

Measuring Adolescents Preparedness and Abilities to Real Life Emergencies

By: Thomas G. Spape
Assistant Fire Chief
Bedford Heights Fire Department
Bedford Heights, Ohio

An applied research project submitted to the Ohio Fire Executive Program

17 July 2006

CERTIFICATION STATEMENT

I hereby certify that the following statements are true:

1. This paper constitutes my own project, that where the language of others is set forth, quotations marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.
2. I have affirmed the use of proper spelling and grammar in this document by using the spell and grammar check functions of a word processing software program and correcting the errors as suggested by the program.

Signed: _____

Thomas G. Spape

Printed Name: _____

Thomas G. Spape

Abstract

The City of Bedford Heights has recognized that adolescents who attend the Bedford City School District are ill prepared to deal with unexpected emergencies. Both evaluative and action based research methods have determined that adolescents at the seventh grade level have the ability to change their comfort level regarding these situations when they are provided with the proper training. This research focused on the following criteria:

1. Do seventh grade students have the necessary cognitive, psychomotor, and mental skills to properly handle unexpected emergencies?
2. What have other entities found to be beneficial when seeking to encourage adolescent participation in a program?
3. When teaching adolescents, what teaching styles have been effective in increasing retention rates among students?
4. When preparing surveys for the adolescent student, what have others found to be helpful ways to format questions in order to maximize the accuracy and completeness of the collected data?
5. Does providing fire and medical emergency educational programs produce a change in the comfort level of seventh grade students when dealing with real life emergencies?

It is evident to this researcher that with a well thought out plan, an organized and committed team of educators can produce a positive change in students' comfort levels. The Bedford City School District and the Bedford Heights Fire Department have worked together to open the door to new opportunities. The results from this initial research

would suggest that a need exists to form a committee to evaluate grades K-12 to determine how students at all levels can be better prepared for dealing with emergency situations.

TABLE OF CONTENTS

CERTIFICATION STATEMENT	1
ABSTRACT	2
TABLE OF CONTENTS	4
INTRODUCTION	5
Statement of the Problem	6
Purpose of the Study	7
Research Questions	8
BACKGROUND AND SIGNIFICANCE	9
LITERATURE REVIEW	16
Adolescent Development	16
Adolescent Participation	17
Teaching Adolescents	19
Measuring Students Needs and Results through Surveys	21
Changes in Students Comfort Levels	23
PROCEDURES	24
RESULTS	29
DISCUSSION	36
RECOMMENDATIONS	40
REFERENCES	43
APPENDIX (1-6)	44

INTRODUCTION

Statement of the Problem

Safety forces in communities locally and nationally recognize that a need exists to educate the public in home safety. Effective program development can only be successful if there is support from the organization. In the City of Bedford Heights, the necessity of any improved service is met by the resistance of budget constraints and overtime issue excuses from the administration. Many ideas are set aside or dropped without fully researching creative financial solutions to the problem. Sadly, other cities in the area have also found their safety forces buying into a theory that they exist primarily as an emergency response unit. The Executive Officers of Southeast Cuyahoga County, Ohio areas have recognized that citizens want to see participation of their fire departments in community activities. In Bedford Heights, firefighters continue to follow the status quo set by past department members, and it has resulted in resistance to participation in fire and safety related educational activities. Naturally, no employee wants to see his/her job responsibilities expanded. However, departments that fail to be flexible and are not responsive to the needs of the community will become obsolete. A progressive mind may encounter roadblocks when trying to implement new ideas if revenues are substantially lower than in years past.

Fire departments have a duty to the community to help prevent fires. The Bedford Heights Fire Department has a duty to provide life safety education as every level within the department, has this responsibility listed in the job descriptions. One small way to help that cause is by educating the children during their adolescent years. Society and communities are not static entities, and the needs of each community continue to change along with the composition of the area. Significant changes in society have a direct affect on families. Today, it is not

uncommon to hear that both parents are working outside the home. The increase in numbers of single parent families can be found everywhere. Adolescents within the family are required to take a more responsible role in the family unit. What happens if an adolescent is in charge of the home during an emergency? We know a fire significantly increases in size from one minute to the next. Does the adolescent have the ability and knowledge to responsibly handle the situation? Based on many factors, today's adolescents are much more likely to experience an emergency where they will need to make life saving decisions without the immediate guidance from an adult.

Through interaction with the local middle school, the Bedford Heights Fire Department has conducted interviews, group sessions, informal and formal classes to collect data. This data has been used to determine how significant a problem exists in the Bedford City School District with regard to adolescent unpreparedness. While conducting this research both an evaluative and an action research approach was used.

Just as the family unit changes, so does the community as a whole. The necessity of placing adolescents in primary roles in a family unit may have found itself to be an easy solution for taking care of family responsibilities. However, we may have left the community at risk if we do not give these children the necessary safety skills to make decisions and handle emergencies around the home when the parental figure is absent. *Through out this project, this researcher identifies the primary problem as the fact that seventh grade students are ill prepared to deal with emergencies and are not receiving training to do so.* Specifically adolescents are being thrust into parental roles because of the changing dynamics in the family. These adolescents, while having the ability, have had little or no emergency training related to dealing with fire/medical emergencies.

Purpose of the Study

The purpose of this study was to determine if there is a significant need for the development of an emergency training program for seventh grade students and if seventh grade students have the ability to effectively change their comfort level to deal with real life emergencies. One must recognize what others have found to be of assistance when seeking to develop educational relationships with adolescents. We need to find creative ways to gain hard facts on how real life emergency training could change the comfort level of seventh grade students. Additionally, it is essential that partnerships with parents, teachers, representatives of the school district, and students are developed to build programs around the common needs of the students in the community. This researcher used a student work group approach to develop a reasonable degree of understanding in dealing with this age of adolescent. Additionally, it was still necessary to conduct a large scale survey in order to obtain a true understanding of where the students' current comfort levels were. Small programs with varying subject matter were introduced to several different classes at the middle of the school year. Changes in the responses of students were measured individually as well as within class groupings. Student needs seem to be case specific, and what one community may need may not be an accurate assessment of the needs of students in other communities. Information acquired through interaction with students, teachers, and parents/guardians helped identify the emergency training needs of the students in the Bedford City School District. While significant needs were identified, recommendations for future improvements in emergency training will need to be presented to the Bedford City School District's Superintendent. It will also be necessary to take this information to city officials to see if the resources exist to even consider the possibility of developing the First Adolescent Safety Training (F.A.S.T.) program.

Research Questions

Research focus will be directed to the following:

1. Does a seventh grade student have the necessary cognitive, psychomotor, and mental skills to properly handle unexpected emergencies?
2. What have other entities found to be useful when trying to encourage adolescent participation in a program?
3. When teaching adolescents, what teaching style seems to increase retention rates among students?
4. When surveying the adolescent student, what have others found to be helpful ways to format or ask questions to maximize the accuracy and completeness of this data?
5. Does providing fire and medical emergency educational programs change the comfort level of the seventh grade students when dealing with real life emergencies?

BACKGROUND AND SIGNIFICANCE

The Home Safety Council conducted a national survey regarding home related injuries. The council has shown that over 20,000 deaths a year occur from home related emergencies. According to their survey, parents either blame not knowing how to address safety issues or not having time in to deal with home safety.

The United States Fire Administration documented over 3,000 children, age 14 or younger, as being killed or injured in residential fires. Many fire deaths can be avoided and prevented with proper training. Additional research was done for the article *Children and Fire*. The article indicated that 53% of arson fires are caused by children less than 18 years of age. There are three recognized classifications within this age group: 1.) children that are looking for attention; 2.) those involved in delinquent activities; 3.) others have emotional disturbances that result in arson activities. (U.S. Fire Administration [USFA], 2001)

Nationally, fire injuries are highest when children are less than five years of age. The frequency of injuries during house fires decreases between the ages of five to ten. Surprisingly, injuries increase during adolescence between the ages of ten to fourteen. The dangers associated with loss and injuries are closely related to income levels. According to the United States Fire Administration (USFA, 2000), African American and poorer families are at higher risk of death in a house fire.

The City of Bedford Heights is a municipality located within the Greater Cleveland metropolitan area. The latest U.S Census Bureau Report shows that the City of Bedford Heights has a demographic profile that includes 67.4 % of its population as African American. The median household income is less than \$38,000 and nearly 8% of individuals are below the national poverty level. The bureau report shows that of adolescent groups in the City of Bedford

Heights, those between the ages 10 to 14 make up the highest proportion of the population. (U.S. Census Bureau Fact Finder Report, April 2000)

Dr. Angela Mickalide, Director of Education at the Home Safety Council, agrees that limited information and programs are available for adolescents in the early and mid teen years. On a personal note, she shared her family's ten point plan for creating a safe home for her 13 and 11 year old by setting boundaries to daily activities when the parents are not home. Both children have received training that may help them deal with unexpected emergencies, but what happens when that same emergency happens in families that have no or limited exposure to safety programs? How should the adolescents be expected to handle them appropriately? (Dr. Mickalide, Personal Communication, June 2005)

The Program of Study for Heskett Middle School for the 2005-2006 school year shows a curriculum without much focus on dealing with real life emergencies. The Health curriculum primarily focuses on the body, substance abuse (D.A.R.E.), abstinence, and AIDS. Family and Consumer Sciences (FACS) investigate childcare and provide lessons about family life by talking about nutrition and functioning safely in the kitchen. Students receive very little, if any, training in dealing with medical and fire emergencies. The Heskett Middle School curriculum reflects the fact that seventh grade students have limited education in fire and medical emergencies. (Heskett Program Guide, December 2004)

What would a thirteen year old babysitter do if confronted with a choking child? If an adolescent, preparing dinner before her parents come home, experiences a fire on the stove, how will she react? Sixty percent of adolescents do not have enough knowledge to help themselves or others at the scene of an automobile accident. ("Lack Skills", BBC News, May 2005) Seldom do parents respond appropriately, sometimes placing adolescents at risk of greater harm. The

Bedford Heights Fire Department Line Officers have indicated that adolescents living within the city are unprepared for emergencies. Researching the NIFRS Reports and Police Records has shown no formal documentation that children are left home more than in years past. However, further questioning of firefighters and police officers uncovered that there may be the need to formally record this information, because all senior safety officers agree that there has been an increase in the number of responses in situations where adolescents were left without adult supervision.

Adolescents are at a perfect age to introduce new ideas and educational programs. In the United Kingdom, a teacher in northwest London has had success introducing life safety skills to students. Teacher Dawn Caplin has dismissed fears of the new program interfering with core subjects because this training falls under health education. She stated, "The children are absorbing all of this, they really enjoy doing it and have no problem at all." (First Aid, BBC, September 1999). Even the simplest actions such as placing an unconscious victim in the proper position can result in significant improvements to a patient's condition until emergency services arrive.

