

Child Pedestrian Safety Curriculum

Teacher's Guide



K-1



2-3



4-5

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I. Purpose of the Curriculum

What is this curriculum?

The Child Pedestrian Safety Curriculum was developed by the National Highway Traffic Safety Administration (NHTSA) to teach and encourage practice in safe pedestrian behaviors for students at the elementary level (grades kindergarten through fifth). It is organized into five lessons that target the main areas of pedestrian safety: walking near traffic, crossing streets, crossing intersections, parking lot safety, and school bus stop and school bus safety. Each lesson builds upon each previous set of skills learned.

All grades receive instruction in the five areas of pedestrian safety mentioned above. However, to promote developmentally appropriate teaching, the curriculum includes three divisions: kindergarten and first grade, second and third grade, and fourth and fifth grade. The lessons build in difficulty throughout subsequent years, require greater problem-solving opportunities, and encourage peer modeling and discussion.

The overall goal of the Child Pedestrian Safety Curriculum is one of skill development. While children may be aware of ways to stay safe as pedestrians, the purpose of this program is to help children develop that knowledge into an automatic response in behavior.

Why is this curriculum important?

Children undergo an enormous amount of growth and change from birth through the teenage years, particularly in the area of cognitive development. As children grow, they develop an increasingly sophisticated understanding of the world which affects how they learn. In terms of pedestrian safety, it is important to use a curriculum that works within children's cognitive development and challenges them to further develop how they think.

Current pedestrian research shows that with proper instruction, children can be taught to follow multi-step directions and to use problem-solving to interpret situations and make critical decisions. According to Thomson et al. (1992), with instruction, children as young as 5 years old can clearly identify safe places to cross a street that mirror the decisions of similarly untrained 11-year-olds. Studies using roadside simulation approaches (that of a pretend street near a real road) demonstrate that children may exhibit a conservative approach to crossing the street, resulting in safer crossing behavior (Demetre et al., 1992; Hoffrge, Weber, Hertwig, and Chase, 2003). In similar studies, children as young as five were taught to make decisions to cross during gaps in traffic that mirror adult decisions (Lee, Young and McLaughlin, 1984; Young and Lee, 1987).

This curriculum seeks to fuse understanding of cognitive development with current findings about the benefits of pedestrian safety instruction. With this program and the repeated guided practice opportunities therein, the curriculum complements their cognitive development relative to their age or grade level.

In the past, most child pedestrian safety courses have focused on audio, video, and workbook instruction. These methods, while increasing knowledge, have shown little behavior change in the lives of the students (Rothengatter, 1981).

The ability to engage in safe street-crossing behaviors relies on the fact that pedestrian safety behaviors are an automatic motor skill. The habit of stopping at a street before crossing, and looking for traffic while crossing roads should be built into a person's repertoire of street crossing behaviors through practice.

Therefore, child pedestrian safety education must address the development of these motor skills in addition to increasing knowledge (Percer, 2009).

Students acquire new skills by incorporating all three stages of motor skill development (Anderson, 1995). First in the “cognitive” stage, the student gains knowledge of facts through instruction, videos, workbooks, and presentations. To move students past this cognitive stage and impact behavior change, students should then practice those learned skills in the “associative” stage. Last, through further and repeated practice in context, the skills and behaviors will become more automatic, thus the “autonomous” stage. With repeated practice and these higher levels of development, students show increased problem solving and require less cognitive effort to execute the skill (Percer, 2009).

This Child Pedestrian Safety Curriculum seeks to engage students in all three stages of development. First, the students gain knowledge through teacher discussion and demonstration. Following this instruction, students are given ample time to ingrain the behavioral experiences through active learning where they practice the skills they have learned. Finally, teachers are encouraged to provide lesson reviews and extensions in the form of cross-curriculum experiences to further take students toward the “autonomous” stage.

Incorporating all three stages of development is critical to developing life-long safe pedestrian behavior. In addition, teachers should also engage the students in learning the individual components of each task (i.e., when crossing the street, they follow the steps of (1) stopping at the street, (2) identifying a safe place to cross, (3) looking and listening for traffic, etc.) on a repeated basis. By exposing students to these concepts consistently and frequently, children will not only build the habits of actually engaging in the behaviors, but also build their own conceptual understanding of what it means to cross safely. Therefore, this program encourages the repeated practice of skill-sets through demonstration, modeling, individual and group applications, and extension activities. This repetition of practice will have an overall higher degree of impact on the students’ future behavior.

