#10444 DRIVER'S EDUCATION: PART 2--THE TRAFFIC SIGNS AND SIGNALS

DEAF SUCCESS PRODUCTIONS, 2004
GRADE LEVEL: 9-12
45 MINUTES

DESCRIPTION

Gives a comprehensive overview of traffic signs and the meanings of their eight shapes and colors. Shows many warning signs before moving to traffic signals and their types and meanings. Covers traffic lights, lane signals, arrows, and pedestrian signals. Includes roadway lane markings. ASL narrator; voiced in English.

ACADEMIC STANDARDS

Subject Area: Health

- Standard: Knows essential concepts and practices concerning injury prevention and safety.
  - Benchmark: Knows injury prevention strategies for community health (e.g., neighborhood safety, traffic safety, safe driving).

Subject Area: Self-Regulation

- Standard: Considers risks.
  - Benchmark: Knows potential safety hazards, and knows common strategies to avoid hazard or injury.
  - Benchmark: Knows emergency safety procedures before undertaking hazardous procedures.

INSTRUCTIONAL GOALS

1. To discuss the importance of understanding and obeying the traffic signs, signals, and roadway markings.
2. To demonstrate how a responsible driver obeys traffic laws.
3. To illustrate the importance of reading traffic signs and signals and taking action that is appropriate.

VOCABULARY

1. merge
2. pedestrian
3. regulatory
4. right-of-way
5. yield

VOICE (800) 237-6213 **TTY** (800) 237-6819 **FAX** (800) 538-5636 **E-MAIL** info@captionedmedia.org **WEB** www.captionedmedia.org
Funding for the Captioned Media Program is provided by the U.S. Department of Education

The eight shapes of traffic signs:

1. diamond
2. horizontal rectangle
3. octagon
4. pennant
5. pentagon
6. round
7. triangle
8. vertical rectangle

BEFORE SHOWING

The purpose of traffic control devices (i.e., signs, signals, and roadway markings) is to help provide safe, orderly, and predictable movement of traffic. Improper handling or overuse of devices may reduce safety and efficiency of traffic flow. National and state standards and uniform state vehicle codes have been developed to provide uniformity of appearance and proper application of devices. For example, imagine the confusion of drivers if each city or county used traffic signals with a different color, shape, and meaning.

AFTER SHOWING

Discussion Items and Questions

1. Why are all traffic laws important for drivers to follow?
2. What are the three keys for being a responsible driver?
3. Discuss the importance of the signs, signals, and roadway markings.
4. Discuss the characteristics of signs:
   a. Eight shapes of the traffic signs.
   b. Eight colors of the traffic signs.
   c. Colors of the lettered words on the signs.
5. Identify five types of lights and signals:
   a. Traffic lights.
   b. Flashing lights.
   c. Arrows.
   d. Lane signals.
   e. Pedestrian signals.
6. Identify four types of roadway markings:
   a. Yellow line markings.
   b. White line markings.
   c. Raised roadway markings.
   d. Other roadway markings.

Applications and Activities

1. Research and report on the following topic: “When is driving the most dangerous (traveling at high speeds on interstate highways or at the busy corner in our hometown)?”

   Answer: Many drivers feel most endangered when traveling at high-speeds in traffic on interstate highways, but they might be interested to learn the most dangerous place on the road might just be the busy corner in their own hometown. If that nearby intersection is regulated by traffic signals, odds are that it could be the site of a serious accident because thousands of drivers each day disobey traffic signals, such as failing to stop at red lights. The toll of this carelessness is staggering.

   Each year red light-running crashes result in nearly 1,000 deaths and about 90,000 injuries

VOICE (800) 237-6213 **TTY** (800) 237-6819 **FAX** (800) 538-5636 **E-MAIL** info@captionedmedia.org **WEB** www.captionedmedia.org
Funding for the Captioned Media Program is provided by the U.S. Department of Education

nationally. And, sadly, things are getting worse. Between 1992 and 1998, red light crashes increased at an alarming 18 percent. According to the Federal Highway Administration, 96 percent of drivers fear being hit by a red light runner upon entering an intersection, yet 55.8 percent admit to running red lights.

The leading excuse cited by the red light runners is "Being in a hurry!" This sense of entitlement—"My time is more valuable than your safety"—combined with a low expectation of being caught is responsible for rampant disrespect for the rules of the road.

But some believe there is an answer to this growing problem. They advocate the use of automatic cameras that will catch red light runners in the act and result in their being fined. Some say that red light cameras aren't accurate or, worse yet, are a compromise of our constitutional rights as Americans. But the California Board of Audits has completed its review of red light camera programs in California, finding the programs to be effective in reducing red light-running crashes.

Statewide collision data indicates a 10 percent drop in accidents caused by motorists running red lights in areas with red light cameras, compared to no change in the number of accidents in other areas," the reports says. The report also notes that red light-running crashes have increased 14 percent in San Diego when the experimental camera program was suspended.

Other studies of safety effectiveness in specific localities have also shown dramatic results. A recent audit of the San Diego program found that the number of crashes caused by motorists who run red lights dropped 44 percent at intersections with red light cameras. The red light camera program in Oxnard, California, has resulted in a 46 percent reduction in injury-causing crashes involving signal or sign violations.

"Aggressive driving is not a right, and red light cameras present no threat of any sort to safe drivers," said Leslie Blakey, executive director of the National Campaign to Stop Red Light Running. "But, getting people to change their behavior requires consistent enforcement. With photo enforcement, we can reverse the trend toward this irresponsible behavior."