In 1979, Gerald M. Dworkin stated that more than one million people suffer a myocardial infarction in the United States each year. Mr. Dworkin wrote that it is estimated that nearly 20% of these fatalities could have been prevented with early cardiopulmonary resuscitation (CPR) had been applied on the scene. An additional 100,000 lose their lives in drowning, suffocation, automobile accidents, fire, and poisoning. Standards have been published for artificial ventilation training for students as early as the fifth grade. The National Academy of Sciences National Research Council and the American Heart Association helped develop these standards which were published in February 18, 1974. ("Teaching CPR", Life Saving Resources, June 1979)

There is a lack of supporting evidence in the Bedford City School District's Program of Study Handbook indicating the existence of such a program.

While mutual aid agreements and better equipment reduce response times to emergencies, it is the bystanders who offer the most beneficial help to the situation until emergency services arrive. The most logical place to introduce educational programs on fire and life safety is within the local school system. School districts find it necessary to prepare students for success on state mandated assessment. Therefore, many schools no longer offer elective courses regarding home repairs, metal shop, wood shop, or cooking. Though the primary focus of these courses was not on medical/fire emergencies, some information was passed on to students about handling cuts, burns, and kitchen fires. This information is no longer shared, due to the curriculum's focus on the Academic content standards.

The City of Bedford Heights Emergency Responders have seen a rise in situations where no parent is home or at least nearby during an emergency. The Fire Prevention Bureau's goal is to reduce loss of life and property through cooperative research, development, and implementation of safety programs for the seventh grade student body. The children within the community can only become a valuable resource if they have the necessary tools to deal with hazardous and emergency situations. A life safety program taught in the local schools can be introduced into the curriculum without stressing the current academic requirements. The results of this study will seek to show that positive participation and behavioral changes of adolescents can be made through the completion and analysis of a proper needs assessment, planning and implementation.

After fourth grade, children typically only see fire department personnel during career days and fire drills. We must recognize the importance of life safety training and understand the

need to educate this valuable resource through the development of a life safety program for seventh and eighth graders. A formal education program may reduce the number of malicious alarms in the city by educating the students about the consequences such actions can cause. The department experienced ten malicious alarms at a local school last year compared to just two the year before. The Aurora Upper Intermediate School, which experienced six malicious alarms, required a general assembly with the fire department before the issue was resolved. The Heskett Middle School, through cooperative efforts, was able to identify the student responsible for a malicious alarm and took the necessary action. Though only a concept, could the F.A.S.T program be introduced into the school curriculum during the academic year? Before developing this program, the Bedford Heights Fire Department and Bedford City School District needed to identify the desired change in behavior and determine if a structured life safety training program would ultimately indicate a significant comfort level change. An assessment by the Bedford Heights Fire Department showed that the activities conducted with students in the spring of 2005 had positive affects on them. There was a change in the comfort level of seventh graders that received some level of safety training. With the cooperation of local schools, parents, and students we can continue to research and study the need for developing a program that focuses on basic first aid, CPR, the Heimlich Maneuver, extinguisher use, environmental emergencies, and home safety for seventh grade students.

In order to properly develop this type of program, input from students, teachers and parents/guardians was solicited. Without their input early on, the idea would be based only on a single opinion and may have lost its focus, which could have added to any reservations to move forward. Recent questionnaires show the students of the seventh grade like interaction within the classroom and enjoy hands on experiences. When a pizza party was offered for students'

interaction, they found themselves excited and more involved in class participation. Information collected during round table activities with the seventh grade students from Heskett Middle School concluded that one of the more successful ways in which adolescents learn was through game play. The current students, parents/guardians, and teachers in the community can be used as resources while in the conceptual phase if the development of the F.A.S.T. program is desired for the future.

Many adolescents are taking care of their homes, watching their siblings and cooking dinner. The necessity of parents working longer hours is apparent based on how often the Bedford Heights Rescue Squad responds to calls where no parent is home. It has been recognized that a need exists to educate adolescents so they are capable of dealing with and recognizing life safety concerns. It is not enough to have babysitter programs, youth groups, and explorer programs because all students do not, or cannot, participate.

The Fire Service needs to take advantage of our close working relationship with public schools and research the necessity and benefits for developing a program for life safety that could be introduced into the academic year. Researching and determining whether or not a need existed for adolescent medical and fire training was warranted. Through preliminary research, surveys, and discussion, the Bedford City School District and the Bedford Heights Fire Department agreed that there appears to be value in developing the F.A.S.T. program. Does the value of this program outweigh the resources needed to create, implement and sustain such a program?

This study will demonstrate to school and city officials that a life safety education program for adolescents can be effective and should be considered for development. The impact it could have on the City of Bedford Heights is significant and can save many lives while also

preserving citizens' property. If it is determined through this researchers work that a program would be beneficial to the community, it is likely that this safety program would be adopted by other communities needing to address similar issues.

LITERATURE REVIEW

This literature review will focus on four specific areas related to adolescents. Research and local studies will show conclusively that the seventh grade student can improve their comfort level as it relates to medical/fire emergencies. First, a review of adolescent development will identify the abilities of the seventh grade student. The second facet of this review encompasses two closely related fields; one on gaining adolescent participation and the other on how to teach the adolescent student. Lastly, we will review what others have found to be successful methods to use when trying to assess the student retention rate following training programs. These four research areas are all critical aspects that must be considered when developing adolescent programs that address life safety education programs.

Adolescent Development

Professionals dealing with the adolescent understand the pressures associated with adolescent development. The media often portrays adolescents negatively which result in many professionals feeling that adolescence is a negative time of life. Studies show that most adolescents not only want adults in their life but need them to be involved. Successful professionals learn to teach, mentor, and counsel adolescents when necessary. When dealing with adolescents, it must be remembered that their bodies are changing. It may be a very anxious time for some students. They may be experiencing maturity changes that alter the way in which they deal with adults and one another. However, even though they are changing physically, mentally and at different rates, they do have the ability to increase their cognitive competencies. These competencies show that an adolescent has the ability to reason effectively. The A.P.A. reference guide shows that an adolescent can think abstractly and reflect on ideas and solutions. (American Psychological Association [APA], 2002)

Adolescents jump to conclusions, can be self-centered, argue for the sake of arguing, and, as any parent can tell us, are over dramatic.

The Bedford Heights Fire Department has seen how effective extinguisher and emergency training can be when these programs are focused on adolescents. The Fire Explorers of the department have shown to have the ability to learn emergency type training and to act responsible in an emergency. The A.P.A. also reveals that many of today's youth have the necessary cognitive development to make mature decisions. However, even though teens are able to think in a higher-level capacity they still require adults for guidance. (APA, 2002)

The cognitive development of the adolescent gives them the ability to work through decisions and problems related to real issues. They can now rationalize and consider two or more aspects of a situation at one time. As adolescents continue to develop mentally, he/she gain the ability to reason about ideas, impossibilities, probabilities, and broad abstract concepts. (Maternal and Child Health Bureau, [MCHB], 1999)

With time constraints, parental support limitations, and less than 100% participation of all students, the information must be used as baseline data when assessing the needs of the community and of the students. There are limitations to the study and the results can be measured as averages within the percentage of the population participating.

Adolescent Participation

The Child Trends Research Brief *Building a Better Teenager: A Summary of "What Works" in Adolescent Development* (USFA, Child Trends, November 2002) identifies adolescents as good citizens in our communities. In the executive summary of Child Trends' American Teens series, over 1,100 research articles were used to identify ten successful tips that will help program designers create programs aimed at adolescents. When dealing with

adolescents, relationships are the key. The research of Child Trends suggests that the adolescent must be viewed as a whole person. Program developers need to engage teens and target a specific outcome in the program's development. It is important that any adolescent program be well organized.

Child Trends' research shows that lecturing to the adolescent student will fail to produce the desired behavioral change for which the program was developed. Successful programs, regardless of subject matter, see far more favorable behavior changes when the students are involved in the program development. Youth programs that focus on academic goals will not be as successful as those programs that engage the teens and treat them as whole people. It is imperative that any new program have the buy-in from both the parent and teen. Research shows that one of the best ways to get teen buy-in is to include them in program development.

Negativity of the adolescent can be neutralized by taking a positive approach to them and bringing them into a team building philosophy. Developing programs around teen participation and engaging their resourcefulness has been shown to have significant influence on successful behavior changes.

Research shows the United States considers youth education an important goal. Students that succeed in academics typically adjust better and do better in society as an adult.

Adolescents who experience mentoring programs and increase their self-concept have shown sizeable increases in motivation and interest in new programs when introduced to them. The adult interacting with the adolescent must recognize the need for a sense of belonging. This is significantly apparent in the 7th through 9th grade adolescent group. Research suggests that adult support through adolescent years may have a direct affect on motivation levels of students. (John S. and James L. Knight Foundation, December, 2001)

Students' enthusiasm is directly linked to their own participation when learning new ideas. Teachers need to engage the student and allow them to talk with their peers. The classroom needs to be arranged to facilitate learning and class participation. Periodically, teachers need to change the presentation and allow students to work on small group activities. The instructor may improve participation by assigning roles to the students through group activities. The instructor must maintain control and lead the group in the desired direction including limiting a student from monopolizing the discussion. Students who may be shy or lack the confidence to participate should be asked open ended questions and reassured that their participation is very important. (Davis, 1993)

Teaching Adolescents

Middle school students are experiencing significant mental and physical changes in their lives. This is a time when their thinking goes from a concrete fixed way into one which can be abstract. The adolescent craves a caring and compassionate adult at this time of his/her life. Students desire a sense of belonging with others, hands-on experiences when learning, and meaningful participation in the classroom. Teachers and program developers must realize times have changed since they were teenagers. Many of today's students will not respond well to lecture based classroom presentations. A more modern middle school curriculum would utilize several approaches and should focus on students' own questions about real life issues.

Teachers today need to engage students and offer an opportunity for them to solve problems completely in order to develop the fundamental skills of learning. Research shows this age group prefers hands-on activities. This is evident in the recent experimental training program offered to local middle school students. Most importantly, a teacher must be believable

and exemplify the things in which they teach. (National Middle School Association [NMSA], 2002)

Every school-aged child, regardless of which academic year they're attending, can be taught some element of basic life saving skills. Overall, they are very receptive and excited to learn life saving skills. They are extremely interested in learning what to do in case of an emergency. (MCHB, 1999)

Adults learn in three distinct domains. Cognitive, affective, and psychomotor skills are recognized to exist in adult students. (King, 2003) Students of the seventh grade have obtained some level of mastery in these same areas and can benefit by the educator developing lessons that engage the student in activities utilizing a variety of modalities. A person's ability to learn is a cognitive domain. Research shows that the more senses a teacher can engage in a student, the higher the success of retention. The affective part of the domain relates to the emotional part of learning. Recent classroom interactions show some adolescents are still developing this domain. The teacher may need to be diligent in their efforts and use their authority, if necessary, to control behavior for maximizing the experiences for other students. Lastly, psychomotor skills relate to a person's ability to do the action. This is probably one of the more beneficial techniques to be used with today's middle school student. Surveys given to the Heskett Middle School students by the Bedford Heights Fire Prevention Bureau show nearly 100% of students want to practice and learn hands-on skills for real life emergencies.

