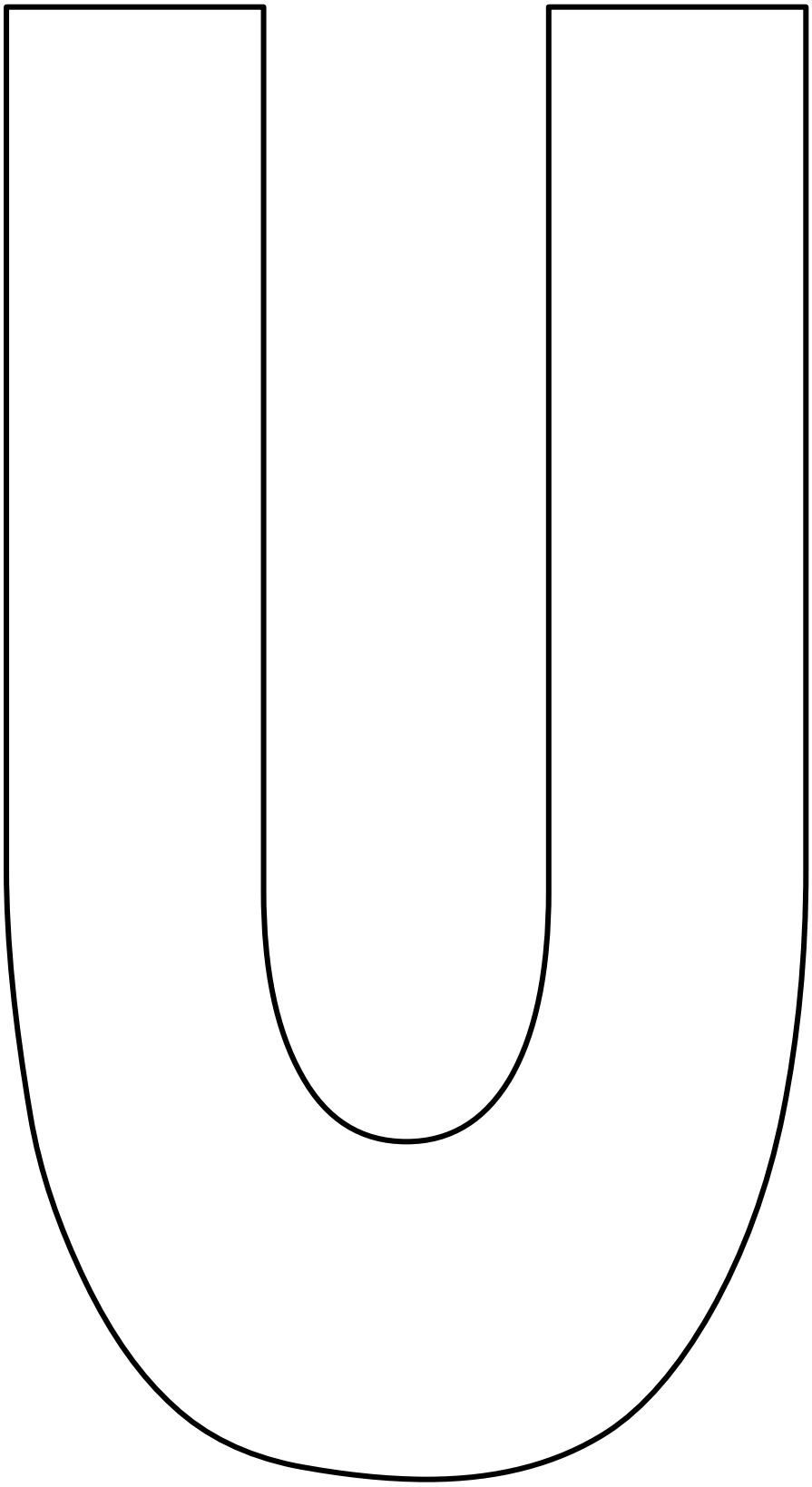
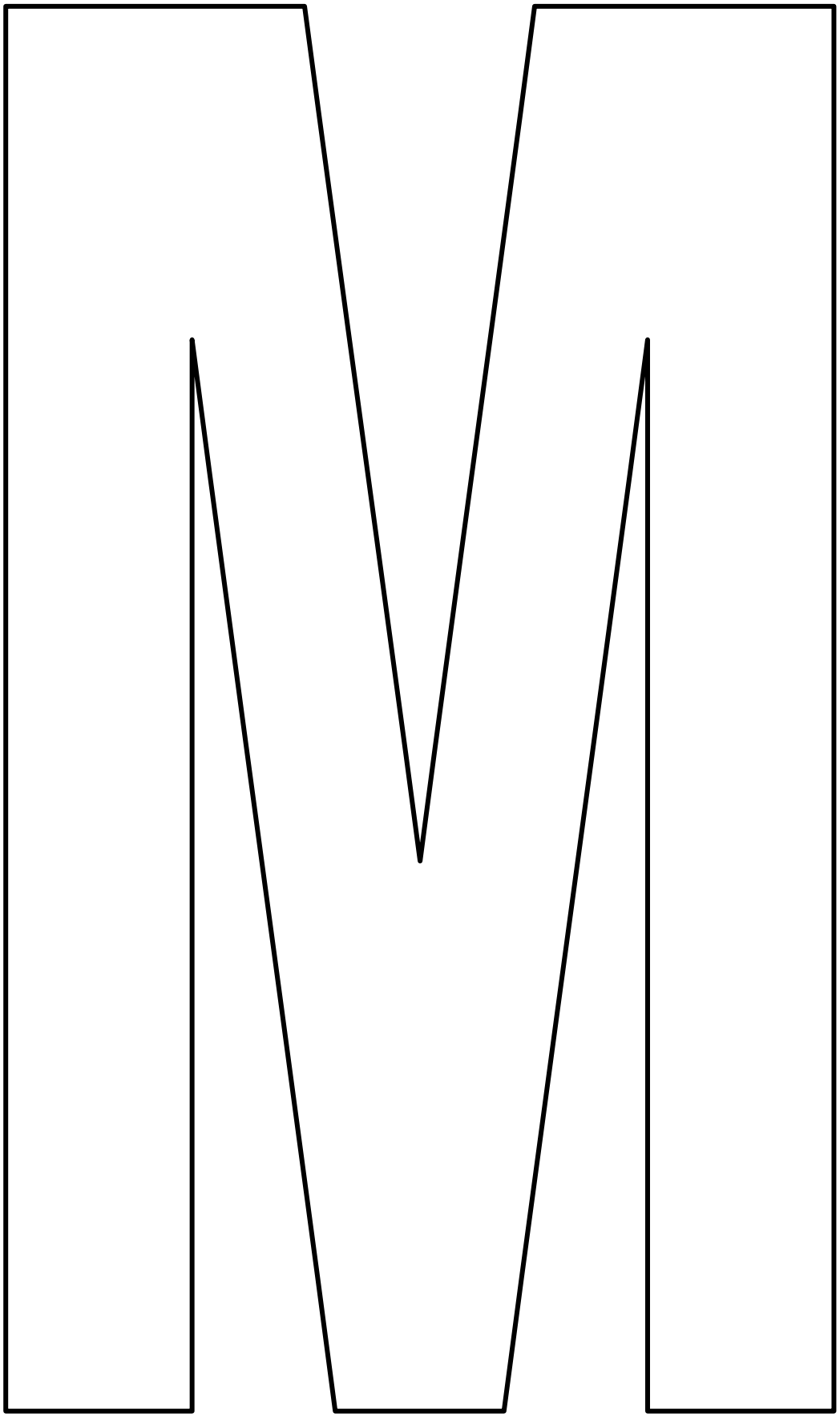
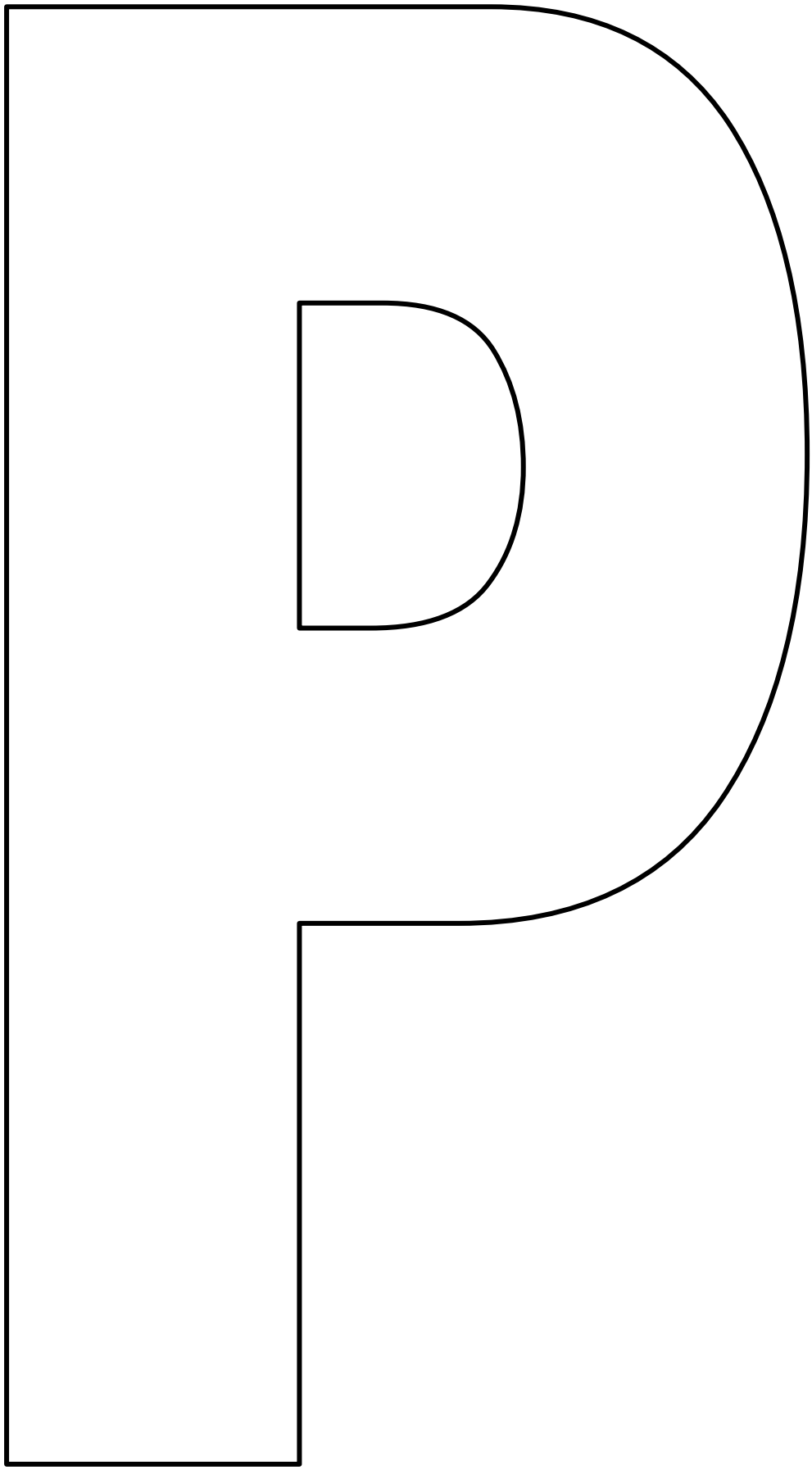
