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Final Report**

September 1989

Junior High School Occupant Protection Materials

The United States Government does not endorse products or manufacturers. Trade or manufacturers' names appear only because they are considered essential to the object of this report.

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16. Abstract Based on a review of existing occupant protection educational materials, discussions with panel of subject experts and teachers, and a series of pilot tests, a set of (draft) curriculum materials on occupant safety was developed for junior high school students. These materials are designed to appeal to the wide range of developmental levels in students ages 12-15, and to maximize ease of use by teachers. The materials are organized around the theme of a Car Club, and are structured in modules, allowing teachers to adapt the program for their classroom needs. Curriculum activities emphasize student participation and self-discovery.					
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- Teachers and administrators from the Montgomery County, MD; Prince George's County, MD; and City of Alexandria, VA public schools who participated in the pilot tests and teacher panel.

I

Introduction

The purpose of the work completed under Contract DTNH22-89-C-07220 was to develop occupant protection education materials for junior high school students ages 12-15. These materials were designed to be integrated readily into existing junior high school curricula nationwide.

The process of developing the materials involved the following steps:

1. A selected literature review of existing educational and informational materials on seat belt usage for themes and approaches.
2. Discussion of themes and approaches with a panel of three experts in the areas of traffic safety, health education, and junior high school education.
3. Development of draft materials.
4. Evaluation through pilot tests, and review by the consultant panel and a panel of junior high school teachers.
5. Revision of materials.

The following is a summary of the results of these activities. Section II presents a description of the research methodology employed throughout the project, including a summary of the literature review, expert panel, initial materials recommendations, pilot tests, consultant/NHTSA review, and teacher panel. We then describe changes made in the materials as a result of the completed research, and conclude with several brief recommendations.

II

Research Methodology

The research began with a review of existing occupant safety curriculum materials for approaches, themes, messages and formats. Effective existing approaches and themes from these materials were adapted for the final product based on feedback from the consultant review, teacher panel, and pilot tests.

LITERATURE REVIEW

The selected literature review included a number of existing health and safety materials aimed at elementary through high school students. Listed below are the highlights.

- Although there are numerous materials for elementary and high school levels, there are few developed for junior high.
- Most materials used similar approaches -- student participation, verification and clarification of knowledge and misconceptions, and allowing students to draw conclusions and make a choice. Inflexible, authoritarian messages were avoided.
- Formats usually included a teacher's or principal's guide, and often student activity sheets. Materials usually included student-guided activities and an occasional video, filmstrip, or game.
- Themes generally centered on safety and health and reinforced the idea that individuals are responsible for occupant safety.

INITIAL CONSULTANT MEETING

In January 1989, NHTSA and Global Exchange personnel met with the panel of expert consultants to discuss themes, approaches, and types of materials that might be effective with a junior high audience, as well as to discuss general NHTSA guidelines for the project.

Based on their years of experience dealing with this age group as well as the subject area, the consultants offered the following insights and suggestions.

Prevalent Attitudes

For this age group, a number of common attitudes are important to consider when developing materials. The focus for this group is on self, on the emergence of individuality vis a vis their environment. Students this age also feel invincible, a feeling that "it happens to someone else, not to me." As passengers, these youth believe that while they are in the back seat they do not need to buckle up. The prevalent attitude is, "I'm in the back seat, so I won't go through the window".

While this age group is resistant to "being told" what to believe, the consultants noted that junior high youth are not as averse to directive messages from adults as were their counterparts even a decade ago. This is perhaps due to the increasing prevalence of working parents, which means that children today do not receive as much direct supervision from their parents as they used to and feel more of a need for guidance.

Meeting participants also generally believed that using negative messages or "fear" would not be effective. Although some negative information on crash consequences should be included, the general tone should be positive.

Themes

Two themes emerged as the primary focus of the materials to be developed:

- Defining these students in terms of their role in the mass transportation system – both as passengers and as future drivers.
- Presenting occupant safety as relevant to their lives, as "the smart thing to do", and as well-regarded by their peers.

Approaches to Materials

The consultants stated that the materials should involve factual presentation, demonstrations, guided discovery, and student discussion. Student activities could include, for example, role-playing, brainstorming, art or science projects, and community-based activities. Additional activities could include outside speakers, positive role models, and films or videos. The presentation should be adaptable to different curriculum areas, so that it could be used in science, social studies, art, math, health education, home economics, and other classes.

All agreed that it was imperative for the materials to be structured for easy and flexible use by teachers, requiring a minimum of preparation on their part, and providing the teacher a range of options on how the materials could be implemented. The general structure would be an initial module with additional activities to be used at the teacher's discretion.

The materials should be usable by the broadest possible segment of students. NHTSA requested that the materials be school-based, in English only, and developed at an appropriate reading level for broad use.

INITIAL MATERIALS DEVELOPMENT RECOMMENDATIONS

The literature review and insights/comments from both NHTSA and the consultants led to the development of the basic outline for the occupant safety program. This program was envisioned as containing a teacher's guide, student activity sheets (self-assessment, fact sheets, activity sheets), and a resource sheet. These components are described in more detail later in this section.

The theme was to help students define themselves and their responsibilities as both passengers and future drivers. All materials would maintain a positive tone and encourage teachers to lead students through a self-discovery process, thus allowing them to reach their own conclusions.

The approach was to develop an educational packet divided into several activities, starting with a basic introductory module and allowing the teacher to select one or more activities, giving the teacher flexibility to implement only the basic activity or a year-long program. Throughout the materials, student participation was to be heavily emphasized. Suggestions for involving parents and the community were also included.

The format was similar to previous NHTSA-produced kits. The teacher's guide would be part of the folder containing the activity sheets, and all materials would be formatted for photocopying and spirit master duplication. As part of the kit, we recommended supplying a logo sheet with different sized logos that could be used

as part of a student safety belt campaign. We also recommended strong, contemporary graphics and a clean, uncluttered layout.

The following is an outline of the recommended components:

Teacher's Guide

- Outline of program objectives
- Overview of program, the range of activities included, and what the teacher can do with the materials to facilitate the varied learning experiences of the students
- A breakdown of all the program components, a suggested order or protocol of use, and guidelines on how to use each component
- Notes on use and special considerations, divided by type of instructional program area – math, science, etc., including Limited English Proficient (LEP) classes
- Sample letter to parents, describing the occupant safety curriculum that will be implemented and asking them to discuss safety belts and air bags at home.

Student Self-Assessment

- Assessment of student knowledge and attitudes about safety belt and air bag use. This serves as a starting point for improving awareness.

Fact Sheets

- Crash dynamics
- Passenger safety
- Defining students as part of the transportation system and as future drivers: The number of 16-year olds who actually have licenses; average costs of insurance; what insurance companies look for in reducing insurance rates; crash statistics on young drivers
- Occupant protection use rates
- Speed
- Alcohol

Activity Sheets:

- Self-discovery
 - Students to go out and collect community crash statistics
 - Student-written article(s) for the school paper
 - Investigating local legislation
- Role-playing
 - Student-as-driver, as passenger, among peers, etc.
- Creative projects
 - Art projects, including designing posters, bumper stickers, buttons, pencils, stickers, and book covers
 - Student-produced videos, PSAs, or plays for younger students and peers
 - Ads in school or local paper
 - Student-produced radio spots
 - Poster contests.
- Student activities
 - Student-run safety belt survey
 - Student/parent contract to buckle up
 - Survivor Clubs.

Resource Sheet

- Videos, tapes, and films
- Suggested types of spokespersons
- Relevant community groups/activities
- Associations
- Materials available from NHTSA and other organizations
- Logo sheet with different size logos.

Coordination With Other Activities

In addition, it was recommended that if students and teachers wanted to develop a year-long program, they should consider timing the program to coincide with two national activities related to occupant safety issues. The kickoff for the program could be held during National Child Passenger Safety Awareness Week, which takes place around Valentine's Day, and the program finale could be during Buckle Up America Week, which starts the week before Memorial Day.

DRAFT MATERIALS

Following these guidelines, draft materials in a modular format were developed. The materials were presented under the theme of "The Car Club", which was intended to foster a sense of being "in the know" about occupant safety, as well as remind the target audience that they are involved in the transportation system. The contents of these materials were as follows:

1. **Teacher's Guide**, with sections on
 - a) *Program Overview*
 - b) *Mapping Your Course*
 - c) *Special Considerations (Instructional Areas: Math, Science, ESL/ESOL)*
 - d) *The Activities*

2. **Student Activity Sheets**
 - a) **Self-Assessment** -- A pretest of student knowledge on occupant safety.

 - b) **Discovery Sheets**
 - "You and the Road" introduces students to their role in the mass transportation system and the risks they face, with discussion on how they can handle the risks.

 - "If You Crash Once, You Crash Three Times" presents crash dynamics with illustrations.

 - "The Amazing Safety Belt" shows, based on crash dynamics, how safety belts prevent serious injury.

 - "Crash Protection that Works Like Magic" introduces students to automatic restraint systems.

 - "A Million Reasons Not To, None of Them Good" prompts students to think about, discuss and examine for themselves many of the excuses and reasons people use for not wearing safety belts.

 - "Remember the Rules of the Road" reviews the need to wear safety belts in the context of other safe rules of driving (and riding).

 - c) **Short Spins** -- Activities students can do in the classroom, including role-plays, debates, and an occupant safety "public event".

 - d) **Road Trips** -- In-depth projects and activities for outside of class.

- e) **Logo Sheet and Certificate** – A sheet with the Car Club logo, that can be used for stickers, posters, etc., and a certificate to be presented on completion of the class occupant safety activities.
 - f) **Parent/Student Contract** – A mutual agreement to wear safety belts and observe sound safe-driving/riding practices.
3. **Resource Listing**, showing films, videos, reports, advertisements and other educational materials on occupant safety, as well as a list of organizations with an interest in this issue.

