Chapter 5 – Natural Laws and Car Control

Gravity
How can gravity affect your speed?
What does the term center of gravity mean?

Energy of Motion
When a vehicle's speed doubles, it needs 4-times the distance to stop
When weight is doubled, so is the energy of motion (Force)

Friction
How would you describe friction in terms of your tires and the road?

Traction
Use the word friction to describe traction.

Tires
What characteristics of tires are important for traction?

Reduced Traction
What are the parts of your car that affect traction?
What are factors in the roadway that affect traction?

Stopping Distance
Estimated stopping distance is 4 seconds
Braking Distance
What are some factors that affect braking distance?
Speed
Road conditions
Vehicle condition
ABS
Hills
Driver ability
Loads

Force of Impact
Force one object hits another
What factors affect impact?
Speed
Weight
Distance between impact and stopping

Safety Belts
Active restraint
What are the three collisions that occur when a car hits another object?
Car hits object
You hit inside of car
Your organs hit your body

Wear snugly

Air Bags

Passive restraint
How far away from the air bag should you sit?
Drive with hands at 9-3 or 8-4

Energy Absorbing

How does a car absorb some of the energy from a collision?
Steering wheel and column
Padded dash
Seat belts
Air bags
Bumper

Child Seats

Required by all states for kids up to a certain age
Why should children ride in the back seat?