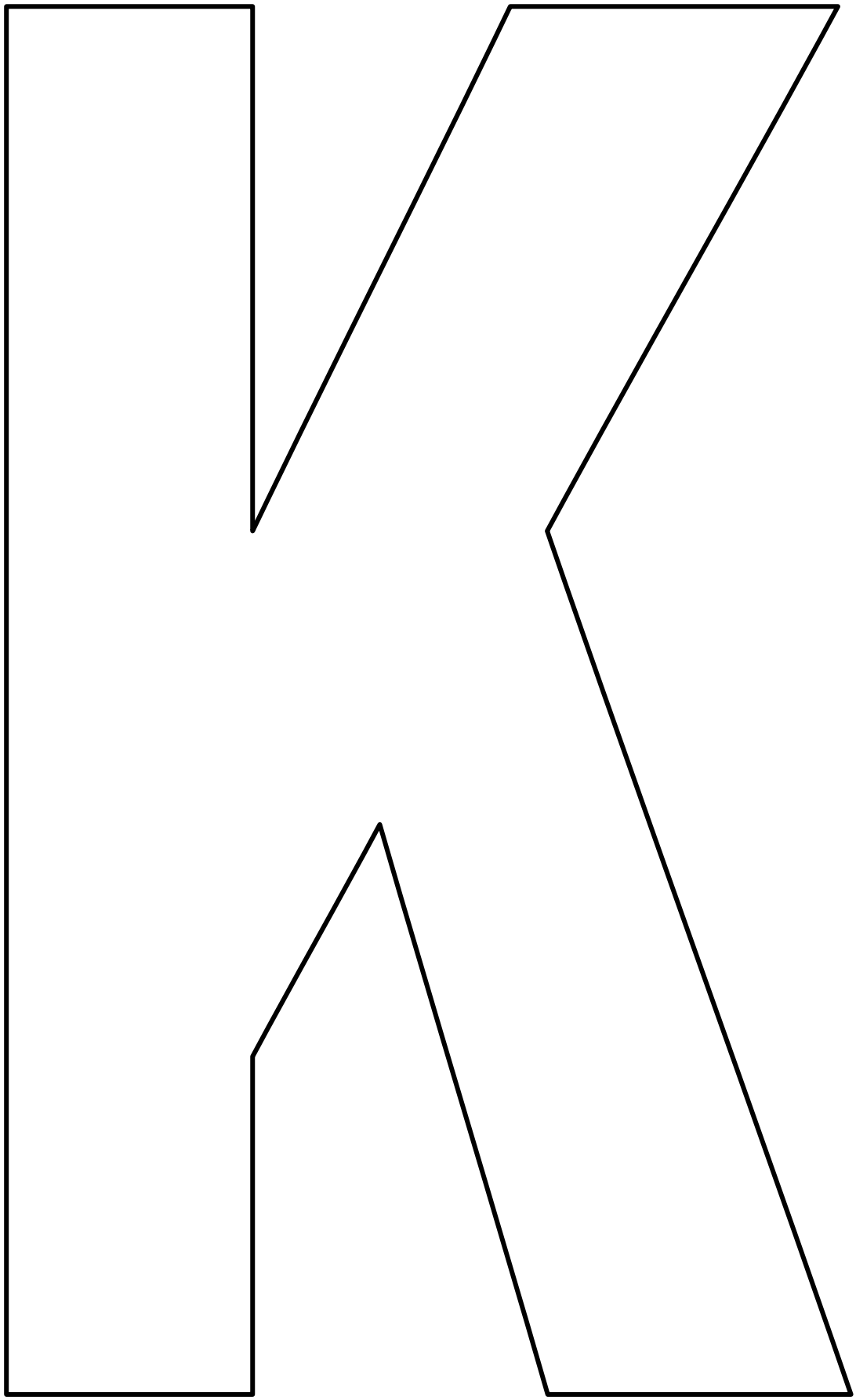
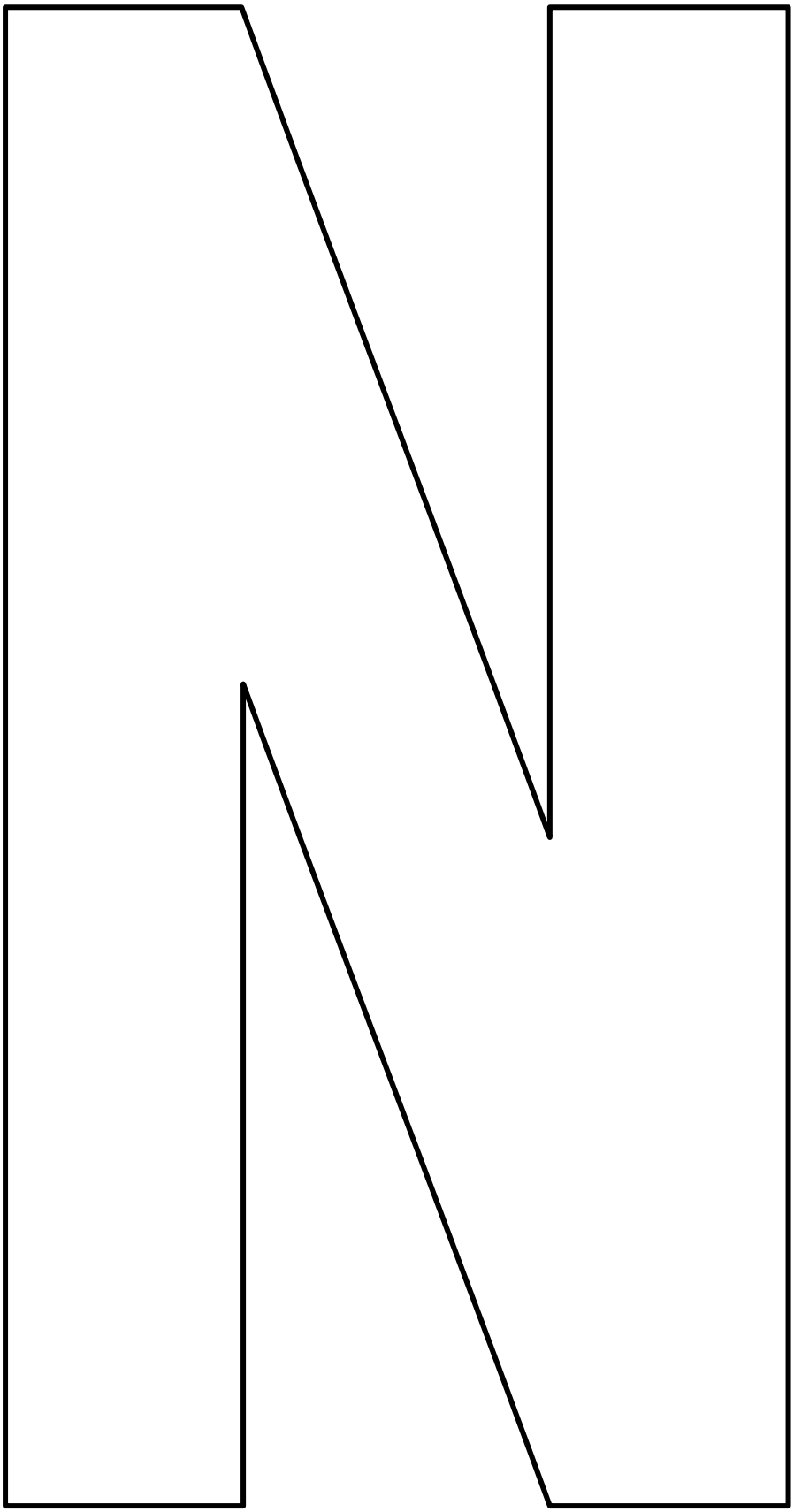
