

Interview with Craig Young (Tuba City Boarding School) about Bluebird Math Circle on April 26, 2021

See also:

Bluebird Flyer Issue #3

<https://aimathcircles.org/issue-3-road-inspectors-full-color-pdf/>

Issue #3 Community Recap

<https://aimathcircles.org/issue-3-community-recap-road-inspectors-full-color-pdf/>

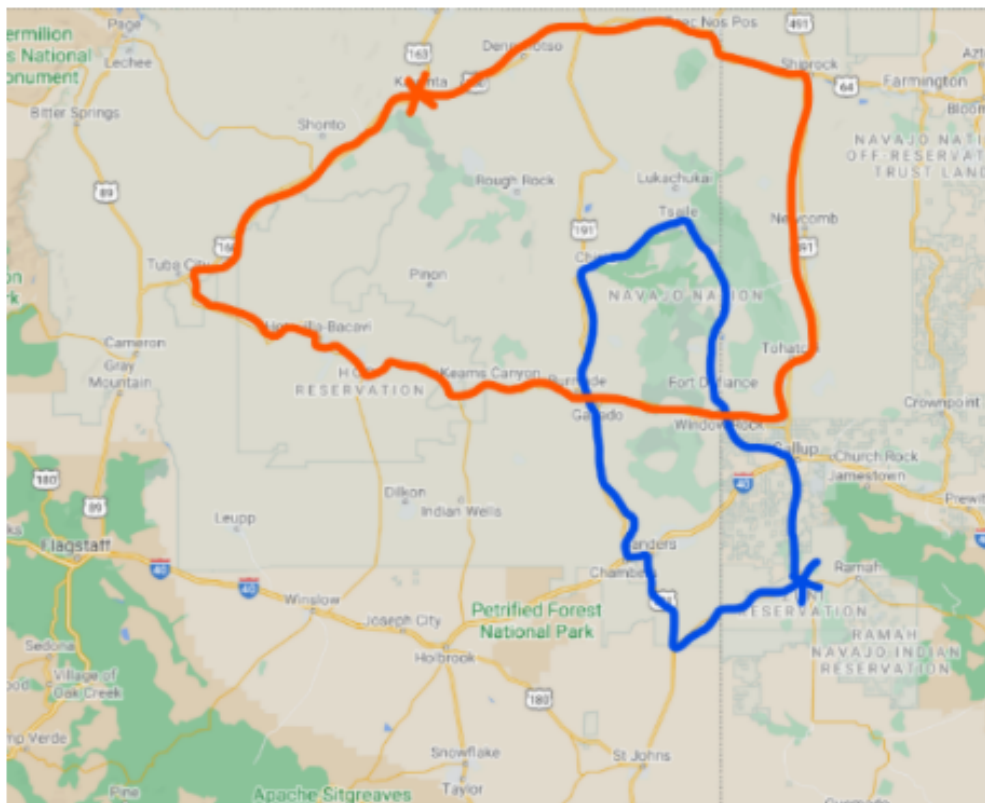
Craig Young has already used these activities in his classroom, and we're happy to provide an account of what his experience was like.

To begin with, Craig told us about nuts and bolts of his session. He started by talking to the entire class. He wanted to make sure that students understood the rules. Then they headed into breakout rooms. Craig had four people helping him: his own learning coach, a co-teacher and his coach, and a special education teacher. So they had four rooms with a teacher in each one. Craig jumped from room to room, because he wanted to see every student participate. And that did really happen: students were coming out of their 'comfort zone' and growing excited about patterns they saw.

A key value of these activities: Many levels of access, both from the point of view of content and of motivation. That offers intrigue for high-flying students at the same time as it gives opportunities for struggling students to make a contribution. "I wanted to use it as a warm up activity, but it just took off to where we used up all the time yesterday. Oh, I had kids that didn't speak up, I had kids that were quiet. I had kids that were shy. And they were the most active. They were the ones who wanted to try to do it."



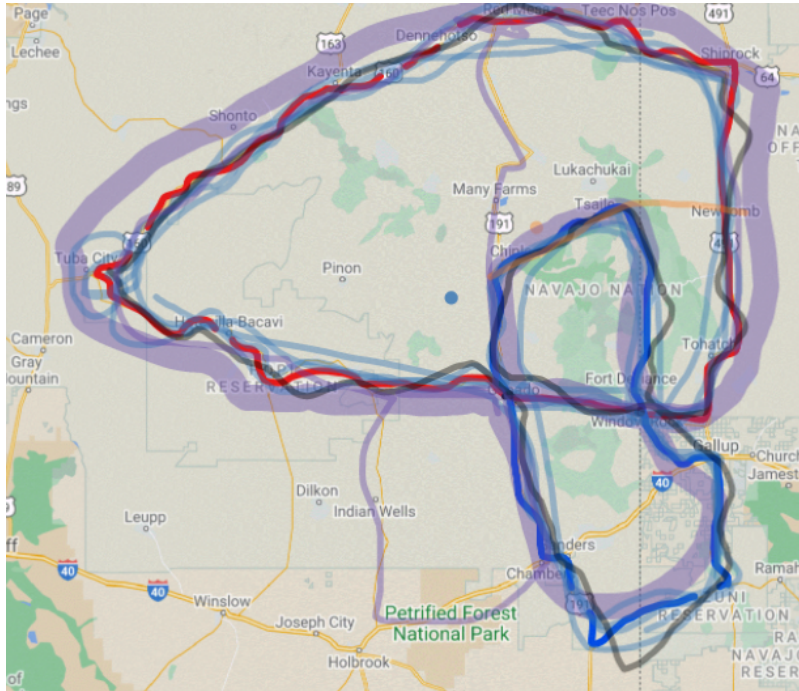
PROJECT — HELP INSPECT THE ROADS ON THE RESERVATION.



And why? Relevance: "I think what really helped them out was that they related to this problem. They recognized these locations on the Navajo Nation and Hopi nation. In our textbooks, you hear about, 'Virginia has this many counties, and

let's find the area of this county, Jefferson County. It's the shape of a trapezoid.' You can say they just kind of are uninterested. But when it's applied to them? They are like, 'Oh, yeah, I can relate to this.' That was pretty cool."

Group activity that has multiple entry points taps into a social dynamic that supports and catalyzes learning. "They were joking, 'Oh, my, my grandma lives over here. She lives over on this side of the Navajo Nation, or she lives over here to Hopi nation. So I'm going to start here, I'm going to pretend I visited grandma and then follow this route.' So yeah, they had fun with it. And some of the most quiet kids finally came out of their cave: 'Hey, I want to try, it's my turn.'"



The group dynamics were not about competition or social climbing, but about sharing the joy. "They were excited about it. They even corrected each other, when some students did make a mistake of going over to the road twice. 'Hey, you can't do that, you know, you can't travel the same road more than once.' They willingly jumped in and there it was, I wouldn't say it chaos, but it was a beautiful... I don't know, not a mess. What it was they had a lot of fun. A lot of fun!"

Sometimes students suspect that exciting topics don't belong in mathematics. "A couple of them said, 'So this is not math. When were you going to do the lesson?' But I was telling them, 'Yeah, this is math, you're engaging in your problem solving here, your analytical thinking.' They understood that when they saw patterns; and then they just enjoyed it."

One key pattern is the difference between an intersection of odd number of roads and even number of roads. "They were there. I think one person caught that. And then we had to break for the next class. But they want to try it again. So I think we'll just continue on. That's great."