There may be no better place to teach CPR than in the local school system. Even the National Middle School Association recognizes that adolescents' roles in the family unit are changing and taking classes outside of the local school system is seldom an option for most middle to low income families. Concurrently, many public schools have the ability to integrate

life safety programs into their curriculum without removing any existing programs. (Teaching CPR, Life Saving Resource Inc. 1979)

Measuring Student Needs and Results Through Surveys

Post education retention rates decline if the student receives no further training. This fact was identified as the American Red Cross conducted six studies to assess their education programs. The studies identified the intervals at which review activities must be included. (Crossnet, June 2001) Many factors can influence the retention rate of a student including instructor preparedness, instructional delivery, the student's learning ability, and proper testing of not just the retention of the information but testing the skills of the students. At <https://crossnet.redcross.org>, the American Red Cross explains that to properly perform CPR over time, continued education for refinement and reinforcement of skills is required by the student. Sharon E. Jurc of the American Red Cross in Cleveland stated "students must have well organized classes delivered by trained instructors and refresher courses must be used to keep skills over time." (S.E. Jurc, Personal Communications, June 2005) The American Heart Association also recognizes that a decline in retention relates to several factors and some are attributed to the instructors' ability to properly deliver information. (King, pg. 10)

The students at Heskett Middle School were insightful in assessing their own educational needs in the field of medical and fire emergencies. While working with students during round table discussion specific areas to be measured were identified. During the discussion, 100% of the students felt they have similar behaviors and have cooking responsibilities at home. They also agreed that natural gas is a significant hazard in their homes. Nearly 96% routinely use electronic devices that could overheat, and the majority felt unprepared to deal with such emergencies. The information gained through the discussion showed only 19% of students

would attempt to do something for a person not breathing before an emergency crew arrived at the scene.

Before any survey is developed, consideration must be given to what data the instructor is trying to obtain. Many times surveys are developed that gather too much information and provide unnecessary data. A survey should be formatted for easy reading and understanding. The order of the questions in a survey is extremely important. If time allows, the survey should incorporate open ended questions as this enables the data to contain richer information. All surveys should end with a brief description of how the information will be used. (Ardolino, 2001) The Bedford Heights Fire Department and Heskett Middle School agreed on these principles and administered these surveys during all emergency training. The Fire Prevention Officer of Bedford Heights Fire Department and the Principal of Heskett Middle School evaluated the data.

The data collected from students during the discussion and the information provided by the Data Center Participatory Research Kit, *Creating Surveys*, was used to develop a survey for the Heskett Middle School students. Even though the Data Center survey development kit was created for social injustices, the format was easily adaptable to the program and provided a successful survey that measured what the students had learned. The research shows that participatory survey development is a very important aspect of creating successful surveys. Open ended questions can assist in identifying a more specific area of need than closed ended questions. When the evaluator doesn't need specific questions answered, fill-in-the-blank questions are a good tool to gain more information and expand on ideas.

Before students could be surveyed at the Heskett Middle School, parental consent forms were obtained. Parental consent forms, even though not part of the survey became a step in the

survey process when dealing with the minors. One way the Bedford Heights Fire Department accomplished this in a timely manner was by using existing school consent forms as a template. Future consent forms will be part of the seventh grade registration process and will allow for larger scaled surveys and student participation. To successfully develop surveys, one must take a participatory approach, find the objectives to measure, create surveys to maximize information gathering to a specific area, and continually review the survey for necessary improvements.

Changes in Students Comfort Levels

Fifty percent of the current seventh grade students participated in a survey conducted by the Bedford Heights Fire Department. The areas covered included Fire Extinguishers, Home Safety, and Medical Emergencies. Surveys conducted prior to the presentation of any educational programs showed these students were not prepared for a fire in their homes. They had retained general home safety tips that were presented to them in third grade, but didn't know much about carbon monoxide and had limited expanded knowledge of behaviors that can prevent fires. Lastly, the survey showed students are ill prepared for dealing with medical emergencies, but they are interested in receiving education in these areas.

The Bedford Heights Fire Department conducted a test run educational class for ten percent of the seventh grade students. The class focused on fire safety and the use of fire extinguishers. According to the survey, most of the students at Heskett Middle School know when to call 9-1-1, and the education they received from the Bedford Heights Fire Department had no significant impact. However, the results from post surveys compared against survey results gathered prior to the class showed that significant improvements in comfort levels do change when students receive fire safety classes. The students also showed significant improvement in knowledge about fire development and proper extinguisher selection.

PROCEDURES

The primary purpose of this research was to determine if adolescents possess the physical and mental capabilities necessary to process and retain information received during emergency training so that it will be useful to them should a need arise. Evaluative research of how others have successfully interacted with adolescents and gained the students trust was key. Creating a successful survey was a key element to the success of this research project.

Action research, combined with evaluative research, tied together all the research questions and provided results concluding that seventh grade adolescents are ill- prepared for dealing with emergencies. It demonstrated that emergency life training changes students' comfort levels. Consideration during this research was given to adolescent cognitive abilities, trust and participation of adolescents, positive teaching techniques for the adolescent student, and measuring changes in behavior in this age group.

In past conversations with Heskett Middle School, the Bedford Heights Fire Prevention Bureau realized that children in the local school district may be lacking in education related to emergencies they may experience in life. It was also uncovered that the curriculum may be open to include this type of training for students. The seventh and eighth grade school borders the fire station, and the close proximity was of assistance when conducting training. Early in the research process, it was necessary to meet with the Heskett Middle School Principal to determine if the school would be interested in working with the fire department. After approval by the principal, it was necessary to identify the various components necessary in the development process in order to provide for successful data collection. Initially, the student group would need to be identified as well as securing the participation of fire department members. A parental release form was created and distributed to two-hundred twenty-five students (Appendix 1).

Thirty forms were returned, and the principal was asked to randomly choose twenty for work group interaction with the fire department. As the work group facilitator, this researcher distributed a general questionnaire form. This questionnaire was discussed in work group round table sessions (Appendix 2).

Results obtained from the work group questionnaire and information gathered at multiple round table discussions of what interested or bored students were used to develop a trial run education program for the work group participants. Since nearly 70% of the work group felt it was not their responsibility to worry about fire emergencies in the home, the fire department would focus on this area of education for the students. A survey form was created to measure the students' comfort level in medical emergencies, home safety, and the use of a fire extinguisher. The students completed a survey prior to fire extinguisher training and were asked to take the same survey after that training. The students understood that their participation and assistance could be of great assistance in the development of future emergency training programs. A pizza party was given to these students upon completion of the program.

The data was collected and presented to the principal and staff. Though a very small percentage of the population was involved, the data showed significant evidence that a more in-depth study was warranted. The health teacher agreed to allow the fire department to use her class for any additional research and training. Due to stringent security requirements, it was necessary to have the parental release form added into the enrollment parent packet for the next school year. Of the 225 forms in the packets, nearly 92% were returned signed. Before the school year started, a staff meeting that included all personnel was called by the principal. The fire department gave a presentation to the teachers outlining the research being conducted and asked for the support and understanding of the teachers throughout the school year.

Three separate short interactive emergency training programs were created for the health class. Students were asked to take one of three surveys dependent upon the training being offered. The three programs created were focused on choking, bleeding, and home safety. Surveys were conducted both pre- and post presentation of any educational session. (Appendix 4) The classroom activities were developed based on what had worked the previous school year and included ideas shared by the student work groups.

The instructional format used was a PowerPoint presentation that included animation and sound effects. Game play was used to stimulate the students' interest. Candy was distributed to students who correctly answered questions and for active participation. Students not actively participating were engaged by the fire educator. The PowerPoint presentation pamphlet for these three classes accompanies this research report. (Appendix 4)

Results of the post education surveys were collected and compared to the previous year's data. It was necessary to temporarily slow the process of the program to meet with the new principal of the school and gain her support for the research. The data collected from the action portion of the research showed seventh grade students can be successfully educated to change their comfort level towards their responses to emergencies. Seventy students were trained and surveyed, representing 33% of the overall population of the seventh grade. Time constraints and class schedules limited the number of students participating in this project.

Conclusions drawn from the evaluation of other research and the responses shown by the students indicated that they possess the necessary cognitive, psychomotor, and mental skills required to be receptive to this type of education. What others have found to be useful when dealing with adolescents was important, but establishing a positive rapport with the students was needed to be able to gain an understanding of what the students felt works with other students of

this age group. A generalized survey for establishing a baseline feel of the audience was developed from what other researchers had found. However, the suggestions and input from the workgroup were invaluable to prepare adequate surveys for use with their peers.

Using evaluative research of what others have found was beneficial to gaining insight into successfully dealing with the adolescent and understanding their development. Information gathered from action research workshops, interviews, surveys, and short educational classes was used to measure pre- and post comfort levels for students as it relates to responding to an emergency. A collaboration of research efforts was used to answer the research questions:

1. Does a seventh grade student have the necessary cognitive, psychomotor, and mental skills to properly handle unexpected emergencies?
2. What have other entities found to be useful when trying to encourage adolescent participation in a program?
3. When teaching adolescents, what teaching style seems to best increase retention rates among students?
4. When surveying the adolescent student, what have others found to be helpful ways to format or ask questions to maximize the accuracy and completeness of this data?
5. Does providing fire and medical emergency educational programs change the comfort level of the seventh grade students?

Tight control during the development phase of the project was necessary as other agencies have heard of the research and desire to develop similar emergency safety training programs for school aged students. The research of the Bedford Heights Fire Department sought to determine if a need exists for this training and if the students have the ability to change if

given this training. The results of this research and data will be used to determine if adolescent life safety training is warranted in the general area. The information and data collected from this research will be shared with the public and school officials. The new principal recently indicated her interest in making the program developed for the health class available to all seventh and eighth grade students in the school. Additionally, the school and local cable stations are interested in recording future sessions for public television. It is a positive sign that interest is drawn to this research, however the focus must be to determine the needs of the students and how training affects their comfort in responding to real life emergencies.

RESULTS

Many adolescents today have increased responsibilities over those of adolescents in the past. Adolescents in the seventh grade have the necessary cognitive and mental abilities to develop a reasonable amount of skills to deal with unexpected emergencies. Properly approaching the students and gaining their trust will make the assessment of students' needs valid and reliable. Adolescents will be more likely to engage in new activities that teach them real life emergency training if the instructor/teacher identifies with them on a more personal level. In the past, workgroup participants agreed that they would quickly lose interest in presentations given only in a traditional lecture. The training may not result in the community impact as desired by the fire department. A multi-focal training approach does significantly increase the retention rate of seventh grade students. Real life emergency training for seventh grade students does change their comfort level in dealing with emergencies. The degree of this change is directly related to the success of the instructor in delivering a well planned and implemented training program, while maintaining a personal approach to the students' needs.

