

Fire Prevention and Life Safety Education in Schools:

A Collaborative Effort

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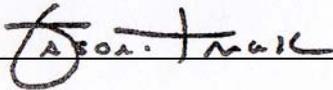
Hampton Division of Fire and Rescue

Hampton, Virginia

Certification Statement

I hereby certify that this paper constitutes my own product, where the language of others is set forth, quotation marks so indicate, and appropriate credit has been given where I have used the language, ideas, expressions, or writings of another.

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A handwritten signature in black ink, appearing to read "Jason Mark", is written over a horizontal line. The signature is enclosed within a light blue rectangular highlight.

Abstract

Annually, the Hampton Division of Fire and Rescue responds to more than 21,000 emergencies in which traumatic injuries account for approximately 18% of the total. Of the total number of traumatic injuries, injuries to children under the age of eleven accounts for nearly 7% of the total. The problem is that the Hampton Division of Fire and Rescue experienced inconsistencies in the delivery of fire prevention and life safety information to City of Hampton elementary school children. To compound the issue, the schools displayed teacher-delivered safety information inconsistencies within each school's curricula. The purpose of the research was to evaluate the existing program and delivery method of fire prevention and life safety education for City of Hampton preschool and elementary students and provide recommendations for a collaborative effort to better educate our children. A descriptive research methodology was utilized to answer the following questions:

1. What fire and injury risks are children ages five to ten most often exposed to?
2. What fire prevention and injury prevention programs are delivered to children in the City of Hampton?
3. What fire prevention and life safety information is included in the Virginia Standards of Learning Health Education curriculum?
4. What barriers exist in the delivery of fire prevention and life safety information to elementary school children?
5. What collaborative effort between Hampton City Schools and the Hampton Division of Fire and Rescue should occur to ensure the fire prevention and life safety messages are effectively delivered?

Procedures included a thorough review of local and state fire and injury statistics for children, a review of Division education programs and Virginia Standard of Learning curriculum, interviews with the Division Fire Marshal's Bureau, and survey of all local elementary schools and surrounding fire agencies.

The results of the research confirmed discontinuity between Hampton Fire and Hampton City Schools in the delivery of essential fire prevention and life safety information. Although important information was being delivered by both entities, recommendations included a standardized curriculum, initiating a coalition between entities, identifying suitable delivery methods, and constant evaluation of the program's effectiveness.

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Introduction

Education is ,”the act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life” (Dictionary.com, 2011). Education is the foundation of understanding. Without education, all beings are limited to thought processes and actions that are either arbitrary or intellectually convoluted that can often lead to undesired results. In the case of health and safety, these acts can be devastating.

In Virginia, deaths from unintentional injuries accounted for a majority of all deaths for children ages one to fourteen with the average being more than 90% (VHI Patient Level Database, 2008). This statistic is alarming to say the least. Although unintentional injuries are the leading cause of death for children, fire-related deaths for these age groups are still occurring and should receive no less attention in support of education and prevention. For the reported period 1987-1996, “children accounted for 12% of all fire-related deaths in the United States” (United States Fire Administration [USFA], 2002). Prevention through education is the single-most modifiable strategy that fire service professionals and educators can utilize to address these statistics.

When the United States Fire Administration’s delivery of *America Burning* and *America Burning Revisited* was released to the world, the focus on prevention and education was at the forefront of a list of carefully prescribed recommendations. The commission recommended that the Department of Health, Education and Welfare (now the Department of Health and Human Services) include in accreditation standards fire and life safety education in the schools throughout the school year (*America Burning Revisited*, 1987). Certainly we have seen an increase in these initiatives over the years such as with the National Fire Protection Association’s

(NFPA) Fire Prevention Week (FPW) and the National Safety Council's (NSC) injury prevention programs. The goals of the fire service and those of educational institutions should not differ as, "the goals are the same: Change the behavior of the public so that there are fewer dangerous situations, fires, and injuries" (USFA, 2002).

The purpose of the research was to evaluate the existing program and delivery method of fire prevention and life safety education for City of Hampton preschool and elementary students and provide recommendations for a collaborative effort to better educate our children. This evaluation also included an evaluation of current fire prevention and life safety curricula currently being taught within the schools by teachers. The comparison aided in determining curricula gaps among individual preschools and elementary schools as they relate to available and current information and that information which the Hampton Division of Fire and rescue is capable of offering. An descriptive research methodology was utilized to answer the following questions:

1. What fire and injury risks are children ages five to ten most often exposed to?
2. What fire prevention and injury prevention programs are delivered to children in the City of Hampton?
3. What fire prevention and life safety information is included in the Virginia Standards of Learning Health Education curriculum?
4. What barriers exist in the delivery of fire prevention and life safety information to elementary school children?
5. What collaborative effort between Hampton City Schools and the Hampton Division of Fire and Rescue should occur to ensure the fire prevention and life safety messages are effectively delivered?

One of the sixteen life safety initiatives developed through the *Everyone Goes Home Campaign* is that public education must receive more resources and be championed as a critical fire and life safety program.

Through the process of this research, the author aims to address three of the United States Fire Administration's (USFA) five operational objectives. Firstly, the research, evaluation, and recommendations will work to reduce the loss of life from fire in the age group 14 years and below. Ideally, the actions prompted by this research will promote within communities (schools) a comprehensive, multi-hazard, risk-reduction plan led by the fire service (Hampton Division of Fire and Rescue). By addressing this topic, the research will allow the author and his department to respond appropriately in a timely manner to emerging issues (USFA, 2009). Combined, the attention to three of the five USFA's provides a significant impact on those issues deemed critical in the communities we serve.

Background and Significance

The City of Hampton is a community located on the eastern seaboard of Virginia on the point of a peninsula that enters the Chesapeake Bay. The City is part of a region of seventeen cities and counties coined Hampton Roads and enjoys a distinct shared, regional effort of its partner communities. The City has a population of more than 146,000 citizens within a 54 square mile area and several miles of coastline and water coverage area. The Hampton Division of Fire and Rescue has 264 uniformed personnel operating out of 10 fire stations and approximately 100 volunteers that supplement its force.

As a fire-based EMS system, the agency responds to more than 24,000 calls for service each year. All frontline apparatus are licensed to provide advanced life support (ALS) care of which nine are patient transport units. More than 20% of the total call volume for medical emergencies are related to traumatic injuries. Of this figure, traumatic injuries to children eleven and under account for almost 7% or one third of all traumatic injuries. Despite the low incidence of child-related traumatic injuries as compared to the total number of medical emergencies, they

account for more than 34% of all calls for children 0-11 years of age. This number is staggering when compared to the fact that injuries to individuals twelve and older only account for 18% of the total number of medical emergencies in that age group.

Fire-related injuries and deaths, although significantly less than injuries and deaths related to trauma, nonetheless constitute a need for action. The United States Fire Administration (2002) stated that children ages five and under, which represent 9% of the population, constitute nearly 20% of all fire-related deaths in the home. Furthermore, they are twice as likely to die in a fire as the rest of the population. In Hampton, however, the similar statistics are disproportionate. Since 2008, nearly 50% of all fire-related deaths were children under the age of twelve (Maurice Wilson, personal communication, 2011).

The Hampton Division of Fire and Rescue often educates children on fire prevention and positive life safety behaviors. However, this education is intermittent and does not conform to any regularly scheduled sessions with schools or other entities where children are the target audience. The Hampton Division of Fire and Rescue's Fire Marshal's Bureau reports that they are only able to educate appropriately when resources allow for the time to do so (Maurice Wilson, personal communication, 2011). Although the programs they and the field personnel within the Division utilize to conduct such education are appropriate, the Fire Marshal Bureau's staff is limited and only has one member dedicated to fire prevention education. Most education occurs intermittently, on the spot, and when requested.

City of Hampton preschools and elementary schools also conduct fire prevention and life safety education. However, research showed that out of the 25 preschools and elementary schools, there were gross inconsistencies in the information delivered if any at all. Although the

Virginia Standards of learning has incorporated fire prevention and life safety topics into the curricula, not all schools utilize these topics to fulfill their requirements.

Through the use of this evaluative research, the researcher attempts to address three of the United States Fire Administrations (USFA) five operational objectives for community risk reduction. The USFA's *Community Risk Reduction Model*, "outlines a process that can be followed to reduce risk in a community, not just plan for it" (Department of Homeland Security [DHS], 2009). The fire organization would be promoting a comprehensive, hazard risk-reduction plan that will help reduce the loss of life in the 14 years and younger age group. In addition, the organization would be fulfilling its moral obligation of appropriately addressing and emerging issue that could positively impact its citizens and employees. The previous constitutes a combination of two important objectives while the latter addresses planning to prevent future casualties through education. These initiatives, the research, and recommendations are aligned with the very core of the Executive Analysis of Community Risk Reduction core content.

Literature Review

A derivation of best practices, lessons learned, and the discovery of relevant information was performed through a comprehensive literature review. The review assisted in determining current fire and injury risk statistics for children 14 and younger while evaluating fire prevention and life safety initiatives currently being utilized. The literature provided resources to allow the creation of educated recommendations based on best practices and the actual data uncovered during the research of Hampton City Schools. Ultimately, answers to the following six questions were answered. These are: (1) what fire and injury risks are children under the age of eleven most often exposed, (2) what fire prevention and injury reduction programs are delivered to children in the City of Hampton, (3) what fire prevention and life safety information is included

in the Virginia Standards of Learning Health Education curriculum, (4) what barriers exist in the delivery of fire prevention and life safety information to elementary school children, and (5) what collaborative effort between Hampton City Schools and the Hampton Division of Fire and Rescue should occur to ensure the fire prevention and life safety messages are effectively delivered?

Answers to the research questions were derived through several methods of review and inquiry. For questions two, five, and six, interviews were conducted with individuals responsible for providing fire prevention and life safety education information to the City of Hampton community and schools. For questions one, three, four, and five, information was gathered from credible, established resources through the use of the Internet and the World Wide Web.

Fire and injury risks for children under age eleven

In 2008, out of 58,468 total deaths in Virginia, 3,929 were the result of an injury. Overall, injury deaths accounted for 6.7% of all deaths occurring in 2008. Injury deaths accounted for a majority of childhood deaths and over half of the deaths for adolescents and adults between the ages of 10 and 34 (Virginia Center for Health Statistics, 2008). During that same year, there were more than 80 deaths and almost 500 injuries related to fire (Virginia Fire Incident Reporting System, 2008). Nearly 30 percent of the deaths and injuries from fire in Virginia were of elementary-aged children. Although the number of injuries and deaths associated with fire have decreased since the United States Fire Administration first published their report in 1973 *America Burning*, Oster (1999) states that, “the U.S. still suffers one of the highest per capita fire-related death rates of industrial nations”. Considering these statistics represent unintentional deaths and injuries, the numbers are alarming.

According to the Center for Disease Control (2008), unintentional injuries such as falls, poisonings, drowning, suffocation, and motor vehicle-related and pedestrian incidents lead the causes of injuries and deaths in youths (Table A). Motor vehicle crashes are the leading cause of unintentional injury-related deaths for children 14 and under with almost 2,000 death in 2008. Inappropriately restrained children are nearly three and a half times more likely to be seriously injured in motor vehicle-related crashes. In 2007, more than 178,000 children ages 14 and under were injured occupants in a motor vehicle crash (CDC, 2007).

Table A**Leading Cause of Death and Injury by Age Group for the United States**

Rank	Age group (yrs)		
	5-9	10-14	15-19
1	Motor vehicle (794)	Motor vehicle (987)	Motor vehicle (5,060)
2	Drowning (243)	Suicide (317)	Homicide (2,311)
3	Fire/Burn (197)	Homicide (290)	Suicide (1,737)
4	Homicide (170)	Drowning (201)	Drowning (439)
5	Suffocation (61)	Fire/Burn (104)	Poisoning (261)

* Source: CDC, National Center for Health Statistics, Vital Statistics System.

Note. From CDC National Center for Injury Prevention and Control, *Incidence of Injury as a Proportion of All Causes of Death*. CDC Office of Statistics and Programming. Web-based Injury Statistics Query and Reporting System (WISQARS). Copyright at <<http://www.cdc.gov/ncipc/wisqars>>. Accessed March 10, 2011

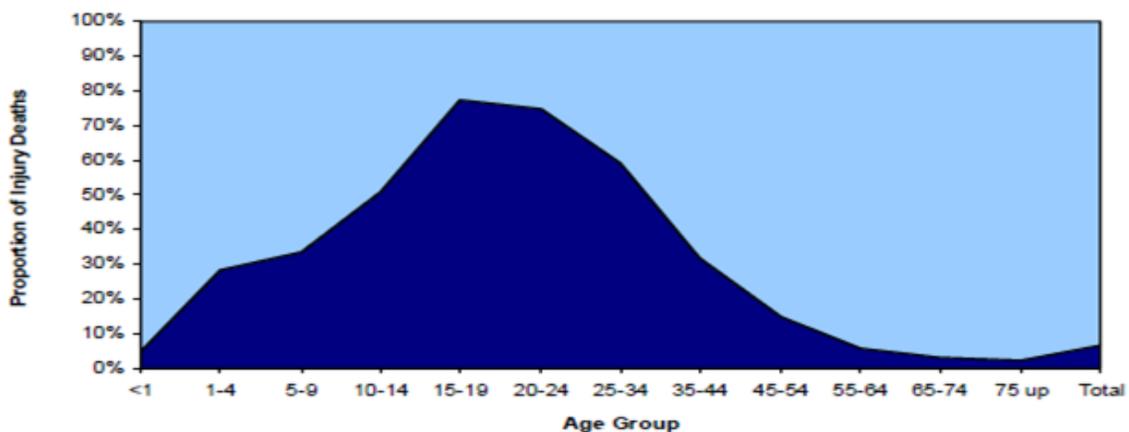
In 2005, approximately 92 children ages 14 and under died from poisoning. More than 2.4 million unintentional poisonings were reported to the U.S. Poison Control Centers in 2006 representing all ages less than one to over 90 years old (CDC, 2005). According to the CDC (2008), the following figures represent an alarming trend involving children. Unintentional falls are the leading cause of nonfatal injuries among children. More than 2.1 million children 14 and under were treated in hospital emergency rooms for fall-related injuries in 2007. Eighty-two children ages 14 and under died from falls in 2005. Lack of supervision is associated with 40% of playground injuries. In 2005, 18 children ages 14 and under died in bicycle-related incidents,

and more than 236,000 were injured in 2007. Head injury is the leading cause of death in bicycle crashes. A collision with a motor vehicle causes nearly 90 percent of bicycle-related deaths. One hundred seventy-nine children ages 14 and under died in 2005 from pedestrian injuries. Nearly 27,500 children received emergency room treatment for pedestrian injuries in 2007.

Childhood drowning and near-drowning can happen in a matter of seconds. They typically occur when a child is left unattended or during a brief lapse of supervision. Eight hundred ten children ages 14 and under drowned in 2005. An estimated 2,780 children were treated in emergency rooms after near-drowning in 2007. Severe and permanent brain damage affects as many as 20 percent of near-drowning victims (National Center for Health Statistics, 2008).

When reviewing injury as a proportion of all causes of death by age group, a sharp incline can be seen between the ages of 1 and 15 (Figure A). Although this sharp rise may be disheartening, it also represents the ages where prevention strategies may have the greatest impact.

Figure A
Incidence of Injury as a Proportion of All Causes of Death



Note. From CDC National Center for Injury Prevention and Control, *Incidence of Injury as a Proportion of All Causes of Death*. CDC Office of Statistics and Programming. Web-based Injury Statistics Query and Reporting System (WISQARS). Copyright at <<http://www.cdc.gov/ncipc/wisqars>>. Accessed March 10, 2011.

The data discovered shows a clear and present health concern that must be addressed. Although the financial cost of death and injury are staggering, the human suffering, diminished quality of life, and loss caused by injury represent the greatest burden. Injuries are often erroneously both portrayed and perceived as “accidents” caused by chance or carelessness, rather “than preventable events which can be addressed through behavior change, environmental modifications, and the use of safety devices” (Division of Injury and Violence Prevention, 2010). Modern approaches to injury prevention are grounded in a public health framework that considers an injury to be the product of the interaction between an individual, the agent or object that causes injury, and the physical and social environment. Injury prevention can target any one or more of these factors. The general approaches to injury prevention used today illustrate the interdisciplinary, multifaceted nature of preventive efforts. These approaches include education, environment or product modification, and enforcement of legal or regulatory requirements. The Division of Injury and Violence Prevention (DIVP) is working to build partnerships for a safer Virginia.

The fire service is often quite good at measuring the tangible value of lost property and the frequency of fire events. “The fire risk experienced by a community can be measured in terms of costs expressed in money terms or in terms of workload expressed in time” (Chubb, 1999). As unpleasant as it may seem, even deaths and injuries can be expressed in dollar terms. “These consequences are the product of the frequency of fire or injury events; the magnitude of the fire threat or injury risk; and the value of the exposed people, property, and activities” (Schaenman, 1992). Possessing the values of these variables alone is simply not enough to produce a complete picture of a community’s fire risk. Consequently, programs based solely on such information are likely to be misdirected or inadequate (Chubb, 1999).

Fire prevention and life safety education programs in the City of Hampton

The Fire Prevention Section of the Hampton Division of Fire and Rescue supports the Fire Division in the delivery of fire prevention and life safety education programs to the community and schools. Fire safety Program Educator Sabrina Strykowski states that education is delivered to all age groups and typically focuses on preschool, elementary school, middle school, seniors, and children that are homeschooled (personal communication, 2011). To further reach the youth of the community, she states that they often provide “safety sessions” Hampton City Schools afterschool care programs and summer programs. The programs are somewhat tailored to the audience as different levels of comprehension are expected depending on the ages of the individuals being educated.

Ms. Strykowski states that several proprietary programs are utilized during the presentations to ensure that all topics of fire prevention and life safety initiatives are addressed (personal communication, 2011). More specifically, the programs utilized are:

1. NFPA’s Risk Watch
2. Home Safety Council Expert Network
3. Centers for Disease Control
4. United States Fire Administration Material from Kenneth Finneman
5. Tidewater Fire Educator’s Network
6. Juvenile Fire Setter Program

However, the NFPA’s Risk Watch program is the primary source of education as it incorporates all aspects of community fire prevention and addresses all pertinent injury risks to the community.

Several programs are available to fire departments and other agencies for use in educating individuals on fire prevention and life safety information. Like the NFPA’s Risk Watch program, Safe Kids Worldwide provides a curriculum of prevention strategies geared toward younger individuals (Safe Kids Worldwide, 2009). Others such as Get Safe Smart, Fire

Pups, and the Home Safety Council's SAFE program are also options in fight against unintentional injuries and fire-related incidents. However, the Risk Watch curriculum is an all-inclusive course that addresses the risks seen with today's youth.

