



WPI



An Evidence-based Approach for the Contemporisation of the Fire Ed Program

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Abstract

This report provides an analysis of the internal and external drivers influencing the contemporisation of the Fire Ed program for primary school children led by the Metropolitan Fire Brigade (MFB) in Victoria, Australia. From interviews, data analysis and contemporary practice case studies, the WPI team provided MFB with the evidence necessary to confirm that Fire Ed needs a modernisation of its booking, reporting and feedback processes, delivery approach, key messages, and resources. The team developed appropriate and contextualised advice to support organisational decision-making about the scope and types of changes required to contemporise the Fire Ed program. The advice specifically provides various options the MFB should consider when updating the Fire Ed program.

Acknowledgements

We would like to acknowledge the people who have aided in the successful completion of this research project and shared their wisdom with us during the course of this research. Their assistance made it possible to present this finished report to the Metropolitan Fire Brigade (MFB) and to other stakeholders interested in the contemporisation of the Fire Ed program.

The information received by members of MFB aided our understanding of the Fire Ed program and its context within MFB, schools, homes, and the community as a whole. The expert advice, guidance, and observations provided to the team by Marthese Kavanagh, Julie Harris, and Geoff Kaandorp were key factors that enabled the team to form a complete study and the resulting report.

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With special thanks to:

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Geoff Kaandorp, Senior Research Officer, Corporate Strategy and Performance, MFB

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Luke Klein, Acting Commander, MFB

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We would like to thank you for sharing your time and experiences with us during our nights on shift. It was a memorable night that will stay with us forever.

In this limited space, it is simply impossible to give the names of everyone who provided invaluable direction that assisted us in this project. We are highly grateful to anyone who guided us in completing this work.

Executive Summary

Engaging the community is an evolving process. What we knew yesterday doesn't necessarily mean it is going to address the issues of tomorrow, so we need to continually review the processes that we do to make sure that we are getting the best products to the community. For me, this is an exciting program that we look at the current state of play and developing contemporary research to inform future products that we can engage the community with.

-Martin Braid, MFB Assistant Chief Fire Officer and Director of CREM

This project focuses on the Fire Education (Fire Ed) program delivered to primary school students by the Metropolitan Fire Brigade (MFB). In terms of fire safety education, MFB has a legislated responsibility to undertake fire prevention education and raise fire safety awareness with the community of Melbourne. MFB developed Fire Ed for primary school students, which is delivered primarily by firefighters. The overall aim of Fire Ed is to reduce the incidence and impact of fire on the community by teaching fire safety in schools.

It has been over ten years since Fire Ed was last reviewed and updated, and there is evidence that uptake of the program in schools is declining. The research team analysed Fire Ed in its entirety. The project aimed to identify contemporary practice and outline complex and interlinked considerations to inform development of a contemporary Fire Ed program. To develop appropriate and contextualised advice, our objectives for the project were:

1. Research and document the emergency management and primary school sectors in Victoria to provide context on how the program contributes to the community
2. Research, document, and develop an understanding of MFB's current Fire Ed program in its entirety
3. Document and analyse the internal and external drivers influencing the need to update the Fire Ed program and how these issues may also inform and impact specific types of change
4. Research and analyse comparable, contemporary, educational programs and technologies to determine best practice methods, which also addresses current issues resulting from internal and external drivers

Methods

The research team utilised a range of social science methods including background research, document analysis, survey analysis, interviews, a roundtable discussion, and data analysis. The research team reviewed government, agency, and academic literature on the emergency management sector and the primary school sector in Victoria. The emergency management research was focused on the national and Victorian state contexts, while the team's research into the primary school sector focused on the structure of the Victorian school system, the curriculum and how it applies at each level of primary school, and the learning outcomes of primary education.

Background

To understand the context of Fire Ed the research team investigated the emergency management sector and the education sector in Australia and specifically within Victoria. The team found that a range of agencies, departments and other organisations have an interest in fire and emergency prevention, including Emergency Management Australia (EMA), the Australasian Fire Authorities Council (AFAC) at a national level and Emergency Management Victoria (EMV), Country Fire Authority (CFA) and MFB in Victoria. The Victorian Government recently introduced legislation into Parliament that proposes major reforms to MFB and CFA. The legislation, which has not been passed, would combine all career firefighters under a new entity known as Fire Rescue Victoria (FRV). CFA would return to a volunteer agency servicing the rural parts of Victoria.

MFB has 596 primary schools located inside the metropolitan district, which include Catholic, Government, Special and Independent schools. Primary school starts at the Prep level with most students aged five or six. Literacy and Numeracy are priorities for Prep students and for the whole of primary school. In Upper Primary, students are aged 10 to 12, and Literacy and Numeracy focuses on more mature and complex achievement standards. In Upper Primary, students are expected to apply concepts to real-life problems and create projects.

The Victorian Curriculum and Assessment Authority (VCAA) is the statutory authority responsible for the provision of curriculum in Victoria. The Victorian Curriculum F-10 (Foundation – first year of primary school to Year 10- the fourth year of secondary school) uses the Australian Curriculum as a basis but they are not identical. In Victoria, the Victorian Curriculum F-10 must be used by all Government and Catholic schools. The Victorian curriculum structure incorporates knowledge and skills and defines them by the use of seven learning areas which include English, mathematics, health and physical education, humanities, science, the arts, and technologies.

Fire Ed

The WPI team conducted a document analysis of all printed Fire Ed materials to develop a comprehensive understanding of the program, resources, materials and systems. Fire Ed has existed for nearly 25 years and is one of MFB's longest running community education programs. In that time, it has delivered fire safety education to thousands of primary school students. Fire Ed is divided into two program levels: Prep and Upper Primary; however, there are a total of five variations of the Fire Ed Program, which are:

- Fire Ed for Preps - Students in their first year of school. Age 5-6 years
- Fire Ed for Upper Primary - Students in their last years of primary school, Grades 5 or 6. Age 10-12 years
- Fire Ed for Special Ed - Students aged 5 – 18 years who live with a disability or who have specific learning needs.
- Fire Ed for Primary EAL - Students aged five to 12 years who are newly arrived in Australia and whose first language isn't English
- Fire Ed for Home School - Students aged 5-12 years who are schooled at home

Internal and External Influencing Factors

Fire Ed is impacted by both internal and external influencing factors (or drivers) that MFB need to consider when contemporising the program. Internal drivers include all the factors that affect the Fire Ed program that MFB has direct influence over. The internal drivers include:

- Engaging schools and scheduling Fire Ed Sessions
- Competing firefighter priorities
- Reporting and evaluation of Fire Ed
- Declining uptake of the Upper Primary component
- Hard-copy program resources
- Equitable access and increasing program take up by home-school students/specialist school students/EAL students

External drivers include all the factors that affect the Fire Ed program that MFB has no direct influence over. The external drivers include:

- Education trends
 - Curriculum related content
 - Content difficulty
 - Content appropriateness
- Competition between emergency services for classroom inclusion
- Demographic profile of Melbourne
- Fire Rescue Victoria

Case Studies

The team analysed a range of technology based programs aimed at primary school students to uncover examples of contemporary practice in the delivery of safety based and other programs within schools. We selected three contemporary programs to develop into case studies. Each case study analysed a specific element of an education program or initiative around program development, content and delivery.

The first case study provides an understanding of the processes involved in developing a game based application (app) that educates students on prevention and preparedness. Life Saving Victoria's (LSV's) Everyday Life Saver App targets students in year seven and eight. The purpose of the app is "using gamification to make learning water safety and emergency response more engaging" (LSV, 2016b). This case study also demonstrates how a safety organisation has used a continuous improvement approach to evaluate and develop its education program to ensure it effectively engages students, maximises reach and improves cost effectiveness.

The second case study provides an example of the integration of fire safety education with inquiry based learning that engages students in developing practical solutions to risk in a contextualized environment. Project FireStorm was a five-stage project, which was designed to allow Upper Primary students to gain an understanding of bushfires through guided exposure to real bushfire footage and stories, development of a project design problem, brainstorming of ideas to solve the problem, creation of prototype models, and testing of solutions (Ryan and Jarrett, n.d.).

The final case study demonstrates how digital learning can be located on a single website to increase accessibility in and out of the classroom, provide effective professional development for teachers, and meet the ongoing evaluation needs of the program. The e-learning for kids foundation (EFK) provides over 800 free, interactive digital learning modules for students age 5 to 12. They also supply their users with resources to help them navigate the website and plan which courses to take. For teachers, EFK provides pedagogical examples to show the modules' flexibility, which makes it more appealing to teachers. Lastly, EFK consulted with other organisations to develop content that was challenging and appropriate for the age level of their target audience.

Contemporisation Framework

The WPI team utilised all our research, and knowledge gained through the project to create a critical framework for the contemporisation of Fire Ed. To contemporise Fire Ed, MFB needs to create a rubric for Fire Ed that includes the mission statement, learning objectives, and outcomes. MFB then

needs to understand the capacity at which Prep and Upper Primary students can have agency in their own education and what type of content is appropriate.

When Fire Ed is contemporised, the resources need to be updated. Fire Ed resources need to engage students and motivate educators to use Fire Ed. The long-term viability of the program requires its resources can be integrated into teaching programs that align with Victorian curriculum and provide teachers with pedagogical examples that demonstrate how the resources can be adopted in a classroom. MFB will need to make all Fire Ed resources available online, and should also consider utilising newer forms of technology in Fire Ed.

MFB may wish to target professional development through various mediums, including but not limited to, webinars and how-to instructional videos. Professional development for teachers also encompasses creating detailed curriculum links that outline the pathways teachers can approach when integrating home fire safety into their teaching programs.

Firefighters are a key part of Fire Ed. To have a scalable, sustainable, contemporary Fire Ed program, their role does need to be reviewed. MFB should consider firefighters participation as home fire safety experts who participate after other activities and/or lessons have occurred. This could be in the form of Q & A sessions, reviewing activity sheets or having a dialogue about specific areas of home fire safety rather than conducting educational lessons.

The WPI team proposes the development of an online portal. When MFB designs their online portal, important resources to include are implementation guides. These guides should be comprehensive documents and interactive videos touching upon every question a user may have. This may include, but is not limited to navigation of the website, pedagogical examples, curriculum links, a complete list of resources available, and commonly asked questions. Upon the creation of the portal, MFB will have to determine the different aspects they want to include and how all the parts communicate with each other. Adding an online portal with built-in automation would take pressure off MFB, MFB firefighters, and teachers.

Feedback and evaluation will be a critical component of a contemporary Fire Ed, including feedback from students. Upper Primary students have the maturity needed to communicate and give insight into their own learning. Fire Ed is designed to teach students, so asking students about the program and what they would want to see change is significant to the success of Fire Ed.

Promotion of a contemporised Fire Ed will be essential to increasing program uptake and penetration through the community. MFB should develop communication strategy to schools encouraging them to look at the new portal and book Fire Ed. This should be done at a minimum of twice a year.

Summary

The redevelopment of Fire Ed needs to deliver a contemporary and accessible program that supports and engages users. It also needs to be sustainable both in terms of its delivery and administration. This team identified that the structure of Fire Ed and the issues affecting it are complex and entwined. Each element or function needs to be addressed separately but also in reference to other key elements or functions. This demands careful planning and the investment of financial and other organisational resources. It will require consultation internally and externally with various stakeholders to gain endorsement and support. It will need to embrace technology and apply it to find sustainable and innovative learning solutions. To meet these challenges MFB may need to consider contemporising the program in phases rather than as a whole to achieve reachable goals and milestones. Fire Ed is a valuable program which needs to be retained and rebuilt. This team is pleased to have had the opportunity to contribute to its long-term future.

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Acronym Bank

Acronym	Definition
ACARA	Australian Curriculum and Assessment Authority
ACT	Australian Capital Territory
AFAC	Australian Fire and Emergency Service Authorities Council
AIIMS	Australian Inter-Service Incident Management System
AV	Ambulance Victoria
CCC	Australian Government Crisis Coordination Centre
CC-DRR	Child-Centered Disaster Risk Reduction
CEM	Catholic Education Melbourne
CFA	Country Fire Authority
CREM	Community Resilience Emergency Management
DELWP	Department of Environment, Land, Water and Planning
DET	Department of Education and Training
DHHS	Department of Health & Human Services
DPC	Department of Premier and Cabinet
EAL	English as an Additional Language
EFK	e-learning for kids foundation
EMA	Emergency Management Australia
EMV	Emergency Management Victoria
FENZ	Fire and Emergency New Zealand
Fire Ed	Fire Education
FRV	Fire and Rescue Victoria
LGA	Local Government Area
LSV	Life Saving Victoria
MD	Metropolitan District
MFB	Metropolitan Fire Brigade
MFESB	Metropolitan Fire and Emergency Services Board
NSW RFS	New South Wales Rural Fire Service
NT	Northern Territory
STEM	Science, technology, engineering and mathematics
UP	Upper Primary
VCAA	Victorian Curriculum Assessment Authority
VERMS	Victorian Emergency Risk Management System
VEYLDF	Victorian Early Years Learning and Development Framework
VICSES	Victoria State Emergency Service
VRQA	Victorian Registration & Qualifications Authority
WPI	Worcester Polytechnic Institute

List of Informants

Name	Company Position
Amanda Leck	AFAC - Director of Information and Community Safety
Dr. Briony Towers	RMIT University's Centre for Risk and Community Safety – research fellow who has extensive experience in Child Centered Disaster Risk Reduction
Carmel Phillips	VCAA - Manager Early Years Unit
Dr. Craig Smith	VCAA - Project Manager Victorian Curriculum F-10 Unit
Firefighter 1	MFB – A firefighter that participated in Fire Ed (Interview was conducted with the understanding that the firefighter's name would not be used)
Julie Harris	MFB - Manager of At Risk Groups
Kate Kroeger	AV – Community Education Manager
Kate Simpson	LSV - General Manager in Education
Luke Klein	MFB - Acting Commander of the Community Resilience Department
Marthese Kavanagh	MFB – Fire Ed Program Coordinator
Martin Braid	MFB – Assistant Chief Fire Officer and Director of the Community Resilience Department
Matt Henry	CFA – Program Design Coordinator, School Education
Sharon Foster	VCAA - Manager Victorian Curriculum F-10 Unit
Tony Jarrett	NSW RFS – Community Engagement Coordinator

Chapter 1: Introduction and Objectives of the Project

Engaging the community is an evolving process. What we knew yesterday doesn't necessarily mean it is going to address the issues of tomorrow, so we need to continually review the processes that we do to make sure that we are getting the best products to the community. For me, this is an exciting program that we look at the current state of play and developing contemporary research to inform future products that we can engage the community with.

-Martin Braid, MFB Assistant Chief Fire Officer and Director of CREM

In 2016, there were 1,228 residential structure fires in Melbourne (MFB, 2017b). One way to reduce the likelihood and impact of fires is by informing people about how to prevent fires and what to do if a fire does occur in their home, through fire safety education programs. Educating children is particularly important because of “their lack of understanding of the dangers of fire,” and because of their ability to contribute to change in their home environment (Byard, Lipsett, & Gilbert, 2000, p. 176). As a result, children have the capacity to influence and contribute to fire safety in their home.

The Metropolitan Fire Brigade (MFB) works to prevent, prepare for, respond to and help the community recover from fires and other emergencies in the metropolitan area of Melbourne, Victoria, Australia. In terms of fire safety education, MFB has a legislated responsibility to undertake fire prevention education and raise fire safety awareness with the community of Melbourne. One of the main purposes of the MFB, as stated in the MFB Act 1958 is “to provide for fire safety, fire suppression and fire prevention services and emergency response services in the metropolitan fire district” (MFESB, 2011).

To fulfill its legislative obligation to provide fire prevention services, MFB developed a Fire Education (Fire Ed) program for primary school students, delivered primarily by firefighters. Fire Ed has been running for nearly 25 years and is delivered at two levels: Prep (Grade 0) and Upper Primary (Grades 5/6). The overall aim of Fire Ed is to reduce the incidence and impact of fire on the community by teaching fire safety in schools. Starting fire safety education at a young age is intended to establish a foundation of fire safety knowledge that can be built upon as children mature. Across Victoria, MFB and the Country Fire Authority (CFA) share the target of delivering fire safety education to approximately 531,928 primary school students, 14,490 students with special needs, 1,918 students for whom English is not their first language, and approximately 4,785

students who are homeschooled. CFA delivers its own fire safety education program called Fire Safe Kids.

MFB is planning to redevelop Fire Ed to ensure that the program is contemporary, sustainable, effective, and more appealing to a broad range of stakeholders (children, teachers, families, and firefighters). The purpose of this project is to support MFB with information and evidence to form a basis upon which to shape and inform the development of a renewed Fire Ed program.

To develop appropriate and contextualised advice, our objectives for the project were to:

1. Research and document the emergency management and primary school sectors in Victoria to provide context on how the program contributes to the community
2. Research, document, and develop an understanding of MFB's current Fire Ed program in its entirety
3. Document and analyse the internal and external drivers influencing the need to update the Fire Ed program and how these issues may also inform and impact specific types of change
4. Research and analyse comparable educational programs and technologies to determine contemporary practice methods, which also addresses current issues resulting from internal and external drivers

The report will provide information and advice to MFB to support organisational decision-making about scope and types of change required to contemporise Fire Ed.

Chapter 2: Methodology

This chapter describes the methodologies the team employed to meet the key objectives of the project.

2.1 Research and Document the Emergency Management and Primary School Sectors in Victoria to Provide Context on How the Program Contributes to the Community

The research team undertook secondary research (or desktop research), reviewing government, agency and academic literature on the emergency management sector and the primary school sector in Victoria. “Secondary information consists of sources of data and other information [that is] collected by others and archived in some form” (Stewart and Kamins, 1993).

The emergency management research was focused on understanding national and Victorian state contexts. Specifically, at a national level the functions of Emergency Management Australia (EMA) and the Australasian Fire and Emergency Services Authorities Council (AFAC); and at a state level the functions of MFB, CFA, Emergency Management Victoria (EMV), and the possible creation of Fire and Rescue Victoria (FRV).

The team’s research into the primary school sector focused on the structure of the Victorian school system, the curriculum and how it applies at each level of primary school, and the learning outcomes of primary education. This phase of the research provided the background necessary to understand the school context in which Fire Ed exists.

In addition to conducting secondary research, we worked at MFB full time, and spent a night on-shift at a fire station. We recorded ongoing observations of our experience that allowed us to develop a better understanding of the values and operating context of MFB. We also conducted semi structured interviews with key informants from MFB (operational and corporate employees), and from a range of external agencies including the Victoria Curriculum Assessment Authority (VCAA), RMIT University, and various emergency service agencies. These interviews are discussed further in sections 2.3.2 and 2.4.2.

2.2 Research, Document, and Develop an Understanding of MFB’s Current Fire Ed Program in its Entirety

The team conducted a document analysis of all printed Fire Ed materials to understand the Fire Ed program and the related resources, materials and systems. Document analysis is a qualitative research method that “is a systematic procedure for reviewing or evaluating

documents—both printed and electronic (computer-based and Internet-transmitted) material” (Bowen 2009, p.27) This analysis was undertaken to help the WPI team understand in detail how Fire Ed is structured and delivered.

A recent change to the Working with Children Act (Appendix D) means that all firefighters delivering Fire Ed in a school must have a valid Working with Children Check. As a result Fire Ed has been temporarily suspended while MFB ensures it complies with this requirement, and we were not able to observe the delivery of Fire Ed in a school. However, MFB’s Fire Ed Program Coordinator, Marthese Kavanagh, provided the team with a detailed outline of how the program is delivered at Prep and Upper Primary levels. The Working with Children Act changes relate specifically to working within schools and do not impact of school group visiting a fire station. The team was therefore able to observe firefighters deliver Fire Ed to a group of home-school students at Oakleigh Station and a fire education display for the general public conducted every Friday at the Eastern Hill fire station. (Fire Ed for home school students is discussed in more detail in section 5.4) These opportunities allowed us to better understand how firefighters deliver many of the key messages from the Prep component of the program in particular.

2.3 Document and Analyse the Internal and External Drivers Influencing the Need to Update the Fire Ed Program and How These Issues May Also Inform and Impact Specific Types of Changes

Fire Ed operates in a context that is impacted by a range of factors internal to MFB as well as external factors from the education sector and the wider Melbourne community. These factors are discussed in detail in Chapters 6 and 7. The WPI team conducted a stakeholder meeting, semi-standardised interviews, a roundtable discussion, survey analysis, and statistical data analysis to understand and generate evidence relating to these drivers.

2.3.1 Stakeholder Engagement

Before undertaking interviews and data analysis, the team conducted a meeting with our MFB sponsors to identify internal and external drivers. The team then collected and analysed information from a range of sources to inform our understanding of the drivers identified.