Individual lesson components are intended to be taught in ways that are interactive and based on guided discovery, as opposed to rote memorization. Teachers should seek to engage students in the teacher discussion and modeling by asking questions and prompting dialogue. Thus, children will incorporate these basic principles into their own behaviors (Ampofo-Boateng et al., 1993; Thomson et al., 1992; Thomson et al., 2005). Teachers should also allow children to use social interactions with their peers to further promote positive behavior. The option of using older students as models for younger children is one such way to show significant increases in safe behaviors (Thomson & Whelan, 2000; Thomson et al, 2005; Tolmie, Thomson, Foot, McLean, & Whelan, 1999). Using older children as models and incorporating student-peer-adult discussion on a consistent basis are encouraged throughout the program.

Furthermore, it is critical that skills are introduced in the specific context where they will be used. According to the “encoding specificity principle,” people are more likely to remember what they have learned if the context is similar to when it was encoded (Tulving, 1975). Children will better remember safe street crossing behaviors when taught in an environment similar to the real world (i.e., near actual roads), as opposed to learning solely in the classroom (Percer, 2009). For this reason, the program encourages teachers to give their students supervised and structured experience in real (or near-real) traffic situations.

Teachers should consider ways to incorporate guided practice in the most realistic setting as possible, while still remembering to adhere to school and district safety guidelines. Safety concerns may dictate where lesson practice is conducted. For this reason, there are several suggested guided practice options within each lesson, ranging from simulated traffic experiences that require teachers to organize materials and prepare models to practicing on real streets.

Finally, it is critical to understand that, while parents are significant safety role models for their children, most parents overestimate their own child's knowledge of safe pedestrian practices (MacGregor, Smiley & Dunk, 1999) and do not always model correct pedestrian behaviors (Quraishi, Mickalide, & Cody, 2005). Therefore, it is important for the curriculum to extend beyond the classroom and provide educational guidance for parents and caregivers to practice with their children.

This program provides multiple opportunities for parental involvement. Teachers are encouraged to solicit parent volunteers to assist with the guided practice portion of the lesson. "Parent/Guardian Tip Sheets" extend the school-based lessons and practice into the home. These "Tip Sheets" are informational pamphlets distributed at the conclusion of each lesson and contain key concepts and further practice options. They also seek to open communication between school and home by including space for teachers to reflect on individual student achievement after a specific lesson (i.e., if the student exceeded or met teacher expectations, or if the student needs additional practice at home) as well as space that solicits and encourages parents to respond to the teacher about the child's success at home.

This program seeks to fuse current research on pedestrian safety with best practices in education to provide the most comprehensive curriculum for schools and the most effective teaching for our children. For this reason, the Child Pedestrian Safety Curriculum incorporates the following ingredients of a successful curriculum:

- a. knowledge of skill development
- b. repeated practice in real-world contexts
- c. experiences that are interactive and social in nature
- d. home-school connections

II. Physical Education & Health Standards Addressed

The following national physical education and health standards (current as of April 2010), as created by National Association for Sport and Physical Education (NASPE) and the Joint Committee on National Health Education Standards are directly addressed throughout the course of this program:

- Physical Education Standard 1: Demonstrates competency in motor skills and movement patterns needed to perform a variety of physical activities.
- Physical Education Standard 5: Exhibits responsible personal and social behavior that respects self and others in physical activity settings.
- Physical Education Standard 6: Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction.
- Health Standard 1: Students will comprehend concepts related to health promotion and disease prevention to enhance health.
- Health Standard 5: Students will demonstrate the ability to use decision-making skills to enhance health.
- Health Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

III. Curriculum Structure

As outlined and described in previous sections, each lesson topic contained in this program is split into three grade-groupings: kindergarten and first, second and third, and fourth and fifth. These groupings emphasize developmentally-appropriate teaching and encourage a progressively complex curriculum as students mature.

The curriculum is designed to begin with the most basic pedestrian safety concepts: learning and practicing how to walk safely near traffic. While this may be a relatively easy task for older children due to their cognitive abilities and ease with combining skills, this component of the program is the building-block for all other lessons. The lessons in the curriculum are intended to be taught sequentially. Mastery of an earlier concept forms a foundation to build on with subsequent lessons.

Lessons are structured to include various teaching methods and reach children of varying learning styles. The general approach for each lesson is as follows:

1. Lessons begin with a brief introduction.
2. Immediately following, the teacher will guide a discussion and demonstration of the concept.
3. The third component, guided practice, is the most critical. In this step, students have the opportunity to carry out the skills observed, make choices about how to behave, and evaluate their decisions. It is this portion of the lesson that has shown to have the most impact on student skill development.
4. Finally, the teacher concludes the day's lesson with a brief review to finalize the lesson.
5. If possible, the teacher can also follow-up each lesson with the cross-curricular activities provided. These help students practice the skills in multiple contexts, thus reaching more diverse learners and supporting long term comprehension.