Risk Watch's philosophy is based on the fact that for children under the age of 14, the number one risk isn't drugs or disease: it is injuries (Risk Watch, 2011). Each year unintentional injuries kill more than 5,000 kids and injure more than 6 million (CDC, 2008). The organization makes it known that every time a child is injured or killed by an unintentional injury, everyone suffers. This includes the child, the family, his or her classmates, and the community as a whole. The Risk Watch philosophy further states that a vast majority of these injuries are not random "accidents" but rather predictable and preventable incidents (Risk Watch, 2011). With education, motivation, and support from caring adults, the NFPA believes that children can learn to be much safer (NFPA, 2011).

Risk Watch is touted as the first comprehensive injury prevention program available for use in schools. Developed by NFPA and in collaboration with a panel of respected safety and injury prevention experts, Risk Watch gives children and their families the skills and knowledge they need to create safer homes and communities (NFPA, 2011). Risk Watch is a school-based curriculum that links teachers with community safety experts and parents. The curriculum is divided into four age-appropriate teaching modules (Pre-K/Kindergarten, Grades 1-2, Grade 3-4, Grades 5-6, and Grades 7-8), each of which addresses the following topics:

1. Motor vehicle safety,
2. Fire and burn prevention,
3. Choking, suffocation, and strangulation prevention,
4. Poisoning prevention,
5. Fall prevention,
6. Firearms injury prevention,
7. Bike and pedestrian safety, and
8. Water safety

Risk Watch helps children beat the odds of suffering the effects of unintentional childhood injuries and it gives them the experience to analyze situations and weigh the consequences. Kids learn to make safe decisions and it instills positive values and healthy self-esteem. Basic attitudes and personal values are developed by the time we reach 10 years old or by 5th or 6th grade. By engaging children in a comprehensive injury prevention program at an early age and keeping them involved throughout their formative years, it is possible to help shape their attitudes and values about safety and wellness (Risk Watch, 2011). The program is designed to stimulate the children to demonstrate their knowledge of the material delivered and allows the educators to assess student understanding of the safety messages presented.

The program also recruits parents into the prevention strategy by engaging them in the very activities their children are learning in the school. The caregiver letters provide parents and caregivers the information they need to support Risk Watch at home (Sabrina Strykowski, personal communication, 2011). Serving as a powerful introduction to Risk Watch, the caregiver letters help encourage parents to reinforce the safety messages their children are learning at school. While reminding families that Risk Watch is being taught in the classroom, these letters will help encourage parents/caregivers to continue supporting Risk Watch. By combining education in the classroom and support in the home, the prevention strategies are extended and reinforced.

The Prevention Section also provides support to the Fire Marshal Section and investigators. The Juvenile Fire setter Program accesses and assists children who have been identified to have fire setting tendencies. Ms. Strykowski states the children can enter the program a few ways such as referral from an investigator, referral from the juvenile intake office, school counselor referral, community support worker, or by the juvenile's parents (personal

communication, 2011). Each child and circumstance is different and is treated as such. In cases where a juvenile sets a fire in one jurisdiction but lives in another, Ms. Strykowski is diligent in communicating with both jurisdictions to discuss the best way to assist the offending juvenile. There have been cases when the children were referred because of behaviors that education would not provide any help or relief. Since November 2008, Ms. Strykowski has worked with 47 children identified as juvenile fire setters.

Fire prevention and life safety content in Virginia Standards of Learning curricula

According to excerpts found in the Early Learning Initiative, President Barack Obama is committed to providing the support that children need to succeed later in school and life (U.S. Department of Education, 2011). This initiative prioritizes improving health, social, and educational outcomes for young children from birth through the third grade by:

1. enhancing the quality of early learning programs, and
2. increasing the access to high quality early learning programs especially for young children at risk for school failure.

Of the several roles listed by the Department of Education (2011), three can be reasonable associated with strategies involved in promoting fire prevention and life safety practices in the schools.

1. administering several early learning programs,
2. encouraging States and local districts to target resources for early learning; and
3. promoting State and local education agency partnerships with other early learning agencies and programs in the State or community;

In line with national standards, Virginia supports teaching and learning through a statewide system of support and accountability for the Commonwealth's public schools and school divisions. The commonwealth sets rigorous academic standards, known as the Standards of Learning (SOL), and measures achievement through annual SOL tests and alternative and

alternate assessments (Virginia Department of Education, 2011). The system provides schools, school divisions and the Virginia Department of Education (VDOE) with critical data to inform the development and implementation of effective instructional strategies and best practices.

VDOE and the Board of Education are using the commonwealth's established process for adopting and revising academic standards to incorporate content from the Common Core State Standards into the Standards of Learning. "In doing so, the board and department are ensuring that expectations for teaching and learning in Virginia schools are comparable to those of the voluntary national standards" (Virginia Department of Education, 2011).

Of the core content taught and tested utilizing the Virginia SOLs, the Health Education SOL curriculum contains those topics found in fire prevention and life safety education (Appendices A-F). The topics can be found in the SOL content for grades K-5 and address all areas found in typical fire prevention and life safety programs such as Risk Watch. An example of the specific content can be found in the first grade knowledge base (Table B) and Appendix C.

Table B

Virginia Standards of Learning for First Grade Health Education

- 1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include
- a) bus and automobile safety;
 - b) pedestrian safety;
 - c) playground safety;
 - d) fire safety;
 - e) home safety;
 - f) Internet safety;
 - g) water safety;
 - h) bicycle, in-line skating, skateboard, scooter, and other self-propelled-vehicle safety;
 - i) the need for protective gear.

According to the Council of Chief State School Officers, "Schools are society's vehicle for providing young people with the tools for successful adulthood. Perhaps no tool is more essential than good health" (Virginia Department of Education, 2011). This is a message found ubiquitously throughout the DOEs literature on prevention strategies. Approximately 53 million young persons attend more than 114,000 schools every day and when combining students and adults, one fifth of the United States population can be found in schools (U.S. Department of Education, 2011). Therefore, school-based programs can efficiently reach a majority of the children, adolescents, and many adults in the United States. As such, schools have a responsibility to prevent injuries from occurring on school property and at school-sponsored events. In addition, schools can teach students the skills needed to promote safety and prevent unintentional injuries, violence, and suicide while at home, at work, at play, in the community, and throughout their lives.

The Division of Injury and Violence Prevention (DIVP) uses a variety of strategies for prevention in the schools including research and assessment, policy development, training and community education, promotion and dissemination of safety devices, public awareness activities, and funding of local projects to implement best or promising practices (Division of Injury and Violence Prevention, 2011). Parents, educators, healthcare providers and others can actively participate in raising awareness and enhancing skills to prevent injury and violence in communities. The DIVP (2011) describes eight broad recommendations for school health efforts to prevent unintentional injury, violence, and suicide. They are:

Recommendation 1: Establish a Social Environment That Promotes Safety and Prevents Unintentional Injuries, Violence, and Suicide.

- Recommendation 2: Provide a Physical Environment, Inside and Outside School Buildings, That Promotes Safety and Prevents Unintentional Injuries and Violence.
- Recommendation 3: Implement Health and Safety Education Curricula and Instruction That Help Students Develop the Knowledge, Attitudes, Behavioral Skills, and Confidence Needed to Adopt and Maintain Safe Lifestyles and to Advocate for Health and Safety.
- Recommendation 4: Provide Safe Physical Education and Extracurricular Physical Activity Programs.
- Recommendation 5: Provide Health, Counseling, Psychological, and Social Services
- Recommendation 6: Establish Mechanisms for Short- and Long-term Responses to Crises, Disasters, and Injuries That Affect the School Community.
- Recommendation 7: Integrate School, Family, and Community Efforts to Prevent Unintentional Injuries, Violence, and Suicide.
- Recommendation 8: For All School Personnel, Provide Regular Staff Development Opportunities That Impart the Knowledge, Skills, and Confidence to Effectively Promote Safety and Prevent Unintentional Injury, Violence, and Suicide, and Support Students in Their Efforts to Do the Same.

The 8 recommendations for school-based unintentional injury, violence, and suicide prevention provide the framework for establishing such school wide strategies as a guiding principle. By adopting these recommendations, schools can help ensure that all school-aged youth attain their maximum educational potential and good health.

Health education curricula and instruction can be an important component of school efforts to prevent unintentional injuries, violence, and suicide. In 2000, “a total of 75% of schools required students to receive instruction on unintentional-injury prevention; 80% required instruction on violence prevention; and 40% required instruction on suicide prevention” (Ballen & Moles, 2000). Schools can teach about unintentional injury and violence prevention using health education methods grounded in theory and with scientific evidence of effectiveness. The

scientific evidence would come in the form of local community health statistics and data from local fire departments. In addition, schools can infuse such unintentional injury and violence prevention content into various disciplines, including family and consumer education, physical education, driver education, and vocational education (Division of Injury and Violence Prevention, 2011). Direct evidence of this infusion can be seen as a comparative example in the Virginia SOL health education curriculum for the fourth grade (Appendix T).

To ensure a safe and healthy future for students in the United States, school-based unintentional injury, violence, and suicide-prevention programs should become a national priority (Department of Education, 2011). These programs could and should be a part of coordinated school health programs and reach students from preschool through secondary school. School leaders, community leaders, and families can commit to implementing and sustaining unintentional injury, violence, and suicide prevention within the schools. Such support is crucial to promoting safety and a healthy academic environment.

Barriers in the delivery of fire prevention and life safety education programs

Traditionally, fire safety programs have been designed, implemented, and delivered by specific individuals in the Fire Prevention areas of fire departments. However, involving the entire department in the effort to reduce the frequency and consequences of fire and injury-related incidents is the first step to obtaining the support and commitment of the entire community to fire safety measures (Chubb, 1999). People engaged in fire safety activities have long recognized that engineering, education, and enforcement are the key strategies required to reduce the costs and consequences of fire (Schaenman, 1992). Figuring out how to actually implement these strategies is often difficult. Chubb states, that barriers such as, “tight budgets, lack of staff, inadequate experience, incomplete information on the fire (or injury risk) problem,

and misplaced priorities individually and collectively conspire to impede fire safety success (1999).

In order to combat these barriers and mitigate their existence, not only must they be identified, but a solution must be devised that will allow the program to move forward. Time, staffing, and funding are among the three greatest barriers to fire prevention programs. All too often, departments fail to put their budgetary resources where it has the potential to make the greatest impact. Sabrina Strykowski, the Hampton Division of Fire and Rescue's Fire safety program Educator eludes to the unnerving fact that her prevention budget has declined over the years (personal communication, 2011). Because of the minimal funding, she is alone in her duties which equates to less time to reach out to all parts of the community on a regular basis. The United Kingdom took a more drastic approach to ensure their prevention strategies could be met. They made some very significant changes in their approach to prevention, especially the weight given to community fire safety programs, even if it meant cutting back on other fire department services (Schaenman, 1992). Scotland has also employed strategies to imply that prevention activities have moved to the forefront of their existence. Every firefighter is expected to participate in prevention if requested. Recruiting for the fire service makes it clear that firefighters can expect to play a major role in community safety programs during their career (Schaenman, 1992). Community fire safety is now part of recruit training.

Another aspect related to staffing issues arises when personnel take on the "it's not my job" attitude. This point recognizes that the fire service, at times, erects it's own barriers that impede fire safety programs. "The fire service must make sure all firefighters stand ready to serve as the community's experts about every aspect of fire prevention, fire precautions, and emergency preparedness" (Chubb, 1999), regardless of position in the organization. He further

states that in order to address engineering, education, and enforcement of fire programs, the following strategies must be implemented to be successful:

1. Develop and use information.
2. Forge new insight through analysis.
3. Foster innovation.
4. Leverage resources through integration.
5. Promote commitment through involvement.

According to Chubb (1999), many law enforcement academies have indoctrinated their recruits on community policing and education so that they not only understand how to mitigate issues on the street, but also in the classroom. To further enhance the idea of involvement, past Fire Chief Ronnie Few of the Augusta/Richmond County (GA) fire department encouraged each station to adopt a school not solely for education purposes, but to serve as ambassadors for an overall and continuance safety campaign. Chubb states that, “by reaching out instead of retreating within our traditional comfort zone, the fire service can contribute to consensus on ways of addressing issues of community welfare beyond fire safety” (1999). Just as important, involving everyone in fire safety functions and integrating fire safety activities with community activities promote continuity and commitment by building a lasting constituency for fire department services.

Schools and non-fire educators are often under-educated of the risks their children face in the community not by choice, but rather by a lack of knowledge. By involving the schools and their educators in the planning and implementation process, the fire service is able to reduce the confusion that revolves around statistics and local community risk reduction practices. “Schools can work with local government and community organizations to promote safer schools, workplaces, and communities through policies, programs, and services” (Division of Injury and Violence Prevention, 2011). The breadth of those involved should not be limited to the teachers alone. Students, parents, and staff members might be encouraged to support and participate in

community efforts to prevent unintentional injury, violence, and suicide. Schools can help community organizations and agencies involve families in educational and other activities designed to reduce unintentional injury, violence, and suicide (e.g., to encourage home fire drill planning and practice, to restrict unsupervised access to alcohol, drugs, and firearms for children and adolescents, to educate community members concerning handguns in the home, and to establish safe walking and bicycling paths) (Division of Injury and Violence Prevention, 2011). Schools can also participate in communitywide coalitions addressing unintentional injury, violence, and suicide prevention. The most notable of these coalitions forces is the local fire department. Often used as subject matter experts, they are the best source of current, real information. Public fire safety educators know that forcing students to participate in and practice desired behaviors is one of the keys to learning success. “Transforming our organizations into learning systems, practicing what we preach, and involving everyone in the mission are vitally important to getting the whole community to participate with us” (America Burning, 1973). In fire safety, like so many other endeavors, leadership must be achieved by example.

Forming a collaborative effort between the fire department and Hampton City Schools to deliver fire prevention and life safety education to elementary and preschool children

Since America Burning was published in 1973, the critical importance of including as many entities in the fire and injury prevention efforts as remained at the forefront of the war on unintentional incidents. U.S. Representative Doug Walgren (D-PA) made a very powerful and still resonant statement regarding fire prevention in *America Burning Revisted* (1987).

"I hope that you would ask yourselves whether we need a new organization that has a structure within which could fit all the elements of our society that are active in fire prevention...There has to be some effective continuous process that would include fire service organizations...citizen advocacy groups .the various non-profit organizations that have developed and served so well in the American system...business interests that have so much to lose...educators that have such a

role to play in education...and technologists who could add, particularly in education, what new technology might provide...I hope you will think about how you can give congress the kind of direction we obviously need given the nature of the Congressional process, and I hope you will think about how you can give each other the ongoing organizational structure that would enable us to pull everybody into a common effort that may not be quite what they are interested in or may be contrary to some of their immediate interests on a political level..., but nonetheless can result in a greater unity of effort in the next 10 years than we have seen in the last 10.”

In his statement he states the importance of collaboration not only amongst fire agencies, but also of school and educators. The stakeholders present during this session felt so strongly about school involvement that one of the recommendations was that the Department of Health and Human Services “include in accreditation standards fire safety education in the schools throughout the school year. Only schools presenting an effective fire safety education program should be eligible for any federal financial assistance (America Burning Revisited, 1987). It can be verified that at least a portion of these standards have been met as many fire prevention and life safety core standards exist in the Virginia SOL health education curricula.

In conjunction the large amount of support that exists within the fire community and the agencies that champion prevention efforts, schools and their piloting agencies also have increased support for the efforts. The Division of Injury and Violence Prevention (DIVP) states that, “effective school-based injury-prevention efforts (should) address policies and procedures, staff development, the physical environment of the school, and the curriculum in a coordinated manner” (DIVP, 2011). However, educational interventions alone cannot produce major reductions in injury or injury risks. The DIVP further states that school efforts to promote safety should be part of a coordinated school health program, which is,

"an integrated set of planned, sequential, and school-affiliated strategies, activities, and services designed to promote the optimal physical, emotional, social, and educational development of students. A coordinated school health program involves and is supportive of families and is determined by the local community based on community needs, resources, standards, and requirements. It is coordinated by a

multidisciplinary team and accountable to the community for program quality and effectiveness” (DIVP, 2011).

The sentiments of the educators streamlines the premise that just as individual strategies cannot be implemented in isolation from each other, schools cannot effectively address fire prevention, unintentional injuries, or other life safety issues in isolation.

Just as the United States Fire Administration collaborates with educators, the local resources in a community must collaborate with schools to effect the over plan to educate. The National Fire Academy conducts training courses to assist educators in the school system to learn how to properly educate children on fire prevention and life safety topics (America Burning Revisited, 1987). Some of the courses offered are:

1. Public Fire Education Planning Manual,
2. Young Children as new Targets for Public Fire Education,
3. Introduction to Fire Safety Education, and
4. Advanced Fire safety Education.

The schools, at the direction of the Department of Education, include mandatory core topics in the curriculum to fulfill requirements. The missing link, if at all, is an effective collaboration between community schools and their local fire department.

Schools and local fire departments enjoy several options to enhance collaboration amongst themselves and other stakeholders of the community. Schools can work with local government and community organizations to promote safer schools, workplaces, and communities through policies, programs, and services (DIVP, 2011). Students, parents, and staff members might be encouraged to support and participate in community efforts to prevent unintentional injury, violence, and suicide. Students can carry out service projects in their

communities (e.g., graffiti removal, planting gardens, and volunteering in a nursing home or day care center). One of the greatest methods in reinforcing these education strategies is to involve parents, caregivers, and families in the effort. Schools can help community organizations and agencies involve families in educational and other activities designed to reduce unintentional injury, violence, and suicide (e.g., to encourage home fire drill planning and practice, to restrict unsupervised access to alcohol, drugs, and firearms for children and adolescents, to educate community members concerning handguns in the home, and to establish safe walking and bicycling paths) (Virginia Board of Education, 2011).

Changing the social or physical environment is a critical part of the overall childhood injury prevention formula and community risk reduction. However, most environmental changes require human action and provide a far greater chance of success the more collaboration between stakeholders occurs. Learning to make the right choices is the result of educational efforts. While the process of preventing childhood injuries has many parts, the effective use of education is the fabric that brings it all together. Because of that, it deserves special attention from injury prevention coalitions, schoolteachers, medical professionals, and other community members.

Procedures

Research Methodology

A descriptive research methodology was utilized to examine past practices and programs in the delivery of fire prevention and life safety education to preschools and elementary schools within the City of Hampton by the Hampton Division of Fire and Rescue. Furthermore, particular attention was paid to fire prevention and life safety related health education topics taught to students by the school system in order to develop a correlate. The descriptive methodology served to examine the root cause of the education inconsistencies, provide

solutions, and impart an improvement scheme through collaboration and consistency to overcome the issues faced in the delivery of fire prevention and life safety education program to preschool and elementary school children in the City of Hampton. In addition to the practical surveys, interviews, and data mining, a thorough literature review offered a deeper venue for comparative analysis of the presented problem.