2.3.2 Semi Standardised Interviews

The team conducted interviews with a range of stakeholders using a semi-standardised interview methodology. Semi-standardised interviews “involve the implementation of a number of predetermined questions and special topics. These questions are typically asked of each interviewee in a systematic and consistent order, but the interviewers are allowed freedom to digress” (Berg, 2010, p.112). Semi-standardised interviews allow for the ability to ask questions that may come up within the interview that were not decided upon before the start of the interview.

2.3.3 Roundtable Discussion

The team also conducted a roundtable discussion with VCAA representatives: Craig Smith (Project Manager Victorian Curriculum F-10 Unit), Sharon Foster (Manager Victorian Curriculum F-10 Unit) and Carmel Phillips (Manager Early Years Unit) to understand drivers relating to curriculum. A roundtable discussion is when “participants sit at a literal round table, usually, or at least in a circle, implying no hierarchy, and each in turn contributes his or her ideas and expertise on the topic” (Levy, n.d.). The questions created for the roundtable discussion can be found in Appendix K.

2.3.4 Survey Analysis

Before the WPI team arrived in Melbourne, MFB sent out online surveys to all primary schools in the Melbourne Metropolitan district. Four surveys targeted schools participating and not participating in Fire Ed at the Prep and Upper Primary levels. They were sent out as follows:

- Upper Primary schools participating in Fire Ed (16 per cent responded)
- Upper Primary schools not participating in Fire Ed (4 per cent responded)
- Prep schools participating in Fire Ed (21 per cent responded)
- Prep schools not participating in Fire Ed (0 per cent responded)

A detailed outline of the surveys given to the Upper Primary level schools can be found in Appendices A and B.

Analysing the survey responses required “a careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, biases, and meanings” (Berg, 2010, p. 349). Evidence from survey responses supported the analysis of some of the internal drivers.

2.3.5 Statistical Data Analysis

MFB supplied the research team with Fire Ed data spanning the years 2014 to 2017. This data recorded the participation status of each school in the metropolitan district. The trends and gaps in the data assisted the team in developing evidence relating to the internal and external drivers. Analysis of Australian Bureau of Statistics and Department of Education were used as evidence relating to the demographic profile of Melbourne outlined in section 7.5.

2.4 Research and Analyse Comparable Educational Programs and Technologies to Determine Contemporary Practice Methods, which also Addresses Current Issues Resulting from Internal and External Drivers

To accomplish the last objective, the team analysed contemporary programs for primary students to understand examples of contemporary practice and how educational technology is currently being used by other organisations. Essentially, we were researching digital learning and contemporary practices.

2.4.1 Case Study Development

The team researched and analysed educational programs, web-based resources and tools, and computer and phone applications (apps) targeting primary school students to create case studies. After analysing each example of educational technology, we selected three initiatives: Life Saving Victoria's Everyday Lifesaver App, New South Wales Rural Fire Service's Project FireStorm, and e-learning for kids.

2.4.2 Semi-Standardised Interviews

The team conducted semi-standardised interviews program coordinators from Life Saving Victoria (LSV) and New South Wales Rural Fire Service (NSW RFS) to understand their education programs and what could potentially be applied to a contemporised Fire Ed program. The representative from LSV was Kate Simpson (General Manager in Education) and the representative from NSW RFS was Tony Jarrett (Community Engagement Coordinator). These interview questions can be found in Appendices G and J.

Chapter 3: MFB and the Emergency Management Sector in Victoria

This chapter will outline the emergency management sector in Australia and Victoria, particularly the structure of MFB and its Community Resilience Department. This is relevant for understanding the context of the Fire Ed program.

3.1 Australian National Emergency Management Organisations

This section will discuss Australian national level emergency management organisations with an interest in fire and emergency prevention, Emergency Management Australia (EMA), and the Australasian Fire and Emergency Service Authorities Council (AFAC).

3.1.1 Emergency Management Australia (EMA)

EMA is a division within the Attorney-General's Department of the Australian Government responsible for disaster and emergency management nationwide. EMA works alongside state and territory governments and the international emergency management community "to deliver critical programs, policies, and services to strengthen and maintain Australia's emergency management capability" (Attorney General's Department, 2017). State and territory governments take on the responsibility of managing emergencies in their jurisdictions, but EMA coordinates physical and financial support from the Australian Federal Government. The Australian Government Crisis Coordination Centre (CCC) within EMA provides assistance coordination during disasters and emergencies. EMA implements the Australian Government's National Strategy for Disaster Resilience and the United Nations' Sendai Framework for Disaster Risk Reduction 2015-2030.

3.1.2 Australasian Fire and Emergency Service Authorities Council (AFAC)

AFAC is the central body in Australia for fire, emergency services and land management (AFAC, 2016). Member organisations representing their respective states collaborate to determine best practices in emergency management for Australasia. AFAC acts as the facilitator and custodian of contemporary fire and emergency service knowledge and practice, including AIIMS, the Australian Inter-Service Incident Management System (AFAC, 2017).

AFAC has thirty-one member organisations; membership consists of emergency services and fire management agencies from all Australian states or territories, and other federal government agencies with emergency management responsibilities (AFAC, 2017). Membership organisations at the federal level are Air Services Australia, Parks Australia and EMA. New Zealand currently has

one member agency, Fire and Emergency New Zealand (FENZ). The table below shows Australian member organisations by state.

Table 1. AFAC Organisations

Territory	Organisations
Australian Capital Territory	<ul style="list-style-type: none"> • ACT Emergency Services • ACT Parks and Conservation
New South Wales	<ul style="list-style-type: none"> • Fire & Rescue NSW • Forestry Corporation of New South Wales • NSW Rural Fire Service • NSW State Emergency Service • Office of Environment and Heritage
Queensland	<ul style="list-style-type: none"> • Queensland Fire and Emergency Services • Queensland Parks and Wildlife Service
Tasmania	<ul style="list-style-type: none"> • Parks & Wildlife Service Tasmania • Sustainable Timber Tasmania • Tasmania State Emergency Service • Tasmania Fire Service
Northern Territory	<ul style="list-style-type: none"> • Bushfires NT • Northern Territory Fire, Rescue and Emergency Services
Western Australia	<ul style="list-style-type: none"> • Department of Biodiversity, Conservation and Attractions WA • Parks and Wildlife Service and Department of Fire and emergency Services.
South Australia	<ul style="list-style-type: none"> • Department of Environment, Water and Natural Resources • Forestry SA • South Australian Country Fire Service • South Australian Metropolitan Service • South Australian State Emergency Service
Victoria	<ul style="list-style-type: none"> • CFA • Forest Fire Management Victoria - Department of Environment, Land, Water and Planning • Metropolitan Fire and Emergency Services Board • Parks Victoria • Victoria State Emergency Service

3.2 Victorian Emergency Management Agencies

This section will discuss the State of Victoria’s emergency management agencies that have an interest in fire/emergency prevention, Emergency Management Victoria (EMV) and CFA.

3.2.1 Emergency Management Victoria (EMV) and Other Agencies

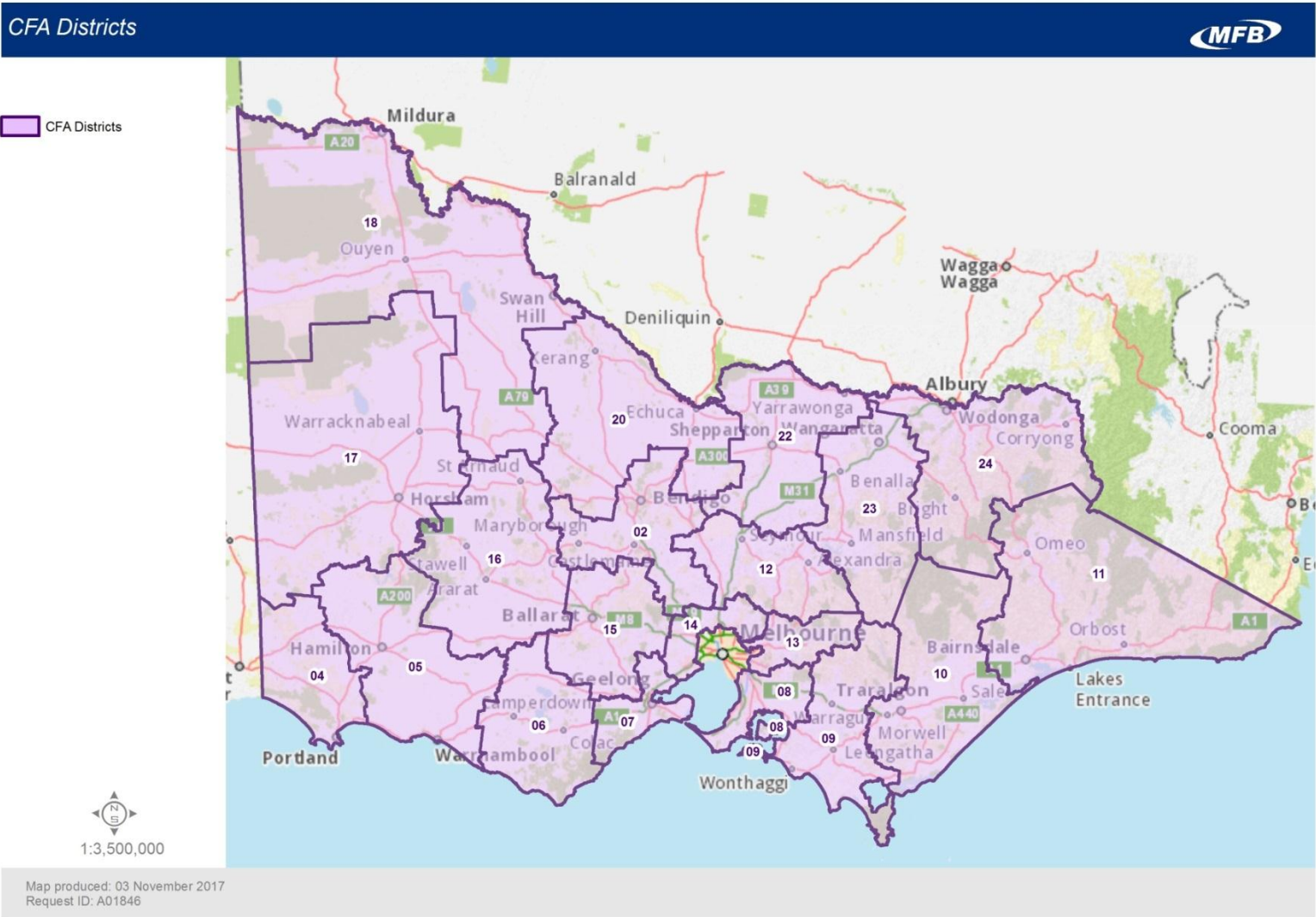
The Emergency Management Act (2013) officially established EMV in 2014. EMV is the coordination agency for emergency services in Victoria. The agency is led by the Emergency Management Commissioner. EMV provides coordination of emergency response and recovery across Victoria, this includes coordination of emergency response agencies (including MFB; CFA; Victoria Police; Ambulance Victoria; Department of Environment, Land, Water and Planning (DELWP); Victoria State Emergency Service (VICSES)); and government and non-government service providers including Department of Health & Human Services (DHHS). EMV aims, “to develop a sustainable and efficient emergency management system that reduces the likelihood, effect and consequences of emergencies on communities” (EMV, 2015).

3.2.2 Country Fire Authority

CFA is a volunteer and community based fire and emergency service that works alongside MFB in Victoria to respond to fires and other emergencies. With 53,000 volunteers, 900 career firefighters and 1700 support staff, CFA provides fire and emergency services across Victoria, except for the Metropolitan District of Melbourne, covered by MFB. CFA is divided into 21 districts within 5 regions (CFA, 2017). Figure 1 shows the location of the CFA Districts in Victoria.

CFA’s mission statement is to save lives and property. CFA and MFB's aims are closely aligned; CFA’s goal is to reduce the incidence and impact of emergencies on the community and increase community resilience to emergencies (CFA, 2016). CFA is committed to prevention, preparedness, response and recovery. CFA's statewide fire and emergency role includes multiple forms of fire suppression, road rescue, technical rescue, and response to hazardous materials, floods, or other emergencies (CFA, 2017). Along with other non-emergency activities, CFA delivers their own fire education program, entitled Fire Safe Kids, to pre-primary and primary students.

Figure 1. CFA Districts in Victoria



3.3 Legislative Change & the Creation of Fire and Rescue Victoria

The Victorian Government recently introduced legislation into Parliament that proposes major reforms to MFB and CFA. The legislation, which has not yet been passed by the Upper House of Victorian Parliament, contains four main priorities: restore CFA to volunteer organisation, establish Fire Rescue Victoria (FRV), plan and build for the future, and value firefighters. FRV would consolidate all career firefighters from MFB and the CFA into one organisation, led by the FRV Commissioner, and would “provide fire services to densely populated urban areas across Victoria” (Fire Services in Victoria, 2017). FRV would cover the forty-seven MFB stations, as well as the CFA’s thirty-five integrated stations staffed by both career and volunteer firefighters that are in significant urban areas outside the Metropolitan District. The implications the legislation has on MFB’s Fire Ed program are discussed further in section 7.4.

3.4 Metropolitan Fire and Emergency Services Board (MFB)

The Metropolitan Fire and Emergency Services Board, usually referred to as the Metropolitan Fire Brigade (MFB), employs 1,954 operational firefighters and 343 corporate staff who serve approximately four million people in the Metropolitan District of Melbourne. MFB’s 47 stations stretch across 26 Local Government Areas (LGAs) and cover an area greater than one thousand square kilometers (MFB, 2017b). The location of the Metropolitan District within Victoria and the locations of the 47 stations, in the Metropolitan District, are shown in the maps on pages 13 and 14.

MFB is focused on four major aspects of emergency management: prevention, preparedness, response, and recovery (MFB, 2017b). MFB's prevention function aims to minimise the likelihood and severity of emergency situations in the metropolitan district. For preparedness, the MFB trains firefighters and the community to be prepared for emergencies. This includes how to respond to emergencies, determining where emergencies are most likely to occur, and ensuring that MFB’s services are available and accessible at all times. MFB responds to approximately 38,000 calls per year to provide a wide range of services (MFB, 2017b). Response efforts include calls for fires, hazardous incidents, automatic alarm response, road accident rescue, emergency medical response, urban search and rescue, high angle rescue and marine response. Finally, the brigade is dedicated to the recovery of both individuals and communities after an emergency by attending to emotional, social, economic, and physical impact of emergencies (MFB, 2017b).

The organisational responsibility for prevention is shared across many areas of the MFB but it is the core responsibility of the Community Resilience Department in the Emergency Management Directorate (CREM). The department is “responsible for the development of strategies, policies, and systems that reduce and mitigate the effects of emergency incidents on the community and firefighters” (MFB, 2017a). This is achieved by “working in partnership with internal departments and external agencies” to educate and engage with the community to build a safer and more resilient Victorian community (MFB, 2017a). CREM is comprised of three separate departments which are:

- Community Development
- At Risk Groups
- Community Education

Each department within CREM targets specific areas of risk mitigation through different methods of engagement. The work of Community Development and At Risk Groups is based on engagement with external partners to advocate for and influence change within existing frameworks and responsibilities. These include developing and or supporting the capacity of agencies and programs to deliver improved community safety outcomes through policy and practice. Major projects undertaken by these two departments include developing a project to have home fire safety included into the national curriculum for community care workers and developing a risk assessment tool and platform to support local government to increase its effectiveness when planning for emergencies. In comparison Community Education works more traditionally through the development and delivery of campaigns and programs. Community Education, or Public Education as it was formerly known, was the first dedicated part of the current department to be established and Fire Ed is the oldest running program within the department.

Figure 2. The Metropolitan District in Relation to the State of Victoria

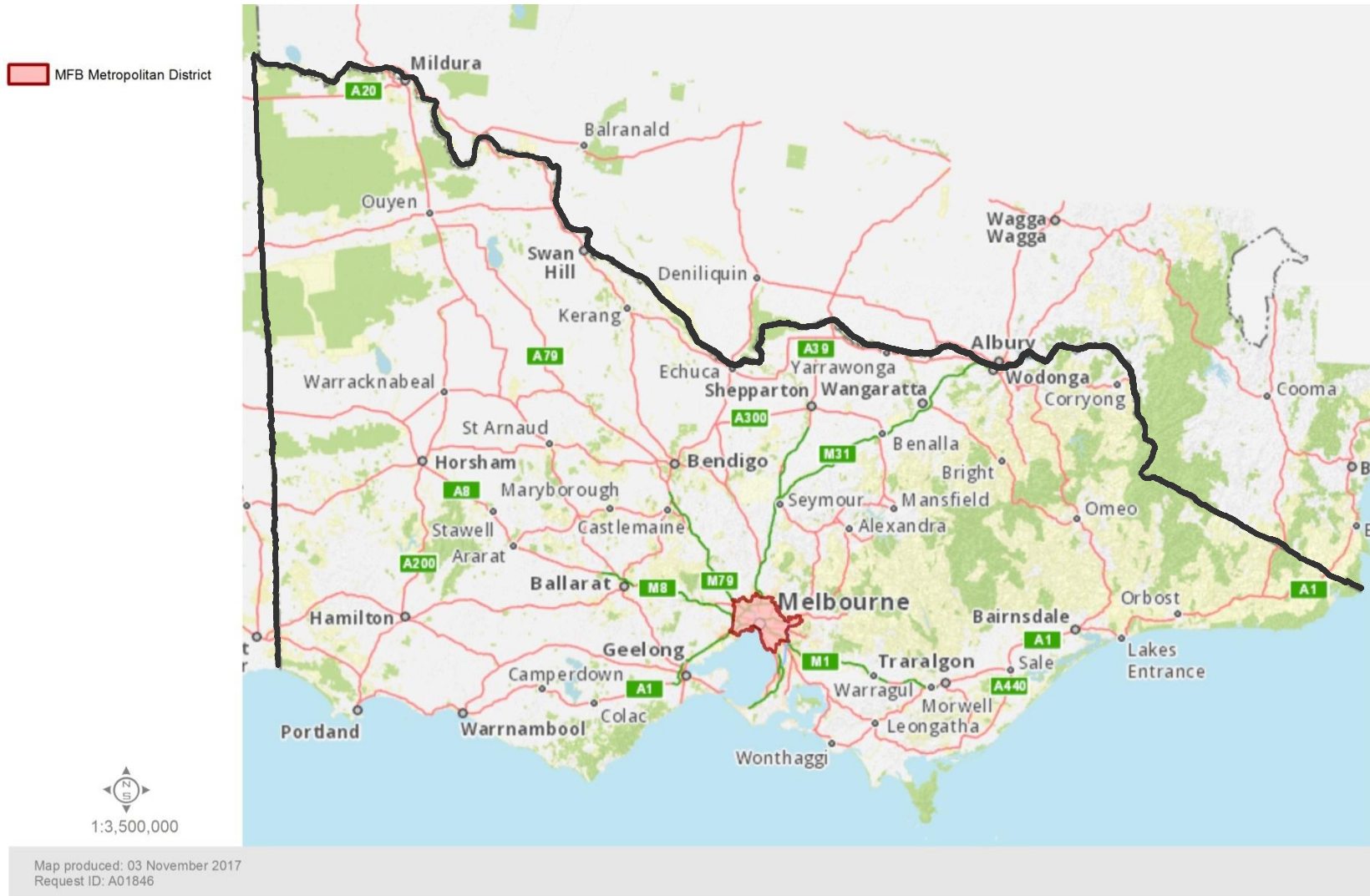
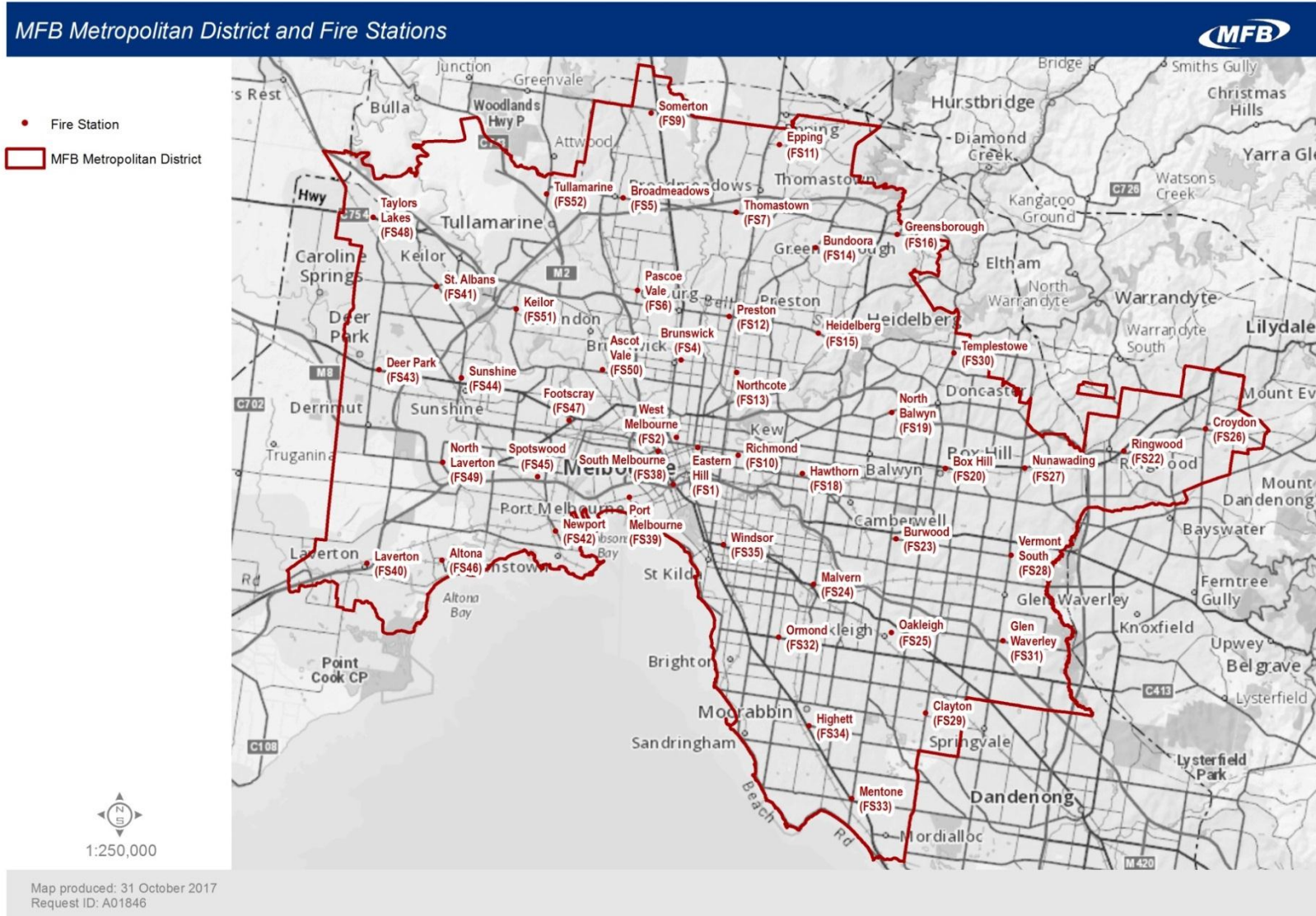


Figure 3. MFB Fire Stations in the Metropolitan District



Chapter 4: The Primary School Sector in Victoria

This chapter outlines the structure of the school sector in Victoria, describes National and Victorian curriculum structures, and discusses teaching and learning at the Prep and Upper Primary levels, providing further context to the Fire Ed program.