The Bedford Heights Fire Department requested that Heskett Middle School randomly choose 20 students to participate in round table activities with the fire department. The fire department used a general safety questionnaire developed by public training officers in the department. This questionnaire was understood to be nothing more than a tool to open communication with the students. The Bedford City School District and Bedford Heights Fire Department reviewed the curriculum of the school and found that adolescents have a gap from 3rd grade through 7th grades where no emergency training is provided. The circumstances are even worse if students don't take elective classes that offer this training, which results in those students having no training until their junior and senior year of high school. The Bedford

Heights Fire Prevention Bureau is dedicated to reducing emergency calls through a proactive approach. It was necessary to determine if the resources were available to commit to developing a program and, if results showed students of the seventh grade have the ability to take on such responsibilities. While working with a few students in the seventh grade, it was obvious to this researcher that a significant need for change exists in the school curriculum. Not only was there a lack of documentation to emergency training, confirmation of this was acquired when directly dealing with the students. It is dreadfully evident that students in the Bedford City School District are ill prepared to deal with unexpected life emergencies.

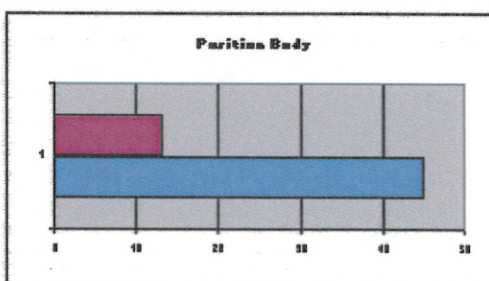
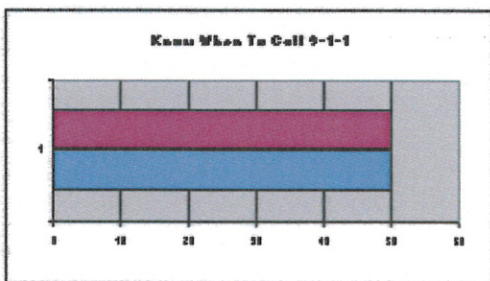
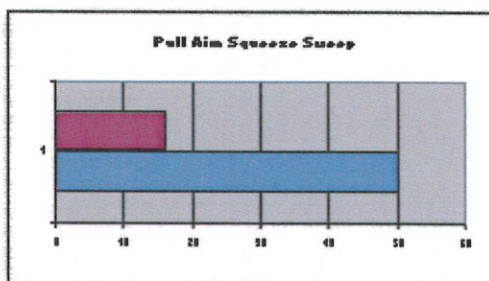
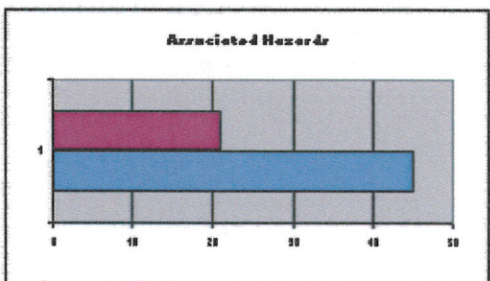
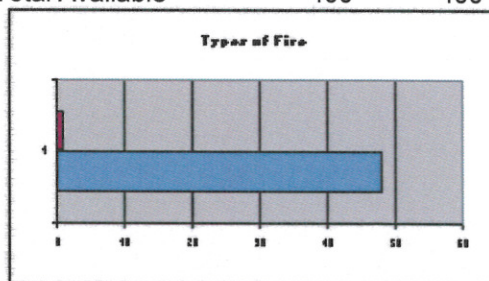
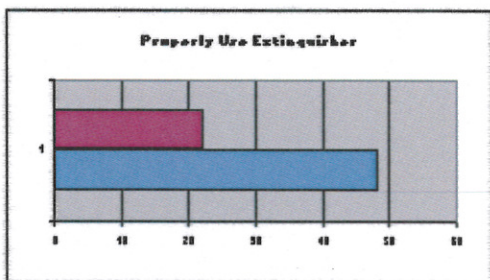
A work group of twenty 7th grade students participated with the fire department to measure the effectiveness of emergency training. The student/fire department committee conducted their roundtable meetings in May and June of 2005. The group told the fire prevention officer why they dislike certain teaching methods. The reasons most students specified for disliking certain teaching methods included that they felt the teacher only lectured or showed disrespect to them and their friends. Since it was identified that students are extremely discouraged when attending a class based on a lecture only format, one should limit the use of this approach in presentations for this age group. The students all agreed that any class that incorporates game play and interaction would have a much better chance of keeping students interested in the program. When dealing with the students, it was necessary to develop a positive rapport with them and show them that sharing their issues with some teachers could be used to make the program better, not used against them in anyway. When the students felt they could trust the instructor, they became much more relaxed and open to sharing their thoughts. During two of the workshops the students identified common hazards that might confront them around the home. The students of the work group agreed to take a fire extinguisher class that

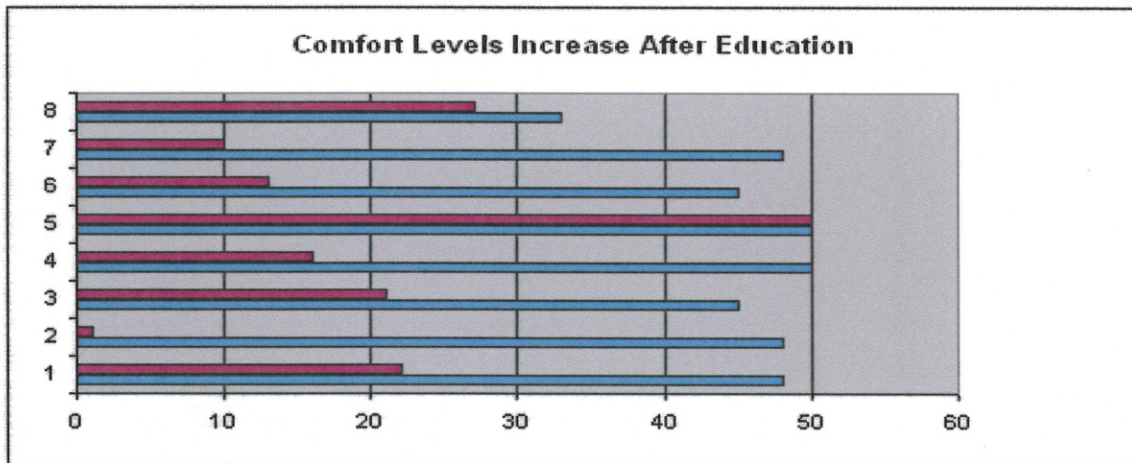
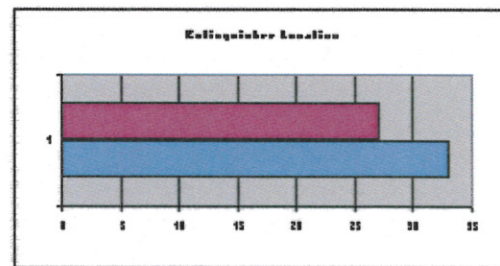
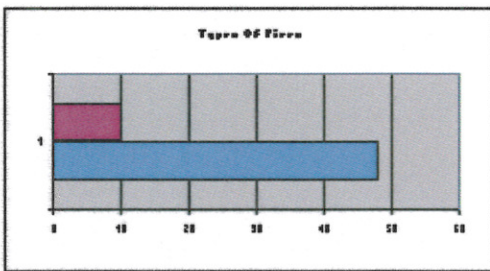
would incorporate many of their recommendations. The students received education on fire extinguishers in order to confirm or disprove that they have the ability to process and act in an emergency situation. Pretest and post test results based on a point system were compiled to confirm a change in comfort level.

**Heskett Middle School
Fire Life Safety Survey Results**

	Prior	Post
I would know how to properly use a fire extinguisher	22	48
I know what type of extinguisher to use for different types of fires	1	48
I am familiar with the different hazards associated with fires	21	45
I understand what PASS stands for when dealing with a fire extinguisher	16	50
I know when it is necessary to call 9-1-1 when a fire is involved	50	50
I know how to position my body when using a fire extinguisher	13	45
I have a basic knowledge of the types of fires and the fire triangle	10	48
I know where my fire extinguisher is located at home	27	33

Total Points	128	335
Total Available	400	400





- *A representation of changing comfort levels of seventh graders who have received fire extinguisher training. Base on a point system of 50. Note: When to call 9-1-1 (number 5) is unchanged and identifies the adolescents previously have adequately acquired this knowledge.*

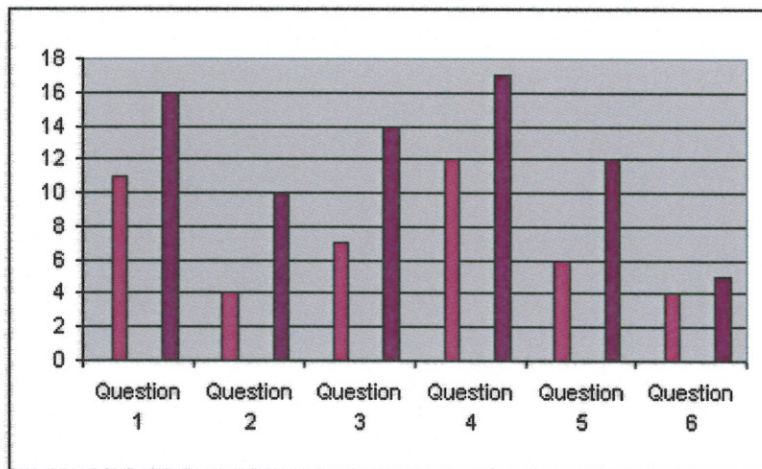
The data gained from the surveys was the first step in identifying the students' retention ability. The program used a PowerPoint presentation, an informal approach, demonstrated practical use of an extinguisher on a real fire, and ended with a lunch party. Using the recommendations of the students and information and data collected by other agencies, the pilot program to measure effective comfort level changes was a success. A more in-depth understanding of how emergency training affects the comfort level of the seventh grade student was necessary.