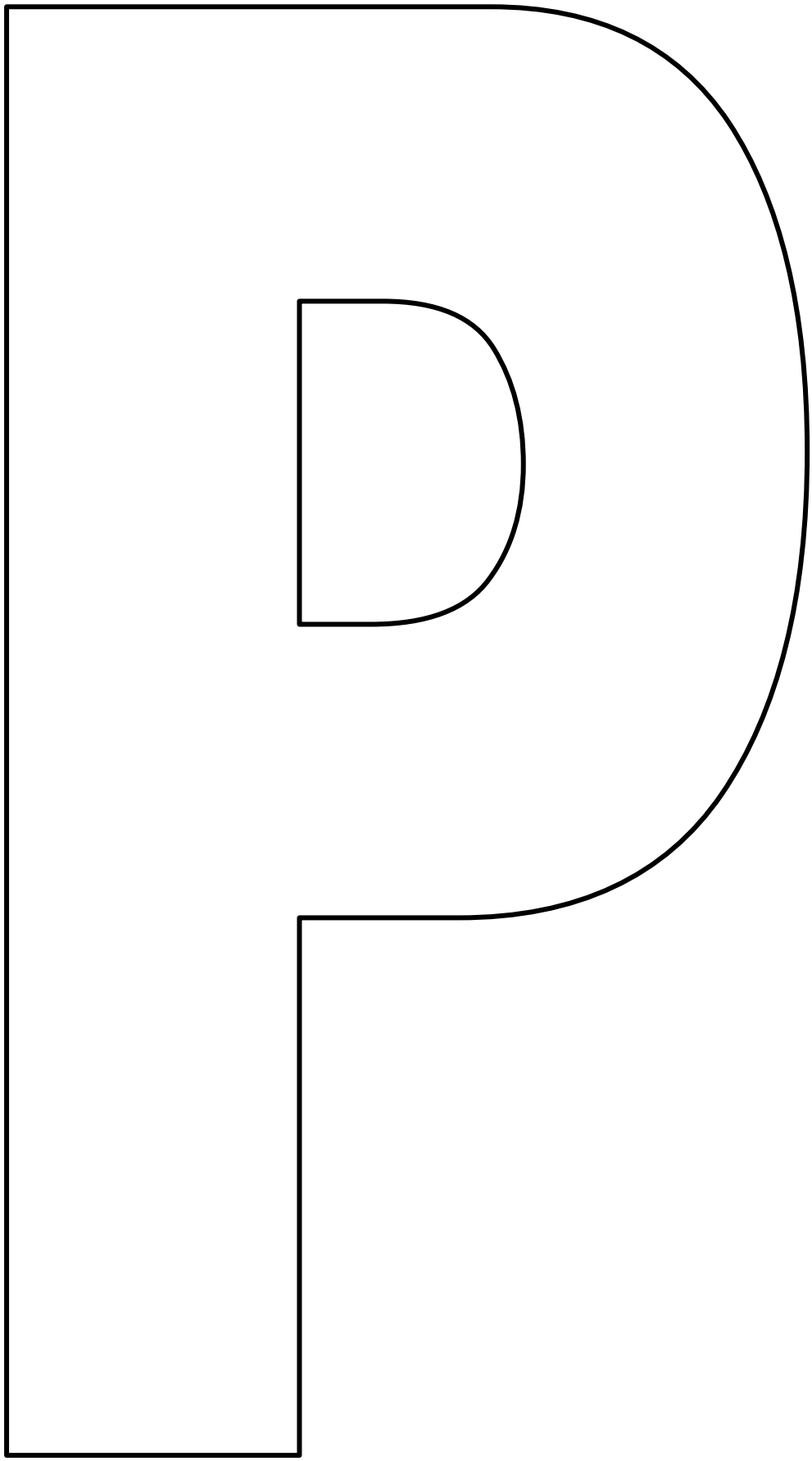
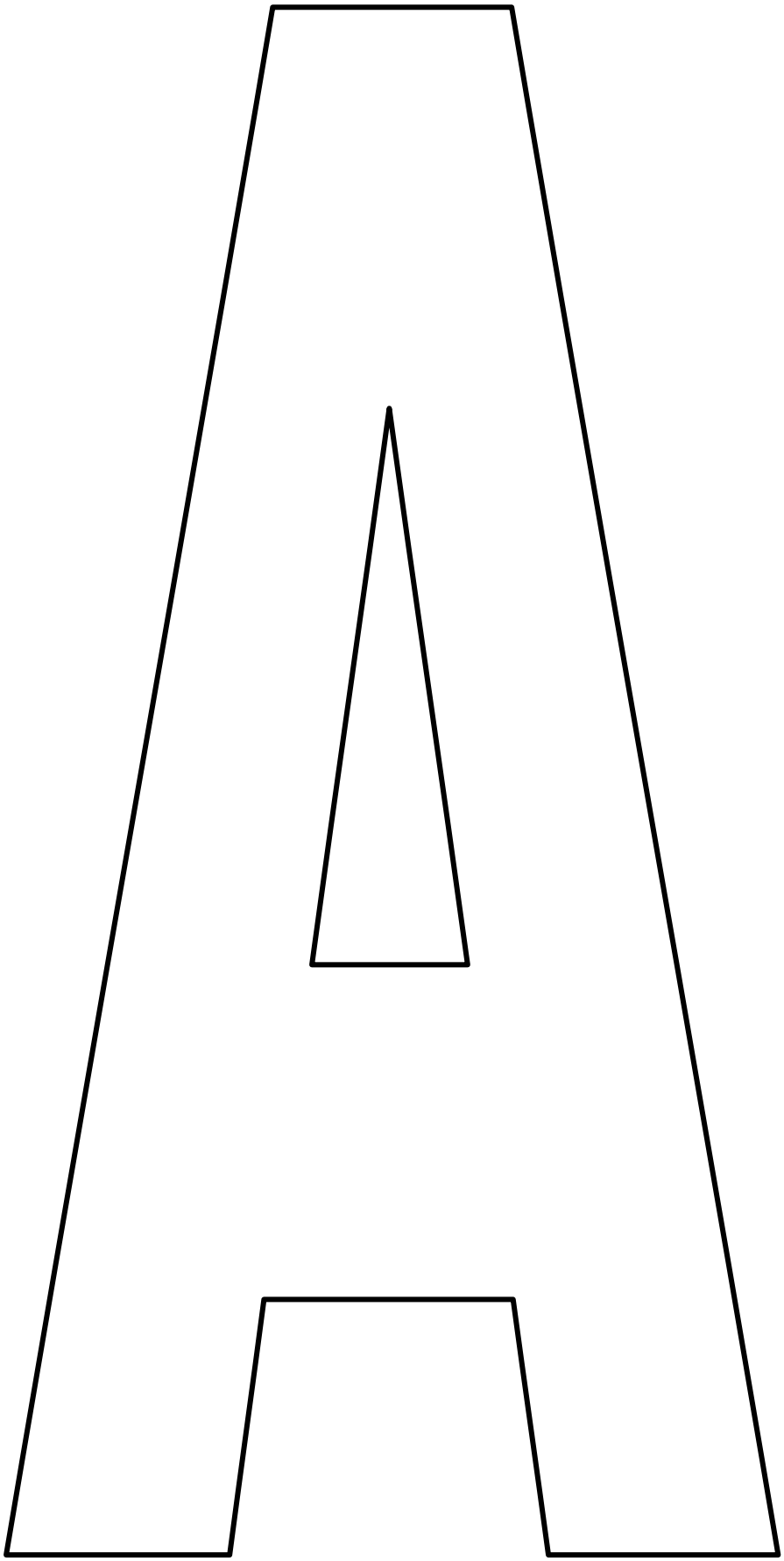
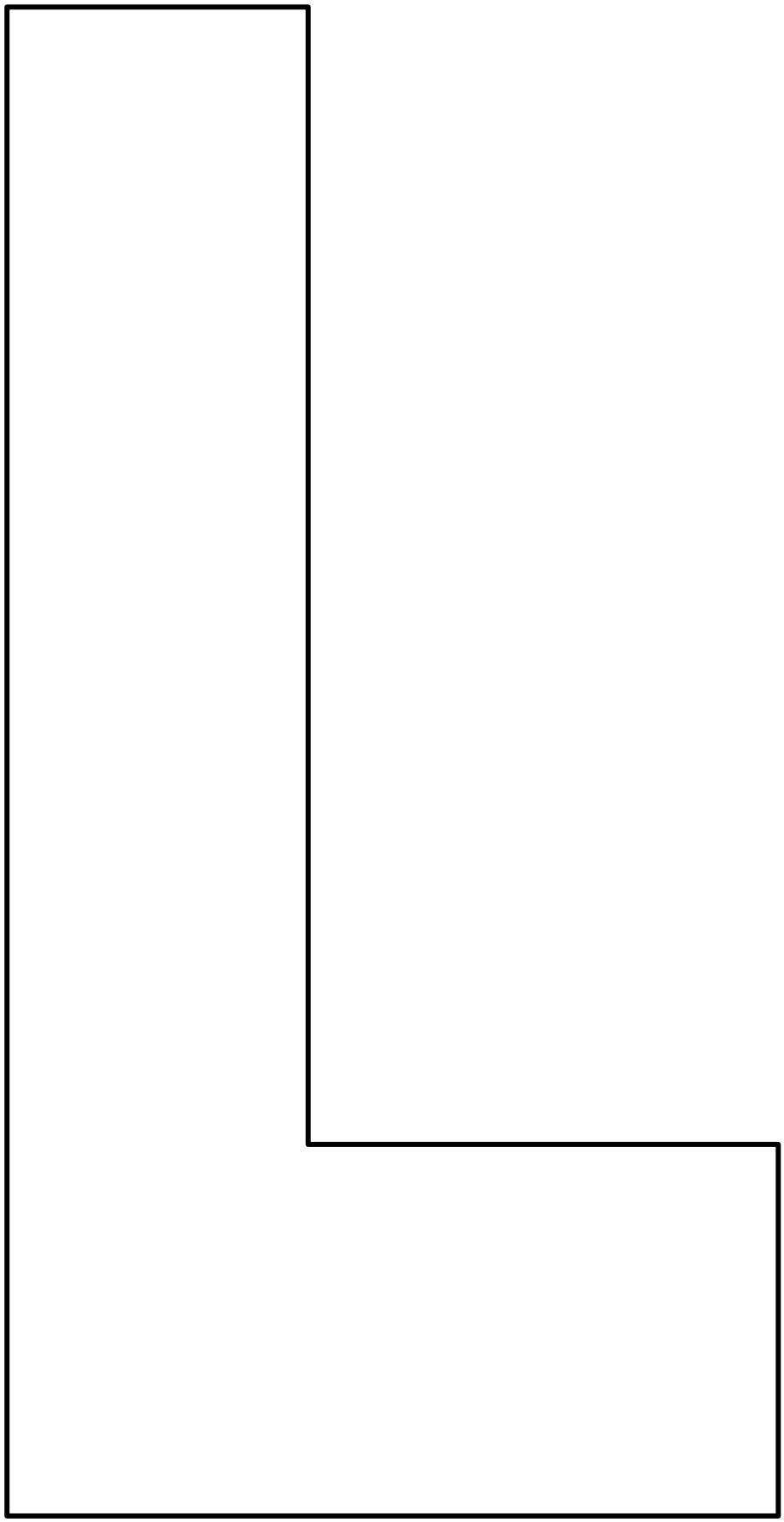