4.1 Primary School Sector Structure

MFB has 580 primary schools located inside the Metropolitan District. These include Catholic, Government, Special and Independent schools. Most schools in the metropolitan Melbourne area are government schools, with Catholic schools forming the next largest group and independent schools forming a smaller group.

All schools, as well as families who home school their children, must be registered with the Victorian Registration and Qualifications Authority (VRQA), a statutory authority. Registration relies on schools and home school families meeting the VRQA prescribed minimum standards, one of which relates to curriculum and student learning.

The funding structure and management for Victorian schools varies. Victorian Department of Education and Training (DET) funds and manages government schools. Most of the funding is from the Victorian Government, with a smaller amount coming from Australian Government. Individual school councils can ask parents to pay fees for essential items, optional enrichment programs and for voluntary contributions. Catholic Education Melbourne (CEM) manages Catholic schools in the Archdiocese of Melbourne. Over half of the funding for Catholic schools is provided by the Australian government, while families provide almost 30 per cent of school funding through fees and fundraising, with the Victorian Government providing the rest (CEM, 2008). Independent schools are self-managed and most of their funding comes from parent contribution (66.1 per cent), while the Australian Government contributes almost 27 per cent and the Victorian Government provides just over seven per cent (Independent Schools Victoria, 2017).

The needs of students with disabilities who attend Government schools can be met through additional funding under the Program for Students with Disabilities. These students may attend special schools or regular schools. There are 40 special schools in MFB's area and these include schools for:

- Children who are Deaf
- Children who are Deaf, Deaf/Blind, Deaf with additional needs
- Children who live with a mild intellectual disability (Special schools)

- Children who live with a moderate to profound intellectual disability (Special Developmental Schools)
- Children who live with a physical disability
- Children who are on the Autism Spectrum
- Children with significant social, emotional and behavioural problems
- Children attending hospital schools

This year in Victoria, 4,785 children were registered for home-schooling (VRQA, 2017b). Home school groups who access Fire Ed include families with mixed age students who meet to facilitate excursions and special interest activities.

4.2 Victorian Curriculum

The Australian Curriculum is developed and administered by the Australian Curriculum Assessment and Reporting Authority (ACARA). Individual Australian states manage their curriculum in various ways. They may use the Australian Curriculum as described, or may choose to incorporate only certain aspects of it.

The Victorian Curriculum and Assessment Authority (VCAA) is the statutory authority responsible for the provision of curriculum in Victoria. VCAA’s mission is “to provide high quality curriculum, assessment and reporting to enable learning for life” (VCAA, 2017a). The Victorian Curriculum F-10 (Foundation – first year of primary school to Year 10- the fourth year of secondary school) uses the Australian Curriculum as a basis but they are not identical.

The Victorian curriculum structure incorporates knowledge and skills and defines them by the use of seven learning areas which include English, mathematics, health and physical education, humanities, science, the arts, and technologies. Achievement standards for each level of each learning area are described and the learning areas can be broken down further into modes, strands and sub-strands. English has three modes: reading and viewing, writing, and speaking and listening.

The Victorian Curriculum is structured as a continuum; the focus is on levels of achievement rather than on years of schooling. This means that when learning programs are developed for students it will relate to their actual learning level rather than an assumption based on their age or grade level. Sharon Foster, manager in VCAA’s Victorian Curriculum F-10 Unit, stated that “in any one classroom you’d have about six different levels of learning” (personal communication, November 23, 2017).

Victoria’s approach to curriculum can be contrasted with the approach taken in New South Wales. New South Wales Education Standards Authority (NESA) has syllabuses, not curriculum.

NESA syllabus states what will be taught and the percentage of time spent per week on learning areas. When bushfire education was added to Stage three (Grades Five and Six) Geography recently, it became a compulsory topic for Grade Five and Six students in that state. The Victorian curriculum “allows schools to contextualise the delivery of the program” (S. Foster, personal communication, November 23, 2017). By contrast, it is important to note that the Victorian Curriculum is not prescriptive. The inclusion of a topic in the curriculum does not make it compulsory. Schools will decide on a learning topic based on the needs of their students and within the context of the school and local community. The Victorian curriculum provides a framework and resources to which teachers can refer to when creating teaching programs for their students. There are notable safety programs e.g. first aid training, traffic safety (as pedestrians, bike riders or novice drivers), that are not compulsory in Victorian schools.

In Victoria, the Victorian Curriculum F-10 must be used by all government and Catholic schools. “Independent schools can use the Victorian Curriculum F-10 as a model and resource for the effective implementation of the Australian Curriculum” (VCAA, 2017).

4.3 Prep

Primary school starts at the Prep level with most students aged five or six. Literacy and Numeracy are priorities for Prep students and for the whole of primary school. "A strong foundation in literacy and numeracy is vital for every child and young person, and underpins their ability to engage in education, reach their potential, and to participate fully in the community" (DET, 2017). Literacy is described as “students' ability to interpret and create texts with appropriateness, accuracy, confidence, fluency and efficacy for learning in and out of school, and for participating in” the workplace and community (ACARA, 2017a). Numeracy is described as “the knowledge, skills, behaviours, and dispositions that students need in order to use mathematics in a wide range of situations” (ACARA, 2017b). Teachers incorporate these priorities, the learning characteristics of Prep aged children, and the learning outcomes defined by the Department of Education and Training (DET) to create a foundation for children to build on in future grade levels.

The VCAA developed the “Victorian Early Years Learning and Development Framework (VEYLDF) – For All Children from Birth to Eight Years,” that outlines a curriculum framework for early childhood services and junior primary grades in Victoria (DET, 2016). The VEYLDF provides “illustrative maps” to assist in the transition of children from early childhood education settings to primary school and the first three levels of the Victorian Curriculum F-10, to further

ensure that learning outcomes for young children in primary school are based on age appropriate education strategies (VCAA, 2017d).

It would be advantageous for a contemporised Fire Ed for Prep to be aligned with the appropriate level/s of Victorian Curriculum F-10 and VEYLDF.

4.4 Upper Primary

Upper Primary students at grades five and six are usually aged ten to twelve. Originally Fire Ed for Upper Primary was called Grade Six Fire Ed. The changes to the name and structure reflected changes to the curriculum at the time of the program's last redevelopment. Schools can structure their classes so that Grade five students are in separate classes from Grade six students or they can be in the same class. This is referred to as a composite class. Schools with a composite class structure tend to use learning programs that run over a two-year cycle. A topic that is covered in year one of the cycle will not be repeated in year two.

Literacy and Numeracy continue as priorities in Upper Primary, but with more mature and complex achievement standards than Foundation level. The learning characteristics and expectations for Upper Primary are outlined in the VCAA's F-10 Curriculum for Levels five and six. Specific learning outcomes are described for each subject area.

In Upper Primary, students are able to apply concepts to real-life problems and create projects. As with other levels of the F-10 Curriculum, educators can develop learning topics where subjects are integrated together. An example of an integrated project in a school setting is the Edible School Yard project, whose goal is to "empower students with the knowledge and values to make food choices that are healthy for them, their communities, and the environment." The project involves learning goals "such as communication, personal and community stewardship, flexibility, and perseverance." The project includes strategies and learning outcomes from English, life sciences, personal and social capabilities (Edible School Yard Staff, 2017).

This method of approach is called inquiry based learning. It incorporates the capacity of Upper Primary level students for self-directed learning, personal research, problem solving, having agency and a voice in decisions that affect them. Integrated learning topic and inquiry based strategies provide rich and engaging sources of learning for students and should be incorporated in Fire Ed program development.

Chapter 5: The Fire Ed Program

This chapter outlines the structure of Fire Ed, which includes how it is delivered to schools, the content taught in each variation of the program, and the resources used in each variation of the program.

5.1 Background

Fire Ed has existed for nearly 25 years and is one of MFB's longest running community education programs. In that time, MFB has delivered fire safety education to thousands of primary school students. Fire Ed is delivered by operational firefighters and is backed by resources and materials available to educators to support the delivery of fire safety lessons before and/or after the firefighter visit(s).

Fire Ed is comprised of five specific variations, all of which include a firefighter visit or visits as their major component. These are:

- Fire Ed for Preps - Students in their first year of school. Age 5-6 years
- Fire Ed for Upper Primary - Students in their last years of primary school, Grades 5 or 6. Age 10-12 years
- Fire Ed for Special Ed - Students aged 5-18 years who live with a disability or who have specific learning needs.
- Fire Ed for Primary EAL - Students aged five to 12 years who are newly arrived in Australia and whose first language isn't English
- Fire Ed for Home School - Students aged 5-12 years who are schooled at home.

Prep and Upper Primary are the main variations of Fire Ed. However, the program must be inclusive and accessible to the maximum number of primary students possible, including those who live with a disability or have who have special learning needs. Each Fire Ed variation has differences that create complexity in both delivery of the program by firefighters, and the overall management of the program. This chapter will outline the components of each Fire Ed variation, and illustrate the intricacy of the overall program.

5.2 Variables Relating to Delivery

Each MFB platoon has 39-41 days each year potentially available to deliver Fire Ed to all the schools that they are assigned (explained further in section 6.2). This is the number of days each year, excluding school holidays, public holidays and days that fall within the summer fire season (late November to March) during which a given platoon needs to schedule a Fire Ed session. Within

the available days, the 45-50 minute Fire Ed session generally needs to occur between 9:30 a.m. and 2:30 p.m. That five-hour time frame does not account for student breaks (recesses and lunch) or firefighter breaks. There are a range of other factors that also place constraints on the potential time available each year for Fire Ed to occur in any one class. Table 2 outlines delivery contrasts and other key variables for each variation of Fire Ed program delivery.

Table 2. Fire Ed’s Key Variables

Fire Ed Variation	Prep	Upper Primary	Special Education	English as an Additional Language (EAL)	Home school
Target audience	Students aged 5-6 years	Students aged 10-12years	Students aged 5 – 18 years who live with a disability or have specific learning needs	Students aged 5 to 12 years who are newly arrived in Australia and whose first language isn’t English	Students aged 5-12 years who are home schooled
Number of visits	2	1	1	2	1
Location	Visit 1 – classroom Visit 2 – classroom and school yard (fire truck visit)	Classroom	classroom and school yard (fire truck visit)	Visit 1 – classroom Visit 2 – classroom and school yard (fire truck visit)	Location arranged by the home school group; may be a community hall, neighbourhood house or fire station
Number of days per year available	39-41	39-41	39-41	39-41	39-41
Duration of sessions	45-50 minutes for each of the two lessons	45-50 minutes	45-50 minutes	45-50 minutes for each of the 2 lessons	45-50 minutes
Class time availability	9.30 am to 2pm	9.30 am to 2pm	9.30 am to 2pm	9.30 am to 2pm	9.30 am to 2pm
Constraints on class availability	Many schools have a literacy block as the first part of each school day. This time is not normally made available for Fire Ed.	Schools with composite Grade 5/6 classes normally have a two-year cycle. Fire Ed will only be delivered to composite classes every second year.	Many students who attend specialist schools travel significant distances, requiring extra time to settle into the class. This restricts time available for Fire Ed.	Scheduling a session requires coordination across all primary levels in the ELS.	Schedule is dependent on coordinating all families involved and locating an appropriate venue to hold the session.
Class variables	Schools may have composite classes of Prep and Grade 1 or Prep, Grade 1 and 2 students Some schools take Preps out of their composite classes for Fire Ed, some won’t.	Schools may have composite classes of Grade 5 and 6 students. Schools may arrange sessions for Grade 5 or 6 students only or with both grades.	This program is not recommended for students on the Autism Spectrum with a known fascination with fire. CREM Program Coordinator and/or OIC will liaise with the school regarding this process.	The class normally includes all the primary aged students, which means that there may be 60-70 students receiving Fire Ed at one time.	Most groups are predominantly primary aged children but may also include a few teenagers.

5.3 Variables in Lesson Content

In addition to the different delivery logistics and constraints for each of the Fire Ed programs described above, there are also differences in lesson content and in the key messages for students in each of the five variations. The Prep stream seeks to convey very basic fire safety messages that are can be understood and acted on by young children. The messages are action orientated and seek to give students the skills to react appropriately if they are faced with a fire in their home. Students are also expected to take the key messages home and are encouraged to discuss fire safety with their family.

At Upper Primary level, the lesson content is more complex, and the focus moves from the personal and family sphere, to a broader focus that looks at the science of fire, how fires in the home can be prevented, and the roles that firefighters have in the community. Table 3 summarises the lesson content and key messages taught in each of the five Fire Ed variations.

Table 3. Fire Ed Lesson Content




Fire Ed Variation	Lesson Content (including key messages)
Prep	<p>Visit 1</p> <ul style="list-style-type: none"> • Basic fire prevention: Good (Safe)/Bad (Unsafe) Fires • Evacuation (Smoke Alarms, Crawl Down Low and Go Go Go, Safe meeting place, Dialling 0-0-0) • Firefighters are helpers (they wear special uniforms) • See Figure 4 for visit 1 lesson plan reference card for firefighters <p>Visit 2</p> <ul style="list-style-type: none"> • Stop Drop Cover Roll • Firefighters are helpers (they drive a fire truck)
Upper Primary	<ul style="list-style-type: none"> • Fire prevention in the home • Basic Fire Science (the fire triangle) • Roles of firefighters
Special Education	<ul style="list-style-type: none"> • Evacuation (Smoke Alarms, Crawl Down Low and Go Go Go, Safe meeting place, Dialling 0-0-0) • Firefighters are helpers (they wear special uniforms and drive a fire truck) • Stop Drop Cover Roll
English as an Additional Language	<p>Visit 1</p> <ul style="list-style-type: none"> • Basic fire prevention: Good (Safe)/Bad (Unsafe) Fires • Evacuation (Smoke Alarms, Crawl Down Low and Go Go Go, Safe meeting place, Dialling 0-0-0) • Firefighters are helpers (they wear special uniforms) <p>Visit 2</p> <ul style="list-style-type: none"> • Stop Drop Cover Roll • Firefighters are helpers (they drive a fire truck)
Home School	<ul style="list-style-type: none"> • Basic fire prevention: Good (Safe)/Bad (Unsafe) Fires • Evacuation (Smoke Alarms, Crawl Down Low and Go Go Go, Safe meeting place, Dialling 0-0-0) • Firefighters are helpers (they wear special uniforms and drive a truck) • Stop Drop Cover Roll

The lesson content at Prep level forms the basis for the key content for the Special Ed, EAL and home-school variations of Fire Ed. There are however, some differences. For example, the Good (Safe)/Bad (Unsafe) fires message is not usually delivered in Special Schools because many educators think this concept is too difficult for their students. Some of the usual poster resources used by firefighters are replaced with posters using communication symbols and words.

For Fire Ed delivered to students who are Deaf or hard of hearing, firefighters usually use a video resource with Auslan subtitles. Auslan is the language of the Deaf community in Australia. Auslan interpreters are also booked for sessions with Deaf students.

Home School Families are encouraged to find out more about fire safety and the roles of firefighters by developing questions to ask firefighters. The Program Coordinator facilitates questions being emailed to firefighters prior to the session.

Figure 4. Example of an aide memoir for firefighters delivering visit one from the Prep component of Fire Ed

Fire Ed for Preps	VISIT ONE	
<p>1. INTRODUCTION (PP 12-13)</p> <ul style="list-style-type: none"> • Introduce yourself and your crew • Discuss the difference between our different uniforms and why we wear them 		
<p>2. GOOD (SAFE) FIRES/ BAD (UNSAFE) FIRES (PP 14 -15)</p> <ul style="list-style-type: none"> • Use posters • SHOW THE GOOD FIRE AND BAD FIRE SIDE BY SIDE • Usually “Bad Fires” are where there are no adults present. 		
<p>3. EVACUATION (PP 16-20)</p> <ul style="list-style-type: none"> • How smoke effects you (makes you cough, hard to see) • Show smoke alarm • Crawl Down Low Go Go GO (use banner) • Safe Meeting Place (use poster) • Homework (ask students to draw a picture of their safe meeting place at home) 		
<p>4. ZERO, ZERO, ZERO (PP 21-22)</p> <ul style="list-style-type: none"> • Adults ring 000 (students are the helpers who remind the adults what to do) • Get students to say ZERO ZERO ZERO <u>not</u> TRIPLE ZERO 		
<p>5. BREATHING APPARATUS (PP21 – 22)</p> <ul style="list-style-type: none"> • Firefighters in full turnout uniform and BA (Show the transition from station uniform to full turnout and BA. We are your helpers, the mask protects us.) 		

5.4 Fire Ed Resources

The resources available to firefighters, educators and students/ their families that support Fire Ed also vary across the five Fire Ed variations. Table 4 outlines these resources for each variation of the program.

The firefighter resources assist firefighters in their delivery of the program. In addition to the resources noted in Table 4, the Program Coordinator emails the platoons information at the beginning of each school year with a template for communication with schools, a platoon planner for school bookings, an information sheet for OIC, a school allocation list for each station, school email list and a reporting sheet (Appendix L).

Firefighters delivering Fire Ed for Special Ed may require additional support. The Program Coordinator will liaise with the school and platoon to tailor an approach based on Fire Ed for Preps but that is suited to the specific needs of the students. The platoon also receives a briefing to ensure they are familiar with the tailored program, any specialised resources and possible student responses. The Program Coordinator can also support crews to deliver the session if required.

The teacher resources were developed through extensive consultation with teachers and education professionals when Fire Ed was last updated over 10 years ago. The worksheets and activities link to the version of the Victorian Curriculum that was current at the time that these resources were reviewed.