CONSULTANT/NHTSA REVIEW

The draft materials were submitted to both NHTSA and the consultants for review, in light of the goals, formats, and messages discovered through the literature review and discussed in the consultant meeting. Several wording changes recommended by NHTSA were incorporated, as well as additional information on automatic restraints. Comments from the consultants at this point were largely editorial. The consultants were unanimously pleased with the degree to which input from the January meeting had been incorporated into the materials.

PILOT TESTS

The pilot tests were structured to provide information on teacher as well as student reaction to the materials, since teachers are clearly a critical audience. Four pilot tests were conducted; one each in 6th, 7th, 8th and 9th grade classes. The schools chosen for the tests were selected in order to provide the widest socio-economic status (SES) representation possible, given the inherent difficulties in scheduling tests such as this in schools already burdened with administrative and classroom loads.

Tests were conducted at the following schools:

- **Sixth Grade**: Ridgecrest Elementary School, Hyattsville, MD (includes lower SES students). Karen Kunkel, teacher.
- **Seventh Grade**: Dwight D. Eisenhower Middle School, Laurel, MD (includes middle SES students). Jessica Lackey, fine arts teacher.
- **Eighth Grade**: George Washington Junior High School (summer program), Alexandria, VA (includes a mix of lower and higher SES students). Roosevelt Blanding, mathematics teacher.

- **Ninth Grade: George Washington Junior High School** (summer program), Alexandria, VA. Substitute teacher, English class.

The tests were all conducted in the same manner, seeking both student and teacher reaction:

1. **In-Class Program.** The teacher was allowed to choose which module or parts of modules to administer during approximately one class period. All of the teachers chose Module One (Self-Assessment, first three Discovery Sheets), and some also took activities from other modules – usually role-plays. Teachers were sent the materials a week in advance to allow them time to review and prepare. This portion of the test was to be conducted just as if it were being integrated into the teacher's regular curriculum, with the contractor observing in the back of the class or otherwise out of the way. After the class session and student reaction session, the contractor discussed with the teacher his/her reaction to the materials.
2. **Student Reaction Session.** Following the class session, the contractor explained the purpose of the pilot test to the class and then conducted a general discussion, asking about student reaction to the program and theme, student interest in the issue, recommendations/suggestions, and student reaction to the creative materials (logo, certificate forms, in-text pictures). Following the discussion, a critique form was passed out for the students to fill out (Copy in Appendices). Students were urged to comment freely.

TEACHER PANEL

The next evaluation step was to convene a separate panel of junior high school teachers to review and comment on the materials. The panel meeting was held on July 13, 1989 at the Global Exchange offices in Chevy Chase, MD. Three junior high school teachers from Maryland and Virginia public schools participated on the panel. The teachers were sent the draft materials one week in advance for review. Topics for discussion included:

- General Comments
- Language Appropriateness
- Design Layout
- Anticipated Student Reaction
- Obstacles to Effectiveness (if any)
- Student Attitudes
- Recommendations/Other Comments.

RESULTS OF PILOT TESTS AND TEACHER PANEL

The pilot tests and teacher panel were very useful in evaluating the effectiveness of the draft materials, and in serving as a reminder that the junior high audience is a difficult target, if for no other reason than the age spread. There are often substantial differences between sixth graders and ninth graders, in terms of outlook, life-experience, and overall maturity. Attempting to appeal to that age range as one audience poses a special challenge.

However, it is our understanding (based on teacher comments) that there is a national trend towards grouping sixth through eighth graders in middle schools, and including ninth graders in high school. If true, this substantially mitigates the age-gap difficulty with our target audience.

In general, the materials and "Car Club" theme seemed to work well with youth at the younger end of the junior high spectrum (the 6th and 7th graders). As students became older and more "world-wise" in the 8th and 9th grades, the idea of a "Car Club" had a mixed appeal. However, if presented well by the teacher, the materials were flexible enough so that the information and activity sheets were interesting to most students.

Role of the Teacher

How the teacher presents the material turned out to be very important. The best teachers in the pilot tests added their own touches to involve everyone in the class and make the material relevant to them. For example, several teachers devised exercises to introduce the program as well as small exercises interspersed throughout, such as the following:

- The 6th grade teacher prepared her class the day before by giving them a question to think about: "Name the ten most important parts of the inside of a car".
- The 7th grade teacher had ten students stand up to represent "teenage deaths in car crashes". Based on statistics in the "You and the Road" Discovery Sheet, the teacher asked two of the ten students to sit down and said that "these remaining eight deaths were passengers."
- The 8th grade math teacher used Self-Assessment questions 14 and 15, which poll student use of safety belts, as an exercise in calculating percentages.

Teachers valued the modular format of the materials. They unanimously felt that it allowed them needed flexibility to adapt the materials for various class situations and learning styles. The pilot tests also made it clear that teachers did not always know the answers to Self-Assessment/Discovery Sheet questions. In addition, one of the consultants felt strongly that the materials should be more

clearly divided/marked in the modular format, for ease of understanding by teachers.

Teachers set the tone. Discussion during the teacher panel emphasized that it is very important for teachers to introduce the materials and stress the significance of the issue before actually presenting the materials in class, so that students don't treat the program as a "throwaway." It was also considered important to involve as many school staff in the program as possible, even the school board, and to treat it "like a campaign." The program, for example, could be announced through Parent-Teacher newsletters.

The Car Club Theme

The Car Club theme may need to be defined more clearly. Students were at times unclear as to what it was. Just a theme? Or an actual club? Some teachers suggested that The Car Club idea was good, but that it should be viewed as ancillary. One teacher thought that The Car Club would appeal most to all junior high age groups if it were treated as a school or community campaign, with local merchants donating giveaways such as t-shirts, etc. However, most students liked the idea of stickers bearing The Car Club logo, and liked the logo itself, although they thought it should be a different, bolder color.

Language

The language was generally well-liked, clear and appropriate. For lower SES 6th graders, there may have been a few "hard words". For upper SES 8th and 9th graders, however, the language may be on the simplistic side. Given the target age-range, this discrepancy is inevitable. The consultants and teachers all felt the language was well-suited to the task, and that the materials were flexible enough that age discrepancies could be compensated for by the teacher.

Activities

In all the pilot tests, it was abundantly clear that the more interactive the class activity was, the better. Role-plays were a favorite, and easy for the teacher to conduct. One consultant felt that the Self-Assessment form gives students "ownership" of the subject. Additional suggestions for student activities included student rap songs, wall murals, and doing a news clipping project on local crashes.

The Self-Assessment and Discovery Sheets included some questions that appeared to be easily answered by most students. However, both the consultants and teachers felt the questions were generally appropriate. Also, questions 6 and 8 on the Self-Assessment needed to be stated more clearly to avoid any confusion, and the discussion question on "If You Crash Once, You Crash Three Times" needed to be re-worded.

"If You Crash Once, You Crash Three Times" was the most popular Discovery Sheet, because most students (and teachers) had not thought of a crash the way it is presented there.

CHANGES MADE

Based on the results of the consultant/NHTSA review, pilot tests and teacher panel described above, the following final changes were made to the draft materials:

- In the Teacher's Guide, a recommendation was included that teachers prepare their class -- even with a brief explanation the day before -- in advance of actually administering the materials. This was added in the sections called Mapping Your Course and Student Activities.
- An Answer Key was added, with answers/explanations for all questions in the materials.
- It was suggested that teachers use a vocabulary list if they are presenting the materials in classes with a particularly low reading level. We feel that this approach is better than simplifying the language further, given that the materials need to appeal to such a wide range of readers, including higher level eighth or ninth graders. For these higher level students, we also suggested supplementing The Car Club with some of the high school level materials referenced in the Resource List. These suggestions were added in the Special Considerations section of the Teacher's Guide.
- At several points in the Teacher's Guide, reminders were inserted to emphasize interactive activities.
- Questions 6 and 8 on the Self-Assessment were reworded for clarity. An additional choice ("d. All of the above") was added to Question 12 to present a slightly more difficult range of choices. And, the exercise on "If You Crash Once, You Crash Three Times" was also modified for clarity.
- The materials were more clearly labeled and organized by module.
- In the Program Overview section of the Teacher's Guide, a clarification of The Car Club theme was added -- explaining its meaning as a theme, not an actual club (unless, of course, interested students wanted to form an actual club).
- In the Mapping Your Course section of the Teacher's Guide, a recommendation was added that the program works best when the message is supported on a number of fronts, including from parents. Also we recommend that teachers be familiar with local/state safety belt laws.

- Based on the pilot test experience, it was noted in the Teacher's Guide that Module One may take longer than one class period.
- In the Teacher's Guide, references were added about some of the impromptu exercises that teachers did in the pilot tests.

RECOMMENDATIONS FOR THE FUTURE

Our experience in developing these materials led to the conclusion that in the future, it would be worthwhile to consider segmenting the junior high audience by grade or at least in two groups -- 6th and 7th grades, 8th and 9th grades. If this is not possible, then the incorporation of some high school materials as options for higher level students would be desirable.

At the same time, we believe that the materials developed under this contract are highly flexible and therefore effective in appealing to all junior high age-levels. However, with flexible materials such as these, the teacher's role is very important.

Secondly, these materials discussed not only safety belt use, but other safety issues such as speeding and drinking and driving. Regarding the latter, we wondered if that issue should not be broadened to substance abuse and driving.

Finally, since Global Exchange, Inc. prepared all the art work for these materials, it would appear more efficient if we also prepared the mechanicals, which was not called for under this contract.

Appendices

Critique Forms

CRITIQUE FORM

In order to develop a classroom program for students that shows why safety belts are important for everyone, we would like you to comment on the Car Club activities you have looked at. Your comments will help us make this program as interesting and as good as possible. Please answer the following questions.

1. Did you like the idea of belonging to a Car Club?

Yes___ No___

What did you like or not like about it?

2. Would other students like the idea of being in the Car Club?

Yes___ No___

Why or why not?

3. Was everything that you read easy to understand?

Yes___ No___

Why or why not?