The data and student/fire department committee led this researcher to create a new training series for a larger portion of the seventh grade population. The new program that would be used to measure comfort level changes was called "Fast Track Life Safety

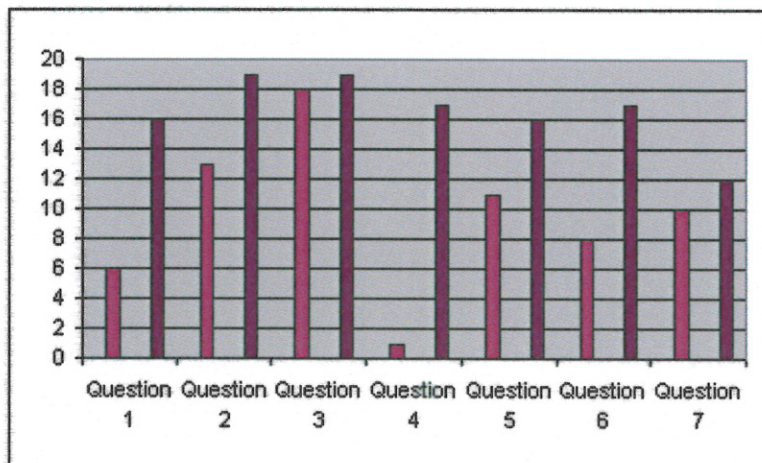
Learning/Education for Heskett Middle School” and was presented to 66 students. The committee of students and the fire prevention officer developed this program so that it would be fun and interactive for students. It used a quick series of training programs that further measured emergency preparedness of the students (Appendix 4 Program). Though the quick 20 minute education programs were developed for individual classes, the three portions were combined into a series that can be delivered in one program. The addition of animation, sound, and a game play point system significantly increased the responsiveness of the audience. The three programs were framed to encompass choking, bleeding, and home safety emergencies. Surveying students both pre and post education programs once again showed significant changes in comfort levels (Surveys Appendix 5 & Results Appendix 6). These short series of programs further hypothesized that a significant need is prevalent in this age group, and concluded students have the ability to change their behavior. The results of pre and post education surveys showed improved emergency training for the adolescent is warranted in the community. The degree of training required would be less if the seventh graders were exposed to some fundamental baseline information between 3rd and 7th grades. General results of these short emergency programs show a change in comfort levels (detailed information in Appendix 6). It is imperative for the educator of seventh grade students to maximize the educational experience by engaging as many student senses as possible. This has shown to significantly increase retention rates.

CHOKING**Results**

	Pre-survey	Post survey
Question 1	6	16
Question 2	13	19
Question 3	18	19
Question 4	1	17
Question 5	11	16
Question 6	8	17
Question 7	10	12

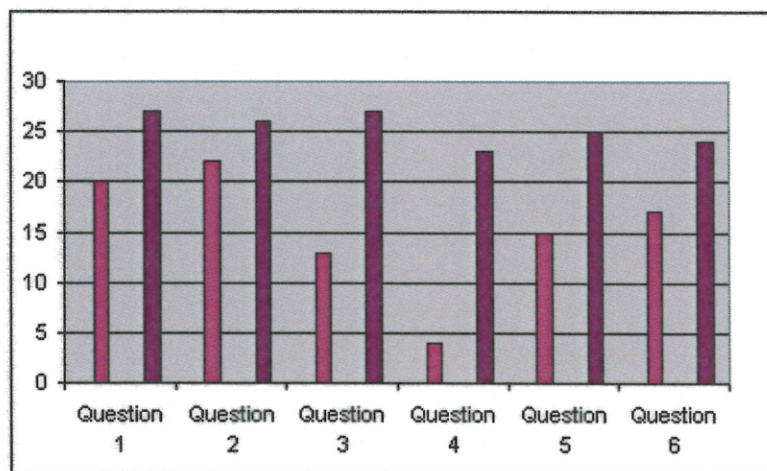
**BLEEDING****Results**

	Pre-survey	Post survey
Question 1	11	16
Question 2	4	10
Question 3	7	14
Question 4	12	17
Question 5	6	12
Question 6	4	5



HOME SAFETY Results

	Pre-survey	Post survey
Question 1	20	27
Question 2	22	26
Question 3	13	27
Question 4	4	23
Question 5	15	25
Question 6	17	24



The success of the program and the collection of data gained through the students' participation answered many of the researcher's questions for this project. This project required partnerships, dedication, significant commitment, development of pilot training programs, and research in addition to what others have found to be helpful when dealing with adolescents. The parallel commitment of the Bedford Heights Fire Department and the Heskett Middle School administration was the key to success during the research effort. When dealing with adolescents, the educator needs to review the students' safety and security rights while in school. Parental approval may be required when dealing with school aged children.

DISCUSSION

This research project has proven that adolescents have the ability to change their behavior and comfort levels when dealing with an unexpected emergency situation. These students have been shown to be at a higher risk to experience emergencies. Their expanded responsibilities at home and the fact that many students have less parental supervision logically increases these chances. The culmination of line officer testimony, direct student contact, and literature indicates that the seventh grade students in the Bedford City School District are at greater risk than years past to experience emergencies while alone. Injuries and deaths increase in this age group, and many of the Bedford Heights students are African American which even puts them at higher risk. African Americans and poorer families are at higher risk of death in a house fire. (USFA, 2004)

The 2005-2006 curriculum for Heskett Middle School students reflect what the fire department had found when dealing with these students. Students have received no emergency training while attending school between 4th through 7th grade and may receive only limited training if they choose health class when attending high school. (Heskett Program Guide, 2004) During the 2005-2006 school year Heskett Middle School practiced school bus evacuations. However, students only gained knowledge of how to rapidly evacuate the bus and no apparent knowledge was offered to the students' on what to do at a severe accident. Sixty percent of adolescents do not have the knowledge to help themselves or others at the scene of an accident. ("Lack Skills", BBC News, May 2005)

Heskett Middle School students are enthusiastic about participating in new programs where they can contribute to, and expand upon, development of a teaching program for their own age group. They are at a perfect age to be introduced to new ideas and educational programs.

(First Aid, BBC, September 1999) The fire department and roundtable work group of students have seen evidence of this when working with one another for over 10 months.

The fire department believes that the area of emergency training should be incorporated into the school curriculum. Proper techniques for ventilating a person were published for students as early as the fifth grade. (“Teaching CPR”, Life Saving Resources, June 1979) Even adults auditing the programs expressed their disbelief in the limited emergency training the students had before the class.

The students initially were cautious when dealing with fire department training officers. However, once a level of trust was established, they became relaxed and appeared to enjoy the experience. Most students want adults involved in their lives. This is why it is important for professionals to learn to teach, mentor, and counsel adolescents when dealing with them. (American Psychological Association [APA], 2002) After developing a relationship with students, a professional trainer still needs to gain the buy-in factor of the students. Adults must recognize the need for a sense of belonging, and this is significantly evident when dealing with the students. This need continues from 7th to 9th grades, for most students. (John S. and James L. Knight Foundation, December, 2001)

The work groups identified lectures as the least desired type of program for their peers. When in small classrooms with limited ability to change the room dynamics, an educator may need to incorporate more student participation. Classroom design directly affects the learning experience. (Davis, 1993) The fire department increased participation of students by distributing gum to class participants, which kept them alert and focused on the lesson. The students laughed and had an enjoyable experience.

If time and facilities allow for students to actually use their own skills to accomplish a task, it significantly increases the retention of the training. This was prevalent during the fire extinguisher training, and research has shown this age group actually prefers hands on type of education. (National Middle School Association [NMSA], 2002) Additionally, the instructor is the primary factor to the successful learning of the students. Preparedness and teaching ability of the instructor directly affect the success of the program. Retention failure is directly connected to the classroom and the instructor's ability to properly deliver information. (King, pg.10) How is one to measure change effectively without providing the most effective training program?

Through direct contact with students it was evident that they learned new skills, leading to the conclusion that they have the mechanical skills to effectively apply what they have learned. Survey results also indicated that the students also possess the necessary mental abilities.

The fire department and Heskett Middle School are at an important crossroad when dealing with the children of the area. The level of participation required for future programs to be successful will be extremely high. The research opened many possibilities for the future, and unexpectedly, identified a larger problem than the lack of emergency training available to 7th grade students. The school district and fire department now must deal with the lack of emergency education for all school grades beyond the 3rd grade. The students of the seventh grade have shown the ability to change their comfort level. However, a foundation of information should be built throughout all school years, where appropriate and coincides with past and future grade levels.

The development of a scope and sequence of future programs throughout all school years appears to be a real need in the community. A committee approach would logically be the best

avenue with respect to magnitude of the issue and agencies involved. Unfortunately, many times these types of committees fail to be successful. What is needed is an energetic, committed, change agent in the community who can keep the group focused on providing a safer community through the education of children. With these dynamics in place, it can lead to great things.

RECOMMENDATIONS

The dynamics of living in today's world are much different than in past years. Adolescents in most school districts are ill prepared to deal with real life emergencies. Schools continue to strive to base success on academic standards on state mandated tests. With the tax paying public scrutinizing public school spending, courses such as metal shop, woodworking, and cooking have been removed from the curriculum. In years past, students had received a minimum degree of safety training on how to deal with cuts, burns, and kitchen fires. Now, families are relying more on their teenaged children to take a more productive and responsible role in the family unit. The basic elements to this research project are focused on identifying the needs of today's seventh grade students and determining if these students have the ability to change their comfort level if given emergency life training.

Seventh grade students have the ability to expand upon ideas and to assist in identifying their own needs. These students can be a tremendous asset in the community. They want adults to be involved in their lives. Anyone who regularly deals with adolescents knows that the adult must maintain control of the adolescents and give guidance when necessary. The most successful approach, when dealing with adolescents, is to build positive relationships with them. If the fire department is only conducting a one day education session and does not have time to build a relationship with the students, it would benefit the instructor to engage as many senses of the students as possible.

Encouraging students' participation may be necessary at the onset of educational programs. Once other students see a benefit to be gained by attending the class, most students will want to participate. Many school systems try to arrange teacher work times throughout the

school year. The fire department that wants to provide educational programs may suggest facilitating sessions during these times, as it benefits the teachers and children.

The school administration must become an integral partner in this endeavor. Safety and the confidentiality of the children must be strictly controlled. Even though the fire department is usually involved in the local school systems, they are still viewed as an outsider to the parents. Fire department personnel may be prohibited from taking pictures, videos, or asking certain questions of the students. These situations must be identified well before any program starts and is one reason a trial run with a small portion of the student population is highly recommended.

A limitation to this research was that, primarily, only one person's perspective was used for the majority of the project. A committee within the fire department would have had the ability to expand upon ideas and divide responsibilities within the committee. The fire department would then need to form a partnership with the local school system in order to develop assessment tool that would determine the needs of the students in their district. Logically, the most successful program should incorporate as many aspects as feasible. Public safety officers, teachers, school administration, parents and students are the key to the success of educational programs. The committee may want to elect someone who will keep the group focused on the issues and desired results. This may limit some of the politics that may result if the system succeeds or sours in its implementation phase.

A fire department that is interested in accessing the needs of the students in their communities should start interacting in the schools by asking the students to complete a needs assessment. Simply showing up and talking about a firefighter's uniform and equipment is common in dealing with young children. This delivery does not necessarily meet the development needs of adolescent students. A fire department that has expanded upon these

opportunities and effectively introduced life safety at every grade level has provided a better service to the community.