Table 4. Fire Ed Variations’ Resources

Fire Ed Variation	Prep	Upper Primary	Special Education	EAL	Home School
Firefighter resources	Fire Ed for Preps Station kit <ul style="list-style-type: none"> • Fire Ed manual • Aide Memoir (lesson shortcut card) • Smoke alarm • Good (Safe)/Bad (Unsafe) Fires posters • Crawl Down Low banner poster • Safe Meeting Place poster (A1 size) • Stop Drop Cover Roll banner poster 	Fire Ed for Upper Primary Station kit <ul style="list-style-type: none"> • Fire Ed manual • Aide Memoir • Smoke alarm • Fire Safety DVD, flash cards and discussion points • Roles of firefighters DVD “MFB Now” and poster • Fire Triangle board and scenario cards 	Fire Ed for Preps Station kit (see Prep) <ul style="list-style-type: none"> • Fire Ed for Special Schools • Fire Ed for Special Developmental Schools • Crawl Down Low banner poster and Stop Drop Cover Roll banner poster or other specially tailored resources 	Fire Ed for Preps Station kit (see Prep)	Fire Ed for Preps Station kit (see Prep)
Teacher resources	<ul style="list-style-type: none"> • “Big Book of Helpers” – a large book for reading aloud to the class. • “Little Big Book of Helpers” a smaller version used for individual reading • Teachers resource kit – includes worksheets and activities 	<ul style="list-style-type: none"> • “MFB On Fire” student resource book. • Teachers resource kit including 82 student task cards which cover 6 topics • Worksheets and activities 	<ul style="list-style-type: none"> • “Big Book of Helpers” • Teachers resource kit – includes worksheets and activities. • “Cooking Safely” booklet • Crawl Down Low and Go Go Go poster, Stop Drop Cover Roll poster • “Firefighters are friends” poster 	<ul style="list-style-type: none"> • “Big Book of Helpers” • “Little Big Book of Helpers” • Teachers resource kit • EAL resources (worksheets and language activities designed to teach EAL) 	Home School families are provided with both the Prep and Upper Primary teacher resources.
School pack (including take home materials)	<ul style="list-style-type: none"> • Letter to families about Fire Ed • Smoke alarm leaflet • 0-0-0 stickers • teacher and family feedback forms • Safe Meeting Place homework sheet • Evacuation plan grid and instructions 	<ul style="list-style-type: none"> • Teacher and family feedback forms • Student fire safety knowledge evaluation form. • Copies of additional MFB publication for use in the classroom 	<ul style="list-style-type: none"> • Letter to families about Fire Ed • Smoke alarm leaflet • 0-0-0 stickers • teacher and family feedback forms • Safe Meeting Place homework sheet • Evacuation plan grid and instructions 	<ul style="list-style-type: none"> • Letter to families about Fire Ed • Smoke alarm leaflet • 0-0-0 stickers • teacher and family feedback forms • Safe Meeting Place homework sheet • Evacuation plan grid and instructions 	<ul style="list-style-type: none"> • Home Fire Safety Book • MFB Colouring Book • MFB Comic Book

5.5 Feedback and Evaluation

The five Fire Ed variations differ in the feedback and evaluation process that is in place. These differences are outlined in Table 5 below. Any formal feedback or evaluation is returned to CREM via mail. Other more informal feedback can be received face-to-face, via email or phone, but is not consistently captured. Data is then entered into an online survey software tool for analysis and a brief report on the results is provided to the platoon that delivered the Fire Ed sessions.

Table 5. Fire Ed Variations’ Evaluation Processes

Fire Ed Variation	Evaluation process
Prep	<ul style="list-style-type: none"> • Teachers can comment on program structure, usefulness of resources and classroom sessions. • Families can comment on their child’s favourite part of the program, and can identify changes they have made to household fire safety as a result of Fire Ed.
Upper Primary	<ul style="list-style-type: none"> • Teachers are able to comment on program structure, usefulness of resources and classroom sessions. • Families are able to identify the Fire Ed topics their child has discussed with them. They also are able to nominate changes they have made to household fire safety routines as a result of Fire Ed.
Special Education	<ul style="list-style-type: none"> • Feedback from specialist school educators is normally via email or face-to-face because the standard Fire Ed format for teacher and family feedback may not address the type of behaviour change observed in these students.
English as an Additional Language	<ul style="list-style-type: none"> • Teachers can comment on program structure, usefulness of resources and classroom sessions. • Families can comment on their child’s favourite part of the program, and can identify changes they have made to household fire safety as a result of Fire Ed. ELS family feedbacks forms are very rarely returned.
Home school	<ul style="list-style-type: none"> • There is no evaluation process for Fire Ed for Home School. Feedback from families is anecdotal and given face to face at the session. There may be a follow up email from the person who coordinated the session, but it normally is just saying thank you rather than a formal evaluation.

Chapter 6: Internal Drivers of the Fire Ed Program

Fire Ed is impacted by both internal and external drivers that MFB need to consider when contemporising the program. Internal drivers include all the factors that affect the Fire Ed program that MFB directly influences. This chapter will identify and analyse internal drivers influencing the update of the program and provide evidence around them. The sections will discuss the following internal drivers:

- Engaging schools and scheduling Fire Ed Sessions
- Competing firefighter priorities
- Reporting and evaluation of Fire Ed
- Declining uptake of the Upper Primary component
- Hard-copy program resources
- Equitable access and increasing program take up by home-school students/specialist school students/EAL students

Each description of the current situation will be followed by considerations MFB should keep in mind moving forward.

6.1 Engaging Schools and Scheduling Fire Ed Sessions

Current Situation

All MFB processes related to engaging schools and scheduling Fire Ed sessions are conducted manually by MFB. As a result, the administration of the program takes considerable time and effort to coordinate and track. At the start of the school year the program coordinator contacts schools via email to advise them that a firefighter will make contact with the school to arrange bookings for the program. For most schools MFB uses the school's generic contact email, but there are some variations. Once the email contact address for each school is confirmed, it is provided to the station that is responsible for delivering Fire Ed to those schools with the advice to book sessions with the school for program delivery. Confirming a booking with a school can take time because while feedback surveys indicate teachers find the booking process relatively easy, the process is more difficult and time consuming for firefighters. In an interview, an MFB firefighter noted that "we make contact with [the Upper Primary schools]. We ask them for some dates that they would be interested in, and quite often they won't get back to us. We give them another contact, and we say, contact us back [and] tell us some dates that you might be interested in. If they don't contact us, that's the end of it" (Firefighter 1, personal communication, November 3, 2017).

CREM maintains a Fire Ed Distribution List (DL- email address) to assist Fire Ed data collection. CREM asks firefighters to scan their recording sheet after booking the sessions and again after completing the sessions and email this to the Program Coordinator. Once this data is received it is entered into a spreadsheet by CREM administrators. This data consists of the number of sessions delivered to schools and when they were delivered. Access to the spreadsheet is restricted to CREM managers, CREM administrators, and the Program Coordinator; which means all administrative tasks can only be undertaken by these personnel.

District Community Resilience Commanders are provided with data relevant to their districts every quarter. This allows the Commanders to have this information when discussing Fire Ed with other District managers, officers and firefighters.

The collection process does not consistently provide accurate numbers of deliveries, because of the manual process as described above, firefighters are restricted from entering data directly into the spreadsheets. Firefighters are tasked with providing the CREM department with the data, which is then entered into the spreadsheets by administrators.

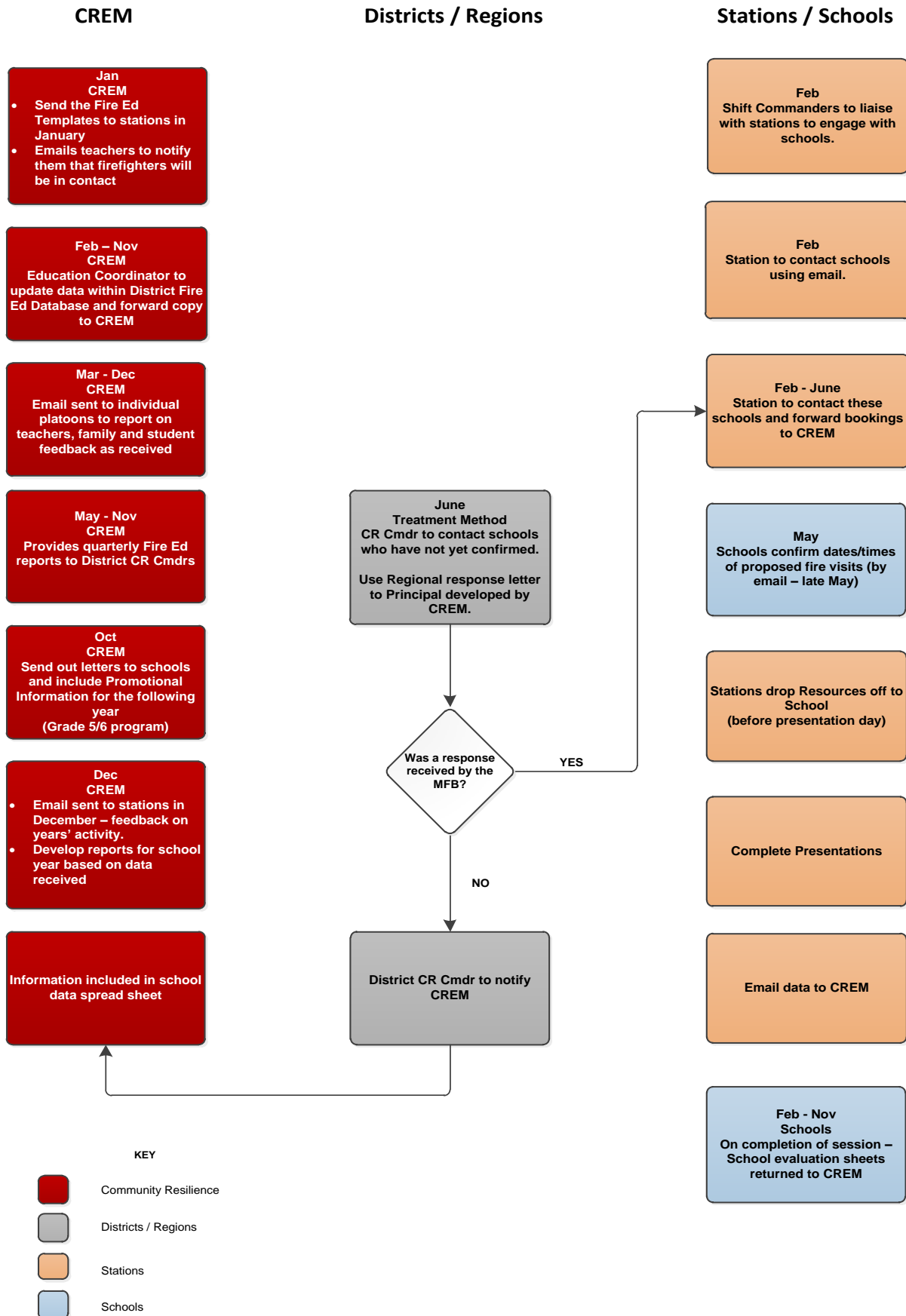
In addition to these issues, for every school new to Fire Ed, firefighters need to find time to physically deliver hardcopy program resources to the school. Every year firefighters also need to re-visit all of the schools they deliver the program to in order to drop off the take home resources. These visits can also take multiple attempts to call and arrange a suitable time. The issue with this process is that considerable time and effort is required by firefighters and the program coordinator to manage the administrative functions of the program, the need to interact with schools multiple times, and the responsibility to arrange presentations and material drop off are inefficient uses of time.

A flowchart of the scheduling process for Fire Ed is displayed in Figure 5 below.

Considerations

The contemporisation of Fire Ed must include a review of the methods in which MFB engages with schools and how sessions are booked. MFB should consider engaging stakeholders to identify efficient, electronic, on-line systems and processes through which schools can be contacted more systematically. The development of a technology based booking system needs to be considered to increase efficiencies and reduce the administrative burden on firefighters and the Program Coordinator to organise Fire Ed sessions.

Figure 5. Fire Ed Booking and Reporting Process Flowchart



6.2 Competing Firefighter Priorities

Current Situation

The primary role of MFB firefighters is emergency response. This means that while on duty, firefighters must be ready to respond to an emergency call within 90 seconds at any time of the day or night. During the summer fire season, which typically runs between November and April, MFB firefighters have additional operational demands due to an increased risk of grass and bushfires in the outer urban areas of metropolitan Melbourne. Supporting CFA stations as well as MFB respond to larger bushfire events. These additional responsibilities may involve deployment of MFB firefighters outside of Melbourne for extended periods of time.

To support operational response, firefighters are also required to maintain their skills for the diverse range of emergencies they may respond to during their shifts. Combined drills and skills maintenance are conducted and delivered throughout the year, usually at a station level or District level. Operational training can include attending other MFB sites for hours or days at a time for specific training such as Emergency Medical Response recertification.

When firefighters deliver Fire Ed at a school, they are still on call for emergencies and must be ready to respond within 90 seconds. This can be summed up by a firefighter who stated, “The problem with our job as you might see today is we could be halfway through having a discussion and suddenly we’re gone, and the truck’s gone” (personal communication, November 3, 2017). The requirement to respond to an emergency during the delivery of a fire safety program is not usually a consideration for other safety organisations, which are more likely to have dedicated workers to deliver school programs.

An uncompleted Fire Ed session has an impact on the students, teachers and firefighters and needs to be rebooked and delivered. When firefighters delivering Fire Ed are called away, stringent school security and safety means that firefighters responding to an emergency will have to manage not only the school grounds and students, but security measures such as locked gates. As a firefighter stated “MFB focuses on rapid emergency response” and yet the potential of a slower response to an emergency when responding during a Fire Ed session is always present (Firefighter 1, personal communication, November 3, 2017). Acting Commander Luke Klein noted that an emergency response from a school grounds can lead to a “potential delay to response time” (personal communication, November 22, 2017).

Additional issues related to the delivery of Fire Ed and emergency call outs are both the school calendar and the location of schools within the MD. The Victorian school year runs from

early February to late December. The school year comprises of four terms, with holidays in April, July, September/October and December/January, about 11 weeks in total. For reasons described above related to the summer fire season and the structure of the school year, Fire Ed is usually only delivered in the six-month period between March and October. Using this information and including public holidays when schools are closed, the WPI team determined that in 2017, platoons A, B, C and D had 41, 39, 37 and 40 days, respectively, to deliver Fire Ed sessions.

Fire Ed involves the delivery of two distinct sessions to students in Prep and one to Upper Primary. Maximum take up of the program by schools would require three visits to each school as a minimum. This is the minimum number of visits because it is based on the number of students per Fire Ed session being no more than about 55 to ensure the students are effectively engaged. Optimally a Fire Ed session involves a maximum of 35-40 students. If a school has large numbers of Prep or Upper Primary level students in any one school, multiple visits may be required. These visits must also fit within a time frame of between 9:30 AM until 2:00 PM and factor in morning and afternoon recess and lunch.

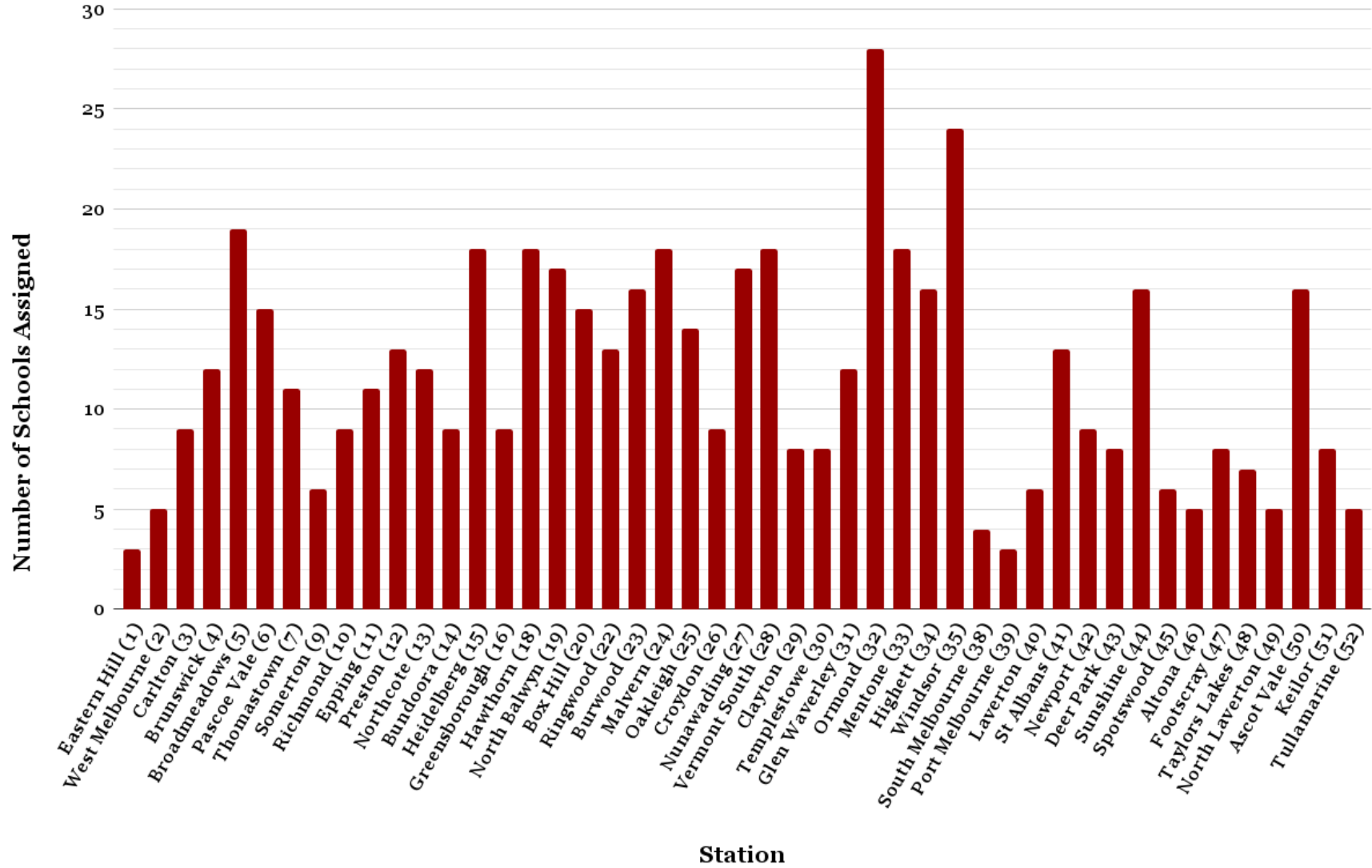
Although platoons have relatively the same number of days to deliver the program, the number of schools assigned to each station varies. The reasons for this are both historic and demographic (as outlined in section 7.3) but the result is that the demands of delivering Fire Ed vary significantly between stations and districts. For example, Station 1 (Eastern Hill), located in central Melbourne, has approximately 24 firefighters per shift, more than any other MFB station but has only three primary schools within its assigned service area. In comparison, Station 32 (Ormond) has 28 primary schools within its area with approximately four firefighters per shift. Figure 6 below is a sample of the delivery burden across MFB districts.

Regardless of firefighters' commitment to the Fire Ed program, they face a range of pressures to deliver the program. Firefighters are integral to the program; feedback about firefighters' participation from students, teachers, and parents is always positive.

Considerations

The redevelopment of Fire Ed needs to identify how to meet the aims of the program and retain firefighter participation through the development of sustainable practice.

Figure 6. Number of Primary Schools Assigned per MFB Fire Station



6.3 Reporting and Evaluation of the Program

Current Situation

Firefighters are required to report to CREM when a Fire Ed session is completed. The current manual, paper system, which is similar to the booking system, provides MFB with inaccurate data on Fire Ed delivery in schools. Participation data sheets for each district from 2014 to 2017 show that there was reporting inconsistency. In the current reporting system there is no way to sufficiently determine why a visit was not completed or documented. Some schools were noted as declining the program, but others had no reason documented as to why a visit was not completed. In some cases, the team found that school contact information to enable the district or station to book visits was missing. Failure to report details about composite classes' Fire Ed visits was also a common trend in the data.

After the program is completed, teachers and parents are asked to fill out paper feedback forms. The forms are returned to MFB, and are manually uploaded into an online system. Occasionally, when MFB receives the feedback forms from parents and teachers, the forms are from schools that MFB did not know any firefighters visited. Another issue with parent-teacher reporting is that parents and teachers are unable to easily and directly contact firefighters to provide specific feedback.

The manual reporting process has not been changed in years because there is no formal reporting, review and evaluation built into the program. When MFB receives feedback, the information is not analysed to determine how to continuously improve the program, and there is no way to follow up with firefighters.

Considerations

The current Fire Ed reporting and evaluation practices are inconsistent. As identified in Section 6.1, streamlining the process and utilising a technology based system for these functions should be examined as part of the contemporisation of Fire Ed.

6.4 Declining Uptake of the Upper Primary Component

Current Situation

There is evidence that the interest in Fire Ed is declining, particularly for Upper Primary students. Figure 7 shows each MFB District's completed sessions of the Upper Primary program over the span of the last three years; looking at just the southern district, the Fire Ed program was

delivered to 94 Upper Primary classrooms in 2014, but only 18 in 2016, which is an 81 per cent drop in three years. This decline is not reflected as dramatically in the uptake of the Prep component of the Fire Ed program, shown in Figure 8.

Figure 9 gives a holistic view of the total number of Upper Primary schools in MFB's district compared to the number of Upper Primary schools visited. In 2014, all MFB districts collectively visited almost 50 per cent of all Upper Primary schools while in 2016, the number of visited schools dropped to only 22 per cent.