Data

Data was obtained through various channels specific and relative to the topic of the research. Information was queried via survey from surrounding fire departments of similar size and function to that of the Hampton Division of Fire and Rescue. In addition, data was obtained via survey from 25 preschool and elementary schools in the City of Hampton. The target population identified for this applied research project was preschool and elementary school students, aged three to eleven, currently enrolled in the Hampton City School System. Further data was obtained via interviews from subject matter experts in the Division and statistical queries.

A representative order for procedural events are as follows:

1. Query statistical data from local, state, and national resources regarding fire injuries/deaths and unintentional injuries sustained by target age group.
2. Contact Fire Prevention Bureau (or bureau that conducts community education) to query a descriptive function of past and current delivery of fire prevention and life safety education program information.
3. Identify similar functional surrounding fire departments
 - i. Create feedback survey cover letter
 - ii. Create feedback survey to capture data from similar surrounding fire departments
 - iii. Disseminate feedback survey to selected surrounding jurisdictions
 - iv. Compile data into practicable results
4. Identify all City of Hampton preschool and elementary schools
 - i. Create feedback survey cover letter

- ii. Create feedback survey to capture data from preschool and elementary school principals regarding fire prevention and life safety education in the school system
 - iii. Contact Hampton City Schools superintendent requesting authorization to query schools
 - iv. Disseminate feedback survey to selected Hampton City Schools
 - v. Compile data into practicable results
5. Compile results from surveys and interviews into comparative format

Interviews

The first point of action was to develop a clear picture of the Hampton Division of Fire and Rescue's role in delivering fire prevention and life safety education information and programs to the community. As a whole, all Division personnel are responsible for educating the community anytime the opportunity arises or is formally requested. However, the Fire Prevention Section of the Division has the unique role of determining what fire prevention and life safety education programs will be utilized within the community and how such programs are delivered. On February 17, 2011, interviews were conducted with Fire Marshal Maurice Wilson and Fire Safety Program Educator Sabrina Strykowski. Based on the responsibilities of the Fire Prevention Section, the Fire Marshal and the Fire Safety Program Educator were chosen as interviewees to gather as much information as possible about past and current program delivery. Subsequent interviews were performed with various uniformed personnel to identify inconsistencies, if any, between the Fire Prevention Section's program guidelines and actual delivery by station personnel.

Feedback Survey (surrounding fire departments)

A feedback survey letter (see Appendix R) was sent to nine local area jurisdictions within the Hampton Roads region introducing the researcher and his purpose for the solicitation. These jurisdictions chosen ranged from nearly identical population and coverage area to as small as

25% of what the City of Hampton is responsible for protecting. They were comprised of two county and seven city jurisdictions all located within a geographical area of what is called Hampton Roads.. This area comprises two sub-areas called the Peninsula and Southside. They were chosen based on the fact that each operates in the same regional protocol area and all participate in regional coordination meetings to address best practices and provide the best coordinated regional fire and EMS services in the area.

A feedback survey (see Appendix S) was then sent via a commercial survey web site to the chosen jurisdictions. The survey questions aimed to capture specific information about fire prevention and life safety education programs offered in their jurisdictions, such as program type, delivery method, and efficacy. A total of seven departments responded to the survey for a return rate of 78%.

Feedback Survey (City of Hampton preschool and elementary schools)

In order to obtain data from Hampton City Schools, a survey letter (see Appendix N) was sent to the Superintendent to gain permission to distribute the survey. Once permission was granted, a feedback survey (see Appendix O) was created utilizing Microsoft Word and distributed to the principals and assistant principals of all 25 preschools and elementary schools within the city of Hampton. See Appendix for a complete listing of schools. The survey's purpose was two-fold. Firstly, it was utilized to determine what collaboration between the schools and the Hampton Division of Fire and Rescue existed in the opinion of school officials. Secondly, it identified what fire prevention and life safety topics, if any, were included in the school curricula. The survey requested specific information such as number of students and classes, whether or not they utilized the fire department to deliver fire prevention and life safety education, specific topics taught within the schools incumbent curricula, and suggested changes

to improve the delivery of desired topics. Of the 25 preschool and elementary schools surveyed, 14 returned the completed survey for a return rate of 56%.

Assumptions and Limitations

During the preparation phase of this research, it was determined that certain limitations would be inevitable. As with any research process, it is difficult to avoid limitations without controlling every aspect of the project. One inherent limitation evolves from the use of human subjects to acquire data. Since data and participation is respectfully requested and not a mandatory compliance request, the researcher is at the mercy of his subjects. For example, limitations may include:

1. Failure to acknowledge, complete, and submit survey
2. Failure to answer all questions on the survey
3. Failure to fully understand the content of what the question is asking
4. Unknowingly reporting incorrect information

Assumption is a “proposition that is taken for granted, as if it were true based upon presupposition without preponderance of evidence” (Wikipedia, 2011). However, there is also a certain level of acceptable assumption that may included during the research process. It is natural deduction process based on educated thought with an expectation that the assumption will be discharged in due course. With that understanding, some assumptions that may exist are:

1. Reasonable expectation that the surveys reached all of the intended targets.
2. Reasonable assumption that the targets had sufficient knowledge to complete the survey.
3. Reasonable assumption that the targets did not feel threatened by any of the survey content.

The researcher, despite the aforementioned limitations and assumptions, was satisfied with the feedback received. Based on the research conducted and the success of local programs, the inference can be made data received established the groundwork for change offering positive implications within the City of Hampton.

Results

The problem that led to the development of this Executive Fire Officer research project was that the Hampton Division of Fire and Rescue experienced inconsistencies in the delivery of fire prevention and life safety information to City of Hampton elementary school children. To further elevate the issue, the schools displayed teacher-delivered safety information inconsistencies within each school's curricula. The purpose of the research was to evaluate the existing program and delivery method of fire prevention and life safety education for City of Hampton preschool and elementary students and provide recommendations for a collaborative effort to better educate our children.

Question 1- What fire and injury risks are children ages five to ten most often exposed to?

When evaluating a program and its delivery, it is important not only to uncover widespread factors, but to also identify local information pertinent to the geographic area of delivery. In Virginia, the same fire and injury risks to children under the age of 14 exist regardless of where they reside. However, it can be seen that those risks occur at different rates based on several factors that are community-related such as poverty level. For example, hospitalization for injury and death rates for individuals living in areas with greater than 20% poverty is 1.77 times greater than those living in areas with less than 10% poverty (Virginia Center for Health Statistics, 2008).

Of all the causes of injury and deaths, unintentional injuries, to include fire-related causes, are the leading cause of death for most Americans. For children ages one to 14, unintentional injuries accounted for an average of 87% of all injuries where those aged five to nine had the highest rate (97.05%) (VHI Patient Level database, 2008). Consequently, this age group also suffered the largest death rate attributed to unintentional injuries. Table C below illustrates the most common causes of death by rank for children living in Virginia ages one to 14. All causes are those that may be easily and addressed through a fire prevention and life safety program.

Table C

Leading Cause of Death and Injury by Age Group in Virginia

Cause of Death by Injury	1-4 years old	5-9 years old	10-14 years old
	Rank		
Drowning	1	3	3
MVT Other	2	1	4 (cyclist)
Suffocation	3	10	1
Firearm	4	4	2
MVT occupant	5	5	8
MVT pedestrian	6	8	6
Fall	7	7	9
Fire/Flame	8	2	10
Pedestrian, other	9	6	5
Poisoning	10	9	7

Note. Data retrieved from Virginia Fire Incident Reporting System databases on March 15, 2011.

In order to obtain information on the local impact of unintentional injuries on children ages 1-14, data mining was performed for the year 2010 on the patient care database for the Hampton Division of Fire and Rescue. Unfortunately, the data was not always categorized exactly as those results found on the national and state level database systems. However, certain similarities in categories existed that allowed the researcher to indicate correlate entries. When compared to the Virginia statistics from 2008 in Table C above, it is quickly noted that Hampton

children did not incur some of the listed injuries at all (Table D). There were no drowning or firearm injuries during the mined time frame. However, these injuries do occasionally occur in the city. It can be seen, however, that traumatic injuries, falls, fires, pedestrian accidents, motor vehicle accidents, and poisonings rank the highest.

Table D

Leading Cause of Death and Injury by Age Group in City of Hampton, VA

Cause of Injury and/or Death	1-4 years old	5-9 years old	10-14 years old
	Rank		
Drowning	-	-	-
MVT Other	-	-	-
Suffocation	6	7	-
Firearm	-	-	-
MVT occupant	5	6	4
MVT pedestrian	7	3	3
Fall	2	2	2
Fire/Flame	3	4	6
Traumatic injury, general	1	1	1
Poisoning	4	5	5

Note. Data retrieved from City of Hampton patient care databases on March 14, 2011.

On average in the United States in 2009, someone died in a fire every 175 minutes and someone was injured every 31 minutes (Karter, 2010). Of those fire-related deaths and injuries, more than 15% are of children under the age of nine (Ahrens, 2010). In comparison, one Virginia civilian was killed or injured by fire every 16 hours (547) with children under the age of 10 accounting for roughly 14% of the total (VFIRS, 2010). In the City of Hampton, there have been 10 fire-related deaths over the last three years (2008-2010) of which children under the age of 11 accounted for 50% of those deaths. When compared to national and state statistics, the rate is considerable higher. Although it is uncommon to see more than two fire deaths in any given

year, the rise can be attributed to two large fires that claimed two and three young lives, respectively.

Question 2- What fire prevention and Life safety programs are delivered to children in the City of Hampton?

Through conduction of a literature review to evaluate which programs are available to educate our children and the community on fire prevention and life safety, it was noted that a multitude of programs exist. Not unlike the number of programs available, the Hampton Division of Fire and Rescue also employs several programs in their education process. The programs currently being utilized by Fire Prevention and other Division field personnel to educate the community and schools as reported by Fire Safety Program Educator Sabrina Strykowski are:

7. NFPA's Risk Watch
8. Home Safety Council Expert Network
9. Centers for Disease Control
10. United States Fire Administration Material from Kenneth Finneman
11. Tidewater Fire Educator's Network
12. Juvenile Fire Setter Program

When reviewing what programs are delivered to the children in the community, the program, delivery, and consistency of both play a large importance in whether it succeeds or ultimately fails to accomplish the goals it implies. Inconsistencies in any aspect of the program will deter from the purpose of the sender and the goals of the receiver.

Materials from the above programs are delivered and presented to the community by the Fire Prevention Section's Fire Safety Program Educator and uniformed personnel in the field. The Fire Safety Program Educator is trained and knowledgeable of the materials and serves to educate the community as a main source of her job description. However, the uniformed personnel have not been specifically trained to present any specific program to the schools or the community. Most of these uniformed personnel have instructor certifications that have provided

them with basic training on delivering general information in addition to on the job experience. At the very least this lends itself to gross inconsistency.

Although a department should not limit itself to one program in general when educating others on fire prevention and life safety, the lack of a formatable, reproducible agenda poses a great risk of delivery variance. The department utilizes five identified programs to educate the general population and one program that focuses on identified at-risk children and includes pieces and parts from various other programs. Even though multiple resources should not be considered a detriment to a program, a clear, reproducible presentation can reasonably be considered an asset to its success.

The final discovery can be considered the biggest disadvantage to the success of a program. Field personnel who have several other assigned tasks and may be unclear on what materials should be delivered coupled with a single, trained resource to adequately provide the education inhibits the consistent delivery at regular intervals to the community. One of the biggest complaints noted in the survey to surrounding fire departments was a lack of adequate staffing to perform the program delivery. Ms. Strykowski states that the programs are geared towards, all ages and demographics, but the lack of personnel resources makes it difficult to adequately deliver the programs on a consistent basis (personal communication, 2011).

During the Hampton City Schools survey phase of the project, surveys (see Appendix O) and letters (see Appendix N) were sent to all 25 pre and elementary school principals and assistant principals via direct correspondence with the superintendent. Of the 25 surveys disseminated, only 14 (56%) school principals or representatives completed and submitted the questionnaire. Of the respondents, all fully completed the questionnaire according to the directions provided. See Appendix P and Appendix Q for reported results.

The introductory questions were set to establish basic demographic information of the individual schools and the children who attended (Table E). According to the respondents, four (25%) schools were preschool only and 12 (75%) were elementary schools with two of those schools also providing preschool education. There were a total of 309 classes comprised of 5,624 students for those aged four to twelve. Since this number is representative of 56% of the surveys disseminated, it can be generally assumed that there approximately 300 classes and 5,000 students not represented.

Table E

Demographics of Hampton City Schools Questionnaire Respondents

Hampton City Schools Survey Questions		Number	%
Questionnaires Returned (out of 27)		16	59%
Type of School	Preschool	4	25%
	Elementary	12	75%
Total # of Classes		309	
Ages Taught		4 to 12	
Total # of Students		5,624	

Note. Excerpted from Appendix P

The schools that reported teaching fire prevention and life safety information and/or interacted with the Hampton Division of Fire and Rescue for program delivery were asked a series of questions pertaining to specific program topics taught. Of the 14 respondents, nine (64%) reported some form of fire prevention and life safety education occurred during the school year while four (36%) indicated no topics were taught. However, when asked if they thought fire prevention and life safety education should begin in preschool, the report was unanimously, “yes”. The fire prevention topics presented in the questionnaire were:

1. Fire Prevention

- a. “Stop, drop, and roll”
- b. Burn safety
- c. Crawl low
- d. Smoke alarms
- e. Match safety
- f. Exit drills in the home (EDITH)
- g. Kitchen safety
- h. What firefighters look like in their gear
- i. Other

Of the topics presented in the questionnaire (Table F), “stop, drop, and roll”, “crawl low”, “smoke alarms”, and “what firefighters look like in their gear” were addressed by 50% of the respondents. Of the remaining topics, the descending order of those taught were, “exit drills (EDITH)” at 37.5%, “match safety” at 31.3%, and “burn safety” and “kitchen safety” both coming in at 25%. One respondent stated they also taught, “911” as a topic. The topics taught most often are reactionary in nature while those taught less often are proactive in context.

Table F

Fire Prevention Topics Taught in Hampton City Schools

For schools who currently teach fire/life safety information in curriculum			
Fire Prevention Currently Taught	Stop, Drop, and Roll	8	50.0%
	Burn Safety	4	25.0%
	Crawl Low	8	50.0%
	Smoke Alarms	8	50.0%
	Match safety	5	31.3%
	Exit Drills	6	37.5%
	Kitchen Safety	4	25.0%
	What Firefighters Look Like in Their Gear	8	50.0%
	Other	1	6.3%

Note. Excerpted from Appendix Q.

A second set of topics was presented to respondents regarding life safety and injury prevention materials. They were:

- 2. Life Safety / Injury Prevention
 - a. Poisonings
 - b. Motor vehicle safety
 - c. Bike safety
 - d. Falls Water safety / Drownings / Pool safety
 - e. Pedestrian safety
 - f. Choking
 - g. Burns / scalds
 - h. Other

Whereas a strong focus was placed on fire prevention, life safety initiatives were far less represented (Table G). 25% of schools were reported to include, “bike safety”, “water safety / drowning / pool safety”, and “pedestrian safety”. “Motor vehicle safety” and “burns / scalds” were reported at 18.8% and 12.5%, respectively. One school (6.3%) included “falls” in their curricula, where no schools reported teaching, “poisonings” or “choking”.

Table G
Life Safety Topics Taught in Hampton City Schools

Life Safety Currently Taught	Poisonings	0	0.0%
	Motor Vehicle Safety	3	18.8%
	Bike Safety	4	25.0%
	Falls	1	6.3%
	Water Safety / Drownings / Pool Safety	4	25.0%
	Pedestrian Safety	4	25.0%
	Choking	0	0.0%
	Burns/Scalds	2	12.5%
	Other	0	0.0%

Note. Excerpted from Appendix Q.

When the respondents were asked if they knew that the Hampton Division of Fire and Rescue offered fire prevention and life safety programs in the schools, 75% acknowledged the fact. However, only 31.3% utilized the fire department to provide the education. There were 10 (62.5%) schools who stated a fire engine visited the school for, “show and tell” and five (31.3%) schools who physically visited a fire station for educational purposes (Table H). Unfortunately,

there were three (18.8%) schools who did not utilize the fire department in any non-emergency capacity for educational purposes.

Table H

Percentage of Schools Who Utilize the Fire Department for Fire Prevention Education

Have used HDFR for programs?	Station Tour	5	31.3%
	Fire Engine Visit	10	62.5%
	Fire/Life Safety Program in Class	5	31.3%
	None of the Above	3	18.8%

Note. Excerpted from Appendix P

Statistics play an important role in determining deficiencies, progress, and awareness. As a barometer of the principals’ knowledge of fire and injury statistics, they were asked the following question. “Are you aware that children under the age of five are at the highest risk of being killed by fire among all children under the age of 14 and that the number one cause of death in children under the age of five is unintentional injuries?” Seventy-five percent of principals were unaware of the statistic or the seriousness of the implications.

The respondents were asked questions regarding distribution of fire prevention and life safety materials in addition to languages in which this information should be provided. Five (31.3%) of the schools distributed fire prevention information to parents in English whereas one school also provided it in Spanish. Only one school distributed information regarding life safety and injury prevention to parents, both in English and Spanish. The need to supply information in Spanish is a low priority for most schools as a majority of those requiring interpretation are taught at one facility. However, when asked if they would prefer such information to be distributed to parents by the fire department, the answer was unanimously, “yes” with seven stating they preferred Spanish materials to be included.

The focus of the questionnaire then turned to those schools who did not routinely present fire prevention and life safety information to their students (Table I). Included in these questions were schools who presented some material, but showed interest in including other topics. Much like those schools that already include the topics, 43.8% of those that did not indicated they would like to include the same topics, “stop, drop, and roll”, “crawl low”, “smoke alarms”, and “what firefighters look like in their gear”. While 37.5% agreed that “exit drills (EDITH)” should be included in the curriculum, 31.3% wished to add, “smoke alarms” and “kitchen safety”. Burn safety ranked the lowest at 18.8%.

Table I

Fire Prevention Topics Requested by Hampton City Schools

For schools who <u>DO NOT</u> teach these programs <u>OR</u> who request additional information, fire/life safety topics requested			
Fire Prevention Information Requested	Stop, Drop, and Roll	7	43.8%
	Burn Safety	3	18.8%
	Crawl Low	7	43.8%
	Smoke Alarms	5	31.3%
	Match safety	7	43.8%
	Exit Drills	6	37.5%
	Kitchen Safety	5	31.3%
	What Firefighters Look Like in Their Gear	7	43.8%
	Other		

Note. Excerpted from Appendix Q.