Seventh grade students have the ability to change their comfort level when experiencing a medical or fire emergency. They must be educated in order to benefit the community. Many times the students claim they would be scared if dealing with an unconscious parent. They need to know it is alright to be afraid, but that they can help with the situation until emergency services arrive. Nationally, the fire service has begun a push toward fire prevention and public education as the primary mission of the future. While many fire departments continue to push toward educating the public and commit many man hours to these efforts, there is a silent group that continues to be missed by all agencies. Students in their adolescent years have the ability to make the community safer. These students are the future of our community and should receive real life training in school.

REFERENCES

- American Psychological Association (A.P.A.) titled *A Reference for Professionals Developing Adolescents* (2002).
- Ardolino, (2001). Tips for Creating Good Surveys.
- BBC News, *First Aid for Schools*, (September, 1999).
- BBC News UK edition, *Children Lack First Aid Skills* (May 2005).
- Child Trends Research Brief *Building a Better Teenager: A Summary of "What Works" in Adolescent Development* (USFA, Child Trends, November 2002).
- Dr. Angela Mickalide, Director of Education at the Home Safety Council
(Dr. Mickalide, personal communication, June 2005).
- Heskett Middle School, *Program of Studies Guide 2005-2006* (Heskett Program Guide, December 2004).
- John S. and James L. Knight Foundation, (December, 2001) Community Level Work on Educational Adjustments in Adolescence.
- Life Saving Resources Inc. ("Teaching CPR", Life Saving Resources, June 1979).
- Measuring the Impact of Fire Service Based Public Education (2003), he sites McClincy (*Instructional Methods in Emergency Services, Chapter 4*).
- National Middle School Association's (N.M.S.A.) article *Living With and Teaching Young Adolescents: A Teacher's Perspective* (October 2002).
- Research done for the American Red Cross by CrossNet, *Evidence Supporting the Need for One Year CPR Certification* (June, 2001).
- The Topical Fire Research Series published by the U.S. Fire Administration (December 2001), *Child Fire Casualties*.

Appendix 1- Parental Release Form

City of Bedford Heights
Division of Fire

Fire Dept.
5661 Perkins Road
Bedford Heights, Oh 44146

Chief Kenneth Ledford
Asst. Chief Tom Spape
office (440)786-3250
Fax (440)786-3224

Dear Parents,

I am requesting your permission to interview and survey your seventh grade student at Heskett Middle School throughout the 2005-2006 school years about home and life safety preparedness. The study will be used for a research project I am working on for The Ohio Fire Executive Program, established and overseen by The Ohio Fire Chief's Association.

Through this study I will be able to identify what type of life safety programs would be most beneficial to this age group. The seventh grade students that participated last year showed significant changes in their comfort levels relating to fire emergencies and were rewarded with a pizza party at the end of the year.

I truly appreciate your time. The students anticipated participation will make the community safer by educating the children on how to handle themselves during a fire or medical emergency. If you have any questions, please feel free to call me at anytime. As always I am here to work with you and for you to make the community a safer place to live.

Sincerely,

Thomas G. Spape
Assistant Fire Chief

Students Name

Parent/Guardian Signature	Date	Yes	No

APPENDIX 2- Work Group Questionnaire



Heskett Middle School



Students of Heskett Middle School you have been assigned into small groups to complete the following exercise. Your participation is appreciated and a survey will be conducted tomorrow as how comfortable you would be dealing with certain life safety emergencies if one should arise. Please work together and answer the following questions the best that you can. Use the back of this sheet if necessary.

1. Within your work group identify common uses for electricity you share.

2. List as many items you all use and think could cause an accidental fire (ex. improper use of candles).

3. Discuss with your group how comfortable you would be dealing with a friend or family member who had stopped breathing.

4. If your group could have a significant impact on future seventh graders and their comfort level dealing with life emergencies which items in the following list would be the most important? *There are no wrong answers for this exercise.* The number one represents the most important issue to the group.

A.	Dealing with accidents with injuries	B.	Helping a person not breathing
C.	Stopping life threatening bleeding	D.	Keeping my house safe from fire
E.	Being safe in severe weather	F.	Knowing when to call 9-1-1

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

List six teachers from sixth or seventh grade that have an impact or teaching style your age group feels most comfortable with:

If your group was directly involved in improving the comfort levels associated with first aid, fire emergency, choking, and CPR for seventh graders what would be the one thing an instructor should understand about teaching seventh graders? There are no wrong answers:

APPENDIX 3- Survey Form



Heskett Middle School



Students of Heskett Middle School this survey is being administered to you in an attempt to measure your comfort level of: **Identifying types of fires, using a fire extinguisher, knowing when to intervene or evacuate a fire area, home safety and medical emergencies.** Circle the answer that best describes your position when dealing with these situations.

1- Strongly Agree 2- Agree 3- Somewhat Disagree 4- Disagree

Fire Extinguishers

I would know how to properly use a fire extinguisher	1 2 3 4
I know what type of extinguisher to use for different types of fires	1 2 3 4
I am familiar with the different hazards associated with fires	1 2 3 4
I understand what PASS stands for when dealing with fire extinguishers	1 2 3 4
I know when it is necessary to call 9-1-1 when fire is involved	1 2 3 4
I know how to position my body when using a fire extinguisher	1 2 3 4
I have a basic knowledge of types of fires and the fire triangle	1 2 3 4
I know where my fire extinguisher is located at home	1 2 3 4

Home Safety

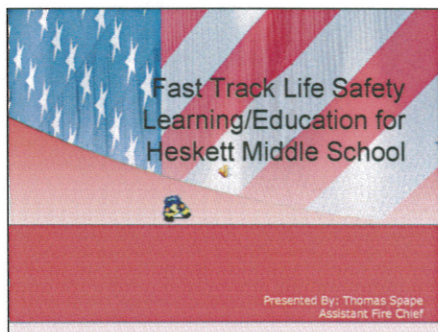
I know how many smoke detectors are in my home	1 2 3 4
If my main path out is blocked by fire I know what to do	1 2 3 4
I know when my family last changed the smoke detector battery	1 2 3 4
I understand how to best minimize the chance of fire in my home	1 2 3 4
I am familiar with the different type of smoke detectors	1 2 3 4
I know the dangers that Carbon Monoxide can present	1 2 3 4
I know what to do if I smell natural gas in the house	1 2 3 4
I understand common hazards around my home	1 2 3 4
I am prepared and comfortable in dealing with severe weather	1 2 3 4

Medical Emergencies

I know how to properly help a person who is choking until EMS arrives	1 2 3 4
If I came upon an unconscious person I would know what to do	1 2 3 4
I am relatively comfortable with controlling bleeding	1 2 3 4
I know what to do if someone is having an allergic reaction	1 2 3 4
I can properly perform CPR if necessary	1 2 3 4
I would know when it is necessary to call 9-1-1	1 2 3 4
I think classes that focus on medical and fire emergencies are helpful	1 2 3 4

APPENDIX 4- Safety Training (Result of action research)

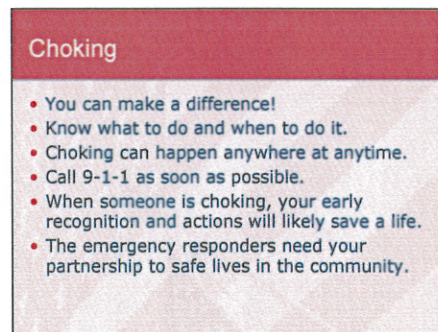
Slide 1



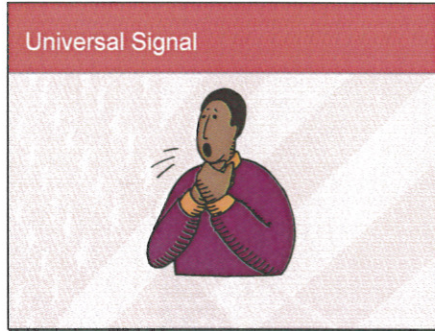
Slide 2



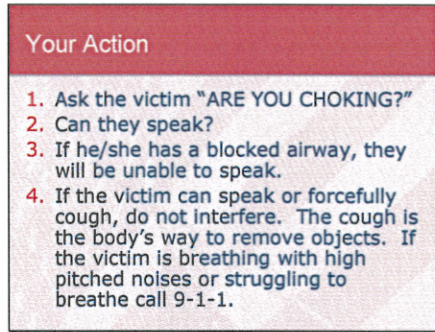
Slide 3



Slide 4



Slide 5



Slide 6



Slide 7

What will this do?

- It increases pressure in the body that forces air back up through the lungs. It will force objects out of the airway like a cork from a bottle.
- You can do it! It can make all the difference in the world for the person and their family.

Slide 8

How do I perform the Heimlich?

1. Stand behind the victim and make a fist with one hand.
2. Place the thumb side of the hand above the navel (belly-button) and beneath the ribs.
3. Grasp the fist with the other hand and provide quick upward thrusts into the victim's abdomen.

Continue until object is pushed out or victim becomes unconscious. Call 9-1-1!

Slide 9

Do you think this type of education is important in your life?

Questions?
Remember:

- You can do it!
- Recognize
- Act quick
- Call 9-1-1
- Save a life

Slide 10

Jeopardy Round 1

- Answer **must be** in the form of a question
- Each team starts with 25 pts.
- Each correct answer in Round 1 is 2pts

HERE WE GO!

Slide 11

This emergency medical condition can commonly be handled by bystanders that know how to perform the Heimlich Maneuver.

- What is Choking ?

2 pts.

Slide 12

This is the universal sign that a person will exhibit when truly choking.

- What is hands around the throat?

2 pts.

Slide 13

You should ask the person experiencing an apparent choking emergency this question.

- What is "Are you Choking?"

2 pts.

Slide 14

If a person can do this normally and can be heard they probably aren't experiencing a choking emergency.

- What is Speak or talk?

2 pts

Slide 15

This is the bodies mechanism for removing an obstruction from the airway.

- What is Coughing?

2 pts.

Slide 16

The Heimlich Maneuver does this inside the body when properly performed.

- What is increase pressure?

2 pts

Slide 17

Properly placed hands will between these two areas of the choking victim.

- What is below rib cage, above navel

2 pts.

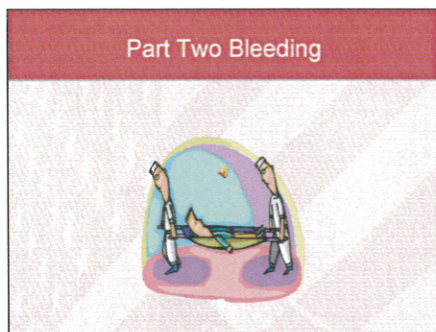
Slide 18

You will likely do this if the person is choking and you perform the Heimlich Maneuver.

