

# You can make a huge puzzle/map of the United States with your

# Cricut

by

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*Not affiliated with Cricut or Provo Craft & Novelty*



## Use 12"x12" or letter size construction paper.

A few months ago, I bought a Cricut computer-controlled paper cutting machine and joined a Facebook group of people who know far more about this machine than I. Many of these Cricut users are school teachers

Last week, Briana Moody, one of those teachers, was looking for graphics files she could upload to her Cricut which would cut card stock into the shapes of the US states which would fit precisely together as a large puzzle/display.

Many other teachers and parents might like an easy way to make the shapes of the states that will fit together, too, so I've made a US map with the contiguous states about 42" wide and 26" tall so all states except Alaska fit whole on 12"x12" Cricut mats. (Alaska takes two pages.) This is free, by the way.

Most maps of the US greatly reduce the sizes of Alaska and Hawaii to squeeze them onto the same page as the contiguous states. My state shapes are all the same scale, with a scale of miles on the Hawaii image along with the state names labels.

You'll notice I've put alignment notes on the .png files for Alaska: 1-1-1-1, 2-2-2-2, and 3-3-3-3 (they won't be printed on your card stock pieces, of course). Just line up the ones across from the ones, etc. The edges abut; they're not intended to overlap. Just put tape under the abutted joints. For storage, you can fold against the tape.

I've separated the state shapes so your Cricut can cut around them, and put multiple states on each page. If you need a map larger or smaller, simply enlarge or reduce these 12\* originals all by the same percentage. Many of us don't have 12"x12" card stock, for instance, so I've also provided files (reduced to 70%) that will fit on letter-size stock\*. That assembled letter-size-stock map comes out to about 30"

wide by 19" high. Just be sure you're using files all the same scale. The start of each file name (after the .com/usmap/ - 12x or L) will tell you the size card stock it's designed for.

This is not a Print then Cut project. The state names on each state on the .png images I made for your Cricut aren't intended to be cut out. Simply have Cricut cut the state shapes, then you'll use the labels I've provided.

You'll probably want to have neighboring states be different colors from each other. With that in mind, I've separated them into four colors (C1, C2, C3, and C4) as the file names indicate. Assign those numbers to whatever colors stock you use and you'll have no adjacent colors. There are three pages each of colors one and two\*, and two each of colors three and four. Alaska is two pieces of the same color, whichever you choose.

Each file name will tell you:

- The scale (whether for 12x12" or letter size stock)
  - The color number (Alaska can be any color, so I didn't put a color number in those file names)
  - The page number within that color, and
  - The states on that page.
- That way, if your hamster eats Colorado, you can easily find the file it's on and make a new one that'll fit perfectly.

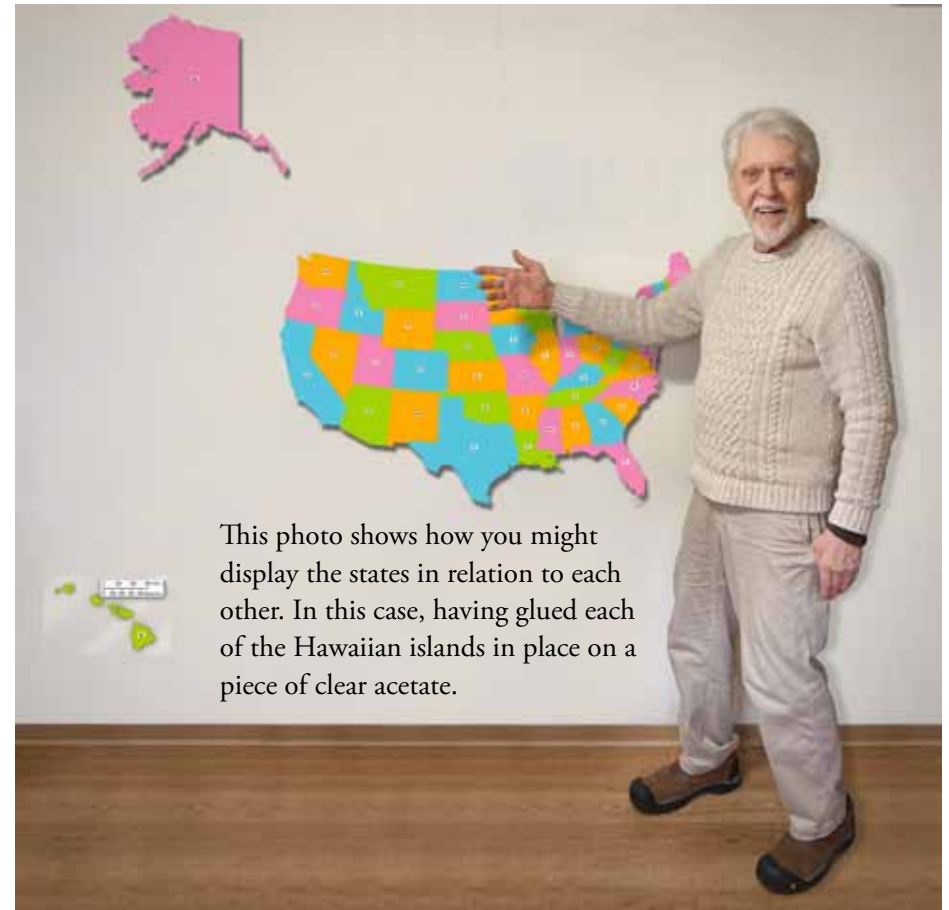
I've had to take some liberties with this map,

