

## Evidence of first consultation

Mr. Krueger: So, I've been thinking — it would be great to have some sort of visual tool for class that shows how populations in European countries have changed over time. Something interactive, maybe? I feel like maps would really help students connect with the material.

Me: Oh, that actually sounds like a fun project! I've been working on some tools in computer science that might fit perfectly with that. Have you heard of a cartogram?

Mr. Krueger: Hmm, the name rings a bell, but remind me — what's a cartogram?

Me: It's basically a map where regions are resized based on some data value — like population — instead of their actual land area. So, if France's population grows a lot, the shape of France will sort of bulge outward over time, while countries with shrinking populations shrink. The idea is to animate that change over the years, so you can actually see the shifting demographics across Europe.

Mr. Krueger: I like the idea. Do the shapes stay recognizable?

Me: That's part of the challenge. I'll use something called a contiguous cartogram, which tries to preserve the overall geography and keep countries connected, but distorts them enough to reflect the data. It ends up looking like a weirdly breathing map — kind of abstract, but still readable.

Mr. Krueger: Wow. And you think you can make this yourself?

Me: Yeah! I've been working with polygon manipulation and force-based systems already, so I can apply that to this. Each country will sort of act like it's pushing or pulling to match its population size for a given year. Then I can animate the transitions to show how the map evolves over time.

Mr. Krueger: That would be amazing for the Industrial Revolution unit — or even post-WWII migration patterns. The kids would love this.

Me: Exactly. I can even add a slider to control the year, or highlight historical events that align with major population shifts.

Mr. Krueger: This is exactly the kind of thing that makes history feel alive. I can't wait to see what you come up with.

\*k3c304\* -- Animated Cartogram

Me: Awesome. I'll start prototyping something and let you know once I've got a demo!

## Evidence of follow-up

[My Name],

Just checked out the animated cartogram — nice work. The simulation runs smoothly, and the population shifts are clear to follow. I think this'll work well for helping students see how things changed over time, especially around major events.

That said, the country borders are pretty mangled in places. I get that that's part of how cartograms work, but some of the shapes are hard to recognize. Might be worth thinking about adding labels or something to help keep it readable.

Still, it's a solid project and definitely something I'll try out in class. Appreciate you putting this together.

– Mr. Krueger