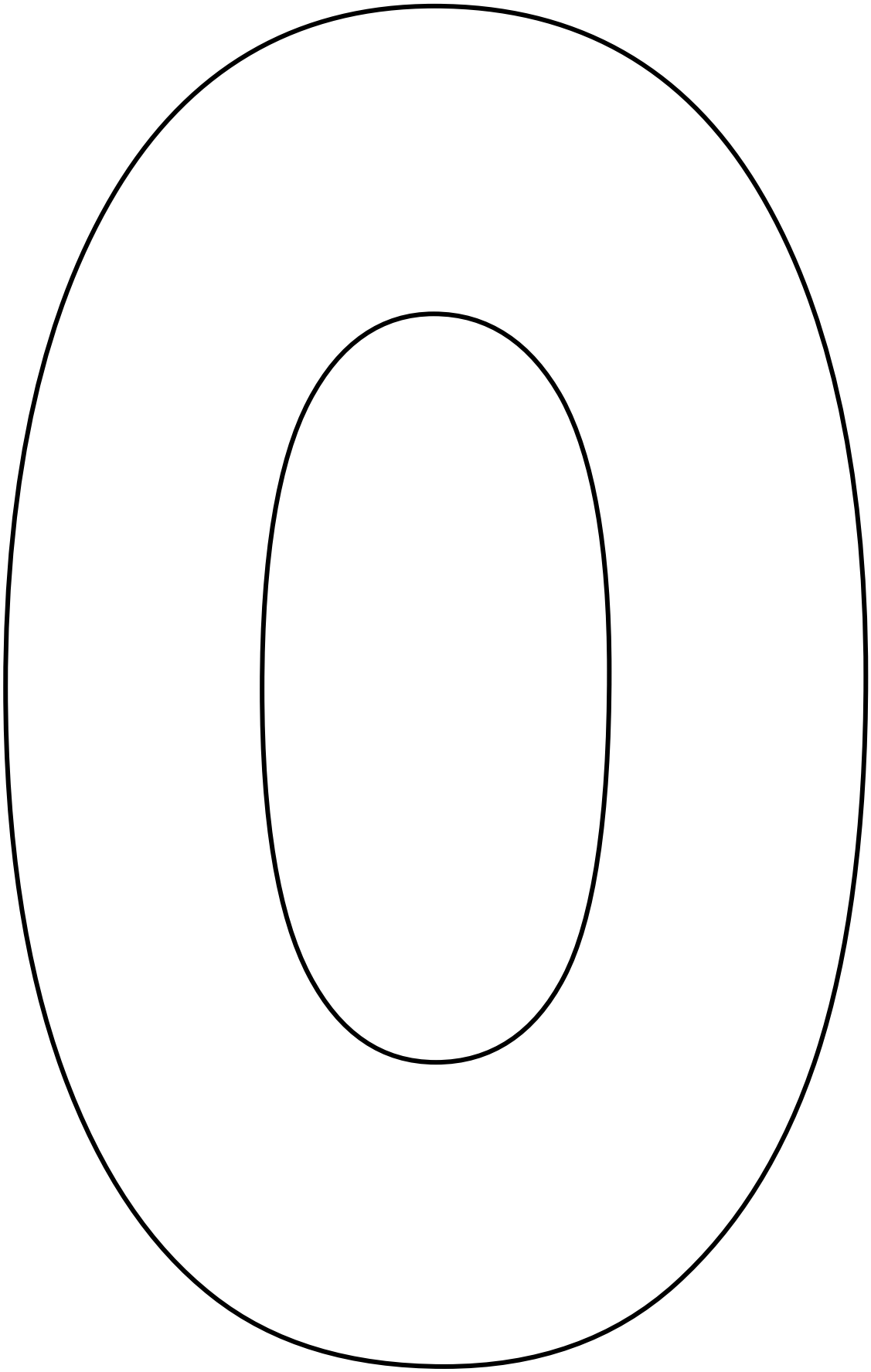
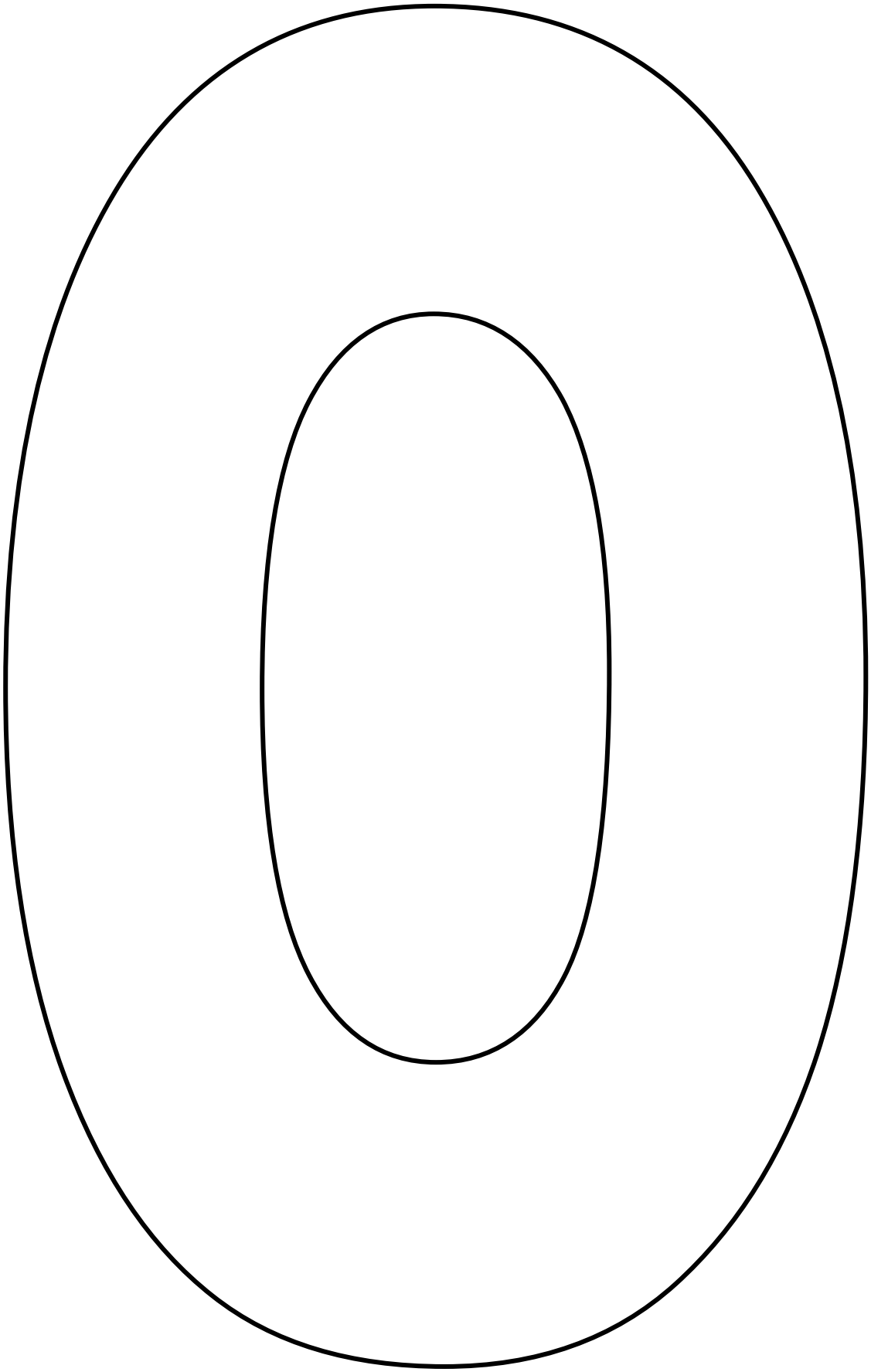