4. Did the Car Club activities help you understand what happens in a car crash?

Yes___ No___

5. Did the Car Club activities help you understand why it is so important to wear your safety belts?

Yes___ No___

6. Did you enjoy the Car Club activities?

Yes___ No___

Which ones did you enjoy or not enjoy?

7. After doing the Car Club activities, do you feel like you will wear your safety belts more often?

Yes___ No___

8. On a scale of one to ten, how much did you like the Car Club program?

(CIRCLE A NUMBER) 1 2 3 4 5 6 7 8 9 10

9. Do you think other students will enjoy and learn from the Car Club program?

Yes___ No___

10. Is there anything else you liked or didn't like about the Car Club program?

STDNT

CRITIQUE FORM

In order to evaluate the draft Car Club occupant safety materials you have reviewed, we would appreciate your comments on how well you think the materials work as additions to a regular class curriculum. Your comments will assist us in making any necessary revisions. Please answer the following questions and return this form along with the draft materials containing your specific comments.

1. Are the materials convenient and easy for a teacher to use?

Yes___ No___

Please explain

2. Are the materials adaptable to different class subject matter or different class formats?

Yes___ No___

Please explain

3. Is the content clear and easy to understand?

Yes___ No___

4. Do the materials clearly show why it is important for junior high school students to wear safety belts?

Yes___ No___

5. Are the activities and materials appropriate for use in a junior high school class?

Yes___ No___

Please explain

6. Do you think these materials will motivate students to increase their use of safety belts?

Yes___ No___

Please explain

7. Would you recommend the use of Car Club materials in your school or school district?

Yes___ No___

8. Which modules do you think you would recommend?

- ___ MODULE 1: Self-Assessment and First Three Discovery Sheets
- ___ MODULE 2: Last Three Discovery Sheets
- ___ MODULE 3: Short Spins
- ___ MODULE 4: Road Trips
- ___ Parent/Student Contract
- ___ Entire program

9. Comments

SUBJ

CRITIQUE FORM

In order to evaluate the draft Car Club occupant safety materials you have reviewed, we would appreciate your comments on how well you think the materials work as additions to a regular class curriculum. Your comments will assist us in making any necessary revisions. Please answer the following questions and return this form along with the draft materials.

1. What subject(s) do you teach?

2. Are the materials convenient and easy for a teacher to use?

Yes___ No___

Please explain

3. Are the materials adaptable to different class subject matter or different class formats?

Yes___ No___

Please explain

4. Is the content clear and easy to understand?

Yes___ No___

Comments

5. Do the materials clearly show why it is important for junior high school students to wear safety belts?

Yes___ No___

Comments

6. Are the activities and materials appropriate for use in a junior high school class?

Yes___ No___

Please explain

7. Do you think these materials will motivate students to increase their use of safety belts?

Yes___ No___

Please explain

8. Would you use any of the Car Club materials in your class?

Yes___ No___

9. Which modules do you think you would use?

___ MODULE 1: Self-Assessment and First Three Discovery Sheets
___ MODULE 2: Last Three Discovery Sheets
___ MODULE 3: Short Spins
___ MODULE 4: Road Trips
___ Parent/Student Contract
___ Entire Program

10. Comments

CRITIQUE FORM

In order to help evaluate the effectiveness of the Car Club occupant safety materials, we would appreciate your comments on the draft materials. We will use these comments in making any necessary revisions. Please return this form to Ruth Karimi.

1. In general, do you feel that the materials satisfy the NHTSA goal of encouraging junior high school students to buckle up?

Yes___ No___

Please explain

2. Are the materials convenient and easy for a teacher to use?

Yes___ No___

Please explain

3. Are the materials adaptable to different class subject matter or different class formats?

Yes___ No___

Please explain

4. Is the content clear and easy to understand?

Yes___ No___

Comments

5. Do the materials clearly show why it is important for junior high school students to wear safety belts?

Yes___ No___

Comments

6. Are the activities and materials appropriate for use in a junior high school class?

Yes___ No___

Please explain

7. Do the materials adequately address the attitudes and approaches discussed in the Treatment/Outline?

Yes___ No___

Please explain

8. Do you think these materials will motivate students to increase their use of safety belts?

Yes___ No___

Please explain

9. Other comments

**Letter of Authorization for
"Egg-Car" Demonstration**



BOY SCOUTS OF AMERICA

National Office
1325 Walnut Hill Lane
P.O. Box 152079, Irving, Texas 75015-2079
214-580-2000

June 23, 1989

Mark Edberg
Global Exchange, Inc.
4701 Willard Avenue, Suite 105
Chevy Chase, MD 20815

Dear Mr. Edberg:

The Boy Scouts of America holds the copyright on the *Cub Scout Leader How-To Book* (1985). Global Exchange, Inc., has permission to use the Humpty Dumpty Pinewood Derby egg-car experiment on page 9-44 of that book for the reasons and in the manner described below, as requested in your letter of June 16.

Use is granted solely for inclusion in curriculum materials developed by Global Exchange, Inc., and the National Highway Traffic Safety Administration (NHTSA) for junior high school youth on safety belt use and occupant safety. We understand that these materials will be made available from NHTSA, free of charge, to junior high schools across the country.

We are happy to have the widest exposure possible of materials that will increase safety awareness in youth. Please let us know if we can help you further.

Sincerely,

A handwritten signature in cursive script, reading "Jimmye L. Anderson".

Jimmye L. Anderson

Draft Materials

**JUNIOR HIGH SCHOOL
OCCUPANT PROTECTION MATERIALS**

Revised Draft

September 6, 1989

Prepared for
**The National Highway Traffic
Safety Administration**

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Special Considerations (Instructional Areas: Math, Science, ESL/ESOL)

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Answer Key

Occupant Safety Resources (videos, tapes, films, posters, etc.)

STUDENT ACTIVITY SHEETS

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Module Two: Discovery Sheets -- Crash Protection That Works Like Magic, A Million Reasons Not To, None of Them Good, and Remember the Rules of the Road

Module Three: Short Spins

Module Four: Road Trips

Logo sheet/Certificate

Parent/Student contract

THE CAR CLUB

**An Educational Program on
Safety Belt Use**

for

Junior High School Students

TEACHER'S GUIDE

The Car Club

Safety belt use is lower among teenagers than any other age group; only about 25 percent of teens buckle up as compared to 37 percent of preteens 5-12 years and 42 percent of adults. Yet motor vehicle crashes are the leading cause of death for this age group! Convincing teens, specifically those in junior high school, to buckle up is the goal of this educational packet.

The Car Club program was developed to help junior high school students make decisions about using safety belts. These are the years when peer pressure becomes more important to young people and they are beginning to examine their values and beliefs. This is an especially important time to introduce traffic safety issues and help them make the choice to buckle up.

PROGRAM OVERVIEW

The Car Club program offers information and a set of activities that allow students to discover the importance of using safety belts and the consequences of nonuse (for some students who used child restraint systems when younger, these activities will be a rediscovery and will help motivate them to continue using occupant protection systems). Students are approached as both passengers and as future drivers to help them examine their roles and responsibilities as they relate to safety belts and automatic occupant protection systems, including air bags.

The Car Club materials include:

- Teacher's Guide, with Answer Key and listing of occupant safety resources
- Student Activity Sheets
 - Self-Assessment
 - Discovery Sheets
 - Short Spins
 - Road Trips
 - Logos and Certificate
 - Parent/Student Contract

The Car Club is a program for learning about occupant safety, and not really a "club" with members or meetings. But the idea of a club is important as a theme in the sense that after going through the program, students can feel they have some special knowledge or awareness about an issue that is important for everyone. The idea of participating in a "club" activity, and/or receiving a certificate can sometimes serve as a reminder about what was learned.

Those students who are most interested in the issue can form an actual club to promote occupant safety through various activities (see "Road Trips: A Student Guide to More In-Depth Activities On Occupant Safety").

MAPPING YOUR COURSE

Before getting started, review this teacher guide, all the student activities, and the resources to decide which of the materials you want to use. The materials have been designed so that you can modify the lesson plan to respond to your needs and time constraints. The Teacher's Guide also includes an Answer Key, and a listing of occupant safety resources to supplement the materials provided in The Car Club. The resource list highlights:

- Print materials, videos, tapes, films and public service announcements (PSAs), and where they can be obtained
- Associations and organizations that can provide additional materials and support.

Depending on the amount of class time you have, you can use just one module or all four, but the more modules that are used, the better. Each module will take approximately one class period, depending on the amount of class discussion. The activities included in each of these modules are described in the "Student Activities" section of this guide.

A program such as The Car Club often works best when its message is supported on many fronts. Try announcing the program to parents through parent-teacher newsletters, for example. And be certain to check local laws, because the law in your area may require wearing safety belts. If so, you can discuss this with your class before or during your presentation of the program.

MODULE 1. For the basic module we recommend the self-assessment and the first three discovery sheets: You and the Road; If You Crash Once, You Crash Three Times; and The Amazing Safety Belt. This module may take up more than one class session, so allow for more time if needed.

MODULE 2. For the second session, have the students summarize what was covered in the basic module and then continue with the last three discovery sheets (Crash Protection that Works like Magic; A Million Reasons Not To, None of Them Good; Remember the Rules of the Road).

MODULE 3. Short Spins offers activities for students to do while in the classroom. These include role playing, a debate, and a "Declaration of Road Safety."

MODULE 4. Road Trips is designed as a student guide for expanding the activities outside the classroom. This could possibly involve other classes or the entire student body. How much more the students do depends a great deal on their enthusiasm and commitment.

The Parent/Student Contract may be used with any of the modules. The letter/contract helps get the message out into the community, and fosters family participation. The letter may be used as provided or modified to meet your own special needs.

Also included in the packet is a sheet of The Car Club logos that may be used on letterhead, press releases, buttons, or wherever else a logo can be used. The Certificate included on the same sheet may be issued to students who have finished all program modules.