MFB sent out surveys to Upper Primary schools to gain feedback and insight into the current state of the program and, in particular, to try to determine why the uptake of the Upper Primary Fire Ed program was declining. The surveys revealed that although the uptake is low, teachers believe fire safety is an important topic for Upper Primary children to learn. An MFB firefighter said “[Upper Primary Fire Ed] is ready for a modernisation of the material. I think the actual subject matter is probably still right, but maybe the way we present it now [should be evaluated]” (Firefighter 1, personal communication, November 3, 2017). Teachers, firefighters, and MFB corporate employee unanimously agree that the program resources need to be evaluated and updated.

Considerations

The declining uptake for Upper Primary Fire Ed is significant. It is vital that the content and how students are engaged is reviewed to reverse this trend.

Figure 7. Upper Primary Schools Visited by each District

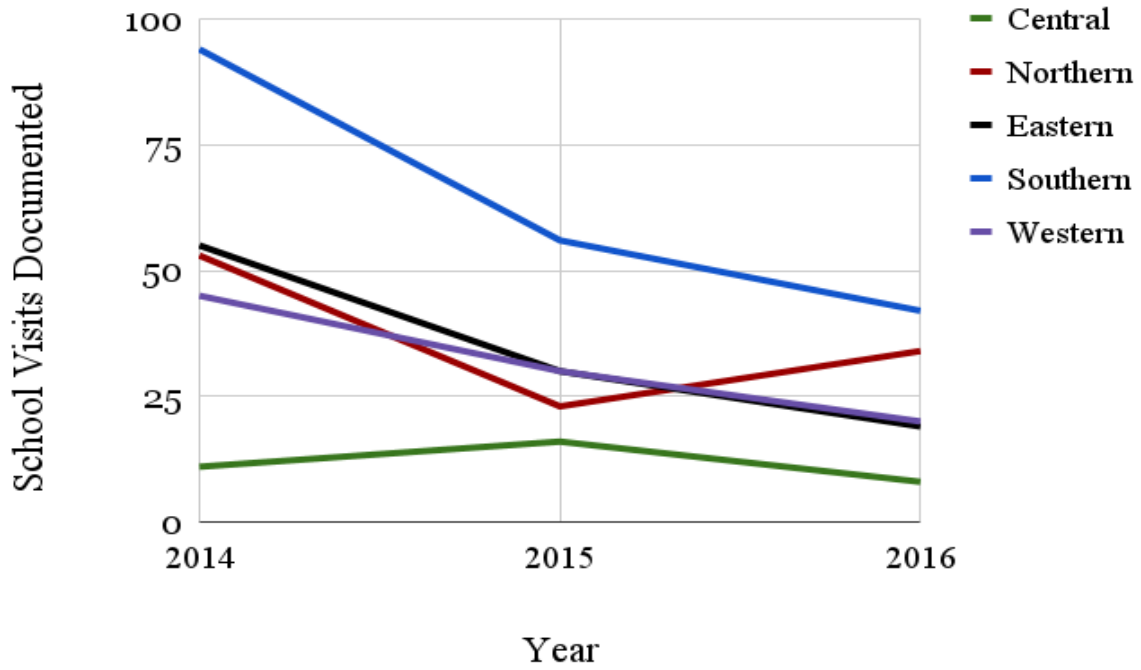


Figure 8. Prep Schools Visited by each District

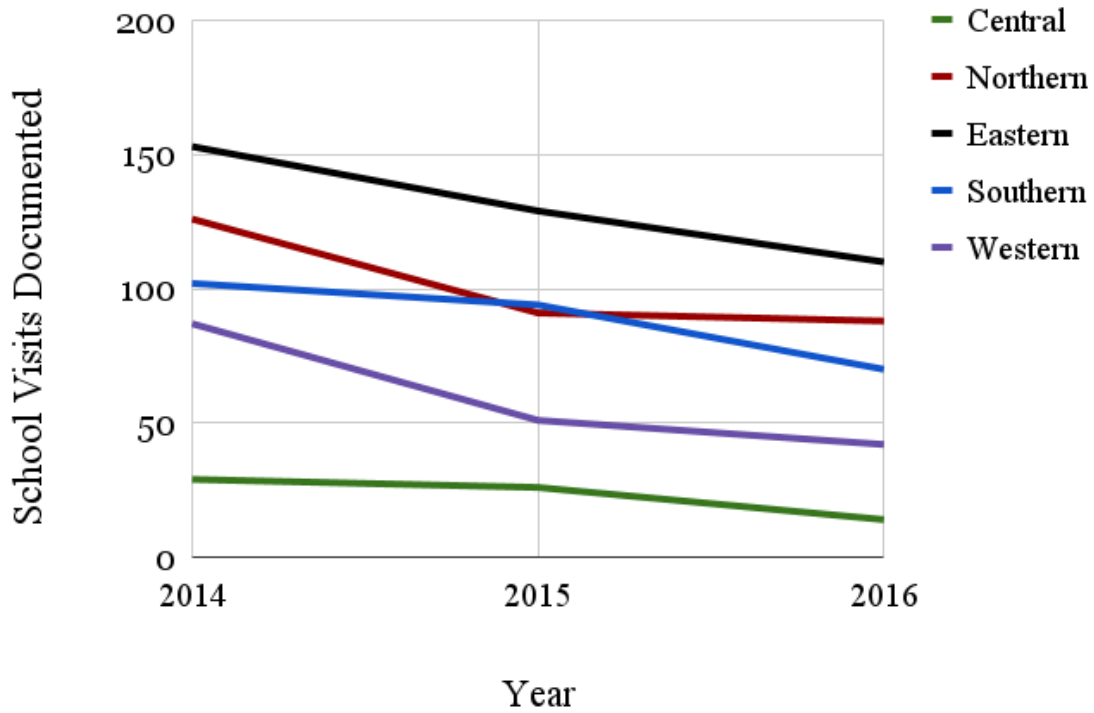
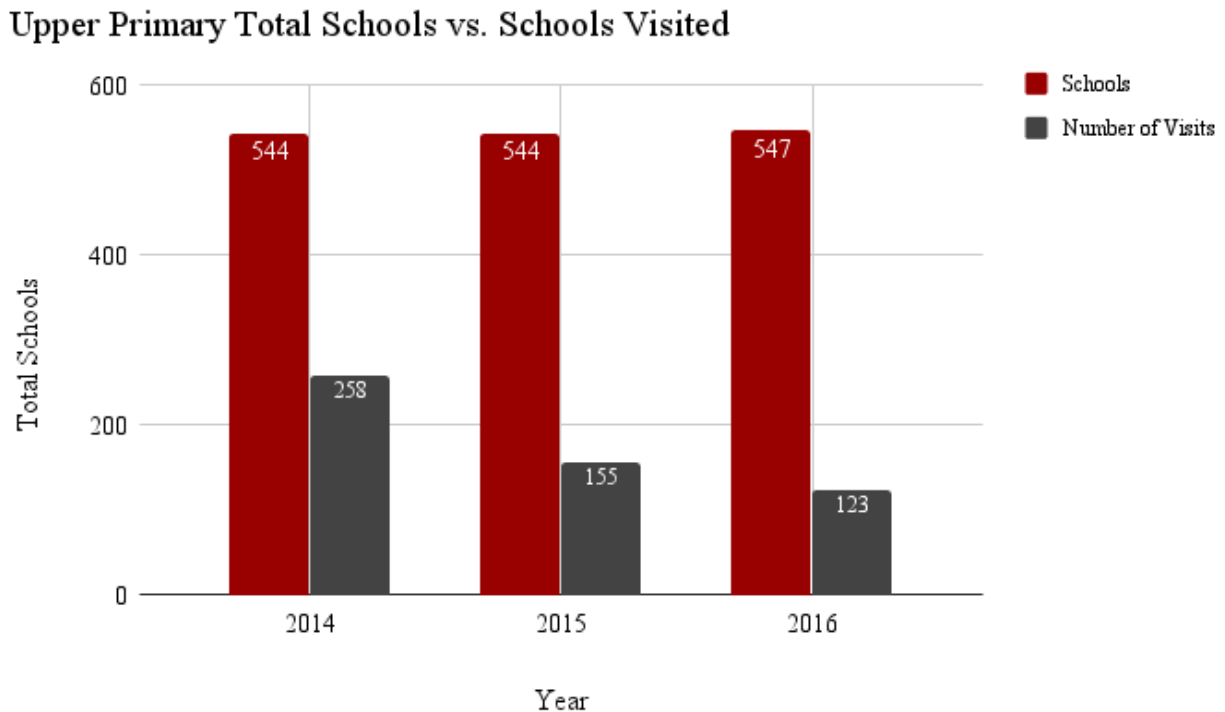


Figure 9. Upper Primary Total Schools vs. Schools Visited



6.5 Hard-copy Program Resources

Current Situation

Fire Ed teachers' resources are paper based and are not accessible online, nor are they aligned with current Victorian curriculum. The Prep and Upper Primary components are distributed to every school and have a unique Fire Ed kit that includes posters, teacher resources, and teacher manuals. Resources are ten years old for the Upper Primary program level, and even older for Prep. The original printing of these resources cost approximately \$55,000 for Upper Primary and \$38,000 for Prep. Currently, as new schools begin with Fire Ed or existing schools require new copies, CREM is required to have copies commercially printed. In addition to the issue of paper based resources, the continued printing and storage of resource material is financially unsustainable.

More than half of all the teachers who participated in MFB's survey were unaware Fire Ed teacher resources existed, or did not have access to the resources. One teacher commented "I don't know exactly what [the resources] are, but I know I have been given them in the past." Hardcopy-only-resources limits accessibility to only the teachers who receive the kits; if the kit is missing or teachers take the resources if they change schools, even less people have access to these materials.

Teachers, parents, and students currently have no method of accessing the information online, so many people are unable to retrieve and use the materials.

The Fire Ed resources do not outline current Victorian curriculum links and teachers would need to spend time and effort to integrate fire safety education into their curriculum. The survey of Upper Primary teachers asked: “Do you include Fire Ed UP as part of a larger unit of learning, theme or topic?” to which more than 80 per cent of teachers responded that they did not. Teachers explained that the resources fail to engage children, and they do not fit within current curriculum requirements. A teacher commented that “we have a classroom pack for teachers to use, however, we haven't been able to fit it into our program” while another said, “the kit is huge and there is simply not enough time to devote to implementing a program this big alongside all of the work that the department requires at the year 5/6 level.”

Considerations

The use of hard copy resources by government funded agencies is declining (DPC, 2017). For Fire Ed, utilising electronic resources will allow greater accessibility, reduce the cost associated with updating the program and printing, and increase the ease of use for teachers.

6.6 Equitable Access and Increasing Program Take Up by Home-school Students/Specialist School Students/EAL Students

Current Situation

Fire Ed is available to home-schooled children, specialist (special education) schools, and English as Additional Language (EAL) students. This is supported by the development of specific resources and flexibility in the Fire Ed delivery model as identified in Chapter 5. Disability is diverse and can include physical and/or intellectual disability with a wide range of functional abilities between disabilities and for an individual disability. One size does not fit all. This requires not only more engagement with individual schools and teachers to assess the most effective way to deliver the program, it may also require more information and support for firefighters in what is a specialist field of education. It is out of the scope of this study to provide a detailed analysis of Fire Ed for Special Education, but this may be required in the future to support increased take up of the program.

Intensive English language support is available for Primary and Secondary students who are newly arrived in Australia and who speak English as an Additional Language (EAL). These students have access to intensive EAL tuition for between 6-12 months as part of the New Arrivals

Program. This Program operates at English Language Schools (ELS) for Primary and Secondary aged students or at English Language Centres (ELC) for Secondary aged students. There are three ELS in MFB's area, some of these have additional campuses and also operate 'Outpost Programs' at local primary schools. ELS classes are taught by qualified EAL teachers, are smaller in size than those in regular schools and EAL is part of the content across all learning areas.

Fire Ed at an ELS is based on the Prep program as it provides the baseline of fire safety knowledge. The difference is that all primary aged children in an ELS participate in Fire Ed together. The firefighter resources remain the same, but a number of additions to the standard Prep teacher resources are provided to EAL teachers. These were EAL worksheets targeted at different EAL levels and aligned to previous EAL curriculum as well as word, sentence flash cards and mini poster cards designed to be used in a number of language games and activities. The theme of the latter activities was Good (Safe)/ Bad (Unsafe) Fires. These resources also included a full set of the same posters used by firefighters. Take home materials include translated versions of MFB/CFA's Home Fire Safety Book.

MFB's ELS are consistent participants in Fire Ed, however the teacher resources are all hard copy, and have links to the former Victorian English as a Second Language (ESL) Curriculum. Updating resources and increasing accessibility by making them available online would provide further support to ensure that ELS participation in Fire Ed continues in the future. The return of feedback forms for teachers and families is low, possibly as the current format is linked to Preps and the format does not fully address the evolving requirements of a school where there may be full or partial turnover of students every 6 or 12 months.

Considerations

The redevelopment of Fire Ed should consider the needs of home-school students, specialist school students, and EAL students. This may require a separate review of Fire Ed for Special Ed, which includes developing and increasing understanding of these groups and the training and support needed to deliver Fire Ed to them.

Chapter 7: External Drivers of the Fire Ed Program

External drivers include all the factors that affect the Fire Ed program that MFB has no direct influence over. This chapter will define and explain the external drivers influencing the update of the program and provide evidence around them. The sections will discuss the following external drivers:

- Education trends
 - Curriculum related content
 - Content difficulty
 - Content appropriateness
- Competition between emergency services for classroom inclusion
- Demographic profile of Melbourne
- Fire Rescue Victoria

Each description of the current situation will be followed by considerations MFB should keep in mind moving forward.

7.1 Education Trends

Teachers are getting used to the idea of logging on and having an interactive professional learning experience. The most successful [webinars] in my opinion are those where the webinar is like a mixed panel: you would have an area expert, someone from the curriculum, and dependent on the topic, someone with another point of view. The idea being that no one person has the whole answer.

-Dr. Craig Smith

Over time, teaching and learning styles as well as curriculum structure and content change and adapt to reflect contemporary research on learning.

7.1.1 Curriculum Related Content

Current Situation

Fire Ed's existing curriculum links are related to earlier versions of the Victorian Curriculum and are only available as part of hard copy resources. Currently, there are no online curriculum links for Fire Ed available for teachers to reference when developing learning programs. This lack of online resources affects teachers who believe that fire safety education is a valuable learning topic, but who may not have the time to research curriculum links. Like firefighters,

teachers manage competing priorities and they will benefit from clear identifiers to assist them in linking home fire safety to appropriate learning areas.

For example, safety is one of the focus areas in the Foundation level (Prep students) of Victorian Health and Physical Education Curriculum. One of the strands is “Being Healthy Safe and Active,” the content description states “identify people and actions that help keep themselves safe and healthy.” This is further expanded in one of the elaborations, “naming trusted people in their community who can help them stay safe and healthy, and practicing ways of asking for help in a range of different scenarios” (VCAA, 2017e).

7.1.2 Content Difficulty

Current Situation

The Victorian Curriculum uses achievement standards that outline the level of difficulty for material that children should be taught at certain ages. These standards are designed to help educators create lessons that challenge students. Dr. Briony Towers stated “often children’s capacities to understand and communicate and participate are really underestimated,” (personal communication, November 22, 2017) while Sharon Foster (VCAA) stated that the VCAA “always has high aspirations for the students in our schools and [they] do set high standards for them” (personal communication, November 23, 2017). If students are used to being challenged and held to high standards, an increase in the difficulty of Fire Ed could encourage their engagement. If Fire Ed’s level of difficulty does not match that of the school curriculum, students could disengage, not understand and not retain the concepts.

Currently, MFB’s Prep program teaches five and six-year-old students personal safety, but Towers informed us that “from three years or four years onwards, we can start equipping kids with skills for keeping themselves safe” (personal communication, November 22, 2017). This means the content for the Preps could potentially incorporate more complex and advanced material for students who have this capacity. Upper Primary students could also become more involved in home fire safety. As Briony Towers mentioned, “students at the Upper Primary level can focus on what actually creates risk in their communities, at that age, [and] what kinds of social processes create risk” (personal communication, November 22, 2017). Inquiry based learning is a commonly used education strategy at Upper Primary level. Inquiry based learning makes knowledge more meaningful, engaging and helps students retain knowledge. Kate Kroeger from Ambulance Victoria (AV) stated that “If we’re teaching [children] a lifesaving skill, we don’t feel just watching a video is sufficient, so we cater for different learning styles and make sure the workshops and programs are

hands on” (personal communication, November 2, 2017). Fire Ed does not currently incorporate inquiry based learning. This approach is explored further by the team in section 8.2.

Currently, professional development for teachers does not exist as part of Fire Ed. Creating educational resources and handing them out to schools will not effectively motivate teachers to want to use the materials. Foster stated in the VCAA roundtable discussion that “there’s no point just thinking that if you produce a resource [teachers will use it]. The mentality of build it and they will come won’t work” (personal communication, November 23, 2017). It is important to develop some “in-service and pre-service teacher professional learning, professional development around what is disaster resilience education, why it’s important, and how you might go about teaching it in a classroom so teachers feel as though they have more skills to deliver these programs” (A. Leck, personal communication, November 12, 2017). Teachers need to understand what they are supposed to teach, why they are teaching it, and how they should teach it to effectively communicate the messages in the content to the children.

7.1.3 Content Appropriateness

I think often when we talk about that emotional side of learning it’s very much focused on children’s fears of hazards and disasters or their fears of bushfires, but we really need to expand those discussions to include that emotional experience that you have when you’re actually supported to be making decisions, and taking actions, and developing and implementing plans.

-Dr. Briony Towers

Current Situation

Effective DRR programs need to consider what content is appropriate to show children as part of safety education programs. It is not MFB practice to show images or videos of real fire scenarios as part of Fire Ed. This is done to reduce the likelihood that children will be traumatised after the program. The challenge with shielding children from this exposure is that children need to have background knowledge of emergency situations to be able to contribute to discussions as well as being psychologically prepared if an incident occurs. If children are given the context on why fire safety is so important, the potential is that they could better cope when they find themselves in that dangerous situation. Consultation with appropriate professionals in this field should be investigated as part of contemporising Fire Ed.

Technology use is an ever-changing educational tool that when used effectively, is appropriate in the classroom. Currently there is no technology to support the teaching of Fire Ed. The team looked into the option of a pre-lesson application that would combine digital learning with a game that aims to get students interested in Fire Ed and help them to understand key terminology. However, games alone won't meet the overall objectives of Fire Ed. The possible implementation of an application or game into Fire Ed could increase its effectiveness in communicating key messages and terminology, but the focus must still be on developing skills that the students will take with them out of the classroom and perform in their household and community.

This exposure to fire and education on how fires affect homes, families and communities could be shown through technology, such as a video or an image. In the current Fire Ed program, there is no technology to aid in the teaching of fire safety. Considering the exposure to technology children face in their social environment, integrating technology into the subject of DRR could increase students' interest and engagement in the subject matter. Various other DRR programs are starting to create digital games or applications that educate children on safety in a fun and engaging way, such as Life Saving Victoria. Unless MFB adapts to this technology movement, this will continue to drive the program to change.

Considerations

To create a Fire Ed program with age appropriate content suitable, the resources need to be aligned to the most recent Victorian curriculum, while still considering the topics explored through the CC-DRR framework. Victorian curriculum alignment will begin to address issues regarding content difficulty and appropriateness in context. To allow for proper classroom context, flexible professional development needs to be provided for educators, so they can effectively and confidently teach students about fire safety.

7.2 Competition between Emergency Services for Classroom Inclusion

Current Situation

When Fire Ed was developed nearly twenty-five years ago, targeting children with safety information in the classroom was an innovative approach for a community safety organisation. Today in comparison, many more agencies have adopted the same approach and developed programs for primary school children. In Victoria, this includes agencies such as CFA, Ambulance Victoria, Life Saving Victoria and VIC Roads. The safety information children can receive in the

classroom can include, but is not limited to, home fire safety, bushfire safety, medical response, road safety, water safety, bullying, stranger danger and mental health. Since Victorian curriculum does not mandate specific types of safety education, primary schools can choose which programs are delivered to their students. Limited time in the school year and additional curriculum requirements means that teachers to choose between a growing number of safety education programs.

