

Safe Driving Lesson Plan

History of Automotive Safety Features

Grade level: 10-12

Subject area: History

Duration: 20-50 minutes

Objectives:

Students will do the following:

- Study the potential dangers, risks and statistics associated with a variety of road safety issues such as speeding, driving while distracted and driving while drowsy.
- Study the history of safety features in vehicles. Discuss how features have changed, and how, though vehicles are safer, we must still drive safely.

Materials:

- Impact Posters
- Impact Probability Wheel
- Impact DVD mini-documentaries

Procedures:

Inform the students of the following:

Seat belts were initially an optional feature and viewed more as a novelty than critical life-saving devices, and the first automobile that offered them was the Rambler. The year was 1950 and the model was the Nash-Kelvinator.

Seat belts are now known as one of the auto industry's most significant automotive safety breakthroughs. Today, not only are seat belts mandatory as standard equipment in new cars, but most state laws require that we use them.

Along the way, another pioneering idea was air bags. These have undoubtedly saved lives. However, seatbelts are still necessary. The fact is that drivers who use seat belts in conjunction with the air bag are 23 percent less likely to experience moderate or severe injuries than those unbelted.

The Safety Movement

The roots of today's safety trend date back to the 1950s, when new car features appeared, such as wrap-around windshields (elimination of distracting center dividers), padded dashboards and collapsible steering columns (shafts that collapse like a telescope in a collision).

By the 1960s, safety gained the attention of the government. What is now the National Highway Traffic Safety Administration arrived under the U.S. Department of Transportation. During the 1960s, the passing of the Highway Safety Act also pointed the way to a new safety priority on the national agenda.

There are hundreds of other safety features, designs and devices that are helping preserve lives. Notice the recessed accessory controls on your car's dashboard, making it unlikely that a passenger will be impaled by a knob during a collision. Another subtle change has been the movement toward eliminating protruding door handles.

Naturally, while the inside of the car has gotten safer, aspects on the outside and underneath have improved, too. Steering systems, suspensions and brake engineering have all improved and contributed to better stability and control. The most recent standout champion on the braking scene has been the addition of anti-lock braking.

When most people encounter an emergency stopping situation, they tend to mash down on the brakes and lock up the wheels. All that does is melt the tires — then you're sliding over liquefied rubber. Ideally, what you should do is depress down on the brake pedal just to the threshold before the wheels begin to skid. The goal is to slow the wheels down, not stop them. However, when you're speeding toward a stationary object, it's difficult to remember that.

Enter anti-lock braking (ABS). With ABS, when the car's wheels begin to lock up, a computer activates a system that pumps the brakes automatically, pulsating many times per second and helps prevent skidding. The result is better braking and steering control.

Discussion questions:

1. Is it possible that the invention of all these safety features have made us worse drivers? Why or why not?
2. Why is it important to still maintain a proper distance from the vehicle in front of you, even with the anti-lock brakes?
3. Why would it be important to make sure that your tires are properly inflated?