SPECIAL CONSIDERATIONS

This educational packet can be used effectively in almost any class and reinforced through various activities. Having the message reinforced in different settings helps to remind students about the importance of using safety belts.

In English or literature classes, occupant protection can be used as the topic for written composition or oral debate. Identifying the issues surrounding safety belt use can be used when teaching research skills.

In history or civics classes, learning about any existing State legislation requiring mandatory safety belt use, and the background on any debates would be a natural. Discovering how the law is enforced could also be a class project.

Exploring the dynamics of a crash is a great activity in science and math classes. For example, a science class can see the effects of a crash and safety belt use with the "egg car" demonstration (see Road Trips in this packet), while a math class can calculate the force of impact or take a student poll on wearing safety belts and use that to calculate percentages.

English as a Second Language teachers can introduce the vocabulary prior to having students complete the activity. The discovery sheets can be used as reading materials and the questions that are included on each sheet will help measure language comprehension. Also, if the class happens to be at a lower reading level, teachers might want to introduce selected vocabulary. In general, the language has been designed to appeal to a broad spectrum of students from sixth through ninth grades.

If you are presenting the program to more advanced eighth or ninth graders, you may want to consider supplementing these materials with materials oriented towards a high-school level. These are available from the National Highway Traffic Safety Administration (NHTSA) and other sources. See the Occupant Safety Resources list included in this package for further information and addresses.

STUDENT ACTIVITIES

These materials have been designed to promote active student participation and to reinforce self-discovery, a process vital to behavioral change for this age group. The activities should be student-directed with the teacher facilitating the activities. Having the students take the lead will reinforce the self-discovery approach.

We have found that the teacher plays a major role in setting the tone and determining students' attitudes about this important issue. Students this age often just don't believe that traffic safety is something they have to worry about, despite the fact that car crashes are the number one killer of teenagers – and the number one killer for all ages 1-34. That is why it is so important to introduce The Car Club to the class and discuss the objectives before starting the activities. Create interest in the program, for example, by placing one of the large logos on the bulletin board a week or so before you actually start the program. **IMPORTANT NOTE:** Throughout the materials the word "car" is used for the sake of readability, but remind your students that what they are learning about occupant safety applies to any motor vehicle.

Each of the activities has been provided in formats you can use with photocopying and spirit duplicating machines. The answers to questions are shown in a separate answer key at the end of this Teacher's Guide.

MODULE ONE:

Self-Assessment

Objective: Students will assess their knowledge about safety belts and the dynamics of a crash by taking a test.

Have students respond to the 15 questions on the assessment sheet. All questions with the exception of numbers 14 and 15 have correct answers. The last two questions are simply an assessment of individual use and do not have "correct" answers.

- Once the students have completed the exercise, review the questions and answers together.
- Discuss which answers were most surprising and why. List them on the board.
- Take a count of the answers for questions 14 and 15 (self-assessment on individual safety belt use). What is the percentage of students for each category? How does the class compare to the national average of 25 percent?

Discovery Sheets

The six discovery sheets included in The Car Club program provide the students with the facts about the effects of crashes and how safety belts and automatic occupant protection systems (such as air bags) work. Have the students review the materials individually, in small groups, or together as a class in an interactive session.

Module One includes the first three Discovery Sheets, which are:

You and the Road

Objective: Students will recognize the risks of being a passenger or driver on the road and how they can reduce some of these risks.

Approach: As future drivers, students will identify three characteristics of a "good" driver.

- Once students have completed this activity, ask how many plan to get their driver's license when they are old enough (16 or 17 years old in most states). Some may not realize how close they are to becoming drivers.
- Have students discuss the characteristics of a good driver. What should they do when they become drivers? What should they avoid?
- Have the students list on the board what they think can be done to minimize the risks of the road. Discuss how they can act to minimize risks in difficult situations where they have to confront peer pressure and other challenges.

If You Crash Once, You Crash Three Times

Objective: Students will learn about the dynamics of a crash and how injuries and death occur.

Approach: Most people do not have a clear understanding of the dynamics of a crash. Learning about the second and third collisions in a crash will help students recognize how injuries and deaths occur in motor vehicles and how the use of occupant protection devices can minimize injury.

- Review the concept that the car and passenger are actually moving separately, not together. Have the students give other examples where this occurs (riding a bicycle, skateboard, airplane or train).

The Amazing Safety Belt

Objective: Students will learn how safety belts prevent the second and third collisions and may even prevent the first collision.

Approach: Have the class review the discovery sheet and examine how occupant protection devices stop the second and third collisions from happening.

- Find out how many students have already been involved in traffic crashes. How many were wearing their safety belts?
- Discuss what it feels like when the car comes to a sudden stop when you are wearing your safety belt. Have students describe how it would feel without safety belts.

MODULE TWO:

This module includes the last three Discovery Sheets as described below.

Crash Protection that Works like Magic

Objective: Students will learn about automatic occupant protection systems, such as air bags and automatic safety belts.

Approach: Discuss how automatic safety belts and air bags work.

- Ask how many students have been passengers in cars or other vehicles with automatic safety belts. Have them explain how they are different from manual safety belts and what some of the different automatic belt systems are.
- Check car dealers to find out which automatic safety systems different car models are equipped with – which models have an automatic shoulder belt only and which have both shoulder and lap belts.
- After reviewing the information about air bags, discuss when this system works best (frontal collisions) and which passengers benefit the most. Also discuss the need to use safety belts with air bags.
- Have students check with different car dealers to see which manufacturers offer air bags as standard equipment and what the cost is for getting them installed as optional equipment.

A Million Reasons Not to, None of Them Good

Objective: Students will examine excuses people use for not buckling up as a way of reinforcing their understanding of why they should buckle up.

Approach: This exercise can be done as a whole class or in small groups.

- Have students discuss each statement and indicate whether or not they agree. Conduct a debate.
- Let each group report on which statements they agreed with and which they didn't. Have them summarize the group discussions.
- Ask the class to share what they would say if a friend or family member believed any of the statements.

Remember the Rules of the Road

Objective: Students will review the need to wear safety belts as one of several sound "rules" of safe driving.

Approach: The exercise can be done in a group or as a class.

- Have students review each of the rules and discuss how these behaviors could endanger or save a life.
- Ask students to give examples of what they could say or do if someone they cared about ignored any of these rules.

MODULE THREE:

Short Spins

Objective: Students will have a chance to creatively use their new knowledge about seat belts, and to think of the safety belt issue in the wider context of public issues.

Approach: Short Spins offers students additional activities they can do in the classroom. These activities are designed to encourage active student participation.

- Activity #1 includes a set of role playing situations in which students will have the opportunity to develop skills and responses that will help them to be assertive in awkward situations where people are not wearing safety belts. Each group will act out their situations and then have the class offer other responses or reactions that would also be effective.

- In Activity #2, the class will debate the issues surrounding mandatory safety belt use. Some of the issues will be freedom of choice, unnecessary regulations, and enforcement (how can they be enforced). In preparing for this debate, have the students check with local police on enforcement methods and for any existing legislation.
- For Activity #3, students will "declare" their choice by preparing a statement about road safety. The class will write an article for the school paper, and if possible, a student will bring in a camera to record the event.

MODULE FOUR:

Road Trips

Objective: Through these projects, students will integrate occupant safety into a broad range of activities outside the classroom.

Approach: Road Trips offers an expanded program for student involvement. Some of these activities may be done as class projects or as The Car Club activities.

If students are interested in forming an actual Car Club, discuss any requirements, such as permission from the principal or a teacher advisor. If the club is just part of a class and not a schoolwide activity, then the need for prior school approval of projects listed in Road Trips should be decided on a case by case basis.

These activities get the message out to other students in the school, as well as out into the community. Promoting student involvement in a larger program will strengthen their commitment to traffic safety and to becoming safe drivers.

If students are interested in carrying out a long-term program, the activities can be timed to coincide with two national occupant safety events. The kickoff for the program can be held during National Child Passenger Safety Awareness Week, which takes place around Valentine's Day, and the program finale can be during Buckle-Up America Week, which starts before and includes the Memorial Day holiday.

How much you do and how involved students become is up to you. What matters is not whether the class participates in just Module One or in a year-long program, but rather that everyone gets involved. Traffic crashes are the leading cause of death and injury for our young people. Preparing young people to be better drivers and better protected passengers can help turn that tragic statistic around.

ANSWER KEY

(For questions on Self-Assessment and Discovery Sheets)

How Far Do You Need to Go? Self-Assessment

1. False. Statistics show that a person is likely to be involved in a car crash once every ten years.
2. True. Not only that, almost 80 percent of the teenagers who die in crashes are passengers.
3. False. You are 4 times more likely to be killed if you are thrown from the car and onto the hard pavement. Safety belts keep you inside the car, where you have some protection (and to get out of the car after a crash it's easy -- just unbuckle).
4. False. Most crashes and fatalities occur under 40 miles per hour and less than 25 miles from home. Safety belts should be worn every time you are in a car.
5. False. Safety is the issue, not politeness.
6. False. Your best chance of surviving in a car that is on fire or submerged is to remain conscious and not injured. Your safety belt is the best way to stay conscious and uninjured, and it takes only a few seconds to unbuckle your belt and get out. If you are not wearing a safety belt, you are more likely to be unconscious or too injured to move, and therefore unable to get out of the car. Besides, less than one half of one percent of all injury-producing crashes involve fire or being underwater.
7. False. Back seat passengers can just as easily be thrown against the inside of the car or against other people in the car. **NOTE:** 1990 car models are required to have three-point safety belts on the outside positions in the rear seat.
8. False. Absolutely not. Your chances of escaping injury or death in a crash are 50 percent better wearing safety belts than they are if you don't wear them.