Surveys sent to primary school teachers by MFB asked teachers to “rank areas of safety or disaster resilience according to their importance or relevance to your school”. The options given to the teachers are water safety, flood safety, storm safety, home fire safety, road safety, anti-bullying, bushfire safety, and personal security/stranger danger. Of the teachers’ responses, only 13.48 per cent ranked home fire safety as most relevant or important. Teachers were also asked, “What other life/personal safety/resilience programs or resources are part of your school’s curriculum?” and given the options of:

- Ambulance Victoria - Ambulance in Schools
- State Emergency Service Programs
- Victoria Police school visits
- CFA – Fire Safe Kids
- Life Saving Victoria – Everyday Lifesavers
- St. John Ambulance - First Aid in Schools
- Transport Accident Commission - Kids On The Move
- RACV – Street Scene
- Victorian DET – Bully Stoppers
- Kidsmatter- Australian Primary Schools Mental Health Initiative, Resilience, Rights and Respectful Relationships (DET)

The most popular program delivered in primary schools in the MD was St. John Ambulance - First Aid in Schools at 48.08 per cent followed by Victoria Police school visits at 47.12 per cent. These results indicate that safety programs for children are in constant competition, highlighting the challenges facing Fire Ed to re-establish home fire safety as a priority for teachers, children, their families and the community.

Considerations

The contemporisation of Fire Ed needs to consider the growing number of safety programs targeting children in the classroom and ensure the new Fire Ed is innovative and engaging for teachers and students. Additional safety programs, like the \$21.8 million Respectful Relationships

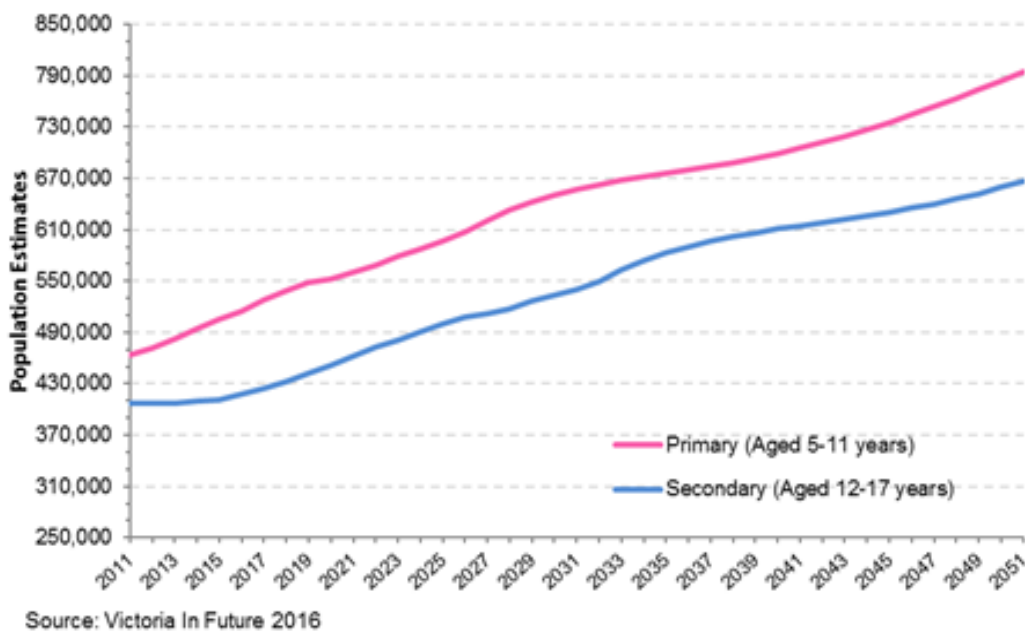
program, which promotes equality and prevents family violence, are continuously added to compete for time in schools.

7.3 Demographic Profile of Melbourne

Current Situation

Like most other large urban cities around the world, the demographic profile of Melbourne is changing. While some of these issues are shared, others are unique to specific cities. In Melbourne these changes are driven by both historical and contemporary drivers that may place additional pressure on the delivery of Fire Ed. The population of Melbourne is aging as the post war “baby boomer” generation grows into old age. By 2050 when the aging population peaks, people aged 65 years and over will account for one out of every four people in the general population. One of the trends which will eventually reverse this is the number of children born now and over the next three decades and it has already started. In 2011, Victoria had 322,700 people aged five to nine; that number is projected to increase to 403,900 by 2021. In 2011, there were 330,100 people aged 10 to 14; this is projected to increase to 389,100 in 2021 (DELWP, 2016). In 2011, there were 930,800 households of families with children; this is projected to increase to 1,090,000 by 2021 (DELWP, 2016). Figure 10 below shows the projected population growth of primary and secondary aged students from 2011 through 2051.

Figure 10. Melbourne Population Estimates



The post war “baby boom” also historically accounts for another trend likely to affect Fire Ed. Schools built to educate this generation were closed down as part of economic cuts to education starting in the late 1970’s. At the same time, new housing in Melbourne grew, mostly along the outer areas of the city. Over the last two decades changes to planning laws, development and consumer demand has led to higher density housing within metropolitan Melbourne including dual occupancy and multi occupancy units. As predicted in the Victorian State Governments “Better Apartments” consultation paper, an increasing number of residents in vertical living situations will be families with young children. As a result, the demand for schools in areas which underwent school closures in the 1970’s and 80’s, is now in reverse.

While the Victorian State Government has acted to accommodate the increasing school age population with fifty-six new schools under construction as of October 2017 (Victoria School Building Authority, 2017), it is important to note what is occurring in inner and metropolitan Melbourne. A recent article in “The Age” newspaper identified that not only is the demand for schools in these areas increasing, it is so high that even the predicted student populations in the new schools have been exceeded. The Age’s Education Editor commented, “the number of Victorian school aged children will increase by almost 90,000 over the next five years with schools having to find room for 1 million students by 2020” (Cook, 2017). The article points out that the student demand for places in inner city schools is so extreme that new schools that aren’t due to open until next year, have already started to refuse applications from students who live outside their boundary area. The Education Editor continues, “if this scramble for places continues, Victoria’s first vertical state school will soon be over its capacity by 200 students” (Cook, 2017).

Between 2011 and 2021, Victoria is also projected to have a net increase of 587,100 residents due to overseas migration alone (DELWP, 2016). Some of these people will come from countries where English is not the first language and countries in which home fire safety is not a high priority. Potential increased numbers of students for whom English is not their first language presents a challenge for Fire Ed since an underpinning value of the program is its capacity to transfer knowledge from the classroom to the home. This is especially important for families who may have a lower awareness of home fire safety.

Considerations

Demographic change is occurring due to more children being born in Victoria, a steady increase in immigration, and higher density housing and development. It is important to consider

the impact these issues will have on the sustainable delivery of Fire Ed, which will need to service an increased population and new schools.

7.4 Fire Rescue Victoria

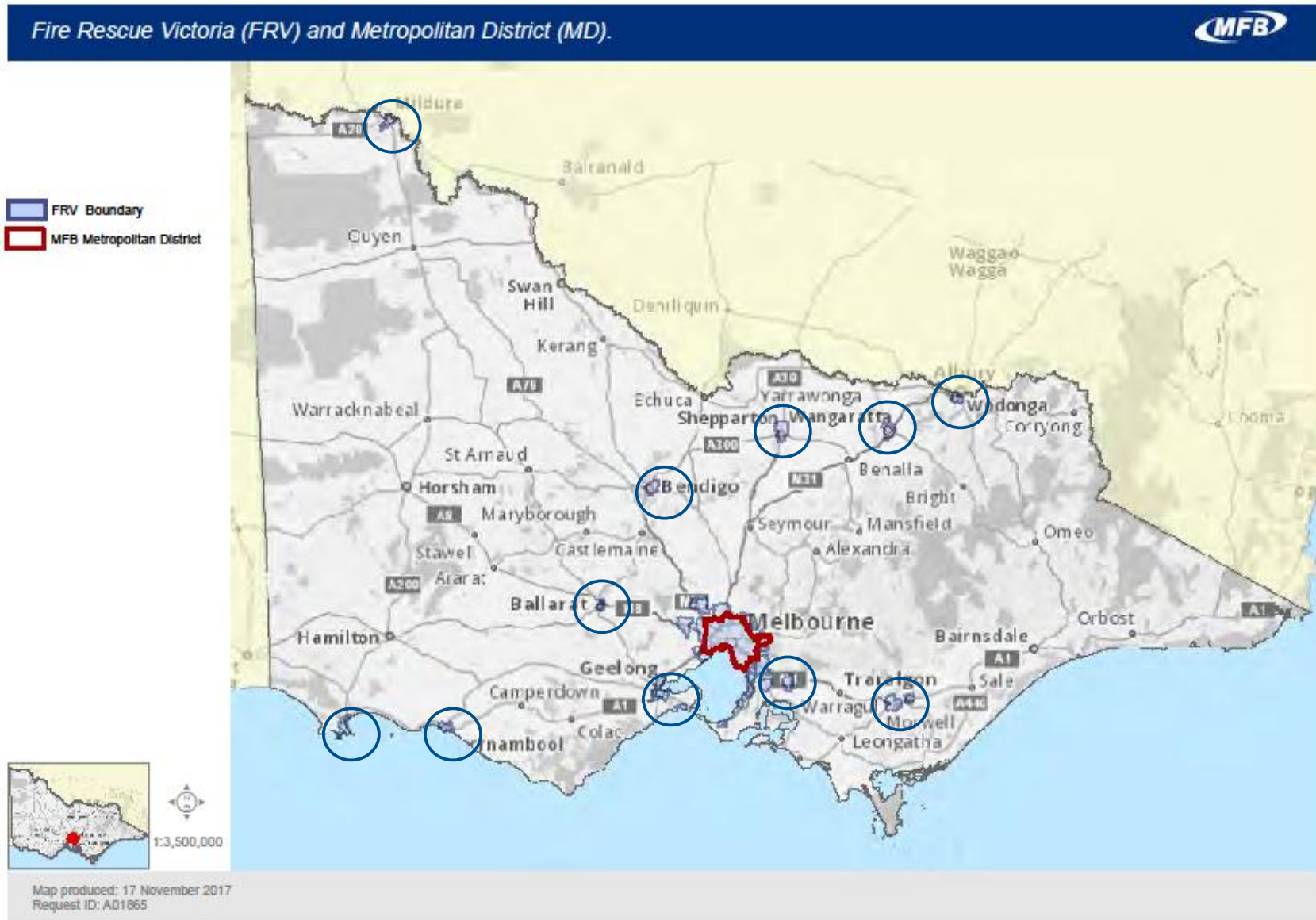
Current Situation

Apart from the demographic change impacting Melbourne and its diverse communities, the future of FRV may place another demand on Fire Ed. The Victorian Parliament is currently considering the establishment of FRV as discussed in section 3.5. If this change to Victorian fire services is implemented, Fire Ed will potentially be delivered to a larger number of schools across a larger geographical area. While the changes are not certain, the MD is likely to include all current MFB stations, as well as 35 CFA stations and their career firefighters. In practical terms this will translate into delivery of the program to 400 more schools not just within Melbourne but also other urban areas of Victoria. In addition to engaging hundreds more schools, firefighters from CFA joining FRV will also need to be trained and supported to deliver the program. The proposed change to current fire services boundaries will place significant pressure on the program in its current iteration. Figure 11 below outlines the current MFB sector in red, and the potential FRV section in blue. The circled sections of the map are potential FRV sections of Victoria as well.

Considerations

Changes to Fire Ed need to ensure capacity to sustainably deliver the program to an increased number of schools across a larger geographic region and include efficiencies in training, engaging schools, and administrative functions.

Figure 11. Potential FRV Fire Ed Coverage Area vs. Current MFB Fire Ed Coverage Area



Chapter 8: Contemporary Practice Case Studies

This chapter outlines new practice in education programs undertaken by external agencies. Each case study will analyse a specific element of an education program or initiative. These are development, content and delivery. Specifically, the first case study provides MFB with an understanding of the processes involved in developing a game based application that educates children on prevention and preparedness. The second case study provides MFB with an example of the integration of fire safety education with inquiry based learning that engages students in developing practical solutions to risk in a contextualised environment. The final case study demonstrates to MFB how digital learning can be located on a single site to increase accessibility in the classroom, provide effective professional development for teachers and meet the ongoing evaluation needs of the program. The purpose of these case studies is to show MFB what contemporary practices are being used elsewhere to effectively educate students. Each case study subject has been chosen on the basis that it reflects a fundamental issue MFB will need to examine and consider when creating a contemporisation plan for Fire Ed.

8.1 Everyday Lifesaver App by Life Saving Victoria

In developing the Everyday Lifesaver App, our intention was to transform the way we teach safety education. The App uses gamification to make learning water safety and emergency response more engaging for students, while enabling access to the online App by community anytime, anywhere.

-Kate Simpson

Life Saving Victoria (LSV) has a mission to prevent aquatic death and injury in Victoria. Their vision is “that all communities will learn water safety, swimming and resuscitation, and be provided with safe beaches, water environments and aquatic venues” (LSV, 2016a). LSV conducts safety programs for multiple age groups, including primary students which were delivered by workers state-wide.

8.1.1 Background

Kate Simpson, General Manager – Education at LSV, informed the team that the organisation was “starting to see this trend of school interest [in LSV’s safety education program] going down.” LSV was also concerned that the allocation of organisational resources to deliver

education programs state-wide was not sustainable. When conducting research into new strategies, LSV discovered “there were no game based learning programs for the year seven or eight age group that taught CPR [cardiopulmonary resuscitation] and water safety.” Simpson believes that “it's not about posters anymore. You can Google any picture and stick it on a wall. This technology brings environments into the classroom” (personal communication, November 24, 2017). To fund the creation of the Everyday Lifesaver App, LSV received a one-off grant from the State Government. The estimated total project value including the grant, cash, and in-kind co-contributions was \$432,560 (LSV, 2014).

An application can be generalised as any software program. A gaming app can be available in desktop, mobile phone (Android and Apple/iOS), or tablet form. In October 2015, LSV launched a trial of the Everyday Life Saver App which targeted students in year seven and eight. Currently, the Everyday Lifesaver App is available on desktop and tablet devices. The purpose of the Everyday Life Saver App is “using gamification to make learning water safety and emergency response more engaging” (LSV, 2016b).

8.1.2 Description of the Game

Upon entering the application, users are asked to establish a new user profile as a student, teacher, or other. Students establishing a profile are prompted for relevant information such as their name, postal code, school name and year level. Students choose a character to play as and then the game commences. There are seven parts to the game which align with the LSV’s key messages about Danger, Response, Send, Airway, Breathing, CPR, and Defibrillation. Each one of the seven messages have exercises that a student must complete to move forward to the next section of the game. For example, the app first identifies common dangers around water before the student moves to the section on Danger. In this section the students need to find dangerous rip currents on a beach, spot hazardous items that could be found on a beach, and identify safety signs by a river where it is too dangerous to swim. The app also provides safety information to students about what to do if they do get caught in a rip current or decide to go swimming in a river.

8.1.3 Program Evaluation

In 2016, LSV conducted an evaluation of the app to determine its effectiveness. The organisation used a focus group discussion with students and parents to learn what key target audiences thought of the app (LSV, 2016b). LSV also evaluated the app based on effectiveness and student engagement. To complete the evaluation, students were separated into three groups: control

group, app group, and practical group. The control group was “assessed without receiving any practical training or completing the Everyday Lifesaver App.” The app group “completed the Everyday Lifesaver App in class, followed by assessment one week later” and the practical group was given “a practical session (designed specifically to mirror the Everyday Lifesaver App content) conducted in the classroom by trained LSV staff, followed by assessment one week later” (LSV, 2016b). The app group and the practical group performed at an even level in several subjects, but the app group was superior in their knowledge of what information to provide when calling for emergency services and what the characteristics of rip currents are. The practical group succeeded the most with ability to perform key CPR actions. This was expected since an expert was able to show them a hands-on example, but the app group “performed as well as [the practical group] in their ability to deliver chest compressions” (LSV, 2016b).

8.1.4 Digital Resource Aspirations

LSV is currently working on a second version of the app requiring additional funding. This version incorporates feedback from teachers, parents, students, and developers. Part of the reason for creating a second version of the app was to make it compatible for both apple and android mobile products. Beyond the new version of the app, LSV is developing other ways to incorporate technology into their education programs to make them more effective and engaging. Virtual reality has also caught the attention of program coordinators at LSV. Virtual reality can be defined as a digital, three-dimensional, interactive resource that places users in a lifelike environment. Virtual reality can be done with or without virtual reality goggles.

LSV has acquired approximately 30 pairs of virtual reality goggles and phones for school visits which cost approximately \$10,000 (K. Simpson, personal communication, November 24, 2017). LSV plans to utilize Google Expeditions and other 360-degree photos and videos to enhance students’ understanding of emergency situations, guided by teacher instruction. LSV has received help from teachers to write expeditions to align with lessons and curriculum in schools. Google Expeditions specifically can be utilised as a virtual reality resource in a classroom with or without virtual reality goggles.

Once these virtual reality projects are ready for trial, LSV will be evaluating them for effectiveness and engagement in a similar manner to how the Everyday Lifesaver App was evaluated.

8.1.5 Considerations

This case study demonstrates how a safety organisation has reviewed and redeveloped its school based education program to incorporate technology to effectively engage students, maximise reach, improve cost effectiveness and integrate evaluation. The LSV app requires no involvement from experts on water safety as part of a broader safety education program. It is also important for MFB to consider that people of all ages have played the Everyday Lifesaver App, further increasing its reach to the community. Children of all ages, even if they do not own a device themselves, may have access to applications in their home.

An app for Fire Ed is likely to address issues affecting the program such as the currency of hard copy resources, accessibility for home-school and EAL, engagement at Upper Primary level and the demands on firefighter's time. It is clear though, that the development of an app is not a simple process or a single solution risk treatment. The work undertaken by LSV has identified that time, stakeholder engagement and funding for both start-up costs and ongoing investment for continuous improvement was and is required. Developing technology can also quickly outpace a program and needs to be considered when scoping change. It may be worthwhile for MFB to consider an app as part of its strategy rather than a standalone treatment and what the actual ongoing financial and other organisational demands will be.

8.2 New South Wales Project FireStorm

In this particular unit on bushfire, [children have] just been asked to explore the impact of bushfire on people, place, and the environment. Then what comes next really is school, classroom, and teacher driven as to how [the children] actually do that, as long as the educational outcomes are met.

-Tony Jarrett

St. Ives North Public School is a primary school in the northern part of the Sydney metropolitan area, located within a bushfire prone region. The school operates “a comprehensive technology program” (St. Ives, n.d. a).

8.2.1 Background

As previously mentioned in Chapter 4, the New South Wales (NSW) syllabus has a more prescriptive approach to school learning programs when compared to the Victorian F-10

Curriculum. A compulsory topic in Years 5/6 Geography requires that “students must study a contemporary bushfire event” (NSW RFS, n.d.). The NSW syllabus allows schools to choose teaching strategies used as long as the syllabus's educational outcomes are met. In 2016, St. Ives North Public School, successfully applied for a STEM (science, technology, engineering, and math) grant, which was used to create Project FireStorm, a Year 5/6 learning program about bushfires. Sean Walsh, the IT and STEM Coordinator at St. Ives, said, “part of that STEM grant was to look for a really authentic local issue to deal with” (NSW RFS, 2017). The grant supported the development of a learning program in which students were able to apply their knowledge of STEM to link science content with the compulsory geography topic on a contemporary bushfire event.

8.2.2 Program Description

FireStorm was a five-stage project, which was designed to allow students to gain an understanding of bushfires through guided exposure to real bushfire footage and stories, develop the project design problem, brainstorm ideas to solve the problem, create possible prototype models, and test the final solutions (Ryan and Jarrett, n.d.).

Inquiry Based Learning Approach

Inquiry based learning is a teaching approach that allows students to be active participants in the process of discovery. In inquiry based learning, students are introduced to a topic or problem, and then with support and guidance from their teachers, they research and present possible solutions to that topic or problem. The topic is researched using different approaches and students present and explain their findings to their peers. They have ownership and have a voice in their learning. They also share with each other what they tried, what worked and what didn't. Inquiry based learning assists in the retention of information as well as provides an opportunity for student engagement in their learning.

Schools are “encouraged to use an inquiry-based approach to learning” to teach the bushfire topic (NSW RFS, n.d.). In Project Firestorm, teachers proposed a situation where a bushfire started in a specific part of the community, and challenged students to make educated decisions around what actions the residents of the community should take. The children believed evacuation was the best option, but mathematical models showed that there was a limited amount of time to evacuate, and due to the population size and traffic flow, not everyone could leave, which indicates that students understood the importance of preparation (NSW RFS, 2017).

Content Appropriateness

Students also studied contemporary bushfire events, including the October 2013 Bushfires in New South Wales. Students were exposed to images of the impact of bushfire, within a guided context with their teachers. From the bushfire research, students began to form an empathic connection to people who had been affected by bushfires. The teachers' classroom management strategies assisted enquiry based learning, facilitating the students' connection to the material. It also supported students in their research on the impacts of emergencies, allowing them to safely engage with the themes involved with real-life bushfire situations.

