Today's Materials

- device
- calculator
- pencil
- notebook
- glue

Scale Drawings and Maps
(optional lesson)

Lesson 8

CCSS Standards: Building on	• 6.NS.B.2 • 6.RP.A.3.b
CCSS Standards: Addressing	• 7.G.A.1
CCSS Standards: Building towards	• 7.RP.A • 7.RP.A.2.b

Let’s use scale drawings to solve problems!

A Train and a Car

Warm Up

Two cities are 243 miles apart.

- It takes a train 4 hours to travel between the two cities at a constant speed.
- A car travels between the two cities at a constant speed of 65 miles per hour.

Which is traveling faster, the car or the train? Be prepared to explain your reasoning.

Today's Goal

- I can use a map and its scale to solve problems about traveling.

Driving on I-90
(optional)

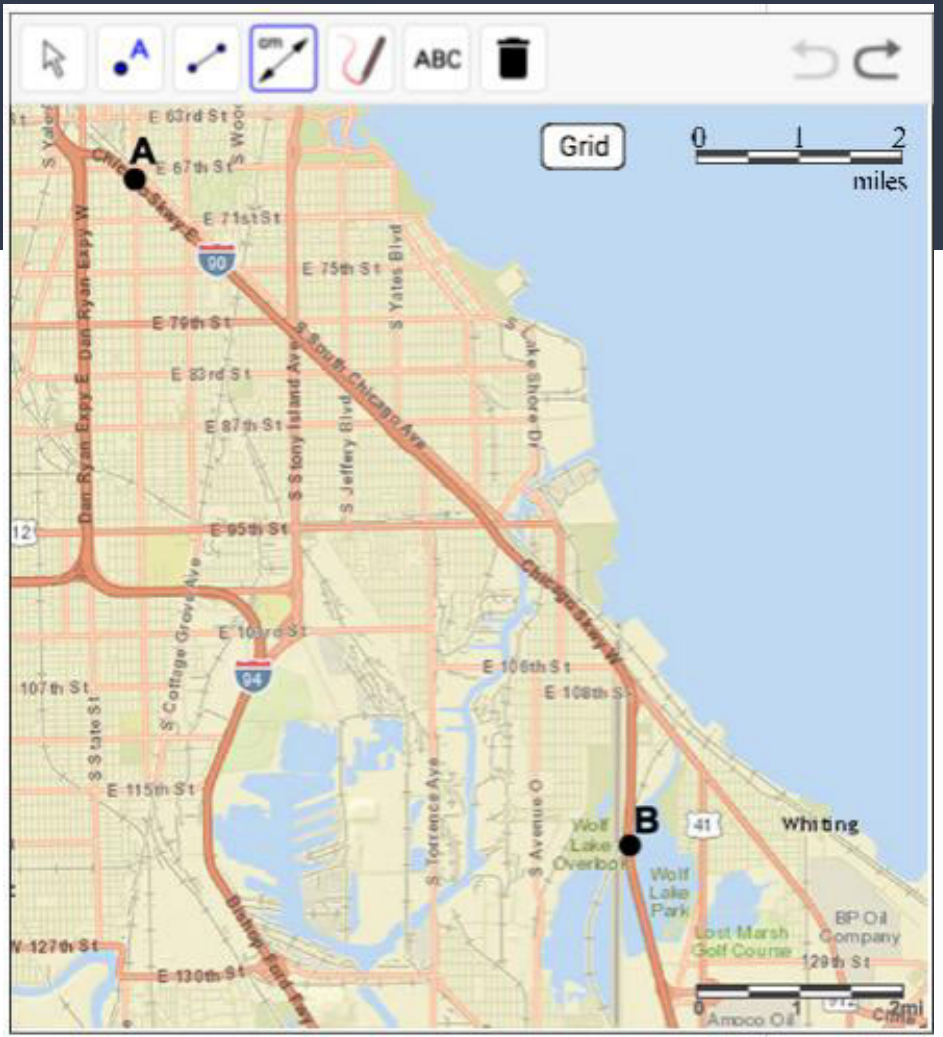
Activity 8.2

- 5 Practices

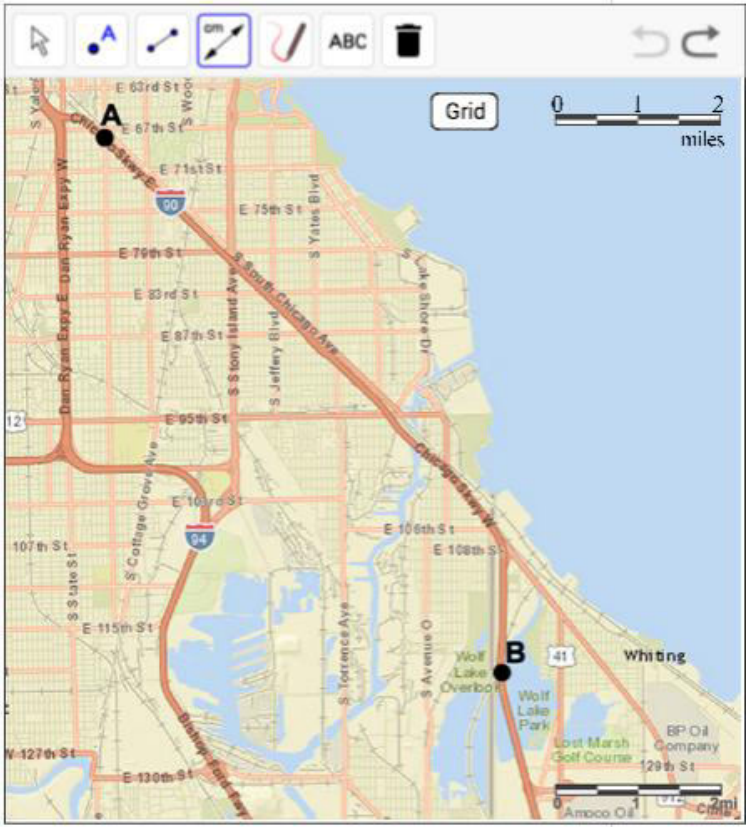
For this activity, you will use a scale drawing (a map) to solve a problem about speed of travel.

Who is familiar with highway travel and speed limits?

Let’s talk about today’s web tools!

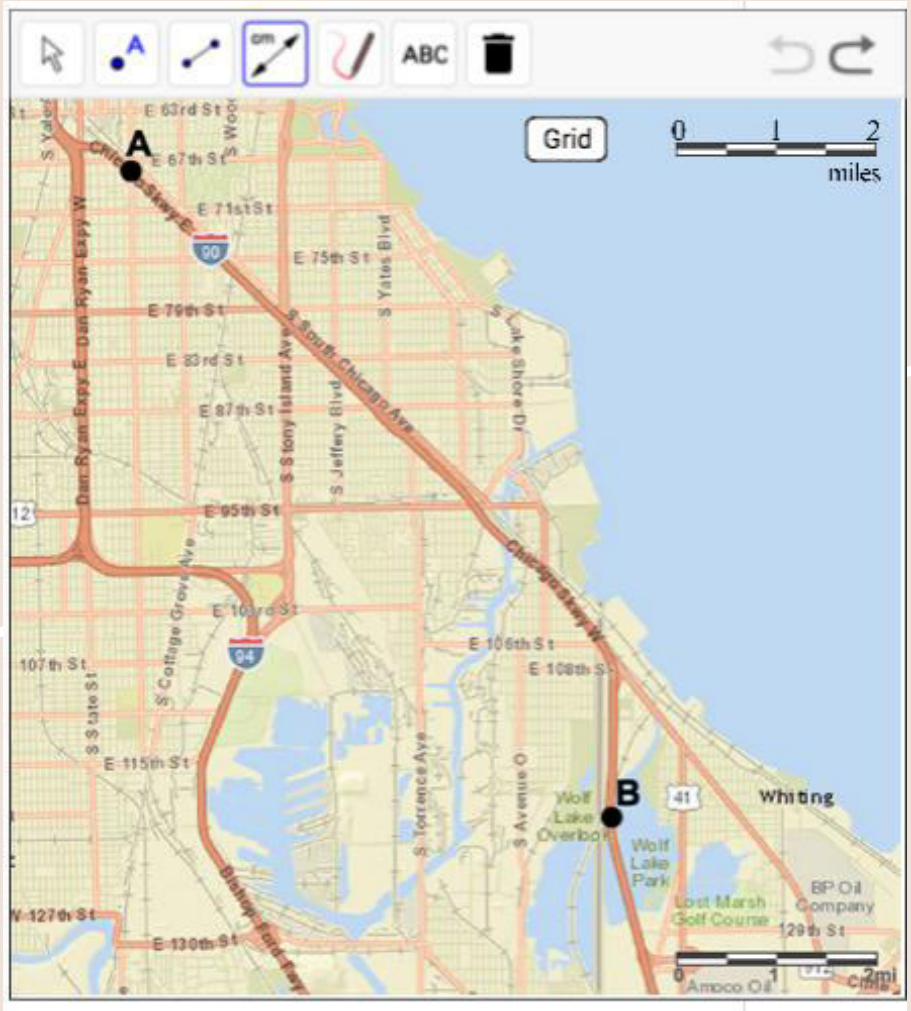


➔Unit 1: Scale Drawings
➔Lesson 8: Scale Drawings & Maps
➔Activity 8.2: Driving on I-90



You will have 5 minutes to work with your partner.