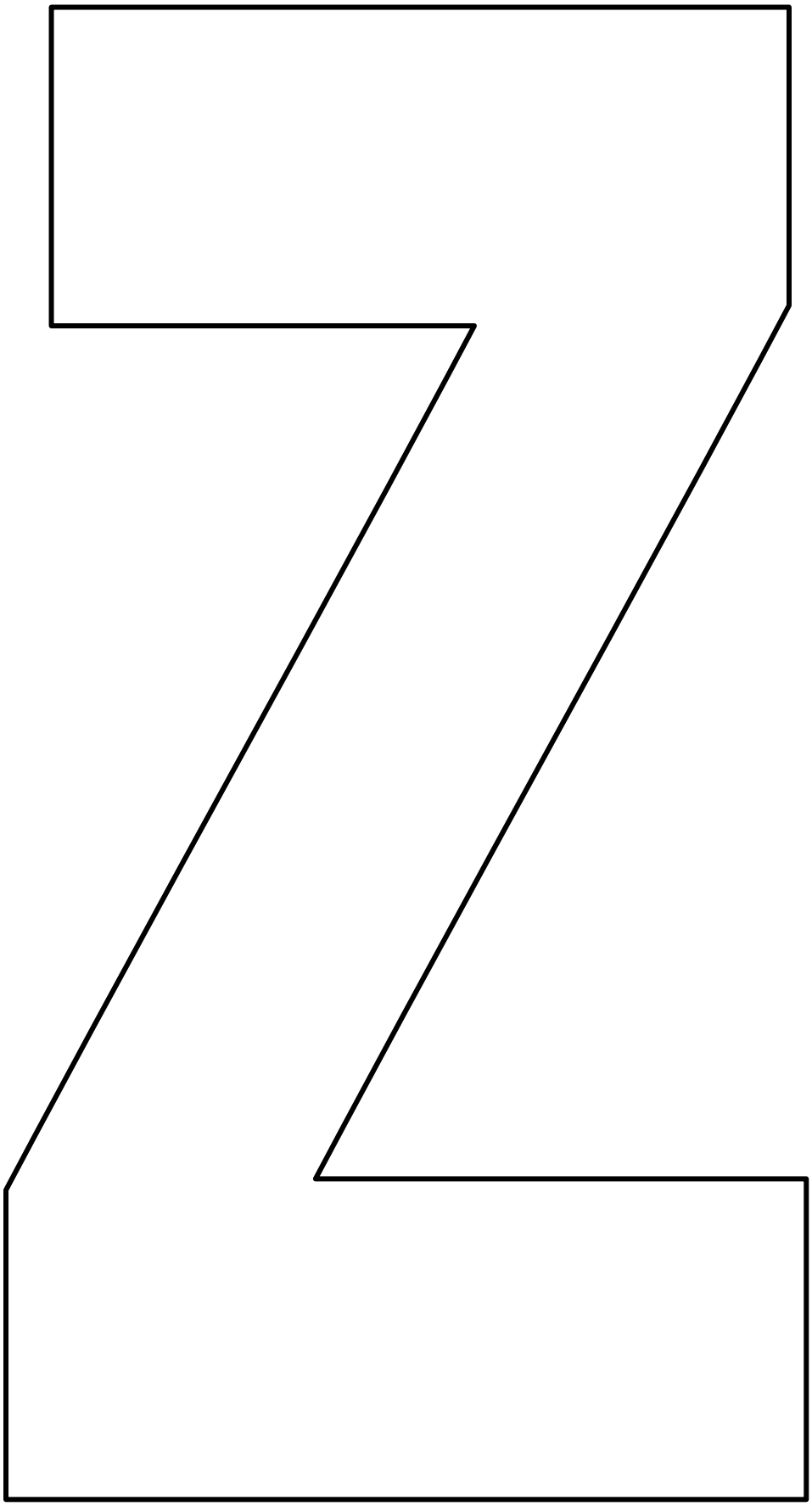
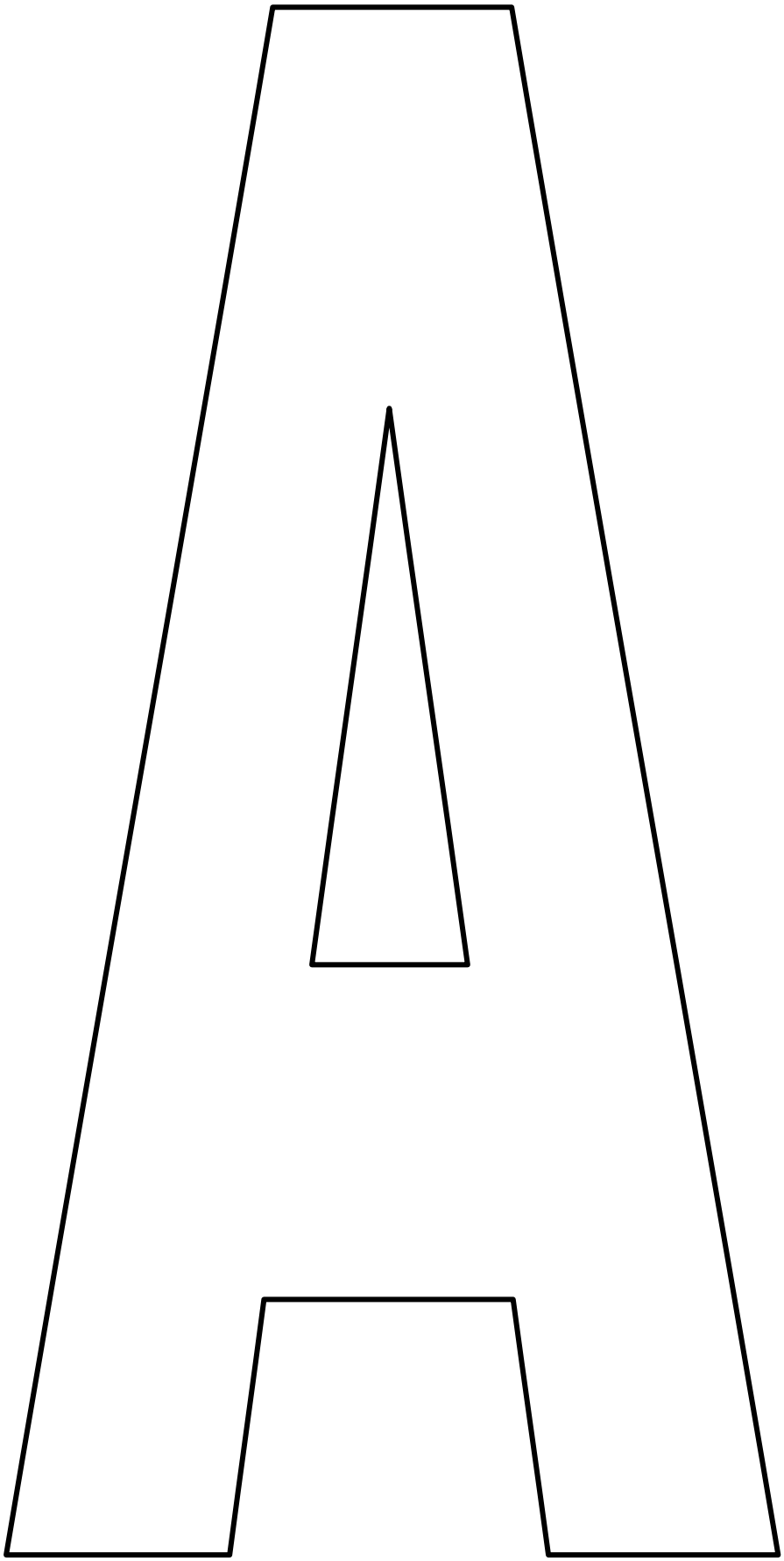
Weight		Circumference		Ribs	Number of Seeds	
Estimate	Actual	Estimate	Actual	Actual	Estimate	Actual

Was your guess over or under the actual weight? _____

By how much? _____

Was your guess over or under the actual circumference? _____

By how much? _____

Was your guess over or under the actual number of seeds? _____

By how many? _____