A transition appeared to emerge as the results indicate that schools wished to include more life safety and injury prevention initiatives in the curriculum (Table J). “Bike safety” came in at 62.5%, while “water safety/drowning/pool safety” and “pedestrian safety” tied for second with 43.8%. “Poisonings” and “choking” which is not taught at all, as reported, received 37.5%

and 25% of the vote, respectively. “Motor vehicle safety”, “falls”, and “burns/scalds” ranked lowest in desire at 12.5%, 12.5%, and 6.3% respectively.

Table J

Life Safety Topics Requested by Hampton City Schools

Life Safety Information Requested	Poisonings	6	37.5%
	Motor Vehicle Safety	2	12.5%
	Bike Safety	10	62.5%
	Falls	2	12.5%
	Water Safety / Drownings / Pool Safety	7	43.8%
	Pedestrian Safety	7	43.8%
	Choking	4	25.0%
	Burns/Scalds	1	6.3%
	Other	0	0.0%

Note. Excerpted from Appendix P

Finally, the respondents were asked a series of question pertaining to preferred instructional method, length of instruction, delivery preference, and time of year to present (Table K). When asked which method of instruction was preferred, 75% stated the use of “props” and “demonstration/practice” were important. “Songs” and “stories” were preferred by 68.8% and 62.5% of the schools. The use of “lectures” ranked lowest at 18.8%. When asked what the ideal length of time was for the instructional period, a majority of principals stated, “30 minutes or less”. Others (31.3%) agreed that “30-45 minutes” was acceptable”. No respondents chose either “45-60 minutes” or “more than 60 minutes”. When queried as to whether they would rather each class be taught separately or as a group, a majority (68.8%) preferred the previous whereas 31.3% preferred the latter.

Table K

Program Delivery by Hampton City School Preference

Methods of Instruction Preferred	Lecture	3	18.8%
	Props	12	75.0%
	Stories	11	68.8%
	Demonstration / Practice	13	81.3%
	Songs	10	62.5%
	Other	0	0.0%
	Preferred Instruction Length	30 minutes or less	11
30-45 minutes		5	31.3%
45-60 minutes		0	0.0%
More than 60 minutes		0	0.0%
Delivery Preference	Each class separately	5	31.3%
	Combine multiple classes	11	68.8%

Note. Excerpted from Appendix P

Specific programs are often promoted during certain recognized times of year. Fire Prevention Week is regularly scheduled during the month of October, whereas Burn Prevention Week is normally promoted during the month of February. Most respondents preferred instruction to occur during the week of or during the entire month of the promoted month. Only one school stated they did not wish to participate in Burn Prevention Week at all.

A cover letter (See Appendix R) and feedback survey (See Appendix S) were sent to nine area fire departments to better understand what programs were offered in other jurisdictions and what challenges and successes they reported to encounter during the delivery of such programs. Cities and counties were chosen with similar demographics and school system basics. Of the nine queried, seven (78%) responded to the survey. See Table L for a listing of the fire departments.

Table L**Population Served by Surveyed Surrounding Fire Departments**

City/County	Total Population Served	Rural	Suburban	Urban
City of Newport News	> 100,000		X	
City of Suffolk	> 100,000		X	
James City County	50,000 – 100,000		X	
City of Norfolk	> 100,000		X	
City of Virginia Beach	> 100,000		X	
City of Williamsburg	50,000 – 100,000		X	
City of Poquoson	10,000-25,000		X	

Representatives from each of the city and county fire departments were asked if they currently had a fire prevention and life safety education program for children. Of the seven respondents, only one city (City of Poquoson) stated that they did not participate in a program. The respondents were then asked which grade levels they targeted when delivering the programs to school children. One (17%) each stated, “Pre-K to Second”, “K to Fifth”, and “Pre-K to Fifth”. Three others had a unique range of grade levels. The remaining responses were, “Pre-K, K, First, and Fourth”, “Pre-K, First, Fourth, and Seniors”, with a lone response of, “Fourth” only. Table M displays the frequency that the respondents chose a specific grade level. Pre-Kindergarten, kindergarten, first, and fourth grades were included in fire prevention and life safety education programs at least 68% of the time.

Table M**Grades Educated by Surveyed Surrounding Fire Departments**

	Pre-K	K	First	Second	Third	Fourth	Fifth	Other
FD #1	X	X	X	X	-	-	-	-
FD #2	-	X	X	X	X	X	X	-
FD #3	X	X	X	X	X	X	X	-
FD #4	X	X	X	-	-	X	-	-
FD #5	X	-	X	-	-	X	-	X
FD #6	-	-	-	-	-	X	-	-
Totals	4	4	5	3	2	5	2	1

The respondents were then asked to describe the method in which the program was designed. Three (50%) of the departments designed their own program, with one of those agencies utilizing program evaluations to address and improve the program while three (50%) departments stated an active collaboration between the agency and the school system. None of the programs delivered was school-only designed application.

There are a multitude of fire prevention and life safety education programs offered by several entities available for use by departments, schools, and the community. The departments were asked which proprietary program, if any, was used in the delivery of the information. Three of the agencies indicated they utilized the Home Safety Council's Start SAFE program whereas one department utilized NFPA's Risk Watch program. Two departments did not answer the question. This was most likely due to the fact that either used random materials to educate the public or that they were unaware which program was used.

Since fire prevention and life safety education is an ongoing process, the departments were asked if their program was delivered on a regular, coordinated schedule. Three (50%)

respondents stated, “yes”, two (33%) stated, “no”, and one (17%) stated they performed education on a regularly scheduled basis and during random times. Those that did not routinely perform education on a regularly scheduled basis most often perform their programs when solicited.

Program evaluation and student comprehension is important in order to verify the effectiveness of a program. When asked if the students were tested on the materials delivered, 67% of the agencies responded positively to testing while one stated they weren't sure. One respondent did not answer the question. If the agency responded, “yes” to testing, they were further queried on how this testing was performed. Two agencies reported using, “oral/didactic” only, one used, “written post-test” only, one used, “written pre-test and written post-test”, and the last used all three methods but only with fourth and twelfth graders. According to the results at the most common testing methods to evaluate comprehension were to use an oral/didactic approach and a written post-test method.

Methods proposed to evaluate the overall efficacy of the programs delivered solicited from all six agencies. One agency utilized post-test results, feedback, and fire department statistics to evaluate its effectiveness. Two agencies each used feedback and fire department statistics, respectively, while two did not evaluate its effectiveness beyond delivery. A major flaw to programs in general is the failure to evaluate its effectiveness beyond delivery.

Although subjective in some cases and objective in others, the departments were asked to rate the overall effectiveness of their agency's fire prevention and life safety education programs. Four (67%) stated their program was extremely effective. One stated it was mostly effective, while the last stated it was only somewhat effective. An interesting correlation was uncovered when this rating was compared to how the department stated they tested for effectiveness. One

department who stated their program was extremely effective does not evaluate the program beyond delivery whereas the other agency who did not evaluate beyond delivery indicated it was only somewhat effective. The latter would be an educated assumption of cause.

The respondents were given the opportunity to provide any further information that may assist the researcher. A recurrent issue arose where many stated that a lack of staffing hindered the regular delivery of program information to the community. Others listed some emerging new programs being offered by various companies and agencies that incorporate a standard fire/life safety education (FLSE) curriculum. The latter is promising to those departments wishing to standardize their programs.

In summary, surveys of both the pre and elementary schools within the City of Hampton and similar surrounding fire departments offered up a multitude of data to assist in developing recommendations to correct the inconsistencies in delivering fire prevention and life safety education in the City of Hampton. Although 64% of respondents provide some form of fire prevention and life safety education, 36% of schools still go without any formal program. Of those schools performing this education, at least 50% have consistency in topics taught. However, all topics presented in the survey share importance in the overall preparation of our children to live a safe, healthy life. The most noticeable deficiency was found with life safety and injury prevention topics in the schools. Fewer than 25% of the respondents addressed these topics while some topics went completely unaddressed. When considering other factors linked to delivery, all schools desired fire department collaboration to present the contents of these programs. Most wanted this to occur in the classroom with multiple classes through the use of props, stories, demonstrations, practice, and songs all in 30 minutes or less.

Question 3- What fire prevention and life safety information is included in the Virginia Standards of Learning Health Education curriculum?

Virginia supports teaching and learning through statewide system support and accountability for the Commonwealth's public schools and school divisions (Virginia Department of Education, 2011). These standards provide a relative framework of content that schools must cover based on grade level. All students are tested on these standards throughout the school year which provides a barometer of teaching efficacy and comprehension of the students. As an incentive to schools, they are rewarded through funding should the students perform to expectation. However, the schools may also be penalized for poor performance by withholding state funding putting the weight on the cities and counties (Virginia Department of Education, 2011).

When reviewing the Virginia Standards of Learning, it was found that most, if not all of the content presented in fire prevention and life safety programs can be directly tied to core content found in the SOLs. More specifically, the information is included in health education core content. See Appendices A through L for the specific content related to health and safety. Topics as broad as, the "concept of being safe" to specific content on how to, "get out and stay out" when a fire occurs are covered. Based on the review of health education SOLs for grades kindergarten through fifth grade, it is evident that a tailored fire prevention and life safety program delivered to children ages four to twelve by both the fire department and the school system would be of great benefit. Not only would children receive education that satisfies state standards, but the consistent delivery of important messages to help keep them safe and healthy would be an excellent move towards a safer community and longer life.

Virginia schools, like most states, creates their curricula based on the Virginia Department of Education's Standards of Learning (SOL). These SOLs cover all topics from English to mathematics to health science, which is where fire prevention and life safety topics are included. See Appendices A through L for VASOL for health education. When the principals from those schools surveyed were asked if they knew that the fire prevention and life safety topics presented in the questionnaire fulfill several SOL requirements for health and education, only 56.3% stated they were aware. An example of the specific SOL criteria met by the fire department's use of NFPA's Risk Watch can be seen in Appendix T. When asked if their school would be willing to dedicate time to these programs, 93% stated, "yes".

Having identified that some Virginia Standards of Learning requirements for health education could be addressed through coordinated fire prevention and life safety programs, the surrounding departments surveyed were asked if the programs they currently utilize are based on SOL requirements. Thirty-three percent of the respondents stated, "yes" while the same number responded, "no". One agency stated they did not know if SOL standards were tied to the program where one agency did not respond to the question. However, all departments were open to discussing measures that would meet the SOL criteria to better improve their programs.

Question 4- What barriers exist in the delivery of fire prevention and life safety information to elementary school children?

The development of programs, regardless of how well-defined or inclusive they may be, must take into account perceived or possible barriers to its ultimate success. These barriers have the potential to surface at any point during the process and require alternate plans or accommodation to provide for continuance without impeding the goals of the program. The most common barriers, potential or realized, to the department's fire prevention and life safety

program effort were the lack of time, funding, coordination, collaboration, and education or knowledge of the facts that may assist with mitigation of all barriers.

The lack of time and funding are mutually detrimental. The Hampton Division of Fire and Rescue has one member specifically assigned to provide education to the schools and community. The departments Fire Safety Program Educator, Sabrina Strykowski, is the coordinator of programs and states that she, “provides support to the Division’s efforts to educate (the) community” (personal communication, 2011). However, the Division’s members usually function on request and not in a coordinated effort. With only one dedicated educator, the time-demand cannot feasibly be met in any instance. Due to the lack of funding in times of financial waning, the ability to hire more members to provide education is not at the forefront of priorities. Not only does the lack of funding hinder the number of staff, but it also encumber the availability of teaching supplies. Most of the area departments surveyed stated that time, funding, and staffing were large barriers to the success of their programs although the schools surveyed stated they would be more than willing to make time to accommodate a consistent fire prevention and life safety program.

Coordination and collaboration became grossly relevant with respect to the effectiveness of content and delivery. The only coordinated effort of delivery came from the Fire Safety Program Educator whereas the uniformed personnel appeared to educate on a whim and without any specific curriculum. Although collaboration is practiced by Ms. Strykowski on a regular basis, she is only physically capable of doing so much with the resources she has and the time that exists. Routine collaboration between the uniformed personnel and the schools is nearly non-existent since most programs are delivered only upon request and in support of Ms. Strykowski’s efforts (Maurice Wilson, personal communication, 2011).

The final prevalent barrier to the success of the Division's fire prevention and life safety education program is the lack of education or knowledge of certain significant basics. For instance, when the schools were asked if they were aware that the Hampton Division of Fire and rescue provides education to the community and schools, 75% stated they were aware. However, when asked if they realized that topics taught in these programs satisfied many of the core content areas of the health education SOLs, only 56.3% were aware of that fact. Furthermore, when asked if they were aware that children under the age of 5 are at the highest risk of being killed by fire among all children under the age of 14 and that the number one cause of death in children under the age of 14 is unintentional injuries, only 25% stated they were aware of the statistic. This simple lack of basic knowledge may have prevented the schools from focusing more effort on ensuring this education was provided.

Question 5 - What collaborative effort between Hampton City Schools and the Hampton Division of Fire and Rescue should occur to ensure the fire prevention and life safety messages are effectively delivered?

Through the review of current Division practices and surveys of both the City of Hampton schools and several surrounding fire departments, loopholes in and lack of collaboration were identified as a source of breakdown that had potential and realized impact on the delivery of fire prevention and life safety education to schools. The Division's collaboration with the school system is limited and greatly needs improvement. It did not appear that the lack of collaboration was purposeful nor was it in the program design. Either lack of communication, miscommunication, or lack of knowledge and time seem to be the biggest factors where collaboration is minimal.

Since fire prevention and life safety education is an ongoing process, when the departments were asked if their program was delivered on a regular, coordinated schedule. Three (50%) respondents stated, “yes”, two (33%) stated, “no”, and one (17%) stated they performed education on a regularly scheduled basis and during random times. Those that did not routinely perform education on a regularly scheduled basis most often perform their programs when solicited. The respondents were then asked to describe the method in which the program was designed. Three (50%) of the departments designed their own program, with one of those agencies utilizing program evaluations to address and improve the program while three (50%) departments stated an active collaboration between the agency and the school system. None of the programs delivered was school-only designed application.

Based on the knowledge gained from surveys and the literature review, several basic steps should be employed to initiate collaboration and enhance the efforts already in place. A joint meeting between program staff of the fire department and individuals in the school system responsible for engaging the curricula and delivering the content should be made. At that point, the coordination of fire department program information with SOL content would be discussed and a plan devised, the latter of which represents the most difficult portion of the process. Once the portion of the process initiating the collaboration has been established, the responsibility to create a coordinated, consistent process to deliver the material must be created. It must be mentioned that the delivery of content should not be the sole responsibility of the fire department. Because time is limited for all involved, a group effort is required amongst the schools and the departments. Although the fire department as a whole serves as the subject expert, collaboration means an alliance to achieve the goal as specified.

Discussion

Information and data from surveys, interviews, and the literature review process provides suggestive conclusion that the Hampton Division of Fire and Rescue can methodically resolve inconsistencies found in the delivery of their fire prevention and life safety education programs to pre and elementary school children. The research identified deficiencies within the department, the schools, and offered comparative solutions gleaned from surrounding fire departments. Fire Safety Program Educator Sabrina Strykowski stated, “We have a respectable foundation, but there is certainly room for improvement (personal communication, 2011).

The first goal of the research project was to determine what fire and injury risks children between the ages of five and ten were most exposed to. On a national level, more than 600 children under the age of 14 died as a result of exposure to fires in 2008 (USFA, 2010). In Hampton, 10 children within the same age group died in a 3-year period between 2008 and 2010 (Sabrina Strykowski, personal communication, 2011). In addition to those 10, more than 30 others were injured by fire or explosion-related incidents. Nationally and in Virginia, injury risks were similar with the greatest being unintentional in nature. Topping the list of most common risks for injury and death were falls, pedestrian accidents, poisonings, drownings, fire/flame exposure, and motor vehicle accidents (CDC, 2008).

In order to determine which programs are utilized by the Hampton Division of Fire and Rescue, the Fire Safety Program Educator for the Division was interviewed. Not unlike the number of programs available, the Hampton Division of Fire and Rescue also employs several programs in their education process. According to Ms. Strykowski, the programs currently being utilized by Fire Prevention and other Division field personnel to educate the community and schools as reported by Fire Safety Program Educator Sabrina Strykowski are:

13. NFPA's Risk Watch
14. Home Safety Council Expert Network
15. Centers for Disease Control
16. United States Fire Administration Material from Kenneth Finneman
17. Tidewater Fire Educator's Network
18. Juvenile Fire Setter Program

Through the literature review a host of programs available to the fire departments, other agencies, and the community are available. Most notable or frequently mentioned were the NFPA's Risk Watch Program, and the Home Safety Council's Safe Program. In addition to programs offered, the CDC provides an excellent resource for data and statistics related to fire and unintentional injuries for all demographics that allows for comparable data sharing (CDC, 2011).

One of the most important aspects of a program is to determine the most appropriate message to be delivered (Allensworth & Lawson, 1997). The message must fit the target audience. As mentioned before, safety messages differ with regard to locality since some areas of the globe are exposed to different risks. By using a standard planning process, the local community, including that of Hampton, can be identified. "A community analysis is a process that identifies fire and life safety problems and the demographic characteristics of those in the community" (Robertson, 2005). Once these risks are identified, the program can be created to specifically address the risks associated with that community.

Regardless of the specific risks associate with a community, all safety programs follow a general format that assists in devising a complete program. The Company Officer manual details three types of hazards that are all inclusive of any risk that should be addressed in a comprehensive fire prevention and life safety education program. The three concepts are:

1. What to do in the event of a fire or other emergency,
2. How to prevent a fire or other emergency from happening, and

3. How to persuade others to use fire or life safety behaviors (IFSTA, 2007).

In addition to fire safety, many other safety concerns are included in these programs such as vehicle accidents, pool and water safety, as well as other common accidents that cause injury and deaths (Smeby, 2006).

Based on the risks identified with the Hampton community, the Fire Safety program Educator chose NFPA's Risk Watch Program as the core program delivered to the community. This choice, after further review, appears to be an excellent fit to the risks most prevalent in the identified community. The program covers 8 core topic areas:

1. Motor vehicle safety,
2. Fire and burn prevention,
3. Choking, suffocation, and strangulation prevention,
4. Poisoning prevention,
5. Fall prevention,
6. Firearms injury prevention,
7. Bike and pedestrian safety, and
8. Water safety

Although the injuries and deaths found in Hampton associated with such risks may not include all of the above, nonetheless they are identified potential hazards that should be addressed. These risks hide within every community and an absence of death or injury should not preclude an educator for addressing the risks. A complete risk reduction curriculum should address all risks with a focus on those issues that are more prevalent in the community. For the City of Hampton, a complete fire prevention and life safety education curriculum would not only address the 8 core areas found in Risk Watch, but particular attention would be paid to those involving the greatest risk associated with injuries and death in the city such as traumatic injuries, falls, fires, pedestrian accidents, motor vehicle accidents, and poisonings which ranked the highest. Even though firearm and water injuries and deaths were not found in the data for the

specific time period queried, the risks still exist. The City of Hampton is a community surrounded by water on three sides by the Chesapeake Bay and its tributaries and enjoys warm weather for at least five months of the year where citizens spend a majority of those months in and on the water and in pools.