9. **False.** Even if you are a good driver, there are plenty of drivers out there who are not.
10. **True.** They are a winning combination.
11. **a.** We already know that choice (b) is wrong (from question 3). As for (a), no arms in the world can withstand the force of impact in most crashes.
12. **b.** Choice (a) is dead wrong. Alcohol impairs driving ability, even if the driver is relaxed. For (c), whether or not the driver knows he or she is drunk is not relevant -- because his/her judgement and ability to react is impaired anyway. (d) is therefore wrong as well.
13. **a.** Since (a) is true, (b) is clearly wrong, and (c) is not important, given the danger posed by speeding.
14. Student poll.
15. Student poll.

You and the Road

What are three risks for passengers and drivers? The three risks to be listed could include any of those mentioned on this Discovery Sheet or other risks that students bring up. There are no set answers -- this question is primarily for discussion.

Can anything be done about these risks? Again, this question is for discussion purposes. One of the answers, however, should be using occupant protection devices.

If You Crash Once, You Crash Three Times

1. ***First blank:*** comes to a stop, or crashes.
Second blank: keeps moving.
2. ***First blank:*** comes to a stop, hits something (like windshield, pavement, etc.)
Second blank: keeps moving.
3. ***First blank:*** come to a stop, hit something inside your body (like your brain hitting your skull).

The Amazing Safety Belt

1. a. As for (b), no matter how big or small your car is, when you crash it is a major impact which can cause injury or death. (c) is clearly false. Again, your chances of escaping injury or death in a crash are 50 percent better wearing safety belts than they are if you don't wear them.
2. b. Since (b) is correct, (a) is not. (c) is clearly wrong – you don't wear or not wear safety belts based on whether or not someone can see you. It's a safety issue!
3. c. If you are the driver, you have a responsibility for the safety of your passengers. (a) is therefore wrong. As for (b), politeness is not the issue. Safety is.

Crash Protection That Works Like Magic

1. d. All are correct.
2. c. Air bags protect you in frontal collisions, not side or rear-impact collisions. That's why they should be used with safety belts.
3. a. It is important to wear your lap belt if the automatic restraint system in your car has only a shoulder belt – to keep you from sliding out from underneath. Choices (b) and (c) may happen in a crash, but are not necessarily direct consequences of wearing an automatic shoulder belt.

A Million Reasons Not To, None of Them Good

Which activity takes the least amount of time? Buckling your safety belt (d) takes only a few seconds – less time than any of the other, regular activities listed.

Explanations for 1 through 7 are in the text.

Remember These Rules of the Road

This question asks for the choice that is not a way to stay safe on the road. (a), (b), (c) and (e) are all good safe-driving practices. (d) is not, since most crashes and fatalities occur close to home, so (d) is the answer.

OCCUPANT SAFETY RESOURCES

The Following is a list of occupant safety resources that you can use to supplement or help you present The Car Club program.

L MATERIALS

Educational Pieces

National Highway Traffic Safety Administration (NHTSA): The following kinds of items may be obtained by contacting NHTSA, NTS-13, 400 Seventh St., S.W., Washington, D.C. 20590:

- Consumer information, e.g., fact sheet on occupant safety
- Occupant safety educational kits/teacher guides for high school
- List of Spanish language occupant safety materials
- Information on community occupant protection safety programs.

Twice a Champion: The Toney Lineberry Story, by Tommy Lineberry, 1988. To order, mail \$9.95 to: Twice a Champion, 570 Seay Rd., Manakin-Sabot, VA 23103. Toney Lineberry is also available for presentations.

Occupant Protection Training Workshop: Instructor's Guide. Write: University of North Carolina, Highway Safety Research Center, CB #3430, Chapel Hill, NC 27599, 1987.

B.E.L.T. (Buckling Up Extends A Life Time). Kit for High School. Entertainment Industries Council, Inc., 1988. For ordering information, write: EIC, Inc., 444 Riverside Drive, Suite 203, Burbank, CA 91505.

American Automobile Association: Contact your local AAA Club regarding availability of materials.

- "Safety Belts for People Who Enjoy Living." Brochure.
- Traffic Safety Education Materials Program (Teacher's Guides for Grades K-3, 4-6, 7-9; My Own Safety Story Activity Booklet; Otto the Auto Storybook; Set of 10 Posters.

Reports

Contact AAA Foundation for Traffic Safety or NHTSA.

Posters/Advertisements

National Highway Traffic Safety Administration (NHTSA):

- Posters, decals, print ads available from NHTSA
- NHTSA also has available a range of television public service announcements, short films, and trailers on occupant safety.

American Automobile Association: Contact your local AAA Club regarding availability of materials.

- Dashboard Decals: **Safety Belt Use REQUIRED (#3398) or REQUESTED (#3399).**
- Litter Bags: **Develop the Safety Belt Habit (#3625); Buckle Up (#3628); Season's Greetings – Buckle Up (#3629).**

These Officers Met by Accident and These Children are in a Class by Themselves Poster, American Coalition for Traffic Safety, 1620 I Street, N.W., Suite 1000, Washington, D.C. 20006, 202-857-0002. (Free)

Buckle Up Music Video. TV and radio PSAs and movie theatre PSAs/trailers. Various lengths from 5 min. to 10 sec. Entertainment Industries Council, Inc., 444 Riverside Drive, Suite 203, Burbank, CA 91505.

Audio-Visuals

The Winning Combination, film/video, 8-1/2 min. Educational film for general audiences on automatic safety belts and air bags, NHTSA, 1/2" and 3/4" video; 16 mm.

Lucky Thirteen, film/video. Entertaining story of a crash dummy come to life. The dummy refuses to crash his car without a safety belt. NHTSA, 3/4" video and 16mm film.

Children in Crashes, film/video, Insurance Institute for Highway Safety, Washington, D.C. Shows why small children need to ride in child safety seats.

If Only..., film/video, 23-min. The message is "Protect your Head!" when in a motor vehicle, participating in sports, etc. Shows the devastating consequences of irreversible head/brain injury. Visucom Productions, Inc., 415-364-5566.

Buckle Up, 22-min. Celebrity testimonials on safety belt use and a buckle up rock video for youth audiences. Entertainment Industries Council, Inc., 444 Riverside Drive, Suite 203, Burbank, CA 91505.

Safety Belts: For Dummies or People?; The Game of Your Life, General Motors/American Medical Association. Teaching videos on safety belts and drunk driving for upper elementary grades and junior high school. Check with school library or media center or Corporate Relations Dept., Rm. #11-157, GM Bldg., Detroit, MI 48202, 313-556-2046.

American Coalition for Traffic Safety: 1620 I Street, N.W., Suite 1000, Washington, D.C. 20006, 202-857-0002.

- Children's Survivors' Event Video, 10-minutes. \$3.50 ea.
- Children in Safety Belts. \$3.50 ea.
- Law Enforcement Video. \$3.50 ea.

II. ORGANIZATIONS

HEALTH

**American College of
Emergency Physicians**
P.O. Box 61911
Dallas, TX 75626
(214) 659-0911

**American College
of Preventive Medicine**
1015 15th Street, NW, Suite 403
Washington, DC 20005
(202) 789-0003

American Hospital Association
840 North Lake Shore Drive
Chicago, IL 60611
(312) 280-6048

**American Medical
Association Auxiliary**
535 North Dearborn
Chicago, IL 60610
(312) 645-4768

**American Nurses'
Association**
2420 Pershing Road
Kansas City, MO 64108
(816) 474-5720

**American Osteopathic
Association**
122 C Street, NW, Suite 875
Washington, DC 20001
(202) 783-3434

**American Public
Health Association**
1015 15th Street, NW
Washington, DC 20005
(202) 789-5627

American Red Cross
17th and D Streets, NW
Washington, DC 20005
(202) 639-3086

**American School
Health Association**
P.O. Box 708
Kent, OH 44240
(216) 678-1601

**American Spinal Injury
Association**
2020 Peachtree Road, NW
Atlanta, GA 30309
(404) 352-2020

American Trauma Society
1400 Mercantile Lane
Suite 188
Landover, MD 20785
(800) 556-7890
(301) 925-8811

**Association for the Advancement
of Health Education**
1900 Association Drive
Reston, VA 22091
(703) 476-3440

**Association of State &
Territorial Health Office**
1311-A Dolly Madison Boulevard
McLean, VA 22101
(703) 556-9222

National Head Injury Foundation
18A Vernon Street
Framingham, MA 01701
(617) 879-7473

**National Center
for Health Education**
2190 Meriden Park Boulevard
Concord, CA 94520
(415) 676-2813

**U.S. Department of Health
and Human Services**
330 C Street, SW, Room 2132
Washington, DC 20201
(202) 472-5370

LAW ENFORCEMENT AND JUDICIAL

Your first resource in this category should be the local police department. Contact the following organizations for additional information on law enforcement ideas and activities:

American Judges Association
300 Newport Avenue
Williamsburg, VA 23185
(804) 253-2000

**National Association of State
Directors of Law Enforcement
Training**
50 Fremont Street, Room 205
Melrose, MA 02176

**International Association
of Chiefs of Police**
13 Firstfield Road, SE
Gaithersburg, MD 20878
(301) 948-0922

National Sheriffs Association
1450 Duke Street
Alexandria, VA 22314
(703) 836-7827

TRAFFIC SAFETY

**American Driver & Traffic Safety
Education Association**
239 Florida Avenue
Salisbury, MD 21801
(301) 860-0095

American Automobile Association
AAA Headquarters
Traffic Safety Department
1000 AAA Drive
Heathrow, FL 32745
(407) 444-7911

**National Association of Governor's
Highway Safety Representatives**
444 North Capitol Street
Washington, DC 20001
(202) 624-5877

**National Association of Women
Highway Safety Leaders**
Myrt Riggs, President
721 Dragoon Drive
Mt. Pleasant, SC 29464
(803) 884-7724

National Safety Council
444 North Michigan Avenue
Chicago, IL 60611
(312) 527-4800

State Traffic Safety Agencies
(Check telephone book for
information.)