### \* 12"x12" vs. Letter-size

When I reduced the shapes that fit on 12"x12" stock to fit on letter-size stock, I was able to juggle some states (within their color) onto two tall pages instead of three square ones, saving two pieces of card stock, so the 42" map is 12 pieces of 12"x12" stock and the 30" map is only 10 pieces of letter-size stock. In the scale of the letter-size stock map, the Hawaii jpeg with state labels is one image.

connecting the two parts of Michigan, for instance, where in reality there's just a bridge (which wouldn't hold the card stock state together). I either attached coastal islands to the mainland or removed them. I'm trusting that you're going to use this as simply a rough schematic and not as a basis for real estate transactions or river navigation.

Since Hawaii is composed of non-contiguous islands, I originally just provided a jpeg of the island chain at the same scale as the cut-out states. You can still use this simple option. If you have some legal-size paper, you can full-bleed print it as one piece. Otherwise, I've cut the picture into two letter-size sections you can tape together.



This photo shows how you might display the states in relation to each other. In this case, having glued each of the Hawaiian islands in place on a piece of clear acetate.

My wife likes the look of all of the rest of the states against the same background (wall, bulletin board, etc.) and disliked seeing ocean blue around the Hawaiian islands, so I've added those islands to one of those Cricut .png files. Instead of these little pieces becoming meaningless confetti, you might glue them to a large enough piece of clear acetate to keep them arranged together. You'll still need to print the Hawaii jpeg to get the scale of miles, though. That print can guide you in placing your little cut-out islands on the acetate, too.

The District of Columbia (Washington DC) and Rhode Island pieces and labels are quite small and easy to lose, so I've made multiples of them.

If you estimate a little less than the distance from San Francisco to New York City on your assembled map, you can put Hawaii that far 45 degrees down to the left of San Francisco and you'll be pretty close to scale. You can measure the height of Washington and Oregon combined and place the southern end of Alaska that far above Washington's northwestern tip.



On that Hawaii jpeg, I've provided labels for the state names. (Again one set of labels is sized for the states cut on 12"x12" stock and a different set for the smaller states cut on letter-size stock.) While your Cricut cuts the shapes, use your inkjet to print the grid of state abbreviation labels. I'd print mine on blank adhesive label stock, but you can print on colored paper and glue those tiny pieces on if you want.

The trick here (shown in the photo, lower left) is to line up a straight edge from the left dot to the right one (above and below each row), cutting with an X-Acto knife from left dot to right dot, then the next row and the next, then making the vertical cuts using the same method. The idea is to keep everything intact while you make slices in one direction, then make your slices in the other direction. 17 cuts will cut out all of the labels. You'll need to trim more tightly around the RI rectangles and the DC shapes.

A good procedure for putting those labels on would be to have them cut and adhesive-ready when your first page of states comes out of your Cricut. Leave the state shapes on the mat. Look at the image of that file on your device. It will show you which shape is what state AND in what orientation to put the label. Several of these shapes fit on the page better sideways or at an odd angle. Once they're labeled, remove the states and the remaining background material from your mat. I wouldn't want to try to figure out which side of which piece was what state (and which side is north) after they're removed from the mats.

How will you display/assemble all of these states? Will the students be handling them repeatedly or are you safe simply using 2-sided tape to do a single demonstration? You might put adhesive hook-sided Velcro on the backs of the state shapes and have students place them on a felt background you provide. If you have a metal backboard, you could use adhesive magnetic strips behind the state shapes. You may want to have the labels on Velcro so they can try to label each

state themselves. You might assemble the contiguous states on a piece of plywood and trace the outline. Then cut well inside that outline and use that as a hangable base to which your states will adhere.

Below are two separate sets of files to make the puzzle map. Use all of the images in the left group if you're cutting your state shapes from 12"x12" card stock for a 42" wide map. Use all of the images in the right group if you're cutting letter-size stock. That will give you a map 30" wide when assembled.