The following chart outlines the lessons within the curriculum. It includes the time required, the goal and objectives of each lesson, the lesson prerequisites, and the grade-level plan components.

Lesson	K-1	2-3	4-5
<p>Lesson 1: Walking Safely Near Traffic</p> <p>Time Allotted: 20–25 minutes</p> <p>Goal: To Teach Students the Basic Concepts of Sharing Spaces with Motorized Traffic</p> <p>Objectives:</p> <ul style="list-style-type: none"> ■ Explain reasons we walk places and identify common places to walk ■ Define and use appropriate pedestrian safety vocabulary ■ Recognize and demonstrate safe practices near traffic such as walking with an adult, walking on a sidewalk or side of street, and wearing bright-colored clothing 	<p>Teacher Discussion & Demonstration: Where and How Do We Walk?</p> <ul style="list-style-type: none"> • Introduce Vocabulary: <i>walker, traffic, reflective materials</i> <p>Class Brainstorming: Rules for Safe Walking Behavior</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • dramatize scenarios • practice behavior on school grounds • practice behavior on community walk <p>Lesson Closure & Review</p>	<p>Teacher Discussion & Demonstration: Where and How Do We Walk?</p> <ul style="list-style-type: none"> • Vocabulary Review: <i>pedestrian, traffic, reflective materials</i> <p>Class Brainstorming: Rules for Safe Walking Behavior</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • dramatize scenarios • practice behavior on school grounds • practice behavior on community walk <p>Lesson Closure & Review</p>	<p>Teacher Discussion & Demonstration: Where and How Do We Walk?</p> <ul style="list-style-type: none"> • Vocabulary Review: <i>pedestrian, reflective materials</i> <p>Class Brainstorming: Rules for Safe Walking Behavior</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • dramatize scenarios • practice behavior on school grounds • practice behavior on community walk <p>Lesson Closure & Review</p>

Lesson	K-1	2-3	4-5
<p>Lesson 2: Crossing Streets Safely</p> <p>Time Allotted: 40 minutes</p> <p>Goal: To Teach Students the Basic Concepts of Crossing the Street Safely</p> <p>Objectives:</p> <ul style="list-style-type: none"> ■ Use care and caution when crossing streets ■ Recognize that they should only cross the street with an adult ■ Identify and demonstrate the five steps to crossing a street <p>Lesson Prerequisites:</p> <ul style="list-style-type: none"> ■ Students should be able to demonstrate ways to walk safely near traffic ■ Students should have working knowledge of vocabulary: walker/ pedestrian, traffic 	<p>Introduction</p> <p>Teacher Discussion & Modeling: How to Cross the Street Safely</p> <ul style="list-style-type: none"> • Introduce Vocabulary: <i>visual barrier, edge</i> <p>Guided Practice:</p> <ul style="list-style-type: none"> • sing and dramatize "Crossing the Street" song • practice behavior on school grounds or near-roads • practice behavior on community walk <p>Lesson Closure & Review</p>	<p>Introduction</p> <p>Teacher Discussion & Modeling: How to Cross the Street Safely</p> <ul style="list-style-type: none"> • Review Vocabulary: <i>visual barrier, edge</i> <p>Guided Practice:</p> <ul style="list-style-type: none"> • sing and dramatize "Crossing the Street" song • practice behavior on school grounds or near-roads • practice behavior on community walk <p>Lesson Closure & Review</p>	<p>Introduction</p> <p>Teacher Discussion & Modeling: How to Cross the Street Safely</p> <ul style="list-style-type: none"> • Introduce & Review Vocabulary: <i>mid-block, visual barrier, edge</i> <p>Guided Practice:</p> <ul style="list-style-type: none"> • practice five steps with teacher guidance • practice behavior on school grounds or near-roads • practice behavior on community walk <p>Lesson Closure & Review</p>