The largest argument for collaboration between the fire department and the schools, besides the identified need to address risks, is that many of the topics found in the Virginia Standards of Learning curriculum for health education are found in the NFPA's Risk Watch program. The inference of benefit is two-fold. Not only would a collaborative program address important risks for children found in the community, but educating these children about the risks in the school environment would satisfy several points of education in the Virginia Standards of Learning curriculum for health education. As identified in Appendices A through L, the researcher has highlighted specific core content that may be addressed to satisfy these requirements. Although many of the eight Risk Watch categories are seen in grades K through Grade 5, it appears a greater and more thorough emphasis is placed on the content in Grade 4. It is stimulating to see such great emphasis on these topics throughout a child's primary years in school where the greatest chance for positive impact is available. Interestingly, when looking at the injuries children across the nation and in Hampton are most exposed to, the educational topics available to assist in preventing these deaths and injuries were the least frequently requested by the schools.

Another goal of the research project was to determine what barriers, potential and realized existed in delivering a program in the City of Hampton. The most common barriers to the department's fire prevention and life safety program effort were the lack of time, funding,

coordination, collaboration, and education or knowledge of the facts that may assist with mitigation of most if not all identified barriers.

According to Ms. Strykowski, the barriers of time and funding shortages are by far the greatest hindrance to the success of program delivery (personal communication, 2011). Unfortunately, these barriers are also beyond the corrective scope of Ms. Strykowski. She agrees with IFSTA's statement that, "while there are other ways to enhance (the) department's image, the means most often used by fire and emergency services organizations is public education as being one of the most cost effective safety activities of any fire and emergency services organization" (IFSTA, 2004). It can be seen across the nation where fire prevention programs have been initiated that injuries and death by fire have decreased. The City of Hampton has employed certain programs to enhance this downward trend by installing free smoke detectors and performing home safety surveys free of charge (Maurice Wilson, personal communication, 2011). These initiatives are specific, coordinated, and occur throughout the year. Ms. Strykowski states that the Division makes a larger push during the winter months when fires are most likely to occur (personal communication, 2011). Because of this coordinated effort, the city has seen a decrease in injuries and deaths associate with fire as a whole, although two large fires claimed 6 lives between 2008 and 2010. Prevention strategies are more focused on fire prevention and fail to actively focus on the aspect of life safety and injury prevention as much as it should. Fortunately, in spite of the lack of time by Ms. Strykowski and the minimal funding for prevention activities, uniformed personnel still play a large role in getting the message out. Although any positive message will benefit the community, a better effort must be made to coordinate the message delivered for the sake of consistency.

The last barrier with the most potential for improvement is communication and knowledge between and of, respectively, the fire department and the school system. It was noted when the schools were asked if they were aware that the Hampton Division of Fire and rescue provides education to the community and schools, 75% stated they were aware. However, when asked if they realized that topics taught in these programs satisfied many of the core content areas of the health education SOLs, only 56.3% were aware of that fact. Furthermore, when asked if they were aware that children under the age of 5 are at the highest risk of being killed by fire among all children under the age of 14 AND that the number one cause of death in children under the age of 14 is unintentional injuries, only 25% stated they were aware of the statistic. This simple lack of basic knowledge may have prevented the schools from focusing more effort on ensuring this education was provided.

The most positive aspect of the deficiency in collaboration is the fact that both the fire department and the school system are open to improving communication and education. In collaboration, the inability or lack of desire to communicate will forbid any sought after improvement in the effort (Posner, 2000). Now that a willingness to collaborate has been identified, the focus of program delivery must shift to a meeting of the minds between both entities. This should occur at the time when collaboration would have the greatest impact on change. More specifically, communication should occur when the curricula is being developed or modified for the next educational period. Setting the stage early on will benefit the school system in identifying the program material to be delivered, when it will occur, and how the program's success will be measured.

Recommendations

Based on the research conducted, it can be reasonably assumed that the City of Hampton would benefit from a collaborative effort between itself and the school system to provide a consistent delivery of fire prevention and life safety education information. It is evident through education of the stakeholders that the goals of the City of Hampton with regard to providing the best services to its citizens possible are aligned with those expectations of the United States Fire Administration's goals of risk reduction.

There are some specific recommendations that should be considered when implementing and monitoring the program. The most effective way to reduce unintentional injuries is to work through a community coalition. This means organizing individuals and organizations with an interest in solving the childhood injury problem. In this case, the coalition includes, the Fire Prevention Bureau, the Fire safety Program Educator, uniformed personnel, and the stake holders of the schools system responsible for implementation and delivery of curricula. "Working together makes sense – few organizations have the resources or expertise to do it alone" (NFPA, 2011).

Once a coalition has been developed, the fire department must maintain an accurate database of injuries incurred by its citizens. Not only is it important to be aware of all risks that are prevalent to children in general, but a focus must be made on those risks that may be ubiquitous and prevalent to the children whom will be the audience. This data can be obtained through fire department databases as well as through the health department, CDC, and other agencies that maintain accurate data.

Secondly, the individuals in the fire department responsible for providing the program and materials to deliver fire prevention and life safety education should review the current

program for improvements. Is the program recognized by an accrediting agency? Is the information current and does the material represented identified and true risks? Does the program offer information and materials pertinent to those risks identified in the community where delivery will occur? All of these questions represent relevancy of a program to the goal audience. As identified, NFPA's Risk Watch program addresses all of these questions and provides an excellent foundation. The Fire safety Program Educator would prepare his or her lesson plan utilizing the Risk Watch lesson plan as a general guide. A complete guide to lesson plans, delivery material, material for parents, and information for teachers can be found at <http://www.riskwatch.org>. Should a fire department choose a program other than Risk Watch, those responsible should ensure all of these questions can be answered in the affirmative.

Barriers to the goal of the program must be identified early and mitigated as thoroughly as possible. Funding should be addressed to ensure that adequate materials are purchased to enhance delivery of the material. A focus should continue to reside on prevention in that dedicated personnel should be assigned to assist with implementation of the program. It has already been noted that prevention strategies are more cost-effective than after-the-fact education. Understanding that funding may not allow for the hiring of additional personnel to deliver the program, the use of uniformed personnel to assist should become a priority. In order to maintain consistency in delivery, these personnel must be educated on how to communicate with children. This can be accomplished through mandating that all personnel that instruct have obtained Fire Instructor Level 1 course. This course provides the basic knowledge of instruction. However, educating children is very different than education of adults. Therefore, it is recommended that all personnel receive training by attending a, "Communicating with Children" course. This course instructs personnel on how to effectively teach children by learning the

methods most applicable to younger people. Additional funding may be sought from in-kind sources and through grants specifically aimed at prevention. The last barrier noted may be resolved as described in the creation of a coalition between the department and the schools system. Both entities are considered stakeholders in the safety and education of our children and according to the surveys have shown a dedicated interest in assuring that they receive the best education possible.

The last recommendation of this research involves program evaluation. A program is only as good as the intended results it is capable of achieving. However, unless a program is evaluated for its success, the true results will go unnoticed. As noted in the survey of area departments, two of the six respondents did not evaluate their program beyond delivery and two more did an insufficient job at the same. However, the schools system methodically and routinely evaluates its teaching through SOL testing. Although the collaboration between the entities sets a good foundation, unless the fire department also evaluates the results through real data, it will be unknown whether the program is truly having an impact on reducing risk amongst our youth. This can be accomplished through reviewing trends in death and injuries to the city's children as it relates to pre and post program efforts. This research is not department specific in that its core goal of fire prevention and life safety education for our children is desired throughout the nation. The goal remains the same. It is up to each individual department how that goal is achieved and to what extent.

Although this research targets fire prevention and life safety education of children, there has also been a movement towards better education for the elderly. As healthcare and medicine improve, the population has become older. Since the population is living longer as a whole, fire and EMS agencies have seen an increase in responses to the elderly. Many of these responses

involve falls where in Hampton the number of calls for injuries due to falls for those 65 and older have increased over the last three years (HDFR database, 2010). A similar curriculum could be created for the elderly population in an effort to educate them on the unique risks they may encounter.

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Appendix A

Virginia Standards of Learning for Health Education (Kindergarten)

Kindergarten

Kindergarten students recognize basic facts and concepts about their bodies and begin to acquire skills and practices that keep them safe and healthy. Students learn to seek help and advice from parents/guardians and other trusted adults and begin to learn how to seek reliable health information. They understand how to make good decisions about simple health issues, to respect others, follow school safety rules, and be responsible.

Knowledge and Skills

K.1 The student will explain that the body is a living and growing organism.

K.2 The student will explain the concept of being healthy.

K.3 The student will explain the concept of being safe. Key concepts/skills include

- a) the need for safety rules and practices;
- b) the differences between emergency and non-emergency situations;
- c) the choices that prevent injuries (e.g., wearing helmets, using seat belts and safety seats, tying shoelaces).

Information Access and Use

K.4 The student will identify sources of health and safety information. Key concepts/skills include

- a) a variety of information sources such as product-safety symbols, television, radio, print materials, and electronic media;
- b) individuals, including school nurses, family members, health care personnel, teachers, school counselors, and public safety officials.

Community Health and Wellness

K.5 The student will explain the importance of seeking guidance from parents/guardians and other trusted adults.

K.6 The student will identify expectations for personal behavior in school and social settings.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix B

Virginia Standards of Learning Technical Assistance Guide for Health Education (Kindergarten)

K-10 Health Education Technical Assistance Guides

The Health Education Standards of Learning delineates the concepts, processes, and skills for health education in kindergarten through grade 10 for Virginia's public schools. The goals and standards in this document are intended to provide the knowledge, processes, and skills needed to help students avoid health-risk behaviors.

**Knowledge and Skills
Kindergarten****Standard of Learning**

K.3 The student will explain the concept of being safe. Key concepts/skills include:

a) the need for rules and practices;

Understanding the Standard

The student will understand the need for safety rules and practices.

Essential Knowledge and Skills

The student will:

- define safety rules. (a rule that helps you to stay safe)
- give examples of:
 - school safety rules; (no running, put books away, etc.)
 - home safety rules; (put toys away, do not touch poisons, etc.)
 - safety rules for bad weather; (get inside quickly, stay off the phone, etc.)
 - pedestrian safety rules; (walk on the sidewalk, cross streets at corners, etc.)
 - safety rules for riding in cars; (wear a safety belt, ride in the back seat, lock your door, stay seated, etc.)
 - bus safety rules; (stay in your seat, put book bags in your lap, etc.)
 - bike safety rules; (do not ride your bike too fast, in the dark, in the street, without a helmet, etc.)
 - fire safety rules; (get out as fast as you can, stop, drop and roll if your clothes catch on fire, etc.)
 - safety rules for the gymnasium; (no pushing or shoving, listen to safety instructions, etc.) and
 - safety rules for strangers. (do not talk to or take anything from a stranger, do not go anywhere with a stranger, etc.)

Instructional Resources

- School Rules for the Gymnasium, Classroom, Playground, and Lunchroom.
- “Respect for Self and Others” and “Safety Counts” – <http://www.healthteacher.com>
- Bicycle Safety – <http://ericir.syr.edu/Virtual/Lessons/Health/Safety/SFY0003.htm>
- Safety City – <http://www.nhtsa.dot.gov/kids>
- Safety Signs –
<http://www.wsd1.org/lessonplans/Health%20Lessons/Grade%20120Safety%20Signs.htm>

Assessment Ideas

The student will:

- demonstrate appropriate safety behaviors.
 - using a checklist, identify appropriate and inappropriate behaviors for specific situations.
-

Standard of Learning

K.3 The student will explain the concept of being safe. Key concepts/skills include:

b) the difference between emergency and non-emergency situations;

Understanding the Standard

The student will recognize the difference between emergency (life threatening) and non-emergency (non-life threatening) situations.

Essential Knowledge and Skills

The student will:

- define an emergency. (someone needs to go to the hospital or you need to call a fireman or policeman for help)
- define a non-emergency. (a minor injury)
- know when to call 9-1-1. (number to call in an emergency)
- know how to make a 9-1-1 call in an emergency. (say your name, tell what happened, do what the person on the phone tells you to do, and do not hang up until you are told to do so)
- define and give examples of first aid. (quick care given to someone who is hurt – for a cut, wash the cut with soap and water and put a bandage on it; for a nosebleed, sit down, lean forward and pinch your nose, etc.)

Instructional Resources

- Local Police, Fire, and Emergency Departments.
- American Red Cross
- Risk Watch – Injury Prevention Curriculum
- Local Insurance Companies

Assessment Ideas

The student will:

- plan a fire-escape plan for the entire family.

- demonstrate that they know their emergency number, (9-1-1 or others) and when and how to make an emergency phone call.
 - give examples of basic first aid.
-

Standard of Learning:

K.3 The student will explain the concept of being safe. Key concepts/skills include:
c) the choices that prevent injuries.

Understanding the Standard

The student will understand that taking proper safety measures will help to prevent injuries.

Essential Knowledge and Skills

The student will:

- define choices. (what you decide to do)
- identify choices that prevent injuries. (you make decisions that will help to keep you safe)
- give examples of safety measures or safety equipment used regularly.
- identify safety choices at school, home, a pool, on the playground, as a pedestrian, on a bus, in a vehicle, when riding a bike, etc.
- give examples of safety choices if you encounter a stranger, during a bad storm, or if you find a gun.

Instructional Resources

- “Bike Smart! Virginia” Bicycle Safety Resource Book from the Virginia Department of Health.
- Safety Advice from EMS – “A Guide to Injury Prevention” – Traffic Safety Lesson Plans for Fire and Rescue Personnel – “An Eggs-Sperimental Car Crash”
- Virginia Water Safety Coalition
- Watch Out for Kids Health – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- draw a picture of safety choices in different situations.
 - role-play safety choices in different situations.
-

Standard of Learning

K.4 The student will identify sources of health and safety information. Key concepts/skills include:

a) a variety of information sources such as product safety symbols, television, radio, print materials, and electronic media;

Understanding the Standard

The student will identify sources of health and safety information.

Essential Knowledge and Skills

The student will:

- define an advertisement. (a message to get you to buy something or a safety message)
- give examples of where one sees and hears health and safety advertisements. (on the television, radio, or in magazines)
- explain where one can find written information about health topics. (at school, in books, in magazines, on the Internet, etc.)
- identify symbols used to warn of safe and unsafe materials. (Mr. Yuck, seat belt signs, poison symbols, road signs, etc.)
- identify television and radio commercials or programs which provide information for individual, community, and world safety. (healthful foods ads, vehicle safety messages, anti-smoking advertisements, etc.)

Instructional Resources

- American Red Cross – Longfellow’s Whaletales (Instructional Program)
- Coast Guard.org
- American Heart Association
- American Lung Association
- DARE
- PBS.org
- <http://www.connectforkids.org>
- <http://www.gov.sg/moh/nhe>
- <http://www.mhie.ac.uk/HERO>

Assessments ideas

The student will:

- identify where they hear or see health messages.
 - describe where they can find health information.
-

Standard of Learning

K.4 The student will identify sources of health and safety information. Key concepts/skills include:

- b) individuals, including school nurses, family members, health care personnel, teachers, and public safety officials.

Understanding the Standard

The student will identify people who help to provide health and safety information.

Essential Knowledge and Skills

The student will:

- identify or describe members of their community who provide health and safety services:
 - school – teacher, school resource officer, nurse, etc.;
 - public safety – fire fighter, police officer, etc.;
 - family – parent, grandparent, etc.; and
 - medical – dentist, doctor, nurse, etc.

Instructional Resources

- American Red Cross – Longfellow’s Whaletales (Instructional Program)
- Coast Guard.org
- American Heart Association
- American Lung Association
- DARE
- PBS.org
- <http://www.redcross.org/services/hss/>
- <http://www.connectforkids.org>
- <http://www.gov.sg/moh/nhe>
- <http://www.mhie.ac.uk/HERO>

Assessments Ideas

The student will:

- identify people who help to provide them with health and safety information.
- discuss when to go to these individuals for help.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix C

Virginia Standards of Learning for Health Education (First Grade)

Grade One

Students in grade one learn about their body's systems and various health topics. They begin to understand how their decisions can impact their health and wellness now and in the future. Students begin to relate choices with consequences. They begin to examine the influence of the media on health decisions and to identify ways to access reliable information. They exhibit respect for self, others, and the environment.

Knowledge and Skills

- 1.1 The student will identify the basic components and functions of the systems of the human body.
- 1.2 The student will explain that good health is related to health-promoting decisions. Key concepts/skills include
 - c) personal hygiene, including care of one's teeth;
 - d) personal safety behaviors;
 - e) the harmful effects of misusing medicines and drugs;
 - f) sleep habits;
 - g) physical activity and healthy entertainment;
 - h) proper nutrition.
- 1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include
 - i) bus and automobile safety;
 - j) pedestrian safety;
 - k) playground safety;
 - l) fire safety;
 - m) home safety;
 - n) Internet safety;
 - o) water safety;
 - p) bicycle, in-line skating, skateboard, scooter, and other self-propelled-vehicle safety;
 - q) the need for protective gear.
- 1.4 The student will demonstrate healthy mental and emotional development.

Information Access and Use

- 1.5 The student will identify the health care providers and agencies that influence personal health. Key concepts/skills include
 - r) the role of community health care professionals;
 - s) the purpose of community health care agencies.

Community Health and Wellness

- 1.6 The student will demonstrate responsible personal and social behaviors in the school and community.
- 1.7 The student will explain that his/her personal decisions help contribute to a healthy environment.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix D

Virginia Standards of Learning Technical Assistance Guide for Health Education (First Grade)

Grade One

Students in grade one learn about their body's systems and various health topics. They begin to understand how their decisions can impact their health and well-being now and in the future. Students begin to relate choices with consequences. They begin to examine the influence of the media on health decisions and to identify ways to access reliable information. They exhibit respect for self, others, and the environment.

Knowledge and Skills First Grade

Standard of Learning

1.2 The student will explain that good health is related to health-promoting decisions. Key concepts/skills include:
b) personal safety behaviors;

Understanding the Standard

The student will describe the need for and the importance of personal safety behaviors.