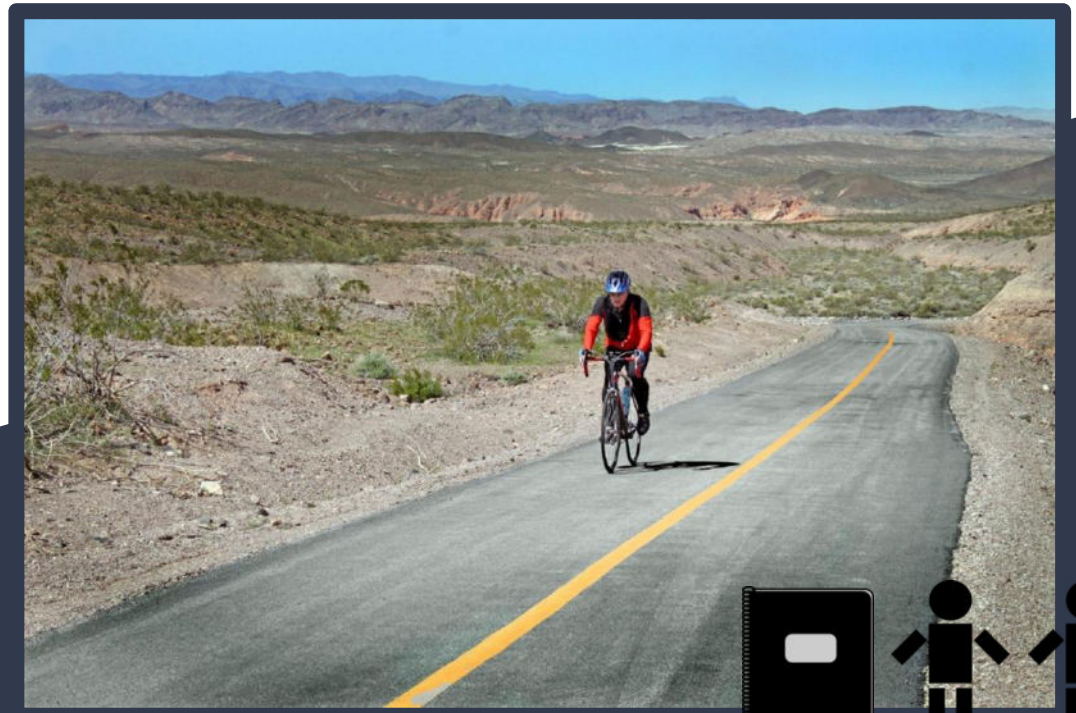
Was the driver speeding or not?



Biking through Kansas

Activity 8.3

- Think Pair Share



Now, we'll use a scale drawing (a map) to solve a different problem about travel.

What is the farthest you've ever biked?

How long did it take?

Begin with Quiet Work Time.
(5 min.)

Collaborate with your team about your answers and ideas.

- How did you estimate the distance between the two cities?
- How long will it take the cyclist to travel between the cities?

Why do you think we have some differences in our estimations?

- measurement error
- the road is not straight
- differing estimations
  - especially if you laid out the scale end-to-end

Are you ready for more?

Jada finds a map that says,
“Note: This map is not to scale.”

What do you think this means? Why is this information important?

A map with a scale helps estimate the distance between two places by measuring the distance on the map and using the scale to find the actual distance.

Once the distance between two places is known:

- If we know how long the trip takes, we can calculate the speed by **distance ÷ time**.
- If we know the speed, we can calculate how long the trip is by **distance ÷ speed**.

What is the speed for a 130-mile trip that takes 2 hours at a constant speed?

distance ÷ time = speed

130 ÷ 2 =

65 miles per hour

What is the time it takes for a 35-mile trip at 70 miles per hour?

distance ÷ speed = time

35 ÷ 70 =

½ hour or 30 minutes

Today's Goal

- I can use a map and its scale to solve problems about traveling.

Walking around the Botanical Garden

Cool Down