GRADE: 5th or 6th Grade **STRAND**: Algebra
GLCEs: 6th Grade

LESSON TITLE: ROAD TRIP

LEARNING OBJECTIVES:

1) Students will explore how different rates affect time travel over a given distance.
2) Students will analyze how changes in one independent variable (rate or speed) inversely affect the dependent variable (time).

MATERIALS: Calculator
Handouts
Pencil

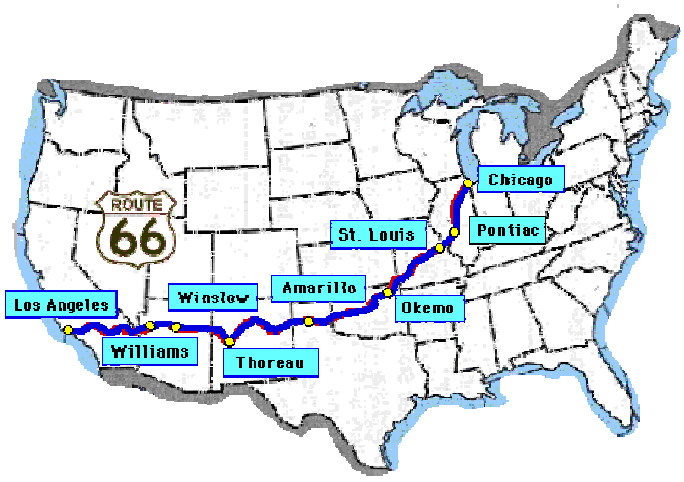
BACKGROUND:

1) Students will need to know how to multiply and divide.
2) Students should be able to read data from a table.

INSTRUCTIONAL PLAN:

The Initial Question:
If you had to travel from Chicago to Los Angles along US Route 66, which form of transportation would you prefer: a Go-Cart, Donkey, Unicycle, or your very own "po-go" stick?

Display United States Map showing Route 66.



The distance of Route 66 is about 2,500 miles long.

The following chart shows how far each form of transportation can travel in one day.

Form of Transportation	Distance traveled in one day
Go – Cart	250 miles a day
Donkey	125 miles a day
Unicycle	50 miles a day
Po – Go Stick	10 miles a day

To calculate travel time, students must divide the distance of Route 66 by the distance each form of transportation has traveled in one day. This will yield the number of days traveled.

For example, a truck going 500 miles a day will have traveled Route 66 in 5 days.

Next, students will attempt to recognize patterns in distance traveled in one day compared to overall time of trip.

Students will write down a verbal phrase stating the pattern and convert the verbal phrase into an algebraic expression and equation.

Students will graph their generated equations as a function of distance traveled in one day (horizontal x-axis / independent variable) and overall time of trip (vertical y-axis / dependent variable).

EXTENSION: Students will predict other outcomes.

MICHIGAN GLCEs

A.PA.06.01 – Solve applied problems involving rates, including speed.

A.FO.06.03 – Use letters, with units, to represent quantities in a variety of contexts.