EDUCATION

**American Association
of School Administrators**
1801 North Moore St.
Arlington, VA 22209
(703) 528-0700

Boy Scouts of America
1325 Walnut Hill Lane
Irving, TX 75038
(214) 659-2000

National 4-H Council
7100 Connecticut Avenue
Chevy Chase, MD 20815
(301) 961-2800

National FFA Center
(Future Farmers of America)
5632 Mount Vernon Memorial
Highway
Alexandria, VA 22309
(703) 360-3600

**Mothers Against Drunk Driving
(MADD)**
669 Airport Freeway
Suite 310
Hurst, TX 76053
(817) 268-6233

**National Association of
Elementary School Principals**
1615 Duke Street
Alexandria, VA 22314
(703) 684-3345

**National Association of
Secondary School Principals**
1904 Association Drive
Reston, VA 22091
(703) 860-0200

**National Association
of Student Councils**
1904 Association Drive
Reston, VA 22091
(703) 860-0200

National PTA
700 North Rush Street
Chicago, IL 60611
(312) 787-0977

National Student Safety Program
Contact the local chapter

**Students Against Drunk Drivers
(SADD)**
Box 800
Marlboro, MA 01752
(617) 481-3568

MODULE ONE

Self-Assessment

Discovery Sheets:

You and the Road

If You Crash Once, You Crash Three Times

The Amazing Safety Belt

How Far Do You Need To Go?

Self-Assessment

How much do you know about safety belts? How much do you know about safe driving? Learning about these issues is one of the main reasons for The Car Club, so try answering the questions below to see how much you know, or how far you need to go.

TRUE OR FALSE

1. ____ I'm not likely to be involved in a crash in the next 10 years.
 2. ____ Injuries from car* crashes are the number one cause of death for young people.
 3. ____ If I'm in a serious crash, my chances of injury will be less if I'm thrown clear of the car.
 4. ____ It's a good idea to wear safety belts on long trips on the highway, but you don't need them for short trips close to home.
 5. ____ If no one else in the car is wearing safety belts, it is impolite for me to put them on.
 6. ____ I shouldn't wear safety belts because they will trap me inside if my car is on fire or submerged under water after a crash.
 7. ____ Passengers in the back seat don't need to wear safety belts.
 8. ____ Safety belts are more likely to cause an injury than prevent an injury.
 9. ____ Good drivers don't need to wear safety belts.
 10. ____ Safety belts combined with air bags are the best way to reduce injury in a crash.
-

11. Of the following, circle the best way to protect yourself in a car crash:
 - a. brace yourself with your arms.
 - b. jump clear of the car.
 - c. wear your safety belts.

* We use "car" throughout these materials, but the information applies to any motor vehicle, including vans, trucks, etc.

12. Drinking while driving...
- a. helps the driver relax and drive better.
 - b. is one of the major causes of fatal car crashes.
 - c. is safe as long as the driver knows he is drunk and is especially careful.
 - d. All of the above.
13. Which of the following is true? Speeding...
- a. gives the driver less time to react and is a major cause of crashes.
 - b. is the best way to get somewhere in a hurry.
 - c. keeps your engine in tune.
14. When you ride in a car, how often do you wear safety belts?
- a. always b. most of the time c. sometimes d. never
15. Should you be wearing them more, less, or is what you do about right?
- a. more b. less c. about right

You and the Road

Although you might not think about it, you spend a lot of time on the road, as a passenger in a car, pick-up, van or bus, or riding a bicycle. And it won't be too long before you'll be on the road as a driver, too.

Since being on the road is such an important part of your life, let's look at some of the risks. Think of it this way: When you're in a car, you are almost always traveling much faster than you would walk or run, and you're traveling inside a machine that weighs a few thousand pounds. Not only that, but you're not alone. The road is filled with other cars, trucks, buses, and all kinds of vehicles. So a lot can happen. When you are involved in a crash, there's a lot of force involved, and the results are often very serious. But most crashes can be avoided. That's why we use the word "crash" and not "accident."

See what you think of the facts below. How might they apply to you?

- Motor vehicle crashes are the leading cause of death among teenagers. This doesn't just mean teenagers who are driving. Almost 80 percent of the teenagers who die in crashes are passengers!
- Almost 20 percent of these teenagers were between 13 and 15 years old. Not even drivers yet!
- Many of these deaths were the result of driving while drinking, speeding, and not wearing safety belts.
- You're already on the road as a passenger, but chances are you'll be on the road as a driver when you are 16 or 17 years old. In 1987, almost 2 million 16 year olds got their licenses. That's half of all 16 year olds in the U.S. for that year.
- When you do get a license, you'll have to get car insurance. Because the accident rate is so high for young drivers, insurance is very expensive. But you can keep the cost down with a good driving record.

What are the risks you face as a passenger and a driver? List three of these risks.

1. _____
2. _____
3. _____

Can you do anything about these risks? List three things you think you can do to help reduce your risks as a passenger or driver.

1. _____
2. _____
3. _____

If You Crash Once, You Crash Three Times

A crash is not just a crash. It's really THREE different collisions. Sound hard to believe? It's not if you realize that you and the car are moving SEPARATELY. The car is moving, but so are you. So when the car hits something, it stops but you don't. You keep going until you hit something, whether it is the dashboard, the windshield, or the pavement outside. When the car hits, that's the first collision. When you hit, that's the second collision.

Let's look at the first two collisions, and then we'll talk about the third collision.

Collision 1



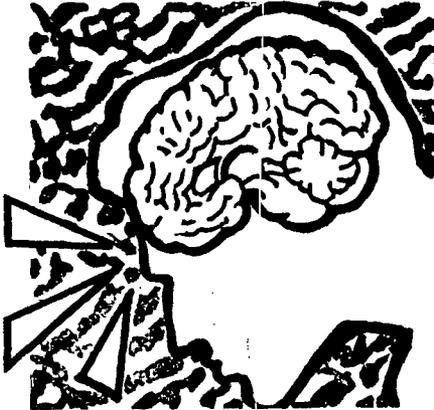
Collision 2



Think of the third collision this way: Just as you move separately from the car, your organs move around separately inside you. Take your brain, for example. Your brain is suspended in liquid inside your skull. If your skull (your head) comes to a hard stop in a crash, your brain keeps moving until it hits the inside of your skull. This collision can cause brain damage, which is often permanent. Can you imagine what would happen to your brain during a 50 MPH crash?

The third crash looks like this.

Collision 3



FILL IN THE BLANKS:

1. In the first collision, the car _____.
Meanwhile, your body _____.
2. In the second collision, your body _____.
Meanwhile, your internal organs _____.
3. In the third collision, your internal organs _____.

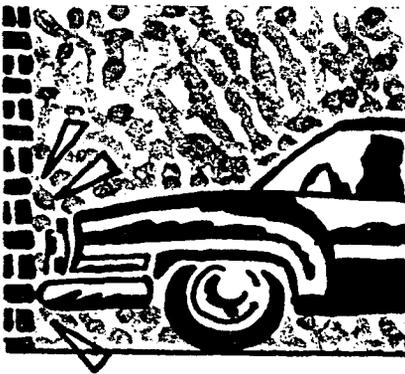
WEARING YOUR SAFETY BELT CAN PREVENT YOU FROM BEING INJURED OR KILLED IN THE SECOND AND THIRD COLLISION!

The Amazing Safety Belt

Statistics show that you are likely to be in at least one car crash over the next ten years (and once every ten years after that). If you are, that crash doesn't have to turn into three collisions! There's one easy way to make sure it doesn't - WEAR YOUR SAFETY BELTS. It's so easy to do, and you'd be amazed at how well they work. They're the BEST way anyone has ever come up with to reduce injuries in a crash.

Let's see how safety belts do their job. In the first collision, the car hits something and stops. Now without safety belts, you -- whether you are the driver or a passenger -- would keep going until you hit something (second collision). Not with safety belts! The belts hold you to the car, so that WHEN THE CAR STOPS, YOU DO TOO. As a result, only the car hits something. You don't.

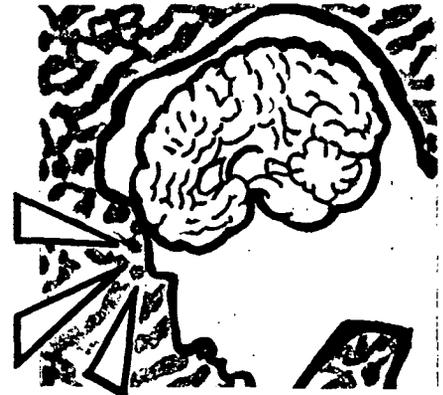
Collision 1



Collision 2



Collision 3



The third collision happens when your internal organs keep moving after you hit something (like the dashboard or windshield). But with your safety belts on, YOU WON'T HIT ANYTHING. Sure, you'll still come to a fast stop in a crash, even with safety belts on. But it won't be nearly as hard an impact, as the belts will spread the force over the stronger parts of your body, like your hips and shoulders. By spreading the crash forces this way, you are much less likely to be injured. This is true even for crashes at low speeds.

To do their job, though, safety belts have to be worn the right way. Your lap belt should be fastened around your hips, not your stomach. Your shoulder belt should fit snugly (not loosely) over your shoulder. It should never be tucked under your arm.

Answer the following questions.

1. Safety belts (CIRCLE ONE)
 - a. prevent you from being thrown out of the car and from hitting the car's interior.
 - b. are not necessary if you're in a big car.
 - c. don't make much of a difference in a crash.

2. If you are a back seat passenger, you (CIRCLE ONE)
 - a. don't need to wear safety belts because you'll be protected by the seat in front of you.
 - b. do need to wear safety belts because you can still be thrown against damaging parts of the car's interior, be thrown into other people in the car, or be thrown out of the car.
 - c. don't need to wear safety belts because no one can see you back there.

3. If you are a driver, you (CIRCLE ONE)
 - a. should worry about your safety belts, not your passengers'.
 - b. shouldn't ask your passengers to wear their safety belts. It would be impolite.
 - c. have a responsibility to make sure everyone in the car has buckled up.