- What is Save a life?

2 pts.

Slide 19



Slide 20


Bleeding

- Many injuries are minor and can be handled with minimal effort on your part.
- Know what to do and when to do it.
- Injuries can happen anywhere.
- If a person has had an injury and looks ill, call 9-1-1 and have them sit down.

Slide 21

Common Injuries


- What types of things can cause injuries?
- Can we do anything to prevent these causes?
- What do you think some of the more common injuries are?

An illustration of a person sitting on the ground, holding their knee in pain, suggesting a common injury like a fall or sports-related injury.

Slide 22

When to call emergency services

- Small cuts, bruises, and scrapes do not require emergency services
- If a person has a severe injury or doesn't appear normal, call 9-1-1.
- Stay cool and calm. Your confidence will go a long way with everyone including the victim.



Slide 23

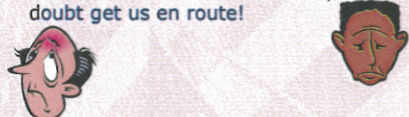
Stop the bleeding for minor wounds

- 1. Direct pressure** - many times we automatically do this when we injure ourselves.
- 2. Elevate** - If we elevate an arm or leg while applying direct pressure, gravity helps us limit the bleeding
- 3. Cool area** - Applying ice wrapped in a towel or cool wet cloth can help slow the bleeding.

Slide 24

Is medical attention needed?


- For severe injuries, head injuries, or when people appear sick from an injury call 9-1-1.
- Minor injuries still may require medical attention for stitches. However, if in doubt get us en route!



Slide 25

Do you think this basic information has helped you prepare for unexpected bleeding injuries?

Questions?
Remember:




- Stay calm as people will follow your lead.
- Call 9-1-1 if needed.
- Minor wounds
 - Direct Pressure
 - Elevate
 - Cool area


Slide 26

Jeopardy Round 2

- Answer **must be** in the form of a question
- Each teams points from round 1 will be added to points gained in round 2.
- Each correct answer in Round 2 is worth 5pts.



HERE WE GO!



Slide 27

Many time minor injuries can be handled without calling this service.

- What is
 9-1-1
 Fire Department

5pts.

Slide 28

A confident attitude will help a victim of an emergency do this.

- **What is**
Relax or Calm down?

5pts.

Slide 29

One thing you can do to stop bleeding for a minor injury is apply this type of pressure

- **What is**
Direct Pressure?

5pts.

Slide 30

This force helps slow bleeding when an injured limb is elevated in the air.

- **What is**
Gravity?

5pts.

Slide 31

We can apply direct pressure, elevate a limb and keep it this to slow the bleeding.

- What is Cool

5pts.

Slide 32


A person with a minor injury who looks pale/sick may require this service.

- What is Emergency Svc's.

5pts.

Slide 33


Home Safety



Slide 34

Home Safety



- Safe housekeeping practices can limit injuries, fires, and hazards around the home.
- Special attention may be needed in homes with the elderly and young children.
- A working smoke detector must be everyone's first priority in the home.



Slide 35

Preventive tips


- Storage of chemicals - safe location, keep in its improved container.
- Gasoline - store in shed or garage in approved container.
- Combustibles- keep away from heat sources.
- If someone smokes, douse butts before placing in trash can.
- Do not wear loose clothing when cooking.
- Candles, Candles, Candles. - never leave unattended

Slide 36

Tips continued

- Have your fireplace, stove, and furnace serviced at least once a year.
- Keep space heaters at least three feet away from things that can burn.
- Do not overload electrical outlets.
- Appliance cords can be dangerous.



Slide 37


Other safety hazards

- Loose rugs or carpeting may pose a tripping hazard.
- Purses, bags, and decorations can be a hanging hazard for small children.
- Wet floors are dangerous (bathtubs, entrance way).
- Ice build-up on steps and walkways are a high hazard area.
- Carbon Monoxide detectors should be in every home.

Slide 38

Appliances


- Handles of pots and pans should be not be hanging over edge of stove.
- Clean around and under appliances.
- Keep clothes and storage away from hot water tanks and furnaces.
- Grills should be away from the house and never left unattended cooking.




Slide 39

Jeopardy Round 3

- Answer **must be** in the form of a question
- Each teams points from round 1 and 2 will be added to points gained in round 3.
- Each correct answer in Round 2 is worth 10pts.



HERE WE GO!



Slide 40

Home safety is always important however when these two age groups are in the house it is even more important.

- **What is**
Children/Elderly

10pts.

Slide 41

What should be the primary priority in the home protecting a family from fire.

- **What is**
A working smoke detector

10pts.

Slide 42

These should never be left unattended and checked to be cooled before leaving room.

- **What is**
Candles

10pts.

Slide 43

tank should be clear of this type of material.

- What is Combustibles

10pts.

Slide 44

Purses, decorations, and small grocery bags can pose this type of hazard to small children.

- What is Hanging Hazard

10pts.

Slide 45

Are education programs similar to this a good idea in the school system?

Questions?
Remember:

- Your attention in these areas may save your family's life.
- Make sure your smoke detector works and the batteries are changed every year.
- Call the fire department with any questions you may have regarding home safety.
- Live safer! The life you save might be your own.

Slide 46

Thank You

- The FAST Track Education/Learning presentation was developed by Thomas G. Spape/Assistant Fire Chief City of Bedford Heights.
- This program was developed to evaluate a conceptual education program (FAST) for the adolescent student. Information gained through these programs will be used for an applied research report for The Ohio Fire Executive Program through the Ohio Fire Chief's Association.

Slide 47

The City of Bedford Heights

- **Fire Department**
 - Chief Ken Ledford
 - (440) 786-3251
 - Assistant Chief Thomas Spape
 - (440) 786-3250
 - Lieutenant Dan Fritz (Public Relations)
 - (440) 439-1234

APPENDIX 5- Questionnaire**Student Questionnaire-Choking (part1)****1. I would be able to determine if a person needed the Heimlich maneuver.**

- Agree
- Some what agree
- Disagree

2. A person that is choking will

- Need a glass of water
- Feel better if they sit down
- Will put their hands around their throat

3. A person with a blocked airway will be unable to speak because:

- They are to embarrassed
- They are scared
- There is no air movement
- I don't know

4. The first thing to do if you see someone choking is:

- Call 9-1-1
- Ask them if they're choking
- Hit them on the back
- I'm not sure

5. Proper hand placement for the Heimlich maneuver is:

- Back blows
- Around the chest
- Around the victims stomach
- I'm not sure

6. If I saw someone choking right now I would be likely to:

- Panic
- Do nothing
- Call 9-1-1
- Know how to effectively handle the situation

7. Life safety training for students in the seventh grade:

- Can be improved
- Is not important
- Should be mandatory
- Doesn't really matter

Questionnaire-Bleeding (part 2)

1. I would be able to determine if a person needed help if they were bleeding.

- Agree
- Some what agree
- Disagree

2. A person that is bleeding will:

- Need a glass of water
- Normally requires 9-1-1 assistance immediately
- May only need temporary pressure applied to injury
- Not sure

3. The first thing to do if you see someone bleeding is:

- a. Call 9-1-1
- b. Stay calm
- c. Give them a bag of ice
- d. I'm not sure

4. The proper sequence for stopping bleeding is:

- a. Ice, elevate, direct pressure, stay calm
- b. Elevate, stay clam, ice, direct pressure
- c. Stay calm, direct pressure, elevate, ice
- d. I'm not sure

5. If I saw someone bleeding right now I would be likely to:

- Panic
- Do nothing
- Call 9-1-1
- Know how to effectively handle the situation

6. Life safety training for students in the seventh grade:

- Can be improved
- Is not important
- Should be mandatory
- Doesn't really matter

First Survey

Second Survey

Student Questionnaire-Home Safety (part 3)

1. I can improve the safety around my home.

- Agree
- Some what agree
- Disagree

2. The first home safety priority should be to:

- e. Make sure all smoke detectors work
- f. Keep candles in proper holding devices
- g. Keep storage neat and orderly
- h. Not sure

3. All extension cords are safe to use in the home:

- a. Not true
- b. True
- c. I'm not sure

4. Space heaters should be at least:

- a. 4 feet from combustibles (things that burn)
- b. 3 feet from combustibles (things that burn)
- c. Never on the floor
- d. I'm not sure

5. I will likely go home and do the following towards safety in my home:

- Do nothing
- Look for hazards and try to live safer
- Not worry about it as my family looks for these things
- I'm not sure

6. Life safety training for students in the seventh grade:

- Can be improved
- Is not important
- Should be mandatory
- Doesn't really matter

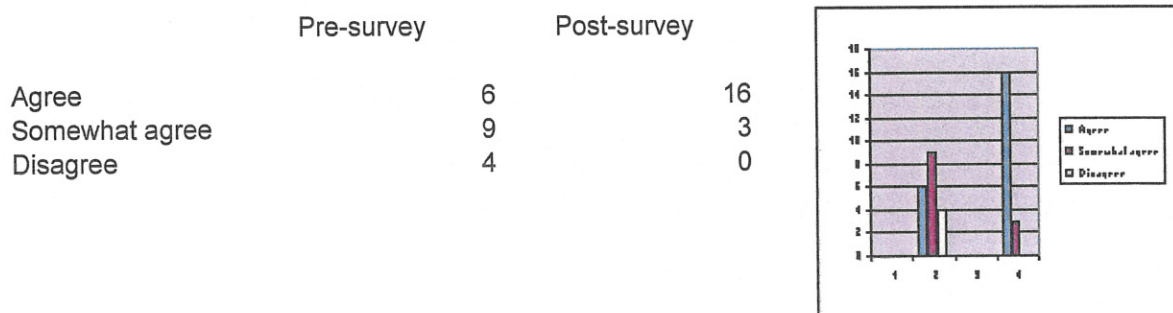
First Survey

Second Survey

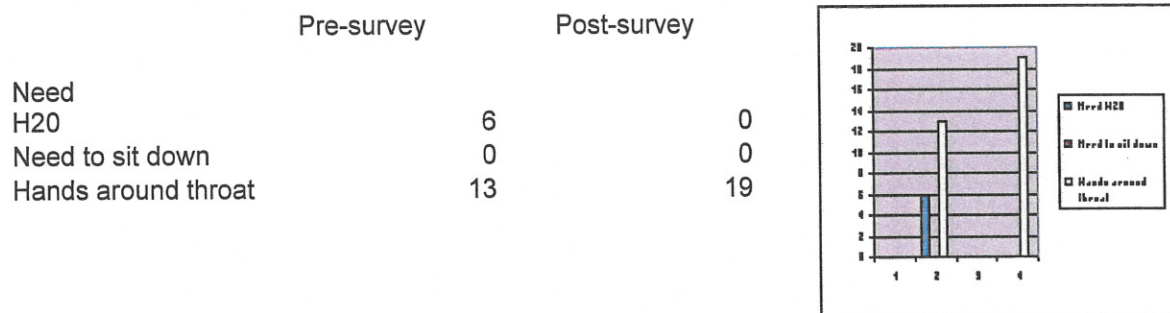
APPENDIX 6- Results of Fast Track Training

