

PAPER CIRCLES

We'll make volvelles, sometimes known as wheel charts or paper calculators. You've probably played with one in a children's book. These have also been used in historic books, in promotional materials, and in devices to aid computation. We'll learn a little bit about their history, some very basic paper engineering, and then make two models. Volvelles are fun to make as cards and personalized gifts.

Minimum tools:

Pencil

Scissors

Metal ruler, 12"

Glue stick, make sure not dried out!

Compass or something to trace circles with: 5" and 6" or 7" and 8" bowls or rolls of tape similarly sized, etc. A Self healing cutting mat or a thick (not corrugated) cardboard, like the back of a legal pad

Something to pierce a small hole in paper: awl or pin vise, or a sewing needle stuck into a cork X-acto knife, or some other craft knife with a sharp blade, but NOT a boxcutter

Pencil, eraser, colored pencils, markers, fine black marker

Optional tools:

45 and 30-60-90 Right triangles, very helpful Protractor, very helpful

Paper & Materials:

5 brads 1/4" or less in size (regular length post) (sometimes called paper fasteners). If brads are hard to find: 10 straight pins with a flat end (not a ball), or 5 paper clips, or some thin wire pieces (or a few stripped twist ties)

30 sheets of white 8.5 x 11 card stock, 110 lb best, 80 lb okay, and 65 lb if that's all you can find

15 sheets of any lighter color(s) 8.5 x 11 card stock, 110 lb best, 80 lb okay, and 65 lb if that's all you can find

Optional: For making a final version of your volvelle using watercolor: I like the Canson XL 140 lb Watercolor paper comes in 9x12 30 sheet pads (available at Michael's). Or you can find a comparable weight and stiffness to that or to the 110 lb cardstock for drawing or other media you like to use.