2. Have the class research and report on the following common questions:
   a. How does a traffic signal know how long to stay green for each movement?
      Answer: Various devices are frequently used to detect the presence of vehicles at intersections. These detections are used by a controller (computer) at each intersection to adjust the timing of the traffic signal based on demand. The most common type of detection is provided by a series of wire loops in the pavement which detect when vehicles disturb the small magnetic field around the loop. Often the loops can be seen as lines making circles or rectangles on the pavement. The thin lines are the sealant used to cover the wire. Newer forms of detection include small overhead cameras which give an image of the approaches to the intersections, and the zones of detection maybe drawn on a computer screen rather than disturbing the pavement. This new type of system reduces costs and improves safety since crews do not have to block lanes to maintain or move loops in the pavement. The city does not maintain videotapes of the camera images.
   b. What do the pedestrian signals mean, and why don't they allow pedestrians to cross the street immediately after the button is pushed?
      Answer: Pedestrian indications consist of the illuminated words WALK and DON'T WALK or the illuminated symbols of a walking person (symbolizing WALK) and an upraised hand (symbolizing DON'T WALK). The steadily illuminated DON'T WALK indication means that a person should not enter the roadway in the direction of the signal. The flashing DON'T WALK means that the pedestrian should not enter the

VOICE (800) 237-6213 **TTY** (800) 237-6819 **FAX** (800) 538-5636 **E-MAIL** info@captionedmedia.org **WEB** www.captionedmedia.org
Funding for the Captioned Media Program is provided by the U.S. Department of Education

roadway, but that any pedestrian that has started to cross may proceed to cross the street or to a safety island. The WALK indication means that a pedestrian may proceed toward the signal, but caution should still be used in watching for potential turning vehicles. Pushing the pedestrian crossing button is similar to the vehicle detectors mentioned above. The signal controller will provide a WALK indication during the normal sequence of the signal lights when vehicle movement conflicts are minimized.

c. Why do some traffic signals have push buttons and signals for pedestrian crossings and others do not?
Answer: Pedestrian signals are primarily installed for two reasons: a high volume of pedestrian traffic is present or the signals directing vehicles do not meet the needs of pedestrians. When signals for vehicles are easy to see and provide plenty of time for pedestrians to cross safely, there is no need for special pedestrian signals. The push buttons are provided since the timing of traffic signals is typically controlled by the vehicle traffic. Pedestrians often require more time to cross streets than is needed for the vehicle volumes. If the extra time for pedestrians was always used to determine the length of the green signal, the operation would be inefficient. The use of a pedestrian push button allows the extra time to be provided only when a pedestrian is present.

d. Does the law allowing right turns on a red signal mean the vehicle must first be stopped?
Answer: When facing a circular red traffic signal, a vehicle must be stopped at the intersection before making a right turn on red. The turn may then only be made after yielding to pedestrians in the adjacent crosswalks and to other traffic in the intersection. A right turn on red is not allowed when a sign is posted prohibiting the movement or if the signal indication is a red arrow. A left turn on red is allowed from a one-way street to another one-way street in a manner similar to a right turn on red.

e. Why do signals sometimes flash, and what does it mean?
Answer: Signals which normally operate with a sequence of green, yellow, and red lights may revert to a flashing operation in certain situations. For example, when a signal is near a railroad crossing and cannot operate normally when a train is present, the signals may be flashed. Signals also contain a fail-safe program to automatically begin flashing if an event occurs which would interfere with normal safe operations. Signals may also be flashed for special events or response to unique situations. Drivers approaching a flashing red indication should treat it as they would a “Stop” sign. When approaching a flashing yellow signal, the driver may proceed through the intersection or past the signal only with caution.

f. What should drivers do when a signal is not on (no power)?
Answer: When a power failure or other malfunction occurs and the lights for a traffic signal are not illuminated, the driver of any vehicle approaching the intersection is required to stop at the intersection and may proceed with caution when it is safe to do so.

3. Have the class report on Garrett Morgan. Background: Garrett Morgan was an African-American inventor. When he was born, he was not free to pursue a quality education. While slavery had ended, African Americans could not find jobs, they could not vote, and although he attended school, he completed his education in the 6th grade. But Garrett Morgan was determined not to be defeated by the hardships that surrounded him. He started his own business. He established his own community newspaper. He invented tools that helped make transportation safer.

   One of Garrett Morgan’s greatest inventions was the automated three-phase traffic signal. This signal laid the foundation for managing traffic flows in the 20th century, and while this technology

VOICE (800) 237-6213 **TTY** (800) 237-6819 **FAX** (800) 538-5636 **E-MAIL** info@captionedmedia.org **WEB** www.captionedmedia.org
Funding for the Captioned Media Program is provided by the U.S. Department of Education

has been electrified, and then computerized, it has never been replaced. Garrett Morgan had the ability to see beyond his day to the scientific future.

RELATED RESOURCES

Captioned Media Program

- *Citizens' Guide To Safe Driving* #7914
- *Driver's Education: Part 1—Becoming A Safe and Skillful Driver* #10445

To view more titles in the *Driver's Education* series and other related media, please connect to our Web site at http://www.cfv.org/browsetitles.asp?sn=98.

World Wide Web

The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **ROADWAY SIGNS**

  http://www.sos.state.il.us/publications/rr/rr_chap07.html
  Along the roadway there are regulatory, warning, and guide signs. The color and shape of each has special meaning. You will be asked to identify roadway signs on the written driver's license test.

- **TRAFFIC SIGNALS & PAVEMENT MARKINGS**

  http://www.sos.state.il.us/publications/rr/rr_chap08.html
  Traffic signals and pavement markings must be obeyed unless a police officer directs otherwise. A driver may never leave the roadway to avoid a traffic signal.

VOICE (800) 237-6213 **TTY** (800) 237-6819 **FAX** (800) 538-5636 **E-MAIL** info@captionedmedia.org **WEB** www.captionedmedia.org
Funding for the Captioned Media Program is provided by the U.S. Department of Education