Choking- (figures reflect answers for each student-class size 19)

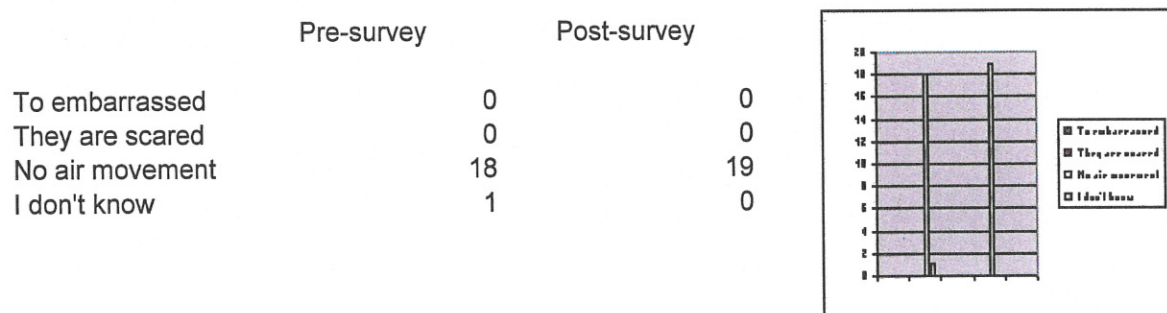
I would be able to determine if a person needed the Heimlich Maneuver



A person that is choking will

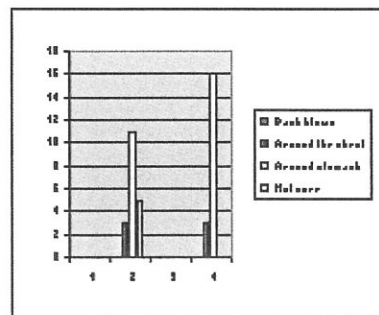


A person with a blocked airway will be unable to speak because:



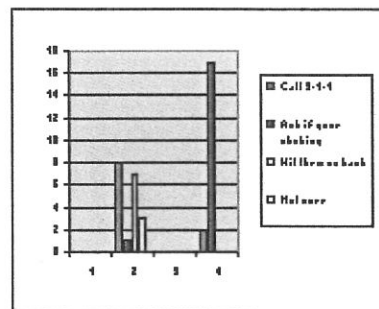
The first thing to do if you see someone choking is:

	Pre-survey	Post-survey
Call 911	8	2
Ask if your choking	1	17
Hit them on back	7	0
Not sure	3	0



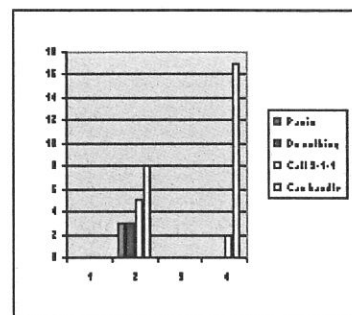
Proper hand placement for the Heimlich maneuver is:

	Pre-survey	Post-survey
Back blows	0	0
Around the chest	3	3
Around stomach	11	16
Not sure	5	0



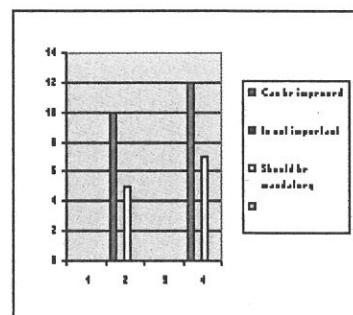
If I saw someone choking right now I would be likely to:

	Pre-survey	Post-survey
Panic	3	0
Do nothing	3	0
Call 911	5	2
Can handle	8	17



Life safety training for students in the seventh grade:

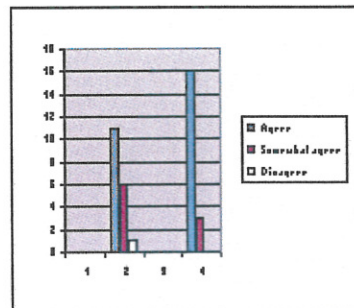
	Pre-survey	Post-survey
Can be improved	10	12
Is not important	0	0
Should be mandatory	5	7
Doesn't matter	4	0



Bleeding-(figures reflect answers from each student-class size 19

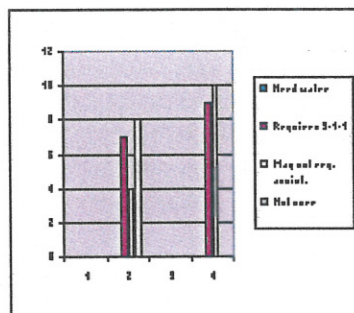
I would be able to determine if a person needed help if they were bleeding

	Pre-survey	Post-survey
Agree	11	16
Somewhat agree	6	3
Disagree	1	0



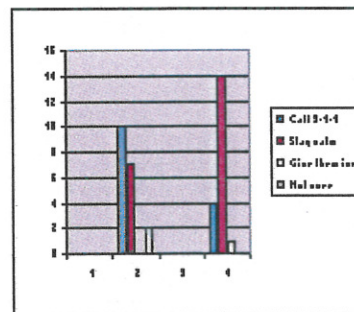
A person that is bleeding will

	Pre-survey	Post-survey
Need water	0	0
Requires 911	7	9
May not req. assist.	4	10
Not sure	8	0



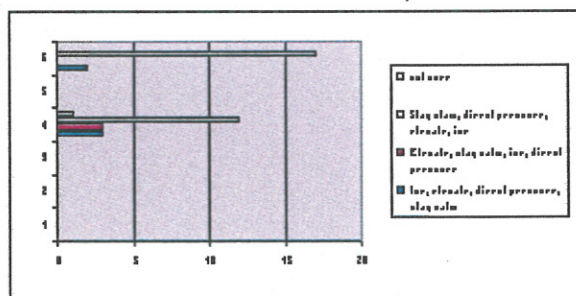
The first thing to do if you see a person bleeding

	Pre-survey	Post-survey
Call 911	10	4
Be Calm	7	14
Give them ice	0	1
Not sure	2	0



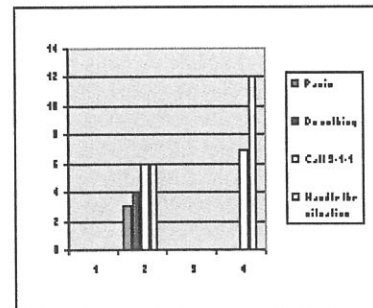
The proper sequence for stopping bleeding is:

	Pre-survey	Post-survey
Ice, elevate, direct pressure, stay calm	3	2
Elevate, stay calm, ice, direct pressure	3	0
Stay clam, direct pressure, elevate, ice	12	17
Not sure	1	0



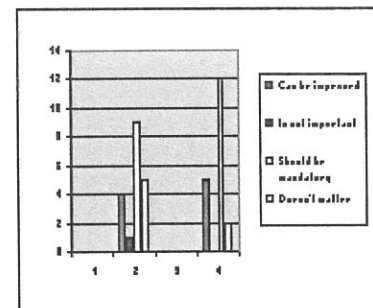
If I saw someone bleeding right now I would be likely to:

	Pre-survey	Post-survey
Panic	3	0
Do nothing	4	0
Call 911	6	7
Handle the situation	6	12



Life safety training for students in the seventh grade:

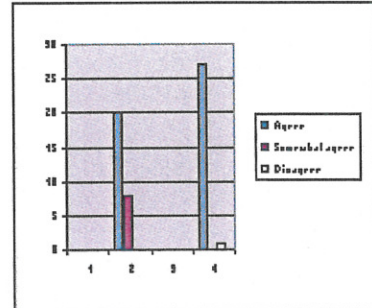
	Pre-survey	Post-survey
Can be improved	4	5
Is not important	1	0
Should be mandatory	9	12
Doesn't matter	5	2



Home Safety- (figures reflect answers from each student-class size 28)

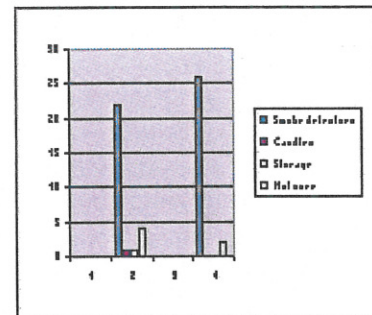
I can improve the safety around my home:

	Pre-survey	Post-survey
Agree	20	27
Somewhat agree	8	0
Disagree	0	1



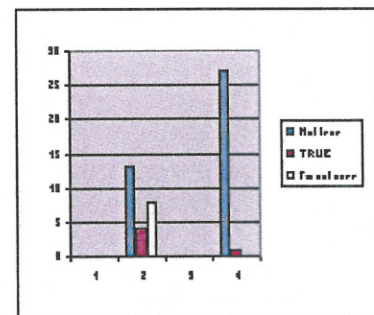
The first home safety priority should be to:

	Pre-survey	Post-survey
Smoke detectors	22	26
Candles	1	0
Storage	1	0
Not sure	4	2



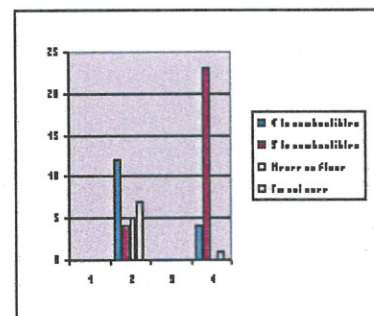
All extension cords are safe to use in the home:

	Pre-survey	Post-survey
Not true	13	27
TRUE	4	1
I'm not sure	8	0



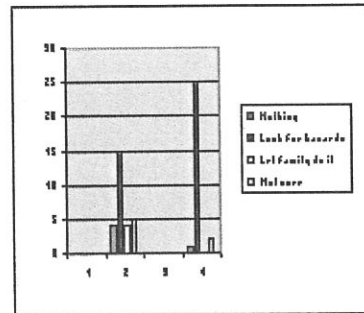
Space heaters should be at least:

	Pre-survey	Post-survey
4' to combustibles	12	4
3' to combustibles	4	23
Never on floor	5	0
I'm not sure	7	1



I will likely go home and do the following towards safety in my home:

	Pre-survey	Post-survey
Nothing	4	1
Look for hazards	15	25
Let family do it	4	0
Not sure	5	2



Life safety training for students in the seventh grade:

	Pre-survey	Post-survey
Can be improved	17	24
Is not important	0	0
Should be mandatory	8	3
Doesn't matter	3	1