In The Car Club, we know how important safety belts are. Here are the facts: With safety belts, your chances of escaping injury or death in a crash are 50 percent better than they would be without belts. And the percentage is highest when you have both lap and shoulder belts on. Not only that, many States now have laws that require you to buckle up. But wearing them is up to you. It's your decision!

HOW TO WEAR YOUR SAFETY BELT THE RIGHT WAY:



MODULE TWO

Discovery Sheets:

Crash Protection That Works Like Magic

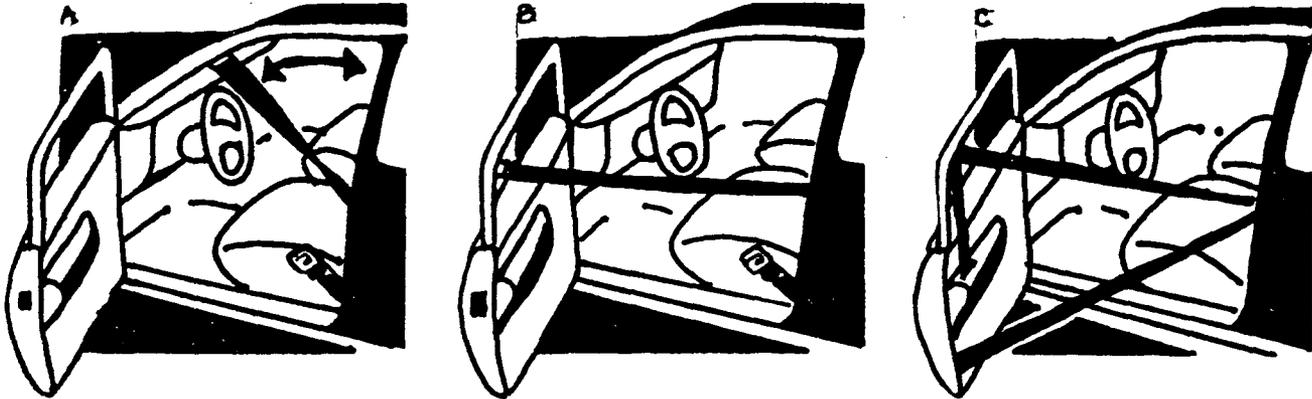
A Million Reasons Not To, None of Them Good

Remember These Rules of the Road

Crash Protection That Works Like Magic

Now there are some new crash protection devices that you are likely to see in more and more cars. These new devices are automatic safety belts and air bags.

Automatic Safety Belts



The automatic safety belts you see in pictures A - C are just like regular safety belts, except that you don't "put them on." They put themselves on, because they are either motorized or attached to both the car door and the seat so that when you get in and shut the door, the belt closes over you automatically. This makes it hard for you to forget! But notice that the automatic belt systems in A and B have only a shoulder belt. It is important to wear your manually-attached lap belt with these shoulder belts. Other automatic systems, like the one in C, include both shoulder and lap belts. Some systems with shoulder belt only also have a padded knee panel below the dashboard to help keep you from slipping out from under the belt.

Air Bags



As you can see in the picture, air bags are really bags of "air" that inflate during a frontal crash and prevent the driver or front seat passenger from hitting the windshield or dashboard by absorbing the overall impact of the crash. So far, they can only be installed in the steering wheel and dashboard for front seat occupants.

How do they work? There are sensors built into the car, usually behind the bumper. In a front-end crash over 12 miles per hour, these sensors set off a gas canister (usually nitrogen) that inflates the bags. Right after they've inflated in the crash, the bags deflate again so that the person hitting them doesn't bounce between the bag and the seat. This all happens very quickly -- in a matter of seconds!

Air bags work extremely well, but only in front-end crashes. They're added protection, but not a substitute for safety belts. Always wear belts with air bags to help keep you in your seat and protect you in side and rear-end crashes, where the bags do not inflate.

Circle the best answer for each:

1. Automatic safety belts...
 - a. are attached to the car door and the seat.
 - b. close over the passenger (or driver) automatically when the car door is shut.
 - c. should always be used with a lap belt.
 - d. all of the above are correct.

2. Air bags protect you if your car is hit from the
 - a. right side b. back c. front d. left side
 - e. all of the above

3. If you are wearing only an automatic shoulder belt, but not your lap belt along with it, you could
 - a. slide out from under the shoulder belt and hit the car's interior.
 - b. be pinned to the seat.
 - c. be unable to escape from the car.
 - d. be thrown from car if the door comes open.
 - e. both a and d.

A Million Reasons Not To, None of Them Good

Now that you know how important safety belts are, can you imagine why anyone WOULDN'T wear them? It's so easy just to buckle up every time you get in a car. Pull, clip, snap. That's it!

Which of these activities takes the least amount of time?

- a) Putting a coat on before going outside on a cold day.
- b) Putting your shoes on.
- c) Brushing your teeth.
- d) Buckling up your safety belt.

If you can believe it, a lot of people still don't quite understand the benefits of safety belts. Many people don't wear them regularly. Here are some of the reasons people give for not wearing safety belts. For each reason given, mark whether you agree or disagree that it's a good reason.

1. "I'm probably not going to get in a crash anyway. That happens to other people, not me"

AGREE ___

DISAGREE ___

2. "If I wear safety belts, I could be trapped in the car if there's a fire or if I'm underwater."

AGREE ___

DISAGREE ___

3. "It's better to be thrown clear in a crash."

AGREE ___

DISAGREE ___

4. "I'm not going far, and I won't be going fast, so I don't really need my safety belt."

AGREE ___

DISAGREE ___

5. "Safety belts will hurt you in a crash."

AGREE ___

DISAGREE ___

6. "Safety belts are uncomfortable."

AGREE ___

DISAGREE ___

7. "None of my friends wear safety belts."

AGREE ___ DISAGREE ___

Now let's take a closer look at these reasons.

1. "I'm probably not going to get in a crash anyway. That happens to other people, not me."

What about all those people who are killed or injured in car crashes? Do you think any of them said "not me"? Probably. Maybe it was the last thing they ever said. Just remember, statistics show that you are likely to be in a crash some time during the next ten years. It could be tomorrow, or the day after, or next year, but why take a chance?

2. "If I wear safety belts I could be trapped in the car if there's a fire or if I'm underwater."

Your best chance of surviving in a car fire or underwater is to remain conscious and uninjured. If you're unconscious or too injured to move, you sure aren't going to be able to get out of your car, even if you are not wearing a safety belt! That's why your safety belt can help you escape. With your safety belt on you're much more likely to be okay, and it'll take you only a second to unbuckle your belt and get out. Besides, less than one half of one percent of all injury-producing crashes involve fire or being under water.

3. "It's better to be thrown clear in a crash."

"Thrown clear" usually means being thrown through the windshield, being scraped along the pavement, or being crushed under your car or another vehicle. In fact, you are 4 times more likely to be killed if you are thrown from the car.

4. "I'm not going far, and I won't be going fast, so I don't really need my safety belt."

Most crashes occur under 40 miles per hour and within 25 miles from home. And you may think that 35-40 miles per hour is too slow to get hurt. Not true. 80 percent of deaths and serious injuries occur in cars going under 40 miles per hour, and 75 percent of deaths and injuries occur less than 25 miles from home.

5. **"Safety belts will hurt you in a crash."**

Not very likely. Any injury you could get from correctly using safety belts would be much less than what would happen without them.

6. **"Safety belts are uncomfortable."**

You can adjust them to make them more comfortable. But think about this a minute. Even if they are a little uncomfortable, it's got to be better than broken ribs, a fractured skull, or worse. Besides, once you get used to wearing safety belts, you'll feel like something's missing when you're not buckled up!

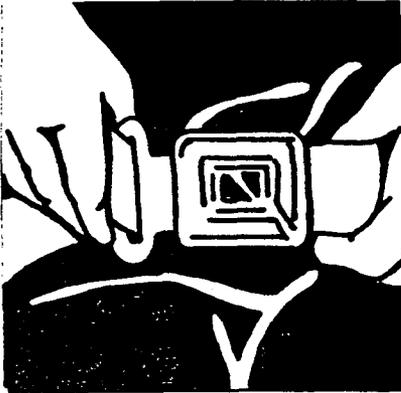
7. **"None of my friends wear safety belts."**

Is this really a good reason? Friends are one of the best things in the world, but they're not always right. You have to make decisions for yourself. You've seen how much safety belts help. So, as a member of The Car Club, you can actually help your friends out by making sure they always wear safety belts!

Remember These Rules of the Road

Now that you're ready to become a Car Club member, let's go over some important rules of the road again. These "rules" are really just reminders about what makes sense to do and not do when you're on the road:

ALWAYS WEAR SAFETY BELTS - AND WEAR THEM THE RIGHT WAY!



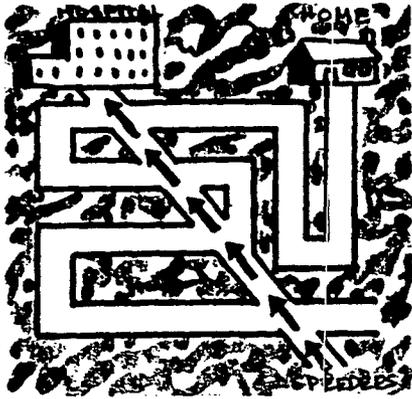
You've seen for yourself how safety belts work. With safety belts on and correctly fastened, your chances of escaping injury or death in a crash are 50 percent better than they would be otherwise. If you use safety belts along with air bags, your chances of coming out okay are even better.

DRINKING AND DRIVING -- A BAD MIX



About half of all traffic deaths involve drinking and driving. Does that tell you something about what drinking does to someone's ability to drive? And ask yourself this: How many of those drivers who were drinking thought they were in complete control?

SPEEDING -- THE FASTEST WAY TO THE HOSPITAL



Speeding is a major cause of traffic crashes and the injuries that result. The faster you go, the more force is involved when you crash, and the worse your injuries could be. Speeding gives a driver much less time to react to any problem on the road, and much less time to stop. And there are always problems on the road for a driver to deal with -- that's part of driving!