Essential Knowledge and Skills

The student will:

- describe a safety rule. (a rule that keeps you safe)
- list examples of safety rules:
 - at home;
 - at school;
 - during bad weather;
 - to prevent a fire;
 - in the kitchen;
 - when you ride a bike;
 - when you ride in a car;
 - on the bus; and
 - on the playground.
- describe personal safety behaviors. (following safety rules)
- list different types of poisons. (household cleaning chemicals, bug sprays, etc., that can harm your brain and body if you put them in your mouth)

Instructional Resources

- Review K.3a-c
- Community Resources
- “Bike Smart! Virginia” – Virginia Departments of Education and Health
- “Pirate Pete” – Playground Video – Department of Health

- “Be Safe” – <http://www.healthteacher.com>
- Injury prevention – <http://www.cdc.gov>
- Watch Out – <http://kidshealth.org/kid/watch>
- National Highway Safety Administration – <http://www.nhtsa.dot.gov>
- Risk Watch – <http://www.riskwatch.org>

Assessment Ideas

The student will:

- identify safety behaviors they currently use to protect themselves.
 - keep a record for a one- or two-week period of their safety behaviors.
-

Standard of Learning

1.2 The student will explain that good health is related to health-promoting decisions. Key concepts/skills include:

- c) the harmful effects of misusing medicines and drugs;

Understanding the Standard

The student will understand that misusing medicines and drugs can be harmful.

Essential Knowledge and Skills

The student will:

- define a drug. (something that changes the way your mind or body works)
- explain the function of medicines. (drugs used to treat an illness or injury)
- define over-the-counter medicines. (a medicine that you can buy without a doctor giving you a prescription)
- identify rules for the safe use of medicine. (take medicine only with permission from a trusted adult and follow the instructions on the medicine labels)
- describe why drugs are harmful if misused. (too much medicine can turn into a harmful poison in the body and if that happens you should tell an adult and call 9-1-1)
- describe Mr. Yuck Stickers.

Instructional Resources

- Review K.1b
- School Health Nurse
- The Poison Control Center – (800) 222-1222
- “Safe Use of Medicines” – <http://www.healthteacher.com>
- Safe Use of Medicines – <http://www.aoa.dhhs.gov/aoa/pages/agepages/medicine.html>
- Drug and Violence Prevention – <http://dave.esc4.net>

Assessment Ideas

The student will:

- explain how medicines help people.
 - create a set of safety rules for taking medicines.
 - develop an emergency plan for a friend who has taken too much medicine.
-

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- a) bus and automobile safety;

Understanding the Standard

The student will demonstrate bus and automobile safety knowledge and skills.

Essential Knowledge and Skills

The student will:

- identify car safety rules. (lock doors to keep strangers out, fasten seatbelts, use booster seats, sit in the back seat, etc.)
- describe bus safety rules. (stay seated while the bus is moving, follow the bus driver's directions, keep your book bag out of the aisle, etc.)
- identify why safety rules are important.
- describe the importance of wearing seatbelts.

Instructional Resources

- Refer to K.6 SOL for Additional Information.
- “Wear Your Safety Belt” – <http://www.healthteacher.com>
- “Riding in the Back Seat” – <http://www.healthteacher.com>
- Community Resource Officer or Local Police Department
- Safety City – <http://www.nhsta.dot.gov/kids>
- Watch Out – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- participate in a school bus evacuation drill.
- draw an automobile safety picture.
- demonstrate how to use a seat belt correctly.

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- b) pedestrian safety;

Understanding the Standard

The student will identify and demonstrate pedestrian safety knowledge and skills.

Essential Knowledge and Skills

The student will:

- define a pedestrian.

- describe pedestrian safety rules while walking on public roadways. (walk facing traffic, cross at intersections, look both ways before crossing the street, cross with the light, etc.)
- describe crossing guards, police, or pedestrian signs and signals.

Instructional Resources

- Refer to K.6 SOL for Additional Information.
- Safety Patrol and School Crossing Guards.
- “Crossing Guard” – <http://www.healthteacher.com/lessonguides/k-1>
- AAA
- School Resource Officer
- Safety City – <http://www.nhsta.dot.gov/kids>
- Watch Out – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- participate in a pedestrian rodeo.
 - draw a picture of pedestrians walking and crossing a roadway safely.
-

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- c) **playground safety;**

Understanding the Standard

The student will understand the need for rules and safe practices to promote playground safety.

Essential Knowledge and Skills

The student will:

- identify the importance of playground safety.
- describe playground safety rules.
- identify unsafe situations or behaviors on the playground that may lead to injury.

Instructional Resources

- Refer to K.6 SOL for Additional Information.
- The National Program for Playground Safety – <http://www.uni.edu/playground>
- School or School Districts’ Playground Manuals
- “Pirate Pete” Playground Safety Video – Department of Health.
- Watch Out – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- develop a set of playground safety rules.
 - create playground safety posters.
-

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- d) fire safety;

Understanding the Standard

The student will learn the importance of fire safety and having a fire safety plan.

Essential Knowledge and Skills

The student will:

- identify the dangers of fire.
- describe the steps to take if a fire breaks out in your home. (yell, call 9-1-1, stay low to the floor, touch the door before opening it, have a meeting place, do not hide in the house, have an escape plan and practice it, etc.)
- identify the importance of having a fire safety plan at home and at school.
- determine escape routes and a class meeting place after leaving the building.
- identify the importance of smoke alarms and fire extinguishers.

Instructional Resources

- Refer to K.6 SOL for Additional Information.
- “Fire Safety: Getting Help” – <http://www.healthteacher.com>
- Local fire departments (October is Fire Safety Month)
- Riskwatch NFPA Curriculum
- <http://healthteacher.com>
- Jr. Firefighter Activity Sheets – <http://www.accentpub.com/jrfire.html>
- In Case of Fire Activity Sheet – <http://www.redcross-cmd.org/Chapter/colot1.html>
- Watch Out – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- draw floor plans of their homes with the help of their family and plan fire escape routes and a family meeting place.
- practice a fire drill.

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- e) home safety;

Understanding the Standard

The student will explain the importance of practicing safety behaviors at home.

Essential Knowledge and Skills

The student will:

- identify home safety rules. (do not stick objects in electrical outlets, do not play with household chemicals or matches, do not answer the phone or the door, do not leave toys on the stairs, do not take medicines without permission, do not put toys away, etc.)
- identify why falls are a common accident in the home.
- describe fire and water safety rules.

Instructional Resources

- Refer to K.6 SOL for Additional Information.
- Community Resource Officer
- Safe Kids
- Safe America – <http://www.safeamerica.org> – Student Pledges, etc.
- Watch Out – <http://kidshealth.org/kid/watch>
- Riskwatch NFPA Curriculum
- <http://healthteacher.com>
- Jr. Firefighter Activity Sheets – <http://www.accentpub.com/jrfire.html>
- In Case of Fire Activity Sheet – <http://www.redcross-cmd.org/Chapter/colot1.html>
- American Red Cross – <http://www.redcross.org/services/hss/tips/healthtips/safetywater.html>
- Virginia Water Safety Coalition – <http://www.watersafety.org>

Assessment Ideas

The student will:

- complete a home safety inspection checklist with the help of a parent.
- create a safety pledge or a safety song.

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- f) **water safety;**

Understanding the Standard

The student will understand the importance of water safety rules.

Essential Knowledge and Skills

The student will:

- identify rules for being safe around the pool, creek, pond, lake, river, and ocean. (adult supervision, life guard, proper use of life jacket, the buddy system, etc.)
- describe weather conditions that are dangerous when in the water. (lightning, high winds, heavy rain, etc.)
- identify rules for being safe while participating in recreational water sports. (skiing, boating, fishing, tubing, and jet skiing safety)
- determine why one should remain seated when a boat is moving.

Instructional Resources

- Refer to K.6 SOL for Additional Information.
- “Staying Safe Near the Water” – <http://www.healthteacher.com>
- “Buddy Systems” – <http://www.healthteacher.com>
- Virginia Department of Games and Inland Fisheries
- American Red Cross – <http://www.redcross.org/services/hss/tips/healthtips/safetywater.html>
- Coast Guard
- Virginia Water Safety Coalition – <http://www.watersafety.org>
- Safe Kids Organizations – <http://www.nsc.org>
- Injury Control Resource Information Network – <http://www.injurycontrol.com>
- Watch Out – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- create a Water Safety Day.
 - demonstrate the proper way to wear a life jacket (PFD).
 - write a short story about why the buddy system is important.
-

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- g) bicycle, in-line skating, skateboard, scooter, and other self-propelled vehicle safety;

Understanding the Standard

The student will be able to describe how to be safe when riding a bicycle, scooter, skateboard, or other non-motorized vehicle.

Essential Knowledge and Skills

The student will:

- identify bike safety rules.
- describe scooter safety rules.
- identify skateboard safety rules.
- describe how to fit and wear a helmet properly.
- identify safety equipment that helps to prevent injuries when using non-motorized vehicles. (helmet, wrist guards, elbows and knees joint padding, and proper footwear)
- identify safe areas to ride. (smooth surfaces, safe from traffic, adequate lighting, etc.)

Instructional Resources

- Refer to K.6 SOL for Additional Information
- “Bike Smart! Virginia” – Bicycle Safety Resource Book
- Local police departments
- Safe Kids Organizations – <http://www.safekids.org>
- Safety Advice from EMS “Bike Safety for Children”
- Bicycle Helmet Safety Institute – <http://www.helmets.org>

- National Bicycle Safety Network – <http://www.cdc.gov/ncipc/bike/kids.htm>
- Safety City – <http://www.nhtsa.dot.gov/kids>
- American Red Cross – <http://www.redcross.org/services/hss/tips/healthtips/safetywater.html>
- Injury Control Resource Information Network – <http://www.injurycontrol.com>
- Watch Out – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- participate in a Bike Rodeo.
 - complete a worksheet where they circle the activity and match it with the proper safety equipment.
 - create a non-motorized vehicle safety poster.
-

Standard of Learning

1.3 The student will explain the need for specific rules and practices to promote personal safety and injury-free situations. Key concepts/skills include:

- h) **the need for protective gear.**

Understanding the Standard

The student will identify and describe sports protective equipment that will help protect them from injury.

Essential Knowledge and Skills

The student will:

- identify bicycle, in-line skating, and skateboard safety protective gear.
- identify other sports equipment designed to protect you from getting hurt. (football helmet, catcher's mask, shin guards, mouth guard, life vest, etc.)
- describe why protective equipment should fit properly.

Instructional Resources

- Review 1.3g
- Refer to K.6 SOL for Additional Information
- “Safety Counts” – <http://www.healthteacher.com>
- Bicycle Helmet Safety Institute – <http://www.helments.org>
- National Bicycle Safety Network – <http://www.cdc.gov/ncipc/bike/kids.htm>
- Safety City – <http://www.nhtsa.dot.gov/kids>
- Watch Out – <http://kidshealth.org/kid/watch>

Assessment Ideas

The student will:

- complete a worksheet where they match the activity with the proper safety equipment.
 - draw pictures of different sport safety equipment.
-

Standard of Learning

1.5 The student will identify the health care providers and agencies that influence personal health. Key concepts/skills include:

- a) **the roles of community health care professionals;**

Understanding the Standard

The student will identify and describe the role of health care providers.

Essential Knowledge and Skills

The student will:

- identify community health care professionals. (emergency medical technicians, public health doctors and nurses, etc.)
- explain the role of community health care professionals. (counselors help individuals and families communicate better with one another, public health doctors or nurses give you vaccines, etc.)

Instructional Resources

- <http://www.healthfinder.gov/healthcare>
- <http://www.youthealth.com>
- <http://www.aap.org>
- FEMA for Kids
- AAHPERD
- For Health Care Professionals – <http://www.childrens-mercy.org/main-med-prof.asp>
- WebMD – <http://www.webmd.com>

Assessment ideas

The student will:

- list at least three health care providers that help people live healthy lives.
 - explain the role of three community health care professions.
-

Standard of Learning

1.5 The student will identify the health care providers and agencies that influence personal health. Key concepts/skills include:

- b) **the purpose of community health care agencies.**

Understanding the Standard

The student will identify and describe the role of community health care agencies.

Essential Knowledge and Skills

The student will identify health care agencies and describe what services they provide.

- ambulance services – transport people with medical needs.
- police department – help if you are lost, hurt, etc.
- fire department – put out fires or help people who are in a car accident.

- health department – provides general health care services.
- social services – provides housing, food, etc.
- mental health services – helps with emotional and other mental health needs.
- local hospitals – provide emergency and long-term care.
- emergency medical services – help if you are injured or sick.

Instructional Resources

- <http://www.youthhealth.com>
- <http://www.aap.org>
- FEMA for Kids
- Emergency Services
- Health Department
- Fire Department
- Police Department
- Hospital
- For Health Care Professionals – <http://www.childrens-mercy.org/main-med-prof.asp>
- WebMD – <http://www.webmd.com>
- Community Agencies – http://www.asl.emich.edu/comm_agencies/comm_agencies.html

Assessment Ideas

The student will:

- identify two health care agencies that helps people live healthier lives.
- describe the role of a community health care agency.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix E

Virginia Standards of Learning for Health Education (Grade Two)

Grade Two

Students in grade two continue to learn about the basic structures and functions of the human body systems. Focusing on preventing illness and disease, the students begin to understand the relationship between health behaviors, choices, and consequences. They learn about the factors that influence health decisions, the harmful effects of drugs, and how to communicate consideration and respect for others.

Knowledge and Skills

- 2.1 The student will identify the major body systems and explain their connection to personal health.
- 2.2 The student will explain that personal health decisions and health habits influence health and wellness throughout life.
- 2.3 The student will describe the influences and factors that impact health and wellness.

Information Access and Use

- 2.4 The student will recognize the influence that health resources and professionals have on personal health. Key concepts/skills include
 - t) health care professionals, resources, and services;
 - u) emergency services;
 - v) print, audiovisual, and electronic media.

Community Health and Wellness

- 2.5 The student will demonstrate ways to communicate consideration and respect for the health of individuals in the community.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix F

Virginia Standards of Learning Technical Assistance Guide for Health Education (Grade Two)

Standard of Learning

2.4 The student will recognize the influence that health resources and professionals have on personal health. Key concepts/skills include:

- a) health care professionals, resources, and services;

Understanding the Standard

The student will identify or describe the influence that health resources and health professionals have on their personal health.

Essential Knowledge and Skills

The student will:

- identify health resources in their community. (water treatment plants, garbage collection, county dump, local health department, etc.)
- identify health resources in the state, nation, and world. (environmental policies to reduce pollution, immunization strategies, etc.)
- understand the function of a variety of health resources.
- identify different types of health professionals. (health education teacher, emergency medical technician, school nurse, physician, school psychologist, dietitian, optometrist, dental hygienist, guidance counselor, etc.)
- describe how health professionals keep individuals and communities healthy. (doctors, technicians, and counselors provide services to help keep people healthy)
- demonstrate ways to locate and contact health resource agencies and health professionals in the community.
- explain how health resources and health professionals contribute to life-long health. (health resources are essential for a healthy community and world)

Instructional Resources

- Department of Public Health
- Children's Safety Network
- American Red Cross
- American Heart Association

Assessment Ideas

The student will:

- identify and describe the function of two health resources in their community.
 - draw a picture of a health professional and illustrate how the health professional helps people in the community.
-

Standard of Learning

- 2.4 The student will recognize the influence that health resources and professionals have on personal health. Key concepts/skills include:
- b) **emergency services;**

Understanding the Standard

The student will understand that emergency services provide essential medical care for individuals and communities.

Essential Knowledge and Skills

Students will demonstrate ways to locate and contact emergency services in their community.

Instructional Resources

- Emergency Services Information
- County Manager's Office
- Department of Public Health
- Children's Safety Network
- American Red Cross – Children's Emergency Services – <http://www.redcross.org>
- Emergency Medical Services for Children – <http://www.ems-c.org>
- Virginia Department of Emergency Management – <http://www.vdem.state.va.us>

Assessment Ideas

The student will:

- locate on the city map the nearest police station to their homes.
- find the section of the phone directory where emergency numbers are listed.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix G

Virginia Standards of Learning for Health Education (Grade Three)

Grade Three

Students in grade three learn how health habits impact growth and development. They learn to compare and contrast healthy and unhealthy practices. Skill building continues as students learn to apply the knowledge of health-risk reduction to the promotion of health. Students access valid information and begin to understand the relationship between personal and community health.

Knowledge and Skills

- 3.1 The student will explain that health habits impact personal growth and development. Key concepts/skills include
- w) food and beverage choices based on nutritional content;
 - x) the benefits of physical activity and personal fitness;
 - y) safe and harmful behaviors;
 - z) positive interaction with family, peers, and other individuals.
- 3.2 The student will use decision-making skills to promote health and personal wellness.
- 3.3 The student will identify the effects of drugs, alcohol, tobacco, and other harmful substances on personal health.

Information Access and Use

- 3.4 The student will demonstrate the ability to use health information to improve personal health. Key concepts/skills include
- aa) the use of health services and agencies to gain information;
 - bb) the ways in which health care has improved as a result of technology;
 - cc) the use of a variety of print, audiovisual, and electronic media resources.

Community Health and Wellness

- 3.5 The student will explain that customs and traditions may impact community health decisions.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix H

Virginia Standards of Learning Technical Assistance Guide for Health Education (Grade Three)

Grade Three

Students in grade three learn about growth and development throughout life as well as about body systems. They learn to compare and contrast healthy and unhealthy practices. Skill building continues as students learn to apply the knowledge of health-risk reduction to the promotion of health. Students access valid information and begin to understand the relationship between personal and community health.

Knowledge and Skills Third Grade

Standard of Learning

3.1 The student will explain that health habits impact personal growth and development. Key concepts/skills include:

- b) **safe and harmful behaviors;**

Understanding the Standard

The student will be able to recognize safe and unsafe behaviors.

Essential Knowledge and Skills

The student will:

- discuss the steps for making decisions:
 - identify your options;
 - evaluate each choice;
 - determine the best choice; and
 - identify the benefits of the choice you selected.
- describe safe behaviors. (wearing a seatbelt, not playing with matches, wearing a helmet, not talking to strangers, etc.)
- identify unsafe behaviors and how they can harm your health.

Instructional Resources

- Safety City – <http://www.nhtsa.dot.gov/kids>
- PBS Teacher Source – <http://www.pbs.org/teachersource/health.htm>
- HealthTeacher.com – <http://www.healthteacher.com>
- National SAFE KIDS Campaign – <http://safekids.org>
- Risk Watch Lesson Plans – http://www.nfpa.org/riskwatch/lsn_34_safeunsafestory.html

Assessment Ideas

The student will:

- role-play different situations where they choose to make safe decisions.
- draw a picture that illustrates safe and harmful behaviors.
- write a short story about safe behaviors.

- have students look through magazines to find pictures of people being safe (e.g. wearing a safety belt) and unsafe (e.g. riding a bike without a helmet).

Standard of Learning

3.4 The student will demonstrate the ability to use health information to improve personal health.

Key concepts/skills include:

- a) **the use of health services and agencies to gain information;**

Understanding the Standard

The student will be able to locate and access health services and agencies to obtain health information.