Lesson	K-1	2-3	4-5
<p>Lesson 3: Crossing Intersections Safely</p> <p>Time Allotted: 40 minutes</p> <p>Goal: To Teach Students Simple Skills for Crossing Intersections Safely</p> <p>Objectives:</p> <ul style="list-style-type: none"> ■ Demonstrate safe behavior while approaching and crossing an intersection <p>Lesson Prerequisites:</p> <ul style="list-style-type: none"> ■ Students should be able to demonstrate ways to walk safely near traffic ■ Students should be able to demonstrate ways to walk safely across a street at mid-block 	<p>Introduction</p> <ul style="list-style-type: none"> • Introduce Vocabulary: <i>intersection</i> <p>Teacher Discussion & Modeling: How to Cross an Intersection Safely & Intro to Traffic Signals</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • play “Red Hand, Walking Man” game to demonstrate behaviors • practice behavior on school grounds or near roads • practice behavior on community walk <p>Lesson Closure & Review</p>	<p>Introduction</p> <ul style="list-style-type: none"> • Review Vocabulary: <i>intersection</i> <p>Teacher Discussion & Modeling: How to Cross an Intersection Safely & Review Traffic Signals</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • play “Red Hand, Walking Man” game to demonstrate behaviors • practice behavior on school grounds or near-roads • practice behavior on community walk <p>Lesson Closure & Review</p>	<p>Introduction</p> <ul style="list-style-type: none"> • Review Vocabulary: <i>intersection, crosswalk</i> <p>Teacher Discussion & Modeling: How to Cross an Intersection Safely & Review Traffic Signals</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • play “Red Hand, Walking Man” game to demonstrate behaviors • practice behavior on school grounds or near-roads • practice behavior on community walk <p>Lesson Closure & Review</p>

Lesson	K-1	2-3	4-5
<p>Lesson 4: Parking Lot Safety</p> <p>Time Allotted: 20-30 minutes</p> <p>Goal: To Teach Students How to Navigate a Parking Lot</p> <p>Objectives:</p> <ul style="list-style-type: none"> ■ Demonstrate safe behavior for exiting a vehicle, walking safely in a parking lot, and re-entering a vehicle <p>Lesson Prerequisites:</p> <ul style="list-style-type: none"> ■ Students should be able to demonstrate ways to walk safely near traffic 	<p>Teacher Discussion & Demonstration: Where and How Do We Walk in a Parking Lot?</p> <p>Review Class Brainstorming from Lesson 1: Rules for Safe Walking Behavior</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • dramatize safe and unsafe parking lot scenarios • practice behavior in school parking lot • practice behavior in nearby community parking lot <p>Lesson Closure & Review</p>	<p>Teacher Discussion & Demonstration: Where and How Do We Walk in a Parking Lot?</p> <p>Review Class Brainstorming from Lesson 1: Rules for Safe Walking Behavior</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • dramatize safe and unsafe parking lot scenarios • practice behavior in school parking lot • practice behavior in nearby community parking lot <p>Lesson Closure & Review</p>	<p>Teacher Discussion & Demonstration: Where and How Do We Walk in a Parking Lot?</p> <p>Review Class Brainstorming from Lesson 1: Rules for Safe Walking Behavior</p> <p>Guided Practice:</p> <ul style="list-style-type: none"> • dramatize safe and unsafe parking lot scenarios • practice behavior in school parking lot • practice behavior in nearby community parking lot <p>Lesson Closure & Review</p>

Lesson	K-1	2-3	4-5
<p>Lesson 5: School Bus Safety</p> <p>Time Allotted: 40 minutes</p> <p>Goal: To Teach Students Safe Bus Riding Behavior, as well as Safe Boarding and Exiting Techniques</p> <p>Objectives:</p> <ul style="list-style-type: none"> ■ Demonstrate safe behavior while waiting, boarding, riding, and exiting the bus ■ Identify “danger zones” around a bus and responsibilities of people on the bus <p>Lesson Prerequisites:</p> <ul style="list-style-type: none"> ■ Students should be able to demonstrate ways to walk safely near traffic ■ Students should be able to demonstrate ways to safely cross streets 	<p>Introduction</p> <p>Teacher Discussion & Modeling: Proper Bus Safety Behavior</p> <ul style="list-style-type: none"> • Introduce Vocabulary: <i>crossbar</i> <p>Guided Practice:</p> <ul style="list-style-type: none"> • sing and dramatize “Safety on the Bus” song • practice behavior on model bus • practice behavior on real school bus <p>Lesson Closure & Review</p>	<p>Introduction</p> <p>Teacher Discussion & Modeling: Proper Bus Safety Behavior</p> <ul style="list-style-type: none"> • Review Vocabulary: <i>crossbar</i> <p>Guided Practice:</p> <ul style="list-style-type: none"> • sing and dramatize “Safety on the Bus” song & play “Freeze” to demonstrate behaviors • practice behavior on model bus • practice behavior on real school bus <p>Lesson Closure & Review</p>	<p>Introduction</p> <p>Teacher Discussion & Modeling: Proper Bus Safety Behavior</p> <ul style="list-style-type: none"> • Review Vocabulary: <i>crossbar</i> <p>Guided Practice:</p> <ul style="list-style-type: none"> • sing and dramatize “Safety on the Bus” song & play “Stump the Teacher/Student” to demonstrate behaviors • practice behavior on model bus • practice behavior on real school bus <p>Lesson Closure & Review</p>

Teachers are encouraged to tailor the lessons to fit classroom circumstances, walking conditions around the school, and the community environment.

