Questions

“Auto$mart – A New Point of View”

The answers to the following questions may only be found in the in-class instructor guide book. For the students, they must go on-line for the answers.

**Module 1** – What is Fuel Efficiency and Why is it Important?

1. Why is carbon dioxide (CO2) called a greenhouse gas (GHG)?
2. What are some of the potential consequences of climate change?

**Module 2** – Fuel-Efficient Driving

1. What are some easy ways to improve fuel efficiency just by how you drive?
2. What are some environmental benefits of fuel-efficient driving?
3. What are some financial or personal benefits of fuel-efficient driving?

**Module 3** -The importance of Proper Maintenance

1. How often should you have your vehicle serviced?
2. Where do you find the correct information about the proper inflation pressure for your tires?
3. What are some important maintenance items?
4. What steps can you take to prepare your vehicle for winter driving?

**Module 4** – Choosing the Right Vehicle for Your Every Day Needs

1. Where can you find out more about a vehicle’s fuel efficiency?
2. What are some of the alternative fuels and advanced technology vehicle types available today- or being developed-that reduce emission?
3. When purchasing a vehicle what questions do you need to ask yourself to determinate your everyday needs?

**Module 5** – The Benefits of Fuel Efficiency

1. What are five things you can do to be fuel-efficient driver and reduce your impact on the environment?
2. What are some of the benefits to you and the environment of being a fuel-efficient driver?

**Road user behavior observation**

“Experiential” instruction homework assignment:

Find a major intersection within a reasonable distance from you home. This intersection must allow left turns, whit left turn traffic lights. Traffic islands are not significant to the observation. If the geography of the intersection allows, find a comfortable and safe place to sit. (bring your own folding chair or sit in a car on the corner parking lot).

Observe the following and keep copious notes which will be transferred to a written report that must be handed in. This should be discussed as part of the in-class program when talking about intersections.

**Here are the challenges:**

1. What is the sequence of traffic light durations? (How long is the amber light before the light turns red).
2. What is the duration of the four-way red before the green light?
3. What is the purpose of this sequencing?
4. Similarly, what are the sequences of the left turn arrow lights?
5. Are there amber left turn arrow lights?
6. How many drivers run red lights?
7. How many drivers make improper right turns on a protected left turn?
8. Armed with the knowledge of your observation how would you deal whit this

intersection while executing a left turn?

1. Rethink and rewrite your answer! Have you forgotten the pedestrian traffic?
2. What types of pedestrian lights are used at the intersection? Pictograph walking man or hand in stop position? Countdown crossing timer?

**Tires, their purpose and behavior**

Expectations:

1. Awareness of the construction of a tire
2. Awareness of the different types of tires and their purpose
3. Awareness of how proper maintainace is a safety factor

Information Materials & Resources:

Wikipedia has excellent information on the history of tires.

Please bring back your answers to class for lesson #7 (lows of Physics) session of the in-class instructions at your driving school. You will be tested on these questions by your in-class instructor at this time.

Hints:

Each of the four tires on your car is in contact whit the road with an approximately area size of a male’s size 12 shoe’s sole. Your life depends on these four patches.

Examine how a driver may abuse the tires on a vehicle.

Examine how the age of a tire may have effect vehicles safety.

What information may you find on the sidewall of a tire?

What effect temperature have on tire behavior?

**Traffic lights, their history, purpose and behavior**

Expectations:

1. Learn why the colours were chosen
2. Learn how traffic lights operate
3. Understanding the timing sequencing of traffic lights
4. Learn how some jurisdictions address colorblindness

Information, Materials & Recourses:

Wikipedia has excellent information on the history of traffic lights.

MTO has an excellent brochure on traffic lights.

Driving is not a “chaotic” or “undisciplined” activity. It must be an orderly behavior. Road users are expected to abide by conventions pertaining to sharing the road. Again this must be limited to an   
“Ontario centric” experience/viewpoint.

Hints :

Why are they in a “Christmas tree” (vertical) configuration?

In some jurisdictions each of the colours have different shapes. Why?

What prompted the proliferation of the left turn lights at intersections?

What are the variations in pedestrian crossing lights?

**Automobile lights, their history, purpose and behavior**

Expectations:

1. Reinforcing one of the six conditions of driving, the ability to see.
2. Awareness of functioning lights offer safety to the driver and to those with whom the road is shared.
3. Awareness that lights are an effective means of communication with other drivers.

Information, Materials & Resources:

Wikipedia has excellent information on the history of automobile lights.

The report must be short and concise, limited to Ontario viewpoints as to their colours, location and their use. The topic is broad and overwhelming if outside of “Ontario centric” requirements.

Please bring back your answers to the class for lesson #8 (Adversities & Emergencies) session of the in-class instructions. You will be tested on the questions by your in-class instructor at this time.

Hints:

1. There are exterior and interior lights on a vehicle.
2. Find the location of all lights
3. Explain their purposes
4. Headlight must conform to specific functions. What are they?
5. Purpose and location of brake lights. What and where are they?
6. Purpose and location of directional lights. What and where are they?
7. Purpose and location of marker lights. What and where are they?
8. Purpose and location of interior lights. What and were are they?