Essential Knowledge and Skills

The student will:

- describe where to locate phone numbers for ambulance services, police departments and animal control agencies.
- identify health agencies that are responsible for water quality, transportation safety, drug treatment, hospital care, child care standards, etc.

Instructional Resources

- Internet Detectives – <http://www.madison.k12.wi.us/tnl/detectives>
- CyberBee – <http://www.infotoday.com/MMSchools/MMStocs/MMScybertoc.html>
- Yahoo!igans! The Web Guide for Kids – <http://www.yahooligans.com>
- Blue Web'n – <http://www.kn.pacbell.com/wired/bluewebn>
- Texas Department of Health – Kids Corner – <http://www.tdh.state.tx.us/kids/default.htm>
- Elementary Health Lessons – <http://www.gsu.edu/~wwwche/elessons.htm>
- FunBrain.com – <http://www.funbrain.com/teachers/index.html>
- SuccessLink – Great Ideas – <http://www.successlink.org/great/g1054.html>
- Media Awareness (K-12 lessons) Lesson Plans and Activities – <http://members.aol.com/donnpages/Sociology.html>
- Lesson Plans Across the Curriculum – <http://members.aol.com/Donnpages/LessonPlans.html>
- The Access Indiana Teaching and Learning Center – <http://tlc.ai.org/thealth.htm>
- McGraw-Hill School Division Teaching Resources – <http://www.mmhschool.com>
- Health Teacher.com – <http://www.healthteacher.com>

Assessment ideas

The student will:

- identify five health services or agencies.
- locate and access five health services or agencies to obtain health information.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix I

Virginia Standards of Learning for Health Education (Grade Four)

Grade Four

Students in grade four learn and apply health skills to the following health areas: disease prevention, nutrition, healthy relationships, use of tobacco, and use/abuse of alcohol. Students begin to recognize the existence of myths related to health information, distinguish fact from fiction, and set simple goals for promoting personal health and preventing disease. Students assume personal responsibility for helping promote health at school and in the community.

Knowledge and Skills

- 4.1 The student will explain how nutrition affects personal health and academic achievement.
- 4.2 The student will develop the skills necessary for coping with difficult relationships.
- 4.3 The student will describe and evaluate the effects of alcohol, inhalants, tobacco, and other drug use on self, family, and community.
- 4.4 The student will demonstrate an understanding of health concepts and behaviors that prevent illness and disease.

Information Access and Use

- 4.5 The student will access and use health resources to improve personal and family health. Key concepts/skills include
 - dd) the use of health care agencies, printed materials, broadcast media, Internet, and audiovisual materials;
 - ee) identification of accurate and inaccurate health information.

Community Health and Wellness

- 4.6 The student will evaluate his/her role in identifying solutions to community health problems.
- 4.7 The student will understand the importance of communicating with family about personal and community health issues.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix J

Virginia Standards of Learning Technical Assistance Guide for Health Education (Grade Four)

Grade Four

Students in grade four learn and apply health skills to the following health areas: disease prevention, nutrition, healthy relationships, use of tobacco, and use/abuse of alcohol. Students begin to recognize the existence of myths related to health information, distinguish fact from fiction, and set simple goals for promoting personal health and preventing disease. Students assume personal responsibility for helping promote health at school and in the community.

Knowledge and Skills Fourth Grade

Standard of Learning

4.5 The student will access and use health resources to improve personal and family health. Key concepts/skills include:

a) the use of health care agencies, printed materials, broadcasts media, Internet, and audiovisual materials;

Understanding the Standard

The student will be able to identify and access a variety of sources of information designed to improve personal and family health.

Essential Knowledge and Skills

The student will:

- list useful print and media/audiovisual materials designed to improve health.
- locate community, state, and national health care agencies that work to improve dental, mental, emergency, occupational, etc., health for you and your family.
- search for useful health care Web sites.
- listen to news reports on radio, television, etc., to become more knowledgeable about local health resources and health promotional events.

Instructional Resources

- Berit's Best Sites for Children – <http://www.beritsbest.com>
- HealthWeb – <http://healthweb.org>
- AskA+Locator – <http://www.vrd.org/locator/subject.shtml>
- Fact Monster – <http://www.factmonster.com>
- CyberBee – <http://www.infotoday.com/MMSchools/MMStocs/MMScybertoc.html>
- KidsClick – <http://sunsite.berkeley.edu/KidsClick!>
- Yahoo!igans! The Web Guide for Kids – <http://yahooligans.com>
- Internet Detectives – <http://www.madison.k12.wi.us/tnl/detectives>
- Media and Public Opinion/Propaganda/Lesson Plans/Advertising, Media, Newspapers/ Politics

- Persuasion Quest/Free Lessons /What's in a Word? Worksheet/Teaching Critical Thinking Skills – <http://members.aol.com/Donnpages/Sociology.html>
- **Cartoon Analysis Worksheet –**
<http://www.nara.gov/education/teaching/analysis/cartoon.html>
- Ask Eric Lesson Plans
- Science NetLinks
- Marcopolo
- Picture Book Database of Health and Literacy – <http://www.lib.muohio.edu/pictbks>
- Cartoon Analysis – <http://www.nara.gov/education/teaching/analysis/cartoon.html>

Assessment Ideas

The student will identify and access 10 sources of information designed to improve personal and family health.

Standard of Learning

- 4.5 The student will access and use health resources to improve personal and family health. Key concepts/skills include:
- b) identification of accurate and inaccurate health information.

Understanding the Standard

The student will be able to discriminate between accurate and inaccurate health information using methods for detecting reliable and factual information sources.

Essential Knowledge and Skills

The student will:

- discriminate between accurate and inaccurate health information:
 - find reputable supporting agencies which endorse the Internet site;
 - identify whether there are supporting authors or studies;
 - determine who has written the information and the information can be checked;
 - establish the aims of the site are clear;
 - determine when the site was produced;
 - screen the information for bias or opinion; and
 - identify whether the site provides other choices available to you.
- define quackery. (health fraud or quackery is defined in The American Heritage Dictionary as “one who pretends to have medical knowledge” or the FDA defines health fraud as “articles of unproven effectiveness that are promoted to improve health, well being or appearance”)
- identify warning signs of inaccurate health information. (Tip Offs to Rip Offs – Nov-Dec. 99, Kurtzweil, U.S. Food and Drug Administration). Use caution if:
 - one product does it all;

- has personal testimonials;
- promises quick fixes;
- claims to be a new-found cure; and
- satisfaction is guaranteed.

Instructional Resources

- Council of Better Business Bureaus, Arlington, Va.
- Discern – <http://www.discern.org.uk>
- Planet Wellness
- Info Prn
- **HealthWave Directory**
- Healthfinder
- Berit's Best Sites for Children – <http://www.beritsbest.com>
- HealthWeb – <http://healthweb.org>
- AskA+Locator – <http://www.vrd.org/locator/subject.shtml>
- Fact Monster – <http://www.factmonster.com>
- CybeBee – <http://www.infotoday.com/MMSchools/MMStocs/MMScybertoc.html>
- KidsClick – <http://sunsite.berkeley.edu/KidsClick!>
- Yahoo!igans! The Web Guide for Kids – <http://yahooligans.com>
- Internet Detectives – <http://www.madison.k12.wi.us/tnl/detectives>
- Media and Public opinion/Propaganda/ Lesson Plans/Advertising, Media, Newspapers/ Politics
- Persuasion Quest/Free Lessons /What's in a Word? Worksheet/Teaching Critical Thinking skills – <http://members.aol.com/Donnpages/Sociology.html>
- Cartoon Analysis Worksheet – <http://www.nara.gov/education/teaching/analysis/cartoon.html>
- Quick: The Quality Information Checklist
- Picture Book Database of Health and Literacy – <http://www.lib.muohio.edu/pictbks>
- Lesson Plans Across the Curriculum

Assessment Ideas

The student will:

- find five reputable agencies that endorse various sites on the Web.
- locate five Internet sites that include supporting authors or cite studies to validate specific health information.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix K

Virginia Standards of Learning for Health Education (Grade Five)

Grade Five

Students in grade five distinguish reliable from unreliable health information and resources. Students' practices and behaviors demonstrate health knowledge and skills. Emphasis is placed on demonstrating interpersonal skills, assuming responsibility for personal health habits, and practicing behaviors that promote active, healthy lifestyles. Students critique advertising and various media displays and work with others to improve community health.

Knowledge and Skills

- 5.1 The student will demonstrate the interpersonal skills necessary to build healthy relationships.
- 5.2 The student will demonstrate responsibility for developing personal health habits and practicing behaviors that promote an active, healthy lifestyle.
- 5.3 The student will analyze the risks associated with dependence on and addiction to alcohol, tobacco, inhalants and other drugs.

Information Access and Use

- 5.4 The student will critically evaluate how print media, broadcast media, and Internet technology influence perceptions of health information, products, and services. Key concepts/skills include
 - ff) strategies for validating health information;
 - gg) tools for the critical evaluation of advertisements and promotions.

Community Health and Wellness

- 5.5 The student will explain how peers, families, and community groups work together to build a healthy community.

NOTE: **Text**: Indicates fire prevention and life safety-pertinent topics with the VASOL

Appendix L

Virginia Standards of Learning Technical Assistance Guide for Health Education (Grade Five)

Grade Five

Students in grade five distinguish reliable from unreliable health information and resources. Students' practices and behaviors demonstrate health knowledge and skills. They begin to see the interconnection between body systems. Students critique advertising and various media displays and work with others to improve community health.

Appendix M

Hampton City Schools Surveyed

	School	Address	Phone	Principal	School Type
1	Aberdeen	1424 Aberdeen Road, 23666	757-825-4624	Karla Young	Elementary
2	Andrews (Combined)	3120 Victoria Blvd, 23661	757-268-3333	Donna Warthan	PK-8
3	Armstrong	3401 Matoaka Road, 23661	757-727-1067	Levia Mason Stovall	Elementary
4	Asbury	140 Beach Road, 23664	757-850-5075	Patricia McIntyre	Elementary
5	Barron	45 Fox Hill Road, 23669	757-850-5100	Mary Wallen	Elementary
6	Bassette	671 Bell Street, 23661	757-727-1071	Ursula Hill	Elementary
7	Booker	160 Apollo Drive, 23669	757-850-5096	Troy Latuch	Elementary
8	Bryan	1021 N. Mallory Street, 23663	757-727-1056	Sean Holleran	Elementary
9	Burbank	40 Tidemill Lane, 23666	757-825-4642	Brenda McIntyre-Odoms	Elementary
10	Cary	2009 Andrews Blvd, 23663	757-850-5092	Ron Holloman	Elementary
11	Cooper Magnet	200 Marcella Road, 23666	757-825-4645	Chevese Thomas	Elementary
12	Forrest	1406 Todds Lane, 23666	757-825-4627	K. Richardson	Elementary
13	Hampton Harbour Academy	1435 Todds Lane, 23666	757-727-2760	Andrea James	Elementary
14	Kraft	600 Cioncord Drive, 23666	757-825-4634	Ralph Saunders	Elementary
15	Langley	16 Rockwell Drive, 23669	757-850-5105	Katie Hermann	Elementary
16	Machen	20 Sacramento Drive, 23666	757-727-2900	Patricia Clark	Elementary
17	Merrimack	2113 Woodmansee Drive, 23663	757-850-5084	Andrea Riddick	Elementary
18	Moton Early Childhood Center	339 Old Buckroe Road, 23663	757-727-1061	Joanne Drew	Preschool
19	Phenix (Combined)	1061 Big Bethel Road, 23666	757-268-3500	Raymond Haynes	PK-8
20	Phillips	703 Lemaster Avenue, 23669	757-850-5079	Anita Owens	Elementary
21	Smith	379 Woodland Road, 23669	757-850-5088	Lawrence Myers	Elementary
22	Spratley Gifted Center	339 Woodland Road, 23669	757-850-5032	Kenneth Crum	3 through 5
23	Tarrant	1589 Wingfield Drive, 23666	757-825-4639	Michael Stutt	Elementary
24	Tucker-Capps Fundamental	113 Wellington Drive, 23666	757-825-4641	Susan Johnson	Elementary
25	Tyler	57 Salina Street, Hampton VA 23666	757-727-1075	Jeffrey Blowe	Elementary

Appendix N

Letter to Hampton City Schools Superintendent

Wednesday, February 16, 2011

Dr. Linda Shifflette
Superintendent
Hampton City Schools
lshifflette@sbo.hampton.k12.va.us
757.727.2030

Dr. Shifflette,

My name is Jason Monk and I am the Chief Medical Officer for the Hampton Division of Fire and Rescue. I am a second year student in the Executive Fire Officer Program at the National Fire Academy and I recently completed the course *Executive Analysis of Community Risk Reduction*. A requirement for each course and year is to complete an Applied Research Project where the student chooses a problem experienced within his or her own agency that directly correlates to the course topic. My applied research project will explore fire and life safety programs in Hampton City Schools and how the Fire Division can assist with improving programs within the schools.

One of the research questions is to determine what current fire and life safety information is currently being taught in the schools. In addition, that question is further broken down into topics and what, if any, Fire Division resources are utilized to assist the schools in these programs. Attached is a questionnaire with 20 questions that will assist in the gathering of this information. I am asking that a designee from each of your preschool and elementary schools complete the questionnaire to the best of their knowledge and return it to me. I have set a return deadline of April 15, 2011 and it may be returned via E-mail (preferred), intra-office mail, or FAX. If you have any questions regarding this questionnaire, please contact me. Thank you.

Appendix O

Hampton City Schools Fire/Life Safety Education Questionnaire

Please complete all information on the questionnaire and return via E-Mail, FAX, or intra-office mail by April 15, 2011. If you have any questions regarding this questionnaire, please call me directly at 757-727-1205 (office) or 757-897-7081 (cell). Thank you for assisting me with this research.

1. Please complete the following information regarding your preschool/elementary school:

Name of School/Organization: _____

Your name and title: _____

Preschool Elementary School

Number of preschool/elementary classes: _____

Age range of students: _____

Total number of students enrolled in your preschool/elementary /organization: _____

2. Is fire safety/life safety taught to your preschool students as part of your curriculum?

YES NO

If yes, what topics are taught for:

Fire Safety

- | | |
|---|--|
| <input type="checkbox"/> Stop, drop, and roll | <input type="checkbox"/> Matches and lighter safety |
| <input type="checkbox"/> Burn safety | <input type="checkbox"/> Exit drills in the home (EDITH) |
| <input type="checkbox"/> Crawling low under smoke | <input type="checkbox"/> Cooking/kitchen safety |
| <input type="checkbox"/> Smoke alarms | <input type="checkbox"/> What firefighters look like in gear |
| <input type="checkbox"/> Other (explain): | |

Life Safety and Injury Prevention

- | | |
|---|--|
| <input type="checkbox"/> Poisonings | <input type="checkbox"/> Drowning/pool or water safety |
| <input type="checkbox"/> Motor vehicle safety | <input type="checkbox"/> Pedestrian safety |
| <input type="checkbox"/> Bike safety | <input type="checkbox"/> Choking |
| <input type="checkbox"/> Falls | <input type="checkbox"/> Burns/Scalds |
| <input type="checkbox"/> Other (explain): | |

3. Do you believe it is beneficial to begin teaching children fire and life safety in preschool?

YES NO

4. Are you aware that children under the age of 5 are at the highest risk of being killed by *fire* among all children under the age of 14 AND that the number one cause of death in children under the age of 5 is *unintentional injuries*?

YES NO

5. Has your school used the Hampton Division of Fire and Rescue (HDFR) for any of the following types of programs? Please mark all that apply.

Station Tour: Students visit the fire station and receive a tour of the equipment and receive a brief safety demonstration.

Fire Engine Visit: A fire engine visits the school and the crew provides the students with a brief demonstration of the equipment and a safety lesson.

Fire/Life Safety Class: The firefighters visit your class and teach the students about fire and life safety. The students are given an opportunity to practice what they have learned.

None of the above

Please answer the following questions pertaining to potential barriers regarding implementation of fire and life safety programs.

6. Are you aware that HDFR offers programs pertaining to fire and life safety to schoolchildren?

YES NO

7. In your school, would you need a program taught in Spanish?

YES NO

8. Do you realize that the topics taught during HDFR's fire and life safety presentations would fulfill some the Virginia English/Health Standard of Learning (SOL) requirements for Health Education?

YES NO

9. Do you have spare time or time that you may adequately schedule to allow for these programs?

YES NO

10. Where would you like these classes to be presented?

At your school At the fire station Other location

Explain "other" location if chosen: _____

Please complete the following questions regarding promotion of the programs in your school.

11. Does your school provide parents with fire safety information?

- In English: YES NO
 In Spanish: YES NO

12. Does your school provide parents with information regarding life safety and injury prevention?

- In English: YES NO
 In Spanish: YES NO

13. Would you like HDFS to provide your school with fire and life safety information for parents?

- In English: YES NO
 In Spanish: YES NO

If your school DOES NOT teach these programs, which information would you like presented?

14. Fire Safety

- | | |
|---|--|
| <input type="checkbox"/> Stop, drop, and roll | <input type="checkbox"/> Matches and lighter safety |
| <input type="checkbox"/> Burn safety | <input type="checkbox"/> Exit drills in the home (EDITH) |
| <input type="checkbox"/> Crawling low under smoke | <input type="checkbox"/> Cooking/kitchen safety |
| <input type="checkbox"/> Smoke alarms | <input type="checkbox"/> What firefighters look like in gear |
| <input type="checkbox"/> Other (explain): _____ | |

15. Life safety and Injury Prevention

- | | |
|---|--|
| <input type="checkbox"/> Poisonings | <input type="checkbox"/> Drowning/pool or water safety |
| <input type="checkbox"/> Motor vehicle safety | <input type="checkbox"/> Pedestrian safety |
| <input type="checkbox"/> Bike safety | <input type="checkbox"/> Choking |
| <input type="checkbox"/> Falls | <input type="checkbox"/> Burns/Scalds |
| <input type="checkbox"/> Other (explain): _____ | |

16. What methods of instruction should be utilized to teach students in your school? (mark all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Lecture | <input type="checkbox"/> Demonstration/Practice |
| <input type="checkbox"/> Props | <input type="checkbox"/> Songs |
| <input type="checkbox"/> Stories | |
| <input type="checkbox"/> Other methods (explain): _____ | |

17. How long should the presentations be? (select one)

- 30 minutes or less
- 30-45 minutes
- 45-60 minutes
- More than 60 minutes

18. Would you want the presentation to be delivered to each class separately or to be combined with multiple classes?

- Each class separately Combine multiple classes

19. Since Fire Prevention week is in October every year, when would you like the presentations to take place?

- During Fire Prevention week
- During the last two weeks of October
- During the entire month of October
- If no, which month would better suit your school? _____
- We are not interested in a fire safety program at this time

20. Since Burn Prevention week is in February every year, when would you like the presentations to take place?

- During Burn Prevention week
- During the last two weeks of February
- During the entire month of February
- If no, which month would better suit your school? _____
- We are not interested in a burn safety program at this time

If you have any additional comments, questions, or concerns, please feel free to include them below. Once again, thank you for assisting me during this research process.