IV. Materials Needed for Teaching

As stated in the first section on current research on education, teachers should incorporate supervised and structured experiences in real (or near real) traffic situations. Within each lesson, teachers are given the option to encourage practice in one of three ways: to simulate the experience by creating a model, to bring students to a near-road or parking area to practice the behaviors, or to bring students out into the community at real-world streets, intersections, and parking areas. The amount of materials necessary for each lesson may vary due to the practice option each teacher chooses.

Teachers are also encouraged to customize the curriculum according to their school's specific geographic locale (i.e., urban versus suburban). By using photographs, language, and descriptions specific to their community, teachers can further promote the understanding and use of safe walking behaviors.

The chart below outlines materials that should be supplied by the teacher:

Lesson	K-1	2-3	4-5
Lesson 1: Walking Safely Near Traffic	Materials Provided: <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet Materials Needed: <ul style="list-style-type: none"> • Chart paper and markers 	Materials Provided: <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet Materials Needed: <ul style="list-style-type: none"> • Chart paper and markers 	Materials Provided: <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet Materials Needed: <ul style="list-style-type: none"> • Chart paper and markers
Lesson 2: Crossing Streets Safely	Materials Provided: <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet Materials Needed: <ul style="list-style-type: none"> • Masking tape, rope, or other material to create street lines • Poster-sized chart of "Crossing the Street" song 	Materials Provided: <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet Materials Needed: <ul style="list-style-type: none"> • Masking tape, rope, or other material to create street lines • Poster-sized chart of "Crossing the Street" song 	Materials Provided: <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet Materials Needed: <ul style="list-style-type: none"> • Masking tape, rope, tall boxes or barriers, and other material to create a model street

Lesson	K-1	2-3	4-5
Lesson 3: Crossing Intersections Safely	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • Cones, tape, yard stick, paper (red, yellow, green), & other materials to create intersection 	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • Cones, tape, yard stick, paper (red, yellow, green), & other materials to create intersection 	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • Cones, tape, yard stick, paper (red, yellow, green), & other materials to create intersection
Lesson 4: Parking Lot Safety	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • A large area to create a model parking lot • Masking tape, rope, chairs (16-24), or other materials to create model parking lot 	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • A large area to create a model parking lot • Masking tape, rope, chairs (16-24), or other materials to create model parking lot 	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • A large area to create a model parking lot • Masking tape, rope, chairs (16-24), or other materials to create model parking lot

Lesson	K-1	2-3	4-5
Lesson 5: School Bus Safety	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • Chairs, cones, beanbags, yard stick, masking tape, rope, or other materials to create a bus • Poster-sized chart of "Bus Safety" song 	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • Chairs, cones, beanbags, yard stick, masking tape, rope, or other materials to create a bus • Poster-sized chart of "Bus Safety" song 	<p>Materials Provided:</p> <ul style="list-style-type: none"> • Parent/ Caregiver Tip Sheet <p>Materials Needed:</p> <ul style="list-style-type: none"> • Chairs, cones, beanbags, yard stick, masking tape, rope, or other materials to create a bus

V. Cross-Curricular Connections

As cited on the Association for Supervision and Curriculum Development website, Curriculum Integration is “a philosophy of teaching in which content is drawn from several subject areas to focus on a particular topic or theme” (McBrien & Brandt, 1997). Rather than teach a concept using only one subject area in isolation, the teacher develops a theme around a particular concept and provides opportunities for complementary instruction in multiple subject areas. While many pedestrian safety programs focus solely on the physical education and health concepts, this program allows teachers to bolster student understanding by incorporating math, reading, social studies, art, music, and science subject areas into the theme of pedestrian safety.

Cross-curricular integration has shown to have many benefits. It shows students how to transfer knowledge and apply it in various settings. It also allows teachers to consistently reinforce concepts across contexts. And finally, by allowing teachers to combine subject areas and standards to achieve similar goals, it makes the best use of instructional time.

After each lesson, at least three complementary activities are included to illustrate how a teacher could take the theme of pedestrian safety and incorporate it into other academic subject areas. These activities are not mandatory, but they should help students transfer what they have learned about pedestrian safety into other, possibly more familiar contexts. They can also help students move from a basic knowledge level into higher-order thinking such as analyzing patterns and evaluating decisions. As stated above, including these activities has been shown to benefit the overall achievement of the students and promote positive changes in behavior.

