



Trip Planning and Navigation

Session Goals

1. Know why and how to pre plan a trip.
2. Organize and develop checklists for personal and vehicle needs before starting a trip
3. Understand and be able to read and plot out a route, on a map, whether it be using an electronic app or a paper map/atlas, it's an important skill to have when heading out on any type of trip.
4. Select best route to use depending on agenda; fastest, most economical, scenic, least traffic, rest/text stops, weather and lighting considerations.
5. Weighing the decision to drive a rental vehicle, Uber type services, ride sharing versus using a personal vehicle for a trip and knowing the considerations and costs associated with the choices.
6. Identify safety precautions when towing and understanding the considerations when driving near vehicles doing so.

Key Vocabulary and Topics

- Navigating
- GPS - Global Positioning System
- Map scale / reading
- Jackknifing
- Rest /cell phone stops
- Mileage markers
- Odometer vs trip meter
- Secondary streets
- EZ Pass/transponder
- Ride sharing
- Arterial streets
- Safe Packing
- Tire Changing
- Map Apps
- Paper Maps
- ETA Estimated time of arrival

Planning Your Travel

Local/Short Distance Travel vs. Long Distance Travel

Do you plan the same way?

Short Trip- Questions to Ask Yourself

- Is this trip necessary?
- Do I have enough time?
 - Allow time for the trip
 - Listen to weather and traffic reports
 - Choose the best travel time or best route to travel
- Is my vehicle prepared for a short/long trip?
 - Windshield wiper fluid
 - Tire condition
 - Lights are working properly
 - Engine properly working

Planning an Extended Trip

- Prepare vehicle (tires, brakes, engine, etc.)
- Loading considerations
- Basic and emergency equipment (maps, jack, flashlight, first aid kit, etc.)
- Personal Preparation
 - Determine route (fastest, shortest, scenic)
 - Traffic – morning/evening rush hour
 - Miles traveled per day
 - Extra keys, bagged meals, medicines
 - Personal care stops

Personally Preparing for a Trip

The driver is the most important factor in having a safe road trip.

Remember...

- Sleep is important
- Breaks are essential to stay alert
- Drive during “waking hours”
- Plan on start and end times for the drive
- Eat a moderate meal to ensure you're not sleepy

Planning is Key - Discussion

- Do you have a GPS device or map?
- Do you know the way? Do you have a backup plan in case you get lost?
- Have you considered the time and any hazards you might encounter (e.g. construction, road condition, congestion, weather)?
- Will there be people in the area to ask questions for help if you get lost?
- Is my route safe? Can I call someone for help?

Consider Time of Day, Weather, and Lighting

Be sure to consider the time of day that you'll be traveling. Traveling into or away from the sun and or traveling at busy rush hour times may affect progress.



Mapping

- Choose the right type of map
- Orient the map by using the directional compass on it, having the “N” pointed up.
- For a road trip, have both a road map/atlas and map app on a phone or computer tablet available and programmed before starting a trip. Make sure electronic devices are fully charged!



Reading a Map

- Good maps include a legend that explains the markings and symbols; review to help you understand the map.
- Locate your current position on the map (or starting point/position).
- Locate where you want to go. If there are several points of interest mark them on the map.
- Plot your course of travel creating checkpoints along the way (plotting several routes is a good idea instead of just one long route).

Mapping Learning Activity

Instructions: Using a NYS roadmap, answer the following questions:

- What are the grid location coordinates for Albany?
- How many miles is it from Albany, NY to Binghamton University?
- List all the major routes and map 2 different routes for Albany to Cortland.
- Which route would be fastest? Which route is most direct?
- Which city is larger by size/area: Watertown or New Paltz?

GPS Devices and Phone Apps

- How long will it take to reach my destination?
 - GPS devices are good for determining this information.
 - You can find this information on two GPS sites, Google maps or Map Quest.
- Technology can also help re-route drivers for faster travel around congested areas. Information regarding how much time can be saved by taking an alternate route can make decision-making easier.

NOTE: Be sure to consider the time of day that you'll be traveling. New technology is constantly being developed to help with traffic alerts. Often, they will "red line" traffic delays and "green line" where traffic is moving smoothly.

Additional Mapping Resources: Travel Apps

- Google Maps
- Rand McNally
- Map Quest
- GPS
- Gas Buddy
- WAZE

Checking for the Latest Technology

- Some maps and devices do not take into account changes in traffic patterns, traffic accidents, or detours. Also, weather will play a significant role in your travel time if the weather is bad.
- Let's pull up a few apps to see how this is done.

Navigation Tips

- Have your route all planned and share the plans with others in the car.
- If sharing the drive with someone, ask that they help navigate the trip.
- GPS can sometimes be misleading, so make sure you have the correct address.
- If you have problems with directions N-S-E-W find and use landmarks.
- Do you have a few navigation tips to share?