Which of the following is not a way to stay safe on the road?

- a. Don't drive when drinking or ride with anyone who is drinking.
- b. Always wear your safety belts.
- c. Slow down (you'll get there!).
- d. Wear your safety belt only if you're driving more than five miles.
- e. Tell your friends to buckle up.

MAKE THE BEST OUT OF THE ROAD, DON'T LET IT TAKE THE BEST OUT OF YOU!

MODULE THREE

Short Spins:

Activities You Can Do In Class

Short Spins:

Activities You Can Do In Class

Now that you're involved in The Car Club program, let's take a few short spins. Here are some activities you can do in class to explore the issue of safety belt use further.

ACTIVITY #1

Here are some situations in which you can put what you know about safety belts into practice. Break the class up into four groups. Each group will discuss one of the situations listed below. Then, your group will "act" out the situation for the class, based on how the group decided to handle it.

Knowing what you now know about safety belts, how would you resolve the following:

GROUP ONE

You are riding as a passenger and your best friend's father is driving. As you start off, you can only find one half of your lap belt, and it looks like it hasn't been used in ages. You can't find the other half, so you can't buckle up. You ask him where the other half is, and he says "I have no idea. You'll be all right. We're only going to the park."

WHAT DO YOU DO?

GROUP TWO

You've gone to a basketball game to meet a group of friends. Some of them are in high school and one of them has just gotten his driver's license. After the game, he says "Hey, let's all pile in my car and go get something to eat." When you get to the car and everyone starts "piling in", you realize you're going to be in a situation where you're in a front seat with several other people, and that there's no way you or anyone else will be able to buckle up.

WHAT DO YOU DO?

GROUP THREE

You're invited out to the movies by a new group of friends. When they pick you up, you get in the front seat. The driver is not wearing a safety belt, and neither is anyone else. You reach for your safety belt and the driver grins, saying, "You don't trust my driving?" The others wait for you to answer.

WHAT DO YOU DO?

GROUP FOUR

Now imagine you're the driver. You've just gotten your license, and you've invited some friends down to the beach. Everyone gets in the car, eager to go, talking and laughing, but no one buckles up. This the first time you've been allowed to take your friends anywhere in a car.

WHAT DO YOU DO?

ACTIVITY #2

For this activity, the class is going to take on the role of law makers -- like a state legislature or town council. You'll be debating whether or not to pass a bill making safety belt use mandatory. The class will be divided in half, with each half representing a different view. One side will be for the law and the other side against it. You'll have 10 minutes to put together your argument and decide how to present it, then there will be 10 minutes for debate. At the end of that time, the class will take a vote on whether or not the bill should pass.

ACTIVITY #3

Draw up a "Declaration of Road Safety" on the model of the Declaration of Independence. The whole class should contribute in writing the Declaration, with one student serving as secretary and writing suggestions on the board. When everyone has agreed what it should say, write it down on paper. Leave 15 minutes at the end of class for a "signing ceremony," where everyone in the class will sign the document. Later, the Declaration can be copied and passed out around the school.

MODULE FOUR

Road Trips:

**A Student Guide to More In-Depth
Activities on Occupant Safety**

Road Trips:

A Student Guide to More In-Depth Activities On Occupant Safety

By now you're quite aware of how important the issue of driver and passenger safety is. It's a deadly serious matter. Almost 50,000 people are killed every year in motor vehicle-related crashes. That's just too much of a loss! As a passenger and future driver, there are lots of decisions you need to make about the kind of driver and passenger you want to be. That's why we've started The Car Club program. If you're interested in exploring the issue further, and maybe even getting the whole school involved, there are a lot of things you can do.

Here are some suggestions for projects you can do by yourself or with other students. REMEMBER, you should talk to your teacher or advisor before starting any of these projects.

1. Investigate safety belt laws. Find out, from your local or State government, motor vehicle department or police department, if there are laws in your community or State requiring the use of occupant protection devices. If there are, what do they require? Also, if there is a safety belt law, contact your local police department and ask about how the law is being enforced.

If there aren't such laws, contact your local or State government representatives and find out why.

Write up the results. You could present them as a report to your class or write them up as an article for the school paper. Another possibility is to call a local newspaper and see if they will print a story on your investigation. They may use your story as the basis for an article written by one of their reporters, but it would still appear as a story about work you did.

2. Investigate local crashes. Find out, from your local or State police, where to get statistics and information on traffic crashes for your area. Then see if you can find out how many deaths or injuries resulted from those crashes (in the past year, for example), and how many of those deaths or injuries involved people who were not wearing safety belts. Not all police jurisdictions keep statistics on safety belt use in crashes, so you may or may not be able to get this information.

If you do find it, write it up as a report or a news story as in the first activity.

3. **Invite a speaker.** There are many kinds of people you could invite to speak to your class or even to a school assembly about the importance of safety belt use. Examples are: a police officer, emergency room nurse, ambulance attendant, emergency room physician, or a crash survivor (from organizations like "Saved by the Belt").

Police departments, fire departments (ambulance services), and most larger hospitals have public affairs offices. These offices are used to responding to requests from the public and are the best place to start when looking for speakers. Whether or not you're speaking with a public affairs office, explain who you are, what school you're from, what you're trying to do, and what kind of speaker you need. When you have found a speaker, talk with that person first about what you're trying to do.

Before you set a date for the speaker, remember to clear this with your teacher and advisor and to: (1) arrange a place for the talk to be held, either in class or in an assembly; (2) make sure you have set a date and time that is both convenient for the speaker and fits into school activities. Your teacher or advisor can help you with this.

There also are many other organizations that will have interesting speakers. "Saved by the Belt" is one such organization that has chapters around the country. Try calling your local chapter of the American Automobile Association (also known as AAA or "Triple-A"), the National Safety Council, Traffic Safety Now, or your State Office of Highway Safety. They often know how to get in touch with people who are involved in the issue of traffic safety.

4. **Creative project.** Get the message out to the entire school by conducting a poster contest. The winning entry could be printed up and copies posted in local businesses. You could also hold an "art exhibit" of the posters at school, at a local park, or a community center.

Art classes can make a great contribution by designing bumper stickers, buttons, stickers, or book covers. Work with local printers to get them printed up -- they may be willing to do it for free as a public service. Your art instructor can help you in how to approach printers. Then pass out the materials you've developed during Buckle Up America Week (the week before Memorial Day) or during a "Buckle Up Day" at your school.

5. **Radio public service announcements:** Write a script for a public service announcement about safety belt use. Contact local radio stations for time limits and other requirements and to see if they will use it, or even help you produce it.

6. **Print advertisements:** Design a public service advertisement for use in your school paper or by other newspapers or publications. Contact your local paper and see if they will print it. Remember, always ask what size the advertisement should be, and if there are any other format guidelines you need to follow.

7. **Student safety belt survey:** Design a simple questionnaire on safety belt use and administer the survey to as many students at your school as you can. This may mean that you ask permission from teachers or the principal to pass out copies of the questionnaire in different classes. Collect the responses and add up the results for each question. It's important to keep the questionnaire short and simple, with mostly "yes or no" answers, so that it won't be too hard to add up the responses. Get teachers and the school paper to report the results.

8. **Form a club or committee:** Try forming a club or committee of students that could sponsor school "buckle-up days" or other events. If you can, include students who have been in car crashes. One way to find out who would be interested, and who has been in a car crash, is to use the survey described in activity #7. Include questions at the end like these:

"Have you ever been in a car crash? YES ___ NO ___"

"Would you be interested in joining a club that would sponsor events about safety on the road? YES ___ NO ___ (IF YOU ARE INTERESTED, WRITE YOUR NAME, CLASS AND TEACHER ON A SEPARATE PIECE OF PAPER AND TURN IT IN WITH YOUR SURVEY. IF YOU'VE EVER BEEN IN A CRASH, WRITE IT ON THE SAME PAPER.)"

Also, if you are already in a club or service organization, persuade that club to sponsor a school "buckle up" event.

9. **The "Egg-Car" demonstration:** For a really interesting science project that shows how safety belts work, you can build the following:

WHAT YOU BUILD: A wooden ramp that you roll a small (wooden) "car" down. The car has a foam rubber seat that holds an egg, which you fasten to the seat with a cushioned vinyl tape "safety belt". At the bottom of the ramp you build a barrier for the car to run into.

WHAT YOU DEMONSTRATE: Roll the car with the egg fastened in the seat down the ramp. When the car hits the barrier, the egg does not break because it's fastened in with a "safety belt". The car itself crashes but the second crash -- the egg against the barrier -- doesn't happen and the egg stays intact. Then try the same thing without fastening the egg by its "safety belt." See what happens to the egg this time! (BE SURE to lay out newspaper around the bottom of the ramp to contain the mess.) What you'll be demonstrating is the effect of safety belts on crash injuries.

INSTRUCTIONS for building the egg car demonstration are on a separate sheet that your teacher has as part of this package. Ask for a copy.

10. **Other projects:** You're creative! What other projects can you think of that would help students understand the importance of using safety belts and using the road safely?

LOGO AND CERTIFICATE SHEET

PARENT/STUDENT CONTRACT

Dear Parents:

Each year traffic crashes are the leading cause of injury and death for teenagers. Safety belt use can help turn this statistic around. The Car Club helps junior high students make the choice to buckle up.

Members of The Car Club are bringing the message home. Review the facts about safety belts and the dynamics of a motor vehicle crash together with your son or daughter. Discuss how this can impact your family and then sign the contract. A promise to buckle up is a commitment to hold your family together . . . for life.

Sincerely,

Teacher

**THE CAR CLUB
CONTRACT**

We agree to keep our family safe by using safety belts. As members of The Car Club; we also pledge that all riders in our car will be asked to buckle up. As safe riders and drivers, we will practice the sound "rules" of the road -- not to ride with anyone who has been drinking and driving and not to speed.

Parent

Student

Date _____

Date _____