The following chart outlines suggested cross-curricular extension activities that follow each lesson:

Lesson	K-1	2-3	4-5
Lesson 1: Walking Safely Near Traffic	<ul style="list-style-type: none"> • Art: Child-Sized Model Cars • Writing: Create a Rebus Story • Science/Dramatic Play: Identify Appropriate Pedestrian Clothing & Reflective Materials 	<ul style="list-style-type: none"> • Art: Illustrate Safe and Unsafe Scenarios • Writing: Directions using Time-Order Words • Dramatic Play & Art: Create Pedestrian and Traffic Stick Puppets & Put on Puppet Show 	<ul style="list-style-type: none"> • Art: Illustrate Safe and Unsafe Scenarios • Writing: Fictional Traffic Safety Story • Math: Taking a Survey

Lesson	K-1	2-3	4-5
Lesson 2: Crossing Streets Safely	<ul style="list-style-type: none"> • Dramatic Play: Create a Floor Map, Dramatize Safe Street Crossing. • Literature: Reading Stories of Walker Safety Aloud to Children • Social Studies (Geography): Identify Safe Routes on a Map 	<ul style="list-style-type: none"> • Musical Facts: Musical Chairs with Pedestrian Trivia • Literature: Reading Storybooks of Pedestrian Safety • Social Studies (Geography): Identify Safe Routes on a Map 	<ul style="list-style-type: none"> • Class Game of Pedestrian Safety Facts with Listening and Movement • Literature • Social Studies (Geography): Analyze Safe Routes on a Map
Lesson 3: Crossing Intersections Safely	<ul style="list-style-type: none"> • Art: Child-Sized Model Street Signs and Traffic Signals • Writing: Safety Words and Sentences • Dramatic Play: Large Community Map, Dramatize Safe Intersection Crossing 	<ul style="list-style-type: none"> • Math: Measurement • Writing: Acrostic Poem • Drama: Pedestrian Safety Skit 	<ul style="list-style-type: none"> • Math: Measurement • Writing: Acrostic Poem • Drama: Pedestrian Safety Public-Service Announcement
Lesson 4: Parking Lot Safety	<ul style="list-style-type: none"> • Music: Crossing the Lot Song • Math: Pictograph • Art & Dramatic Play: Child-Sized Model Parking Lot Props 	<ul style="list-style-type: none"> • Music: Composing Lyrics to Common Tunes • Math: "I Spy" Geometry • Dramatic Play: Props to Demonstrate Pedestrian Safety 	<ul style="list-style-type: none"> • Music: Composing Lyrics to Common Tunes • Math: Plotting Ordered Pairs on a Coordinate Grid • Dramatic Play: Props to Demonstrate Pedestrian Safety

Lesson	K-1	2-3	4-5
Lesson 5: School Bus Safety	<ul style="list-style-type: none"> • Art: Child-Sized Model Buses • Math: Comparing Sizes • Literature: Reading Storybooks of School Bus Safety Aloud to Children • Guest Speaker/ Hands-On Experience 	<ul style="list-style-type: none"> • Art: Bus Safety Poster • Math: Story Problems • Literature: Read and Recreate a School Bus Safety Storybook • Guest Speaker/ Hands-On Experience 	<ul style="list-style-type: none"> • Art: Bus Safety Brochure • Math: Reading a Schedule & Elapsed Time • Literature: Read and Discuss a School Bus Safety Storybook • Guest Speaker/ Hands-On Experience

National Standards for Cross-Curricular Activities

National standards in math, reading, social studies, science, music, and the arts are applicable to the Cross-Curricular activities included in the program. Following is a list of national standards (organized by subject area) that pertain to the activities:

Math Standards (developed by the National Council for Teachers of Mathematics). The student should be able to:

- NM-DATA.3-5.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them (Lesson 1: grades 4-5)
- NM-DATA.3-5.2: Select and use appropriate statistical methods to analyze data (Lesson 1: grades 4-5)
- NM-MEA.PK-2.2 & NM-MEA.3-5.2: Apply appropriate techniques, tools, and formulas to determine measurements (Lesson 3: grades 2-3 & 4-5)
- NM-MEA.3-5.1: Understand measurable attributes of objects and the units, systems, and processes of measurement (Lesson 3: grades 4-5)
- NM-DATA.PK-2.1: Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer (Lesson 4: grades K-1)
- NM-DATA.PK-2.2: Select and use appropriate statistical methods to analyze data (Lesson 4: grades K-1)
- NM-GEO.PK-2.1 & NM-GEO.3-5.1: Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships (Lesson 4: grades 2-3)
- NM-GEO.PK-2.4 & NM-GEO.3-5.4: Use visualization, spatial reasoning, and geometric modeling to solve problems (Lesson 4: grades 2-3)
- NM-GEO.3-5.2: Specify locations and describe spatial relationships using coordinate geometry and other representational systems (Lesson 4: grades 4-5)
- NM-NUM.PK-2.1: Understand numbers, ways of representing numbers, relationships among numbers, and number systems (Lesson 5: grades K-1)
- NM-MEA.PK-2.1: Understand measurable attributes of objects and the units, systems, and processes of measurement (Lesson 5: grades K-1)
- NM-NUM.PK-2.3 & NM-NUM.3-5.3: Compute fluently and make reasonable estimates (Lesson 5: grades 2-3 & 4-5)
- NM-MEA.3-5.2: Apply appropriate techniques, tools, and formulas to determine measurements (Lesson 5: grades 4-5)