New South Wales Rural Fire Service Expert Visits

St. Ives contacted New South Wales Rural Fire Service (NSW RFS) during the planning of Project FireStorm. NSW RFS provides fire emergency services to the rural areas of New South Wales. Because of this consultation, teachers felt supported by content experts, and were comfortable teaching the material. During Project FireStorm, NSW RFS visited St. Ives for two expert visits. At the start, NSW RFS presented an overview on bushfires to the students. They returned for a second visit halfway through the project, when students were starting to prototype their designs. According to the NSW RFS Community Engagement Coordinator, Tony Jarrett, the visit allowed NSW RFS to learn “what the students were doing [to provide] reassurance ... and even in some cases had discussions on what wasn't going to work” (personal communication, November 21, 2017).

Children's Agency in Learning

St. Ives North held a showcase of the students' projects at the end of the eight-week project. Special guests included members of RFS NSW. Students used their newfound knowledge on bushfires in creating their projects. For example, one team learned that embers, not fire, are usually the reason houses burn down. This team had designed a robot, “which drives around, and... when it senses heat it would beep and... inform [firefighters] where the ember was and how they could get to it” (NSW RFS, 2017). Other student groups focused on creating tools for firefighters. They designed the Heartbeat Pro, which was designed to, “save firefighters lives by turning on and off and showing you when you need to get out of the fire and if your heart rate's too high” (NSW RFS, 2017).

Through the case study, students were able to creatively use what they learned, to design solutions to real bushfire problems. This case study both guided children in their learning about

bushfires and provided them the opportunity to actively participate in providing solutions to problems they cause. As Sean Walsh stated, “the main thing that [the students] learned from it from my perspective is their role in preparation and survival and recovery from bushfire - that they can be really active agents of change in their local community” (NSW RFS, 2017).

8.2.3 Considerations

This case study demonstrates the effectiveness of inquiry based learning at St. Ives North Public School. The project enabled students to not just receive information, but have agency in their education and developing solutions for fire safety issues that affect the region in which they live. This was supported by the introduction of “emotional learning” to increase their understanding of the consequences of fire and empathy for affected people.

The redevelopment of Fire Ed would benefit from inquiry based learning to increase engagement with students particularly at the Upper Primary level. MFB will need to define a clear scope for inquiry based learning to ensure it meets the home fire safety of students rather than the broader activities undertaken by students in this project. As this work was led by classroom teachers and not firefighters, it may require higher consultation with teachers and education specialists. Another element of Project FireStorm was about engaging students through “emotional” learning and the consequences of fire. Fire Ed is based on positive actions students can take at home to contribute to the fire safety of themselves and their family. The inclusion of information about the consequences of a fire in the home needs to be considered by MFB to find a balance between what information can be included and how it can be conveyed in a positive way. It is important for MFB to explore this area to ensure the program reflects current trends and thinking regarding primary school students and how active a role they can take in relation to home fire safety.

8.3 e-Learning for kids

e-Learning is a highly effective teaching method that provides high quality consistent and personalised education based on the latest insights.

-Nick van Dam

Founded in late 2004 by Nick van Dam, the e-learning for kids foundation (EFK) is an award-winning, global, non-profit foundation whose mission is “to be the source for childhood learning on the internet available from anywhere and without charge” (EFK, 2017a). Their more

than 800 digital learning modules are aimed for students from age five to twelve and cover subjects in math, science, environmental skills, computer skills, health, language arts, and life skills (EFK, 2017b).

8.3.1 Program Description

Accessibility and Engaging Modules

Users identify and select a course and when opening a course, students are presented with an introduction followed by a series of levels. At each level, the student earns stars based on performance. After completing each level of the course, a certificate is generated. These modules engage students by requiring them to interact by clicking links and undertaking simple tasks. Lessons are available online and offline. For offline use, lessons may be downloaded or played using a CD-ROM version. Modules are also available in Spanish, French, Portuguese, and Indian English (EFK, 2017b).

Instructional Resources

EFK provides users with resources to help them navigate the website and plan which courses to take. EFK provides three versions of an implementation guide: EFK Implementation Guide, EFK Best Practices Guide, and EFK Best Practices Lesson (EFK, 2017b). The EFK Implementation Guide is the most in depth and explains everything including setting up your computer, using the EFK lessons effectively, and where to find additional resources. The EFK Best Practices Guide is a PowerPoint presentation that provides a condensed overview of the EFK Implementation Guide. Lastly, the EFK Best Practices Lesson is an interactive video module that teaches the same content. Additionally, EFK has a guided tour of the website to learn how to navigate and find lessons efficiently. They also produced a cumulative list of all lessons available and their respective grade level, website link, topic, and skills learned.

Content and Partnerships

For development and curriculum support, EFK has partnered with digital learning and content professionals, various non-government organisations (NGO), and multiple media groups (EFK, 2017d). Together, they can ensure that the lessons are presented in an effective way and that the content is appropriate for the various age levels.

8.3.2 Evaluation and Accreditation

In 2016, over 4.4 million of EFK's online digital lessons were accessed. Additionally, EFK was able to reach 3,752 new schools that were sent offline resources, which accounts for over two million new students (EFK, 2017e). Because of their success and outreach, EFK was recognised as a Learning! 100 2017 award winner and was honoured by the Homeschool Community as a Top Ten Educational Website for 2017 (EFK, 2017c). Homeschool Base emphasised that their “educators and homeschoolers applauded EFK as the best curriculum supplement for multiple subjects, as well as an excellent resource for students who need extra practice in specific subjects.” They went on to express that, “Homeschoolers, teachers, and educators highlighted that EFK is based on well researched standards and first-rate quality courses and lessons” and noted how EFK “truly appreciates and welcomes feedback” (Homeschool Base, 2017).

8.3.3 Consideration

EFK is a single site through which students, teachers and educators can access lessons and resources across a broad range of subjects and languages. The information is provided in a broad range of media/formats.

This case study identifies the importance of investigating the accessibility and sustainable management of Fire Ed in MFB's redevelopment of the program. Currently the program involves a complex series of engagement activities between internal and external stakeholders. Resources are hard copy with no accessibility to the materials on line. The booking system and reporting is time consuming and not consistently completed. This causes confusion and affects the accuracy of program data and evaluation. Combined, these practices are unsustainable. MFB can learn from EFK to help address these drivers through the development of a single portal for students, teachers and educators. The portal could house the various components of program and link specific functions to increase efficiencies. For example, when a teacher downloads or accesses resources, an electronic evaluation form could be automatically sent within a prescribed time frame. To increase reach and extend the relationship with users, accessing specific functions may provide a prompt asking if the person would like to receive updated safety information or alerts from the site in the future. Especially important for MFB to look at is EFK's examples of pedagogical usage of the modules. These outline eight different variations of how to integrate EFK lessons into a classroom. The guidelines make using the lessons easier for teachers with the goal that they are more likely to incorporate them in their own class.

In the future, MFB should also consider collaborating with other emergency services or safety organisations to cross promote through the provision of interagency links and/or information to support a higher level of individual and community resilience. This may be best achieved through the establishment of a specific area on the site as a “safety hub.” To ensure the viability and sustainability of the program in the future, MFB needs to undertake a cost benefit analysis of the establishment of a Fire Ed portal.

Chapter 9: Critical Framework for the Contemporisation of Fire Ed

This chapter will provide MFB with a framework to consider the many elements and functions required to contemporise Fire Ed. MFB needs to look through the lens created by this framework when making informed, evidence-based decisions around the program. It is critical to follow the order in which the steps of this framework are presented as they were created based on a continuum of step wise improvement.

9.1 Fire Ed Mission, Objectives, and Outcomes

To contemporise Fire Ed, MFB first needs to develop a mission statement for the program. This should include the aims of the program, its scope, the services it will provide and who it intends to provide them to. It will support MFB to “be clear about the key messages you want taught [and] the intent of the learning” (S. Foster, personal communication, November 23, 2017). A mission statement also provides a platform upon which to review current policy and practice to ensure the program is supported by a solid operating framework. This approach will allow MFB to holistically scope and implement the contemporising of Fire Ed in a systematic way.

The current Fire Ed program has no defined or documented learning objectives or outcomes. The creation of a rubric for Fire Ed that includes the mission statement and learning objectives and outcomes will address this. A learning objective or learning outcome of Fire Ed is students being able to dial 000 but this is more complex than simply telling a student to dial 000. The learning objectives for students being able to dial 000 needs to include that they will know:

- what types of situations are appropriate for calling 000
- which emergency service is needed (ambulance, police, fire)
- what to expect from the operator when they are on the phone and what information they might need to provide the operator with
- how to confidently dial 000 on an *unlocked* or a *locked* phone
- that the operator will automatically know the location they are calling from

By stating every learning objective and outcome that students should achieve through the program in this way, a Fire Ed rubric defines the intent of the program and will also be more easily understood by teachers. Teachers create teaching and learning programs using curriculum learning outcomes, incorporating students’ current abilities, interests and needs. The Victorian Curriculum supports the development of students at all ages as life-long learners who are active and informed citizens. In the Victorian Early Years Learning and Development Framework (VEYLDF), the second learning outcome refers to, “children who are strongly connected to their world

participate in shared everyday routines, events and experiences, and use opportunities to contribute to decisions” (DET, 2016). This supports the idea that students can be active participants in the safety of their community. Their capacity to participate and to share their thoughts and feelings about matters of importance is described in the fifth VEYLDF learning outcome: “Children are effective communicators. Their communication and self-expression take many forms” (DET, 2016).

The articulation of learning outcomes for Fire Ed will provide an improved opportunity to demonstrate alignment to the learning framework. The rubric could also be incorporated in program evaluation by measuring and analysing if students are meeting the learning outcomes.

9.2 Content Presentation

Before designing resources, MFB needs to examine two key issues related to content. These two issues are to increase MFB’s understanding of the capacity at which Prep and Upper Primary students can have agency in their own education and what type of content is appropriate. Historically, Fire Ed has taken a conservative approach to content, based on positive actions that students can take to improve their family’s home fire safety. It is only over the last five years that research has been conducted in Australia which challenges this approach, also taken by many other fire and emergency services that engage students via school programs. As stated by Dr. Briony Towers, “If [students] don’t have that understanding of causes and consequences then they’re in no position to be coming up with ideas or things they can do to reduce that risk” (personal communication, November 22, 2017).

To build MFB’s knowledge and develop policy, MFB will need to consult with experts about what home fire safety educational content is appropriate for students at their respective ages and how this can be achieved. Consultation with subject matter experts from the fields of research and education will be required. Acknowledging a child’s capacity to critically think about home fire safety in a contextualised environment may be required to ensure Fire Ed keeps pace with trends in education and to deliver positive program outcomes.

9.3 Resources

Fire Ed resources need to engage students and motivate teachers and educators to use Fire Ed in the classroom or home-school. They also need to be inclusive of and support accessibility for EAL and Special Ed students.

Linking to Curriculum

There are no curriculum links for Fire Ed that explicitly identify how teachers can incorporate home fire safety in the Victorian curriculum. The long-term viability of the program requires that the program can be easily integrated into teaching programs that align with Victorian curriculum. The Program Coordinator asked teachers participating in Upper Primary where they believed home fire safety fits into key learning areas and capabilities of the Victorian Curriculum via survey. The top five responses were: Health and Physical Education, Civics and Citizenship, Personal and Social Capability, Science and English. This consultation should be expanded in scope to include teachers at Fire Ed for Prep level and the DET to maximise all opportunities for program alignment to curriculum.

Engaging Resource Formats

Fire Ed resources need to be sustainable, scalable, and engaging for students. They need to reflect the ways in which technology is used in the contemporary classroom. Currently, Fire Ed is behind in terms of its use of technology and MFB should consider utilising new technology in Fire Ed. These resources would enable Fire Ed to disrupt the school safety education sector as discussed in the case studies in Chapter 8. Using technology to convey messaging and increasing interactivity can be done in multiple ways using different mediums. This can include simple changes or ones which require a significant allocation of financial investment.

Digitising posters so that they could be displayed on a large screen, such as a SMART board is a simple solution to address old print based resources. An additional benefit is that a digitised poster could also be designed to be interactive resource, where students could click on the image. An example of how MFB could do this is with the good fire versus bad fire posters is by having both situations displayed on the SMART board next to each other. Students would be prompted to choose which picture represented the good fire in front of the whole class. If the student was correct, the image would turn green and enlarge to fit the whole screen, and a text box explaining why that situation was the good fire would appear.

Creation of a game-based app would require more investment but could be used as a pre-lesson prior to a visit by firefighters. An example of a game-based application was designed by the WPI team and is included in Appendix I. This would enable students to familiarise themselves with key terminology and messages and participate in learning and then review this when the firefighters visit to reinforce messaging and explore key areas. MFB could also consider the use of Google

Expedition and develop 360-degree virtual reality scenarios on line to provide students with real life environments and promote critical problem solving in a home fire safety context. A more holistic approach to developing new technology to support the aims of the program would be through an interactive digital learning module. Creating this module would increase accessibility of the resources and present them to users in an appealing way that gives users flexibility in the way that it is consumed. The module could encompass the digitised posters, the app, and even virtual reality.

Aside from technology, MFB could create project prompts for schools that would enable teachers to create inquiry-based projects for Upper Primary students. The prompts should allow for integration of learning objectives and outcomes from multiple subject areas included in the VCAA curriculum. The prompt could be integrated into an English paper, into a digital technology project where students program an escape plan for their home, or it could even be integrated into an art project. Students could work together in groups and make exit plans based on where the fire is located. Teachers could use the prompt to make projects that are at an appropriate difficulty for their students and that fit into the program they are currently teaching.

Online Resource Access

The creation of effective Fire Ed resources requires easy access to resources. With the amount of hard-copy resources teachers receive from various agencies, it can be easy for MFB's Fire Ed resources to be stored away and even lost. MFB should ensure that all resources are available online. Online access to Fire Ed materials could increase its uptake at the Upper Primary level and accessibility for home-school students. MFB would also avoid the printing costs that come with hard-copy resources.

Pedagogical Examples

The creation of effective Fire Ed resources lastly requires providing teachers with pedagogical examples that demonstrate how the resources can be adopted in a classroom. It is not enough to put resources online and expect schools and the community to use them. MFB should make it as feasible as possible for teachers to educate on fire safety in a way that best fits their students. For example, digital learning is flexible in the way it can be taught to students. It can be:

- taught by the teacher as a guided lesson
- interacted with by small groups of students
- taken by students at their homes to supplement a classroom discussion
- accessed by students for a homework assignment

- adapted by home-school groups that do not have traditional access to the material
- opened at a student's leisure for a fun game to play

These options empower the teacher to make informed, pedagogical decisions rather than making the resources dictate the methods they need to be taught with.

Reflection

These ideas are in no way definitive of the opportunities available to refresh Fire Ed resources using technology. They need to be considered individually but also in terms of what opportunities there are to integrate additional activities to resolve the drivers applying pressure on the program. For example, activities which occur without firefighters present do not need to be confined to the classroom. Linking printable activity sheets for home to an app would allow students to undertake the activity in the classroom, do an activity at home with their family and bring the completed sheet to the firefighter session.

9.4 Teacher Professional Development

MFB cannot expect schools or the community to use resources they create or know how to use them without support. MFB may wish to target professional development through various mediums, including but not limited to, webinars and how-to instructional videos. Professional development for teachers also encompasses creating detailed curriculum links that outline the pathways teachers can approach when integrating home fire safety into their teaching programs. Conducting professional development regularly will provide teachers with an increased understanding of the program and how it can be incorporated into curriculum. Matt Henry (CFA Program Design Coordinator) explains this saying, "If a teacher's done some professional development on be it home fire safety or bushfire safety and then they can go to the website ... there's a lesson and it's all mapped to the curriculum and it's got everything they need, they'll teach it" (personal communication, October 31, 2017).

MFB should create a how-to video that educates teachers on how to use and access the resources of the Fire Ed program and explain how the resources can be used with curriculum requirements. Teachers stated in the Upper Primary participating survey that they feel firefighters need to teach Fire Ed because they are the experts. The development of a video could address teachers concerns and increase their confidence and result in increased take up of the program. It would be beneficial if the video also included specific advice for home-school and teachers in Special Ed and EAL.

In teacher surveys conducted by the Program Coordinator, webinars were a popular response. “Teachers are getting used to the idea of logging on and having an interactive professional learning experience. The most successful ones in my opinion are where the webinar is like a mixed panel where you would have an area expert, someone from the curriculum, and sometimes somebody else” (C. Smith, personal communication, November 23, 2017). These could be hosted by the Program Coordinator, other MFB employees, and external experts.

Part of the professional development resources for teachers should be suggestions relative to the curriculum links recommended in 9.3. Specifically, MFB could recommend that teachers provide their students with home fire safety education when the school conducts fire drills. Students often do not understand the importance of fire drills and evacuating a building. Teachers have an opportunity to inform their students on the importance of personal safety regarding fire. “Government schools in Victoria are expected to run a fire drill every term [...] That would mean you’d have an opportunity to teach it once a term” (S. Foster, personal communication, November 23, 2017). Encouraging teachers to educate students on home fire safety around these fire drills would outline four days a year that teachers could teach home fire safety in an authentic context.

Engaging teachers and educators and increasing their participation in the delivery of Fire Ed is important as it supports the long-term viability of the program incorporating it into the classroom rather than an add on. Giving teachers the resources and information on how to use them will provide them with a larger role in Fire Ed as active participants.

9.5 Firefighters Expert Visit

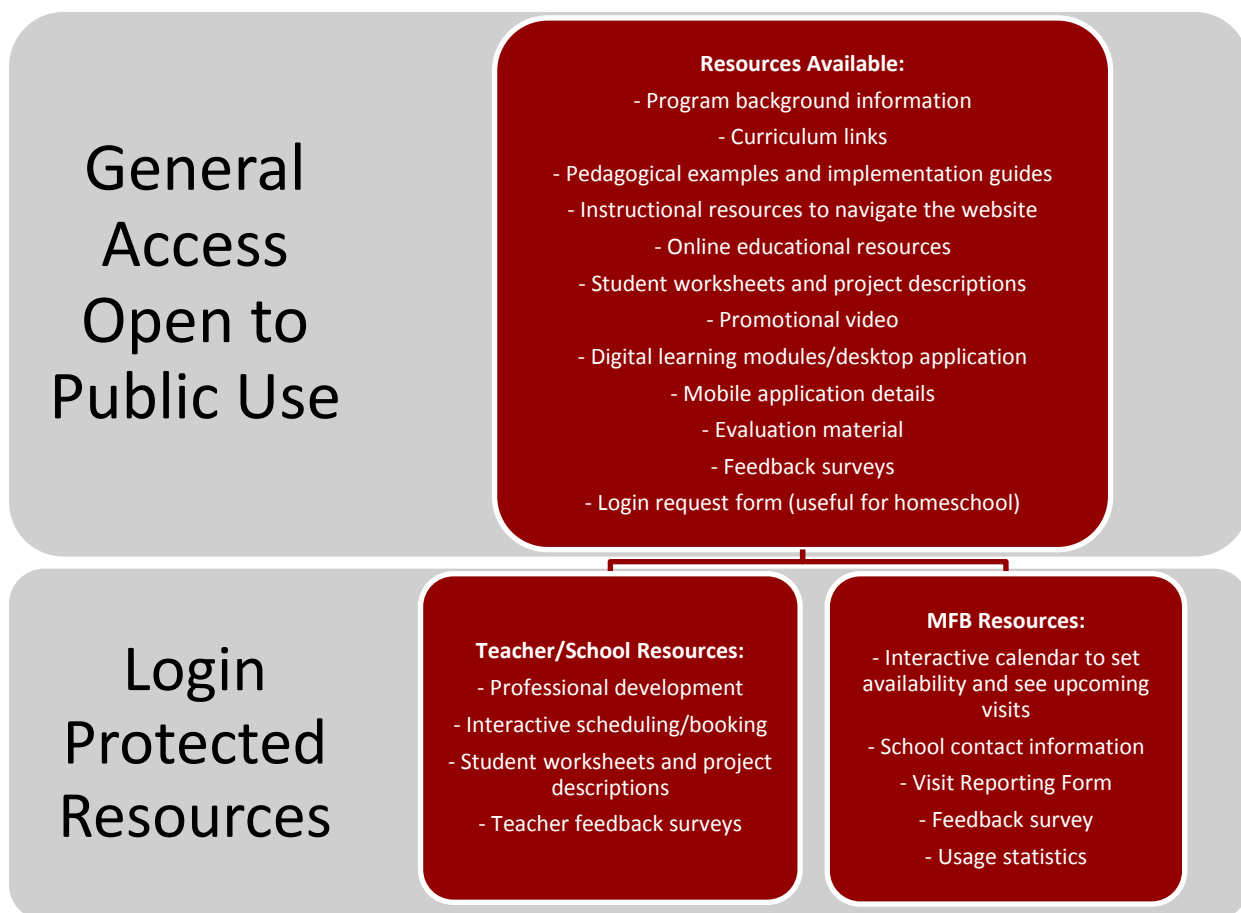
Firefighters are a key part of Fire Ed. To have a scalable, sustainable, contemporary Fire Ed program, their role does need to be reviewed. MFB Firefighters are experts in home fire safety but they are not teachers in what is an increasingly complex class room and education environment. The demands on their time, the growing number of schools, the inequity of schools between districts and the low number of school days available for them to deliver the program are significant issues. MFB needs to identify how to effectively retain firefighter participation in program delivery but do this in a more sustainable way. MFB needs to consider reducing the firefighter visits in Fire Ed for Prep when redeveloping the program from two visits to one visit. The larger issue is the actual role of firefighters in the delivery of the program. Developing new resources that better support teachers and students to undertake learning about home fire safety independent of firefighters will provide an opportunity for MFB to review firefighters’ role in the program. MFB should consider firefighters

participation as home fire safety experts who participate after other activities and/or lessons have occurred. This could be Q&A, reviewing activity sheets or having a dialogue about specific key areas of home fire safety, rather than conducting educational lessons. Since its inception, the program has been delivered by operational firefighters and consultation should be undertaken with firefighters and the United Firefighters Union. MFB should consider a specialist working group of firefighters to participate in the contemporisation process.