Believe lessons should begin in preschool		YES	YES			YES		YES	
Aware of fire and injury statistic		NO	NO			NO		NO	
Have used HDFR for programs?	Station Tour	X				X		X	
	Fire Engine Visit	X	X		X	X		X	
	Fire/Life Safety Program in Class		X						
	None of the Above								
Aware that HDFR offers fire/life safety programs		YES	YES		YES	NO		YES	
Would program be needed in Spanish?		NO	NO		NO	NO		NO	
Aware that topics fulfill some VA SOL requirements		YES	NO		NO	NO		NO	
Does school have time to dedicate to these programs?		YES	YES		N/A	YES		YES	
Presentation Preference	At School	X	X		X	X			
	At fire station								
	Other location								
Does school provide parents with fire safety information?									
	In English	NO	NO		NO	NO		NO	
	In Spanish	NO	NO		NO	NO		NO	
Does school provide parents with life safety information?									
	In English	NO	NO		NO	NO		NO	
	In Spanish	NO	NO		NO	NO		NO	
Prefer HDFR to provide information for parents?									
	In English	YES	YES		YES	YES		YES	
	In Spanish	NO	YES					YES	

		Burbank	Cary	Cooper	Forrest	Hampton Harbour	Kraft	Langley	Machen
Questionnaire Returned			X		X		X		X
Type of School	Preschool								
	Elementary		X		X		X		X
Total # of Classes			17		21		19		20
Ages Taught			5 to 11		5 to 12		5 to 11		5 to 12
Total # of Students			280		472		380		460
For schools who currently teach fire/life safety information in curriculum									
Fire Prevention Information Currently Taught	Stop, drop, and Roll								
	Burn Safety								
	Crawl Low								
	Smoke Alarms								
	Match safety								
	Exit Drills								
	Kitchen safety								
	Firefighters in gear				X				
	Other		X						
Life Safety Information Currently Taught	Poisonings								
	Motor vehicle safety								
	Bike safety								
	Falls								
	Water safety								
	Pedestrian safety								
	Choking								
	Burns/Scalds								
	Other		X						

Believe lessons should begin in preschool					YES		YES		YES
Aware of fire and injury statistic					NO		NO		NO
Have used HDFR for programs?	Station Tour								X
	Fire Engine Visit		X						X
	Fire/Life Safety Program in Class								
	None of the Above				X		X		
Aware that HDFR offers fire/life safety programs			NO		NO		NO		YES
Would program be needed in Spanish?			NO		NO		NO		NO
Aware that topics fulfill some VA SOL requirements			NO		NO		NO		YES
Does school have time to dedicate to these programs?			YES		YES		YES		YES
Presentation Preference	At School		X		X		X		X
	At fire station								X
	Other location								
Does school provide parents with fire safety information?									
	In English		YES		NO		NO		NO
	In Spanish		NO		NO		NO		NO
Does school provide parents with life safety information?									
	In English		NO		NO		NO		NO
	In Spanish		NO		NO		NO		NO
Prefer HDFR to provide information for parents?									
	In English		YES		YES		YES		YES
	In Spanish		NO		YES		NO		YES

For schools who DO NOT teach these programs or who request additional information, fire/life safety topics requested									
Fire Prevention Information Requested	Stop, drop, and Roll						X		X
	Burn Safety								X
	Crawl Low						X		X
	Smoke Alarms						X		X
	Match safety						X		X
	Exit Drills								X
	Kitchen safety								X
	Firefighters in gear								X
	Other								
Life Safety Information Requested	Poisonings								X
	Motor vehicle safety								X
	Bike safety						X		X
	Falls								X
	Water safety						X		X
	Pedestrian safety						X		X
	Choking								X
	Burns/Scalds								X
	Other								
Methods of Instruction Preferred	Lecture				X		X		
	Props				X		X		X
	Stories				X		X		X
	Demonstration/Practice				X		X		X
	Songs				X				X
Preferred instruction length	30 minutes or less				X		X		
	30-45 minutes								X
	45-60 minutes								
	More than 60 minutes								
Delivery preference	Each class separately								
	Combine multiple classes				X		X		X

Preference for Fire Prevention Week programs	During Fire Prevention Week							
	During the last 2 weeks in October					X		
	During the entire month of October				X			X
	If no, which month would better suit school							
	Not interested							
Preference for Burn Prevention Week programs	During Burn Prevention Week							
	During the last 2 weeks in February						X	
	During the entire month of February							X
	If no, which month would better suit school							
	Not interested				X			
Additional Comments, Questions, or Concerns								

		Merrimack	Moton ECC	Phenix (Combined) Preschool	Phenix (Combined) Elementary (K-2)	Phillips	Smith	Spratley Gifted Center	Tarrant	Tucker-Capps (Sp. Ed Preschool)	Tucker-Capps (Elementary)	Tyler
Questionnaire Returned			X	X	X				X	X	X	X
Type of School	Preschool		X	X						X		
	Elementary				X				X		X	X
Total # of Classes			17	5					18	2	22	26
Ages Taught			4 to 5	4 to 5					6 to 11	2 to 4	5 to 11	5 to 10
Total # of Students			238	90					330	32	358	457
For schools who currently teach fire/life safety information in curriculum												
Fire Prevention Information Currently Taught	Stop, drop, and Roll		X	X	X				X	X		
	Burn Safety			X	X				X			
	Crawl Low		X	X	X				X	X		
	Smoke Alarms		X	X	X				X	X		
	Match safety		X	X	X				X			
	Exit Drills		X	X	X				X	X		
	Kitchen safety		X	X	X				X			
	Firefighters in gear		X	X	X				X	X		
Other			911	911								
Life Safety Information Currently Taught	Poisonings											
	Motor vehicle safety		X	X					X			
	Bike safety		X	X					X			
	Falls								X			
	Water safety		X	X					X			
	Pedestrian safety		X	X					X			
	Choking								X			

	Burns/Scalds								X			
Believe lessons should begin in preschool			YES	YES					YES	YES	YES	YES
Aware of fire and injury statistic			NO	NO					YES	NO	NO	YES
Have used HDFR for programs?												
	Station Tour								X			
	Fire Engine Visit		X						X	X		
	Fire/Life Safety Program in Class		X		X				X			X
	None of the Above			X								
Aware that HDFR offers fire/life safety programs			YES	YES	YES				YES	YES	YES	YES
Would program be needed in Spanish?			YES	NO	NO				NO	NO	NO	NO
Aware that topics fulfill some VA SOL requirements			YES	YES	YES				YES	YES	YES	YES
Does school have time to dedicate to these programs?			NO	YES	YES				YES	YES	YES	YES
Presentation Preference												
	At School		X	X	X				X	X	X	X
	At fire station								X			
	Other location											
Does school provide parents with fire safety information?												
	In English		YES	YES	YES				NO	N/A	N/A	YES
	In Spanish		YES						NO	N/A	N/A	
Does school provide parents with life safety information?				YES	YES							
	In English		YES						NO	N/A	N/A	NO
	In Spanish		YES						NO	N/A	N/A	

Appendix Q

School Survey Questionnaire Results

Hampton City Schools Survey Questions		Number	%
Questionnaires Returned (out of 27)		16	59%
Type of School	Preschool	4	25%
	Elementary	12	75%
Total # of Classes		309	
Ages Taught		4 to 12	
Total # of Students		5624	
For schools who currently teach fire/life safety information in curriculum			
Fire Prevention Currently Taught	Stop, Drop, and Roll	8	50.0%
	Burn Safety	4	25.0%
	Crawl Low	8	50.0%
	Smoke Alarms	8	50.0%
	Match safety	5	31.3%
	Exit Drills	6	37.5%
	Kitchen Safety	4	25.0%
	What Firefighters Look Like in Their Gear	8	50.0%
	Other	1	6.3%
Life Safety Currently Taught	Poisonings	0	0.0%
	Motor Vehicle Safety	3	18.8%
	Bike Safety	4	25.0%
	Falls	1	6.3%
	Water Safety / Drownings / Pool Safety	4	25.0%
	Pedestrian Safety	4	25.0%
	Choking	0	0.0%
	Burns/Scalds	2	12.5%
	Other	0	0.0%

School principal believes fire/life safety lessons should begin in preschool		16	100.0%
School principal is aware of provided fire and injury statistic		4	25.0%
Have used HDFR for programs?	Station Tour	5	31.3%
	Fire Engine Visit	10	62.5%
	Fire/Life Safety Program in Class	5	31.3%
	None of the Above	3	18.8%
Aware that HDFR offers fire/life safety programs		12	75.0%
Programs needed in Spanish?		1	6.3%
Aware that topics fulfill some VA SOL requirements for health and PE		9	56.3%
School has time to dedicate to these programs			
Presentation Preference	At School	15	93.8%
	At fire station	2	12.5%
	Other location	0	0.0%
School provides parents with fire prevention information			
	In English	5	31.3%
	In Spanish	1	6.3%
School provides parents with life safety and injury reduction information			
	In English	1	6.3%
	In Spanish	1	6.3%
School Principal prefers HDFR to provide information for parents			
	In English	16	100.0%
	In Spanish	7	43.8%
For schools who <u>DO NOT</u> teach these programs <u>OR</u> who request additional information, fire/life safety topics requested			
Fire Prevention Information Requested	Stop, Drop, and Roll	7	43.8%
	Burn Safety	3	18.8%
	Crawl Low	7	43.8%
	Smoke Alarms	5	31.3%

	Match safety	7	43.8%
	Exit Drills	6	37.5%
	Kitchen Safety	5	31.3%
	What Firefighters Look Like in Their Gear	7	43.8%
	Other		
Life Safety Information Requested	Poisonings	6	37.5%
	Motor Vehicle Safety	2	12.5%
	Bike Safety	10	62.5%
	Falls	2	12.5%
	Water Safety / Drownings / Pool Safety	7	43.8%
	Pedestrian Safety	7	43.8%
	Choking	4	25.0%
	Burns/Scalds	1	6.3%
	Other	0	0.0%
Methods of Instruction Preferred	Lecture	3	18.8%
	Props	12	75.0%
	Stories	11	68.8%
	Demonstration / Practice	13	81.3%
	Songs	10	62.5%
	Other	0	0.0%
Preferred Instruction Length	30 minutes or less	11	68.8%
	30-45 minutes	5	31.3%
	45-60 minutes	0	0.0%
	More than 60 minutes	0	0.0%
Delivery Preference	Each class separately	5	31.3%
	Combine multiple classes	11	68.8%
Preference for Fire Prevention Week Programs	During Fire Prevention Week	7	43.8%
	During the last 2 weeks in October	2	12.5%
	During the entire month of October	7	43.8%
	If no, which month would better suit school	0	0.0%
	Not interested	0	0.0%

Appendix R

Letter to Surrounding Fire Departments Requesting Feedback

Wednesday, February 16, 2011

Jason H. Monk
Chief Medical Officer
Hampton Division of Fire and Rescue
1300 Thomas Street
Hampton, Virginia 23669

To whom it may concern,

I am currently a student of the National Fire Academy's (NFA) Executive Fire Officer Program (EFOP) and am conducting research as part of the Executive Analysis of Community Risk Reduction (EACRR) curriculum.

This research is part of an evaluative study to evaluate the City of Hampton's current fire prevention and life safety education delivery to elementary school children and determine what needs exist to improve the program while implementing a collaborative effort between the Fire Division and Hampton City Schools. To do this, I need your help.

I have attached a survey that proposes several questions related to fire prevention and life safety programs within your agency or City/County. Please answer the questions as accurately as possible. The information gathered from you and your cohorts will assist in determining best practices for such a program while helping the City of Hampton improve its education efforts.

Should you have any additional information or documents you feel would assist me in this research please feel free to include them upon submission. If you have any questions, please contact me at (757)897-7081 or jmonk@hampton.gov. Thank you for your assistance in advance.

Sincerely,

Jason H. Monk
NFA EFO Student

Appendix S

Survey Results from Surrounding Fire Departments

1. Please provide your professional affiliation information.

[View 7 Responses](#)

1. Please provide your professional affiliation information.

#	Response
1	Beth Bruner Public Educator FF/PM, Norfolk Fire-Rescue, , , Norfolk, , , , beth.bruner@norfolk.gov
2	Margaret Tucker Fire Education & CERT Programs Manager, James City County Fire, , , Williamsburg, , , , , margaret@james-city.va.us
3	William S.Kiley Deputy EMS Chief, Virginia Beach EMS , , , Virginia Beach, VA, , , , , wkiley@vbgov.com
4	J. David Barrick, Acting Deputy Chief, Newport News Fire Department, , , Newport News, , , , , dbarrick@nngov.com
5	Lieutenant John Young, Poquoson Fire Rescue, , , Poquoson, , , , , jyoung@poquoson-va.gov
6	Louis E. Taylor Deputy Fire Chief, Suffolk Fire & Rescue, , , Suffolk, , , , , ltaylor@suffolkva.us
7	John Hansen Captain, Williamsburg Fire, , , Williamsburg, , , , , jhansen@williamsburgva.gov

2. Does your agency currently have a fire education and life safety program for children? (if "no", please proceed to the last question)

Yes		6	86%
No		1	14%
Other, please specify		0	0%
Total		7	100%

3. If "yes" to question 2, what age groups are targeted?

Pre-K to 2		1	17%
K through 5		1	17%
Pre-K through 5		1	17%
Other, please specify View Responses		3	50%
Total		6	100%

3. If "yes" to question 2, what age groups are targeted?

#	Response
1	Pre-K, K, 1st, 4th
2	Pre K, 1st, 4th and Seniors
3	Fourth grade

4. If "yes" to question 2, is the program

designed by your agency?		2	33%
designed by the school system?		0	0%
a collaboration between your agency and the school system?		3	50%
Other, please specify View Responses		1	17%
Total		6	100%

4. If "yes" to question 2, is the program

#	Response
1	Designed by our agency with input from evaluations

5. Is the fire education and life safety program formally designed based on educational standards (such as SOL) or other proven criteria?

Yes		2	40%
No		2	40%
Other, please specify View Responses		1	20%
Total		5	100%

5. Is the fire education and life safety program formally designed based on educational standards (such as SOL) or other proven criteria?

#	Response
1	Do not know

6. If your program is based on a proprietary design, which program is used/followed?

Get Safe Smart		0	0%
Fire Pups		0	0%
SAFE		2	50%
Other, please specify View Responses		2	50%
Total		4	100%

6. If your program is based on a proprietary design, which program is used/followed?

#	Response
1	Materials used from Home Safety Council's Start Safe for Pre-K
2	NFPA

7. Is the program delivered on a regular, coordinated schedule?

Yes		3	50%
No		2	33%
Some regularly scheduled with the school system and some random		1	17%
Other, please specify		0	0%

8. Are the children tested on the material delivered?			
Yes		2	40%
No		0	0%
Not sure		1	20%
Other, please specify View Responses		2	40%
Total		5	100%

8. Are the children tested on the material delivered?	
#	Response
1	Informal verbal evaluation
2	Yes in 4th grade and Seniors

9. If the children are tested, how are they evaluated? (choose all that apply)			
Written Pre-test		2	40%
Written Post-test		3	60%
Oral/Didactic		3	60%
Other, please specify		0	0%

10. How is the efficacy of the program evaluated for effectiveness?			
Feedback		3	50%
Fire agency statistics		2	33%
The program is not evaluated for effectiveness beyond delivery		2	33%
Other, please specify View Responses		1	17%

10. How is the efficacy of the program evaluated for effectiveness?	
#	Response
1	pre & Post test and evaluations and Stats

11. How would you rate the overall coordination and effectiveness of your agency's fire education and life safety program?			
1 Not at all effective		0	0%
2 Somewhat effective		1	17%
3 Neutral		0	0%
4 Mostly effective		1	17%
5 Extremely effective		4	67%
Total		6	100%

12. Please provide any information you believe may assist the researcher in this survey.

[View 2 Responses](#)

12. Please provide any information you believe may assist the researcher in this survey.

#	Response
1	Lack of manpower limits regularly scheduled program within school system. Currently utilize Play Safe Be Safe for K classes.
2	NFPA recently published a "Guide to Evaluating FLSE Messages". Home Safety Council has developed a FLSE Academy, free to members.

Appendix T
Risk Watch and VA SOL (4th Grade) Content Comparison

Risk Watch Grades 3-4	Virginia Health Education Standards of Learning
<i>Getting Into Character</i>	
Reporter	4.1b, 4.2b, 4.5d, 4.5f, 4.7b
<i>Lesson Cards</i>	
Lesson 1: Motor Vehicle Safety	4.1b, 4.2a, 4.7a, 4.7b, 4.7c, 4.9a, 4.9c
Lesson 2: Fire and Burn Prevention	4.1a, 4.1b, 4.5f, 4.7b, 4.7c, 4.21
Lesson 3: Choking and Suffocation Prevention	4.1b, 4.5d, 4.5f, 4.7a, 4.7b, 4.7c, 4.21
Lesson 4: Poisoning Prevention	4.1b, 4.1c, 4.2b, 4.5f, 4.7b, 4.9a, 4.21
Lesson 5: Falls Prevention	4.1a, 4.1b, 4.1d, 4.2a, 4.2c, 4.5f, 4.7c
Lesson 6: Firearms Injury Prevention	4.1b, 4.5f, 4.7a, 4.7c, 4.9d
Lesson 7: Bike and Pedestrian Safety	4.1a, 4.1b, 4.2a, 4.2c, 4.7c, 4.22
Lesson 8: Water Safety	4.1a, 4.1b, 4.1c, 4.1d, 4.5d, 4.5f, 4.7c, 7.9b
<i>Risk Watch in Action</i>	
Activity 1: "What's a Risk?"	4.1b, 4.4d, 4.21, 4.22
Activity 2: "Risk Reporters to the Rescue"	4.1b, 4.5f, 4.7b, 4.21, 4.22
Activity 3: "On the Safety Scene"	4.1b, 4.1c, 4.2a, 4.5e, 4.21, 4.22
Activity 4: "News First"	4.2a, 4.2c, 4.7a, 4.7b, 4.7c, 4.9d, 4.21, 4.22
Activity 5: "Get the Message"	4.5f, 4.21, 4.22
<i>Caregiver Letters</i>	
Caregiver Letters	4.5d
<i>Evaluation Instruments</i>	
Risk Watch Knowledge Test	4.5f
<i>Accessing Resources</i>	
Community Resources	4.1c, 4.21, 4.22