After You Plot Your Route

Once you have your routes plotted ask yourself:

- Do any of my routes require tolls? If so, how much will it cost me in tolls to take that route?
- Where will the toll start and what toll exit will you need to look out for?
- EZ PASS? How does it work? Benefits of purchasing?

Highway Electronic Tolling Procedures

- Account required – tolls are electronically billed.
- Transponder registered to one specific vehicle and license plate.
- Using Electronic Tolling:
 - Select the correct toll lane
 - Observe the posted lane speed limit
 - Watch for pedestrians and other vehicles entering or exiting
 - Wait for light or message to proceed

Other Trip Preparations

- Do you need lodging? How many nights will you need?
- On your trip, will you need rest breaks? Do you know where you want to stop and take a stretch break?
- Will you be stopping for food, or will you be packing food to bring with you?

Service Your Vehicle

Check for major and minor difficulties:

- Brake system
- Exhaust system
- Steering system
- Cooling and heating system
- Engine system
- Tires and spare
- Wipers and windshield wiper fluid

Packing an Emergency Bag

- Every vehicle should have an emergency supply kit.
- Check every six months and replace expired items/change items to represent the season you will be driving in
- What emergency equipment should we pack?

Vehicle Emergency Kit Should Include

- Properly inflated spare tire, wheel wrench and jack
- Jumper cables
- Toolkit and/or multi-use tool
- Reflective triangles/flares
- First aid kit
- Non-perishable foods (granola bars, nuts, dried fruits, hard candies)
- Drinking water
- Car charger
- Fire extinguisher
- Duct tape
- Additional items for cold weather: snow brush, shovel, windshield wiper fluid, warm clothing and blankets, cat litter for traction

Road Trip Planning Learning Activity

Instructions: With a group, pick a road trip destination in another state and plan your trip

Make sure to include information on what roads you need to check and what you need to pack. How will you find out information about the other states you are driving through?

What are the potential environmental factors and conditions that you could experience? What will you need to prepare for these possible environmental factors and conditions?

Rental Vehicles

Many trips will be a combination of flying and driving. You may have to get a rental car. Some decisions you'll want to consider ahead of time:

- What size and type of vehicle do you want? Compare prices
- How long do you need it? A weekly rental may be cheaper than a daily rental.
- Will it be a round-trip or one-way rental?
- How will you handle insurance? Check to see if your regular insurance will cover the rental.
- Will you fill the gas tank on return, or will you buy a full tank of gas with your rental agreement?
- Don't forget to bring car seat if needed.

Other Types of Travel Choices

- Uber/Lyft Type Services
- Ride Sharing
- Car-Pooling

If You Need to Tow a Trailer

When pulling a trailer:

1. Double the time and space you need to accelerate, slow, and turn.
2. This will cut your fuel economy almost in half.
3. Jackknifing can also be a problem if the weight isn't distributed correctly.

Towing a Trailer Takes Planning

Check the following:

- Vehicle's owner manual that it can carry the load you want to carry
- Make sure the trailer can handle the load you want to carry
- Check fluids/grease the trailer bearings
- Double check all vehicle and trailer lights work
- Ensure that the trailer is properly fastened to the vehicle
- Have a spare tire for the trailer

Owning & Loading Trailer Tips

- You will need to register your trailer in NYS, in addition to getting it inspected yearly.
- Maintain sufficient insurance to cover you, your car, and your trailer.
- Generally, 60% of the weight is loaded towards the front (towards the vehicle) of the trailer and spread across the entire trailer.
- Never exceed the weight limit rating for the trailer. The weight limit is generally noted on the trailer or in the trailer's owner manual.

Tips for Towing a Trailer

- You may need to install towing mirrors to properly see your trailer and its behavior while you are driving
- Know the height of your trailer (important when going under low bridges)
- The longer your trailer is, the wider you'll want to turn right
- Don't take turns/curves too fast. You may tip the trailer (top heavy)
- Practice backing up a trailer. It does take some skill
- You may need to change to a lower gear to use engine compression
- Keep right when going up hills (use slow moving vehicle lane)

Trip Planning Exit Quiz

True or False

1. T When towing a vehicle, allow twice as much distance to pass.
2. F Always carry a spare can of fuel when traveling on a long distance trip.
3. T In order to stay alert while driving on a long distance trip, take a break every four hours.
4. T When typing the coordinates into your GPS for short trip travel, make sure to type in the correct address using the correct name of the street, road, or avenue so as to not be routed to the wrong area.

Trip Planning Exit Quiz

True or False

5. T Make sure that you have checked windshield wiper fluid before heading out on a long-distance trip.
6. T The odometer can help you determine how many mpg (miles per gallon) you are getting on a given trip.
7. F Map legends can help identify the type of road that your route will follow, as well as exit numbers.
8. T Load the heaviest items on the bottom forward part of the trunk.