Reading/Language Arts Standards (developed by the National Council for Teachers of English). Students should be able to:

- NL-ENG.K-12.1 Reading for Perspective: Read a wide range of print and nonprint texts to build and understanding of texts, of themselves, and of the cultures of the United States and the world; to

acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works. (Lesson 2: grades K-1 & 2-3; Lesson 5: grades K-1)

- NL-ENG.K-12.3 Evaluation Strategies: Apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics). (Lesson 2: grades K-1 & 2-3; Lesson 5: grades K-1)
- NL-ENG.K-12.4 Communication Skills: Adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with variety of audiences and for different purposes. (Lesson 1: grades K-1, 2-3, & 4-5; Lesson 2: grades 2-3 & 4-5; Lesson 3: grades K-1, 2-3, & 4-5; Lesson 5: grades 2-3)
- NL-ENG.K-12.5 Communication Strategies: Employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes. (Lesson 1: grades K-1, 2-3, & 4-5; Lesson 2: grades 2-3 & 4-5; Lesson 3: grades K-1, 2-3, & 4-5; Lesson 5: grades 2-3)
- NL-ENG.K-12.7 Evaluating Data: Conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience. (Lesson 2: grades 2-3 & 4-5)
- NL-ENG.K-12.8 Developing Research Skills: Use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge. (Lesson 2: grades 2-3 & 4-5)
- NL-ENG.K-12.12 Applying Language Skills: Use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information) (Lesson 5: grades K-1, 2-3, & 4-5)

Social Studies Standards (developed by the National Council for Social Studies & the National Geographic Society). Students should be able to:

- NSS-G.K-12.1 The World in Spatial Terms: Understand how to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective (Lesson 2: grades K-1, 2-3, & 4-5)

Science Standards (developed by the National Research Council & the National Science Teachers Association):

- NS.K-4.1 Science as Inquiry: Abilities necessary to do scientific inquiry and understanding about scientific inquiry (Lesson 1: grades K-1)
- NS.K-4.2 Physical Science: An understanding of properties of objects and materials and light (Lesson 1: grades K-1)

Fine Arts Standards (developed by the Consortium of National Arts Education Associations)

Music Standards. Students should be able to:

- NA-M.K-4.1 Singing, Alone and With Others, A Varied Repertoire of Music: Sing independently, on pitch and in rhythm, with appropriate timbre, diction, and posture, and maintain a steady tempo; Students sing expressively, with appropriate dynamics, phrasing, and interpretation (Lesson 4: grades K-1, 2-3, & 4-5)
- NA-M.K-4.4 Composing and Arranging Music within Specified Guidelines: Create and arrange music to accompany readings or dramatizations; Students create and arrange short songs and instrumental pieces within specified guidelines (e.g., a particular style, form, instrumentation, compositional technique) (Lesson 4: grades 2-3 & 4-5)
- NA-M.K-4.6 Listening to, Analyzing, and Describing Music: Respond through purposeful movement (e.g., swaying, skipping, dramatic play) to selected prominent music characteristics or to specific music events (e.g., meter changes, dynamic changes, same/different sections) while listening to music (Lesson 4: grades K-1)

Theater Standards. Students should be able to:

- NA-T.K-4.2 Acting by Assuming Roles and Interacting in Improvisations: Imagine and clearly describe characters, their relationships, and their environments (Lesson 1: grades 2-3)
- NA-T.K-4.3 Designing by Visualizing and Arranging Environments for Classroom Dramatizations: Visualize environments and construct designs to communicate locale and mood using visual elements (such as space, color, line, shape, texture) and aural aspects using a variety of sound sources; Students collaborate to establish playing spaces for classroom dramatizations and to select and safely organize available materials that suggest scenery, properties, lighting, sound, costumes, and makeup (Lesson 1: grades 2-3; Lesson 4: grades K-1, 2-3, & 4-5)
- NA-T.K-4.4 Directing by Planning Classroom Dramatizations: Collaboratively plan and prepare improvisations and demonstrate various ways of staging classroom dramatizations (Lesson 3: grades 2-3 & 4-5; Lesson 4: grades K-1, 2-3, & 4-5)
- NA-T.K-4.5 Researching by Finding Information to Support Classroom Dramatizations: Communicate information to peers about people, events, time, and place related to classroom dramatizations (Lesson 3: grades 2-3 & 4-5; Lesson 4: grades K-1, 2-3, & 4-5)

