The Highways or the Byways: Mapping Routes in North Carolina

A Lesson Plan Prepared for Use with North Carolina Maps: http://www.lib.unc.edu/dc/ncmaps/

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Vork on the first three problems as a class.			
I.	If Mary wanted to drive 125 miles at 45 mph, how long would it take her to reach her destination?		
2.	John wants to drive to Charlotte. He will drive on a highway at 65 mph for 50 miles, and the on a side road at 40 mph for 25 miles. How long will it take him?		
3.	Susie wants to drive to Wilmington for the summer. She lives 300 miles from the beach and wants to make the trip as quickly as possible. Should she take the highway at 55 mph for the entire 300 miles, or should she split the route: 100 miles on the 45 mph side road and 200 miles on the 65 mph superhighway?		

Work on the next section alone.

Before starting the problems below, follow these **instructions**:

- Open the UNC NC Maps site (http://www.lib.unc.edu/dc/ncmaps/). Find the 1940 Highway Map on this site by following these steps: Using the Browse menu, search "Browse by Date," and click on 1940-1949. Click on the "North Carolina Primary Highway System" map.
- You should see the map on your screen. Try zooming in and out on different parts of the map. Next, find the **legend** in the bottom right corner of the map.

INFORMATION TO KNOW:

US Highways (Red Lines): Speed Limit is 65 mph State Highways (Blue Lines): Speed Limit is 55 mph Gravel Roads (Dotted Blue): Speed Limit is 40 mph Earth Roads (White/Blue): Speed Limit is 25 mph

In a separate window or tab, go to <u>www.mapquest.com</u>.

Problem One:

Mike works at the Durham Performing Arts Center. He has a two-week vacation and wants to visit his parents in New Bern. He has two route choices:

- a. He can drive Highway 70 the entire way.
- **b.** He can drive HWY 70 to Raleigh, HWY 64 to Wilson, HWY 117 to Mount Olive, and HWY 55 to New Bern.

Solve the following four questions to figure out the fastest way for Mike to get to his parents' house.

I. Use Mapquest to find the distances between the following cities:

Durham to New Bern:	miles
Durham to Raleigh:	miles
Raleigh to Wilson:	miles
Wilson to Mount Olive:	miles
Mount Olive to New Bern:	mile

2.	Using the speed limit for Highway 70 and the distance to New Bern, figure out how long it will take Mike to drive straight from Durham to New Bern. (Remember the speed limits listed in the instructions!)
	Hours
3.	How long will the second route take Mike? (Remember the different speed limits.)
	Time from Durham to Raleigh:
	Time from Raleigh to Wilson:
	Time from Wilson to Mount Olive:
	Time from Mount Olive to New Bern:
	Total time to New Bern: Hours
	How does this second route compare to the first route (driving straight from Durham to New Bern along Highway 70)?
1 .	If Mike is caught in traffic on Highway 70 and is only moving at 35 mph, would it be faster for him to take the second route or to stay on Highway 70? Show your work.

Problem Two:

Jane and Sally want to drive from Charlotte to Bakersville. They can choose one of two different routes:

- a. Drive Hwy 29 to Hwy 64 to Garden City, then take the road to Hwy 26 to Bakersville.
- **b.** Drive Hwy 74 to Hwy 221 to Hwy 26 to Bakersville.

Using the 1940 map to find speed limits and Mapquest to find distances, calculate which route would be quicker. Look at Problem One if you need a reminder of which steps to follow. Be sure to show all of your work!

Problem Three:

You want to take a road trip from Asheville to Fayetteville. On the way, you want to stop in Asheboro, Hickory, and Lenoir. List each road that you would take and calculate how long it would take for you to make the entire trip.

North Carolina Maps is a comprehensive, online collection of historic maps from the North Carolina State Archives, North Carolina Collection at UNC-Chapel Hill, and Outer Banks History Center. North Carolina Maps is made possible by the Institute of Museum and Library Services under the provisions of the Library Services and Technology Act as administered by the State Library of North Carolina. Visit North Carolina Maps online at http://www.lib.unc.edu/dc/ncmaps