9.6 Online Portal

This team proposes the development of an online portal as outlined in the following diagram.

Figure 12. Outline of the online portal



Implementation Guides

When MFB designs their online portal, important resources to include are implementation guides as exemplified by EFK, which was described in section 8.3. These guides should be comprehensive documents and interactive videos touching upon every question a user may have.

This may include, but is not limited to navigation of the website, pedagogical examples, curriculum links, a complete list of resources available, and commonly asked questions.

User Interaction

Upon the creation of the portal, MFB will have to determine the different aspects they want to include and how all the parts communicate with each other. To understand the potential of the online portal, Table 6 (on the next page) shows a flow chart of how different people could interact with the information presented. This is just one way to describe how these resources would connect to each other.

Table 6. Online Portal User Interaction Flowchart

Step Number	MFB Actions	Automated Online Portal Actions	School/Teacher Actions
1	Station officers login to set their availability on an interactive calendar.		
2		Send teachers a message with initial login information to inform them about Fire Ed, notify them that scheduling for the upcoming year is available, and provide the link to a promotion video on the online portal.	
3			View the promotional video and login to choose a time and date available on the interactive calendar for their expert visit and update the preset login password.
4		Remove chosen availability from the interactive calendar and keep track of the number of visits the chosen platoon has been booked for. This number could be limited to even the number of schools each platoon visits.	
5		Send an email to the school confirming the Fire Ed booking with a link to the professional development resources on the online portal along with their login username as a reminder.	
6		Send an email to the platoon that was chosen notifying them that they have been booked for an expert visit and provide the details of the visit.	
7			Engage in professional development and learn how to use the online portal with the implementation guides.
8		Two weeks prior to the expert visit, send an email to the teacher with a link to the pedagogical examples with a reminder to teach a Fire Ed pre-lesson using the interactive, digital resources.	
9			Choose a teaching method that best fits their students' needs and conduct the pre-lesson to introduce students to Fire Ed's key messages and terminology.
10		Three days prior to the expert visit, send an email to both the scheduled platoon and the school reminding them they have a lesson coming up.	
11	Complete the expert visit to the school.		
12	Report the visit on the portal by logging on to the portal and simply clicking a completed button. Optionally fill out the feedback survey.		
13		Send the school and email thanking them for their participation and asking them and their students to complete a feedback survey with their links. Also direct the school to additional resources for Fire Ed such as the inquiry based learning project prompts or the mobile application.	

Motivation

Adding an online portal with built-in automation features would take pressure off MFB administrators, MFB firefighters, and teachers. Looking at Table 6, little is required from firefighters and more tasks are handled by the online portal itself. MFB would do less manual reporting, firefighters would visit a manageable number of schools while focusing on other priorities, and communication between fire stations and schools for Fire Ed scheduling would present less difficulties. Also, home-school groups would gain easier accessibility to the information by requesting login information and reading about the program online. Lastly, the booking methods and content delivery would be sustainable and scalable.

9.7 Upper Primary Student Feedback

After the program is organised online, MFB should consider soliciting feedback from Upper Primary students participating in Fire Ed. Upper Primary students have the maturity needed to communicate and give insight into their own learning. Fire Ed is designed to teach students, so asking students about the program and what they would want to see change is critical to the success of Fire Ed. Upper Primary students could provide feedback through a survey at the end of the program, a classroom discussion with firefighters, and pre-Fire Ed testing combined with post-Fire Ed testing. Assessment of students' knowledge of home fire safety before and after participating in the program can effectively track how well the students are progressing with their understanding of Fire Ed concepts and skills. As discussed in section 4.2, in any classroom, teachers can expect about six different student learning levels. Without a control test before the program and an evaluation test after the program, it is difficult to gauge how effective Fire Ed is in conveying key concepts to students due to the variation in knowledge at the start. It is also important for Fire Ed to produce the quantitative evaluation data that assessments would provide to MFB in conjunction with the qualitative feedback received from survey and discussion responses.

9.8 Promotion

When MFB successfully contemporises Fire Ed, MFB will need to promote the program to increase its adoption through the community. MFB should mass email schools encouraging them to look at the new portal and book Fire Ed. This should be done at a minimum of twice a year.

A common response from teachers was that they did not know the Fire Ed program, or its resources, existed. MFB should create a video which includes key stakeholders such as teachers and

students, endorsing the contemporary Fire Ed program. This video should be put on YouTube, Facebook, TV if possible, and the MFB Portal/Website. An email should be sent out to all schools with a link to the video along with a reminder to book Fire Ed.

Chapter 10: Conclusion

What I want to see is products that appeal to a broad range in the community and to enable that is to explore all avenues of technology and communication channels that we can reach out to all segments of the community. It's not just a book. It's not just the radio. It's what does the future look like. And we need to piggy back off of that to deliver our message.

-Martin Braid, MFB Assistant Chief Fire Officer and Director of CREM

Despite all the issues affecting Fire Ed, in 2016 the program reached an estimated 17,680 students across 580 schools. This team acknowledges all MFB firefighters who deliver the program to students across the MD and the work of the Program Coordinator. While their work needs to be acknowledged, so do the issues which have to be resolved to ensure a viable future for the program. The redevelopment of Fire Ed needs to deliver a contemporary and accessible program that supports and engages users. It also needs to be sustainable both in terms of its delivery and administration.

Our team identified that the structure of Fire Ed and the issues affecting it are complex and entwined. Each element or function of the program needs to be addressed separately but also in reference to other key elements or functions. This demands careful planning and the investment of financial and other organisational resources. It will require consultation internally and externally with various stakeholders to gain endorsement and support. It will need to embrace technology and apply it to find sustainable and innovative learning solutions. To meet these challenges MFB may need to consider contemporising the program in phases rather than as a whole to achieve reachable goals and milestones. Fire Ed is a valuable program which needs to be retained and rebuilt. This team is pleased to have had the opportunity to contribute to its long-term future.

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Appendix A - Fire Education for Upper Primary – Participant schools survey

This appendix presents the contents of the survey sent to Upper Primary schools participating in Fire Ed. The purpose of this survey was to gain teachers' feedback on the current state of the Fire Ed program. This survey was created and delivered to schools prior to the WPI team participating in this research project.

1. In what capacity have you primarily been involved in the MFB Fire Ed Upper Primary program?
 - a. Classroom teacher, year 5/6
 - b. Former classroom teacher, year 5/6
 - c. Coordinator, year 5/6
 - d. Other (please specify)
2. For how long has your school and you been involved in the *Fire Ed for Upper Primary* program?

Scale: Don't know, 1-3 years, 4-5 years, 5-10 years, >10 years

 - a. Can you estimate how many years your school has run the Fire Ed UP program?
 - b. Can you estimate how many years you have been involved with the Fire Ed UP program?
3. What is your motivation to adopt the program?
 - a. Engagement with firefighters / emergency service personnel
 - b. For students to experience a guest speaker
 - c. Prompted by MFB / local firefighters
 - d. Annual routine occurrence
 - e. Family / personal connection with MFB
 - f. School community or individual has recently experienced a fire
 - g. Did Fire Ed Upper Primary at previous school
 - h. Home Fire Safety is part of the curriculum
 - i. Home Fire Safety fits into a school, year level or class theme
 - j. Other (please specify)
4. Please rate how strongly you agree or disagree with each of the following positive statements.

Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree

 - a. Arranging a firefighter visit is a simple process
 - b. MFB is proactive in contacting the school to arrange a firefighter visit
 - c. The firefighters' delivery of Fire Ed UP is professional
 - d. The firefighter visit is effective in terms of student engagement
 - e. The firefighter visit is effective in terms of student learning about the fire triangle / fire science
 - f. The firefighter visit is effective in terms of student learning about firefighter's roles
 - g. The firefighter visit is effective in terms of student learning about evacuation

- h. The firefighter visit is effective in terms of student learning about home fire prevention
 - i. The firefighter visit is effective in terms of student learning about smoke alarms
 - j. The firefighter visit is effective in terms of other outcomes (if agree state what they are below)
 - k. Please provide any other comments about these statements
5. Did you include Fire Ed UP as part of a larger unit of learning, theme or topic?
- a. No
 - b. Yes
 - c. If yes, please specify what
6. Are you aware that the Fire Ed UP program includes classroom resources to assist teachers to conduct their own Home Fire Safety lessons?
- a. No (skip to question 9)
 - b. Yes (specify below)
 - c. Please specify what resources you're aware of
7. What components of the Fire Ed UP program do you use / are used at your school?
- a. Firefighter visit
 - b. Box kit - Student Task Cards
 - c. Student reader - MFB on Fire
 - d. Take home surveys (schools pack)
8. Please rate how strongly you agree or disagree with each of the following statements about the teacher delivered component of the Fire Ed UP program, including classroom resources
Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree
- a. The teacher delivered component of the program is supported by high quality resources and materials
 - b. The classroom resources are effective in terms of student engagement
 - c. The classroom resources are effective in terms of student learning
 - d. The classroom resources are effective at educating students to improve their family's home fire safety
 - e. Please provide any other comments about these statements
9. These key topics are pitched at the right level for year 5 and 6 students
Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree
- a. Fire triangle / fire science
 - b. Firefighters' roles
 - c. Evacuation
 - d. Home fire safety
 - e. Smoke alarms
 - f. First aid
 - g. Please provide any other comments about these statements
10. Please rate how strongly you agree or disagree with the following statements
Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree
- a. Safety topics are more challenging to teach than other topics

- b. With the support of written advice I would feel confident delivering a home fire safety program
 - c. Home Fire Safety would be best taught as a cross-curricula unit or theme of work rather than as an isolated topic
 - d. I would welcome receiving professional development on the teaching of fire safety
 - e. Please provide any other comments about these statements
11. Effective professional development in fire safety teaching should include these forms
Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree
- a. Online professional reading
 - b. Researching emergency service websites
 - c. Researching teacher resource websites
 - d. Seminars / conferences
 - e. Webinars
 - f. Pre-service university presentations
 - g. Please provide any other comments about these statements
12. Home Fire Safety fits into which Learning Areas and Capabilities of the Victorian Curriculum? (You may choose more than one response)
- a. The Arts
 - b. Critical and Creative Thinking
 - c. English
 - d. Ethical Capability
 - e. Health and Physical Education
 - f. Civics and Citizenship
 - g. Geography
 - h. Mathematics
 - i. Personal and Social Capability
 - j. Science
 - k. Other (please specify)
13. What should the firefighter visit focus on? (You may choose more than one response)
- a. Introduction to Home Fire Safety messages
 - b. Firefighter roles / MFB
 - c. Reinforcement of Home Fire Safety messages taught by class teacher
 - d. Responding to students' prepared questions about Home Fire Safety and Firefighter roles / MFB
 - e. Other (please specify)
14. Adding which of these aspects of fire and / or community safety to Fire Ed for Upper Primary would enhance the program? (You may choose more than one response)
- a. Your school's emergency management plan
 - b. Fire safety in buildings other than home (e.g. sporting venue, cinema, fast food restaurant)
 - c. Summer fire safety (e.g. bushfire awareness when on holiday or traveling)
 - d. Fire safety for at-risk groups (e.g. older people or people with a disability)

- e. Burns prevention and treatment
 - f. Disaster Resilience
 - g. None
 - h. Other (please specify)
15. Please rank the top 3 areas of safety or disaster resilience education according to their importance or relevance to your school.
- a. Water Safety
 - b. Flood Safety
 - c. Storm Safety
 - d. Home Fire Safety
 - e. Road Safety
 - f. Anti-bullying
 - g. Bushfire Safety
 - h. Personal security / Stranger Danger
16. What other life / personal safety / resilience programs or resources are part of your school's curriculum?
- a. Ambulance Victoria - Ambulance in Schools
 - b. State Emergency Service Programs
 - c. Victoria Police school visits
 - d. CFA - Fire Safe Kids
 - e. Life Saving Victoria - Everyday Lifesavers
 - f. St. John Ambulance - First Aid in Schools
 - g. Transport Accident Commission - Kids On the Move
 - h. RACV - Street Scene
 - i. Victorian DET - Bully Stoppers
 - j. Kidsmatter - Australian Primary Schools Mental Health Initiative
 - k. Building Resilience - Social and Emotional Learning Materials (DET)
 - l. Other (please specify)
17. Do you have any further comments about the current or future Fire Education for Upper Primary program?
18. Please indicate if you would like to go into the prize draw and if you are willing to be contacted for further research on the Fire Ed for Upper Primary program
- a. I would like my school to be entered into the prize draw (yes/no)
 - b. I am willing to be contacted for further research on the program
19. OPTIONAL: If you would like to go into the prize draw or are happy to be contacted to provide further information for this research, please provide your name and contact details

Appendix B - Fire Education for Upper Primary - Non-participant schools survey

This appendix presents the contents of the survey sent to Upper Primary schools not participating in Fire Ed. The purpose of this survey was to gain teachers' feedback on why their respective school is not booking the Fire Ed program. This survey was created and delivered to schools prior to the WPI team participating in this research project.

1. Has your school ever used the Fire Education for Upper Primary program?
 - a. Yes
 - b. No
 - c. Don't know
2. What are the main reasons for not conducting the Fire Education for Upper Primary program at your school?
3. What would make you want to start (or restart) offering the Fire Education for Upper Primary program?
4. Please rate how strongly you agree or disagree with the following statements
Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree
 - a. Safety topics are more challenging to teach than other topics
 - b. With the support of written advice I would feel confident delivering a home fire safety program
 - c. Home Fire Safety would be best taught as a cross-curricula unit or theme of work rather than as an isolated topic
 - d. I would welcome receiving professional development on the teaching of fire safety
 - e. Please provide any other comments about these statements
5. Effective professional development in fire safety teaching should include these forms
Scale: Strongly disagree, Disagree, Neither agree nor disagree, Agree, Strongly Agree
 - a. Online professional reading
 - b. Researching emergency service websites
 - c. Researching teacher resource websites
 - d. Seminars / conferences
 - e. Webinars
 - f. Pre-service university presentations
 - g. Please provide any other comments about these statements
6. Home Fire Safety fits into which Learning Areas and Capabilities of the Victorian Curriculum? (You may choose more than one response)
 - a. The Arts
 - b. Critical and Creative Thinking
 - c. English
 - d. Ethical Capability
 - e. Health and Physical Education
 - f. Civics and Citizenship
 - g. Geography

- h. Mathematics
 - i. Personal and Social Capability
 - j. Science
 - k. Other (please specify)
7. What should the firefighter visit focus on? (You may choose more than one response)
- a. Introduction to Home Fire Safety messages
 - b. Firefighter roles / MFB
 - c. Reinforcement of Home Fire Safety messages taught by class teacher
 - d. Responding to students' prepared questions about Home Fire Safety and Firefighter roles / MFB
 - e. Other (please specify)
8. Adding which of these aspects of fire and / or community safety to Fire Ed for Upper Primary would enhance the program? (You may choose more than one response)
- a. Your school's emergency management plan
 - b. Fire safety in buildings other than home (e.g. sporting venue, cinema, fast food restaurant)
 - c. Summer fire safety (e.g. bushfire awareness when on holiday or traveling)
 - d. Fire safety for at-risk groups (e.g. older people or people with a disability)
 - e. Burns prevention and treatment
 - f. Disaster Resilience
 - g. None
 - h. Other (please specify)
9. Please rank the top 3 areas of safety or disaster resilience education according to their importance or relevance to your school.
- a. Water Safety
 - b. Flood Safety
 - c. Storm Safety
 - d. Home Fire Safety
 - e. Road Safety
 - f. Anti-bullying
 - g. Bushfire Safety
 - h. Personal security / Stranger Danger
10. What other life / personal safety / resilience programs or resources are part of your school's curriculum?
- a. Ambulance Victoria - Ambulance in Schools
 - b. State Emergency Service Programs
 - c. Victoria Police school visits
 - d. CFA - Fire Safe Kids
 - e. Life Saving Victoria - Everyday Lifesavers
 - f. St. John Ambulance - First Aid in Schools
 - g. Transport Accident Commission - Kids On the Move
 - h. RACV - Street Scene

- i. Victorian DET - Bully Stoppers
- j. Kidsmatter - Australian Primary Schools Mental Health Initiative
- k. Building Resilience - Social and Emotional Learning Materials (DET)
- l. Other (please specify)

11. Do you have any further comments about the current or future Fire Education for Upper Primary program?

12. Please indicate if you would like to go into the prize draw and if you are willing to be contacted for further research on the Fire Ed for Upper Primary program

- a. I would like my school to be entered into the prize draw (yes/no)
- b. I am willing to be contacted for further research on the program

Appendix C - Firefighter Interview Questions

This appendix presents interview questions created by the WPI team intended to ask to firefighters (under the impression that the firefighters would not be named in the document). The purpose of this interview was to enable the WPI team to gain an understanding of the Fire Ed program from a firefighter's perspective and to obtain evidence that those who deliver the program believe Fire Ed needs a contemporisation of its material. The WPI team conducted one interview with these questions.

Background

- How long have you been working for the MFB? What have your roles been?
- What has been your role in relation to the Fire Ed program for primary children?

Communications

- How many times do you estimate that you have personally delivered the Fire Ed program at schools? Prep and UP? Homeschool? Special Ed?
- How feasible is it to visit schools? Do you believe there is adequate time to book all schools in your maintenance area? Could there be an improved booking process?
- How would you suggest the MFB increases the delivery of the program to more schools? How would you suggest the MFB makes the program easier for firefighters to deliver and for teachers to implement?

Program

- Do you find the training you receive before teaching the Prep program adequate to be successful in teaching? Upper Primary? Are the firefighter resources adequate and easily accessible? Do you have any suggestions for improvement? What might help maintain your skills?
- If applicable - Do you find the training adequate to teach the home-school, English as additional language, or special students? How easy is the structure to follow?
- How would you describe the delivery of the program to Prep students? To UP students?
- If applicable - How would you describe your delivery of the program to home-school students? To special ed students? To EAL students?
- How do you feel about the resources used in the Prep program? (The posters, activities, DCD, etc.). How do you think they could be improved?
- How do you feel about the resources used in the UP program? (The posters, activities, DCD, etc.). How do you think they could be improved?
- If applicable - How do you feel about the resources used in the home-school program? The special ed program? The EAL program? (The posters, activities, DCD, etc.). How do you think they could be improved?
- What observations have you made concerning children's engagement and reactions when teaching the programs? What do you think children like best about the program? Is it different for Prep and UP? What are characteristics of teaching when engagement is going well?
- After the program, teachers and families are encouraged to reinforce the lessons that were taught with resources given to them. Do you believe that these efforts are successful? Do you have any suggestions for improvement?

- Are the two visits to Prep a good thing, or could it be one? How often do you get a firecall whilst doing a session? What impact does this have?
- After the program, teachers and families are encouraged to reinforce the lessons that were taught with resources given to them. Do you believe that these efforts are successful? Do you have any suggestions for improvement?
- Do you think children do any preparatory work before/in between visits?
- What are your thoughts on making the Fire Ed program more technology-based? Do you have any suggestions for improvement?

Effectiveness

- In your opinion, which aspects of Fire Ed are working well?
- What aspects need improvement?
- Do you think there are any aspects of the program that are unnecessary? Which ones and why?
- What are some difficulties you may have had to deal with when teaching the Prep program? The UP program? (If applicable: Homeschool? Special? EAL?)

Appendix D - Legislative Change: The Working with Children Act

Change in Legislation

A recent reform to the Victorian legislation introduces the Working with Children Checks, a component of the Working with Children Act enacted in 2006. The Working with Children Check is a screening process for people who interact with children in the course of their work or volunteer activities. The act did not originally require all individuals with intentions to work with children to have a Working with Children Check. Rather, all that was required for an individual to be in a room with children was supervision. In the new amendments, a Check is required whether there is supervision or not (Working with Children, 2017). The Working with Children Checks amendment will, in the short term, require the MFB to suspend the Fire Education