Visual Arts Standards. Students should be able to:

- NA-VA.K-4.1 Understanding and Applying Media, Techniques, and Processes: Use different media, techniques, and processes to communicate ideas, experiences, and stories; Students use art materials and tools in a safe and responsible manner (Lesson 1: grades K-1, 2-3, & 4-5; Lesson 3: grades K-1; Lesson 5: grades K-1, 2-3, & 4-5)
- NA-VA.K-4.2 Using Knowledge of Structures and Functions: Know the differences among visual characteristics and purposes of art in order to convey ideas; Students describe how different expressive features and organizational principles cause different responses; Students use visual structures and functions to communicate ideas (Lesson 1: grades 2-3 & 4-5; Lesson 5: grades 2-3 & 4-5)

- NA-VA.K-4.3 Choosing and Evaluating a Range of Subject Matter, Symbols, and Ideas: Explore and understand prospective content for works of art; Students select and use subject matter, symbols, and ideas to communicate meaning (Lesson 1: grades 2-3 & 4-5; Lesson 5: grades 2-3 & 4-5)
- NA-VA.K-4.5 Reflecting Upon and Assessing the Characteristics and Merits of their Work and the Work of Others: Understand there are various purposes for creating works of visual art; Students understand there are different responses to specific artworks (Lesson 1: grades K-1, 2-3, & 4-5; Lesson 3: grades K-1; Lesson 5: grades K-1, 2-3, & 4-5)

End-of-Unit Culminating Celebration

In addition to extending student learning by following each lesson with appropriate cross-curricular connections, teachers are encouraged to organize an end-of-unit activity. This celebration reinforces the learning that has taken place over the course of the unit, helps teachers assess student understanding of the overall goals of the program, and allows students to demonstrate to peers, other teachers, administration, parents, and community-members their newfound knowledge.

Examples of end-of-unit celebrations:

- Field Trip (all grades)—students can travel to places in their community where they will demonstrate (and practice) their pedestrian safety skills. Teachers should consider inviting parents and other community member volunteers.
- Safety Fair (all grades)—teachers can invite community workers such as police officers and crossing guards to demonstrate to students their daily work with traffic and pedestrian safety. Older students can develop tri-fold posters to show what they have learned. Younger students can, using props and models, demonstrate for attendees what they have learned.
- Grade-Level Play (grades K-1 or 2-3)—students can use props created throughout the pedestrian safety unit to put together a play about safety. Children can demonstrate safe behaviors when near traffic, near driveways, crossing streets, crossing intersections, or crossing parking lots.
- Public Service Announcements (grades 2-3 or 4-5)—students can create one to two minute educational broadcasts on pedestrian safety. Depending on the age and maturity of the students, they can research proper marketing techniques, develop slogans, and use technology to develop their announcements. If allowed by school policy, these announcements can be broadcast for other classes, over the school-wide television system, or distributed to a wider market.
- Walk to School Day (all grades)—students, teachers, parents, and members of the school community can celebrate walking to school while practicing safe pedestrian behaviors. International Walk to School Day is usually scheduled for the first full week in October. Walk to School Day events are also sometimes planned for the spring and coincide with Walk to Work Day (April) or Bike to Work Day (May). Additional information is available on at <http://walktoschool.org/>.

VI. Additional Resources & Works Cited

The following resources have been used throughout the process of developing this teacher's guide and curriculum:

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Tulving, E. (1975). Ecphoric processing in recall and recognition. In J. Brown (Ed.), *Recall and Recognition*. London: Wiley.

Young, D. S., & Lee, D. N. (1987). Training children in road crossing skills using a roadside simulation. *Accident Analysis and Prevention*, 19, 327-341.

National Physical Education & Health Standards

National Standards for Sports and Physical Education:

<http://www.aahperd.org/naspe/template.cfm?template=publications-nationalstandards.html>

McBrien, J. L., & Brandt, R. S. (1997). *The language of learning: A guide to education terms*. Retrieved August 18, 2008, from <http://www.ascd.org/portal/site/ascd/menuitem.fdd976cd7e54fccddeb3ffdb62108a0c/>.

From Lessons:

"Crossing the Street" song – Sung to the tune of "London Bridge", folk song

"Crossing the Lot" song – Sung to the tune of "The Addams Family" theme, by Vick Mizzy, 1964

"Safety on the Bus" song – Sung to the tune of "The Wheels on the Bus", popular children's song, composer unknown

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