I suggest you download this PDF and save it and the associated .png and jpeg files to your computer. My web site won't be active forever

## Files for use with 12"x12" card stock

<http://brucephilpott.com/usmap/12X-AK-top.png>

<http://brucephilpott.com/usmap/12X-AK-bottom.png>

<http://brucephilpott.com/usmap/12x-C1-p1-TX-VT-KY-CT.png>

<http://brucephilpott.com/usmap/12x-C1-p2-CA-CO-MI.png>

<http://brucephilpott.com/usmap/12x-C1-p3-ND-ID-IA-PA-GA-DC.png>

<http://brucephilpott.com/usmap/12x-C2-p1-WA-WY-NV-NM.png>

<http://brucephilpott.com/usmap/12x-C2-p2-AR-OH-AL-SC-MA-VA.png>

<http://brucephilpott.com/usmap/12x-C2-p3-MN-DE-IL-KS-HI.png>

<http://brucephilpott.com/usmap/12x-C3-p1-LA-WI-WV-OK-TN.png>

<http://brucephilpott.com/usmap/12x-C3-p2-MN-DE-IL-KS-HI.png>

<http://brucephilpott.com/usmap/12x-C4-p1-OR-MS-IN-UT-SD.png>

<http://brucephilpott.com/usmap/12x-C4-p2-MD-FL-RI-NC-NY-ME.png>

<http://brucephilpott.com/usmap/12x-HI-left-labels.jpg>

<http://brucephilpott.com/usmap/12x-HI-right.jpg>

and I'd prefer these files to have a longer life. This introduction and the two sizes of .png files might be put on a flash drive to be loaned to friends who'd like to have the files for their Cricut use. If you save both sets of images, I'd put them in separate folders to further avoid confusion. To access these files, just copy the link and paste each URL into your web browser. Enjoy!

While on the topic of the scale of enormous things, you might be interested in my short articles about the [scale of the Earth's satellites](#) and the [scale of the planets in our solar system](#). You can read my other articles and tutorials at [brucephilpott.com/tutorials](http://brucephilpott.com/tutorials).

## Files for use with letter-size card stock

<http://brucephilpott.com/usmap/L-AK-top.png>

<http://brucephilpott.com/usmap/L-AK-bottom.png>

<http://brucephilpott.com/usmap/L-C1-p1-PA-TX-CT-VT-ID-IA-KY.png>

<http://brucephilpott.com/usmap/L-C1-p2-ND-DC-GA-CA-CO-MI.png>

<http://brucephilpott.com/usmap/L-C2-p1-WA-WY-NV-NM-IL-KS.png>

<http://brucephilpott.com/usmap/L-C2-p2-AR-OH-AL-SC-HI-MA-MN-DE-VA.png>

<http://brucephilpott.com/usmap/L-C3-p1-LA-WI-WV-OK-TN.png>

<http://brucephilpott.com/usmap/L-C3-p2-MT-NH-AZ-NJ-MO-NE.png>

<http://brucephilpott.com/usmap/L-C4-p1-OR-MA-IN-UT-SD.png>

<http://brucephilpott.com/usmap/12x-C4-p2-MD-FL-RI-NC-NY-ME.png>

<http://brucephilpott.com/usmap/L-HI-labels.jpg>

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Please share this information with others, but it's not for sale.



## Appendix - a printable, hand-cut version

A couple of friends asked if I would post files of the states which could be printed on their printers and then cut by hand to form a 30" wide puzzle. Here you go! I'd suggest 110-lb. cardstock, but suit yourself. The states will fit together exactly because I cut them along the borders myself. Accurate cartography, no, but a good fit. Just copy and paste these links into your browser.

<http://brucephilpott.com/usmap/one.jpg>

<http://brucephilpott.com/usmap/two.jpg>

<http://brucephilpott.com/usmap/three.jpg>

<http://brucephilpott.com/usmap/four.jpg>

<http://brucephilpott.com/usmap/five.jpg>

<http://brucephilpott.com/usmap/six.jpg>

<http://brucephilpott.com/usmap/seven.jpg>

<http://brucephilpott.com/usmap/eight.jpg>

<http://brucephilpott.com/usmap/nine.jpg>

<http://brucephilpott.com/usmap/ten.jpg>

<http://brucephilpott.com/usmap/eleven.jpg>

Fun side topics to discuss are why are so many of those borders so wiggly? (Surveyors used rivers and the tops of mountain ranges to determine borders.)

Why don't the map lines run perfectly horizontally and vertically? (Distortion happens when you project a globe onto a flat map like this.)

Which of the contiguous states is the northern-most? People will guess Washington or Maine, but a little bump on the northern border of Minnesota makes it the furthest north. This addition to the state was granted when it was discovered the headwaters of the Mississippi were actually further north than originally thought, so, according to the treaty, the border was moved northward. Sometimes we hear people refer to the "lower 48 states." That would include Hawaii, then, and not Minnesota; which is not what they mean.

CA has a population of about 40 million and has 2 senators. Wyoming has a population of half a million (an eighth of California's) and has two senators.

I used to confuse Vermont and New Hampshire until I realized they're shaped like the first letter of their names.

I'm sure you'll use your imagination with this map puzzle. Have fun and let me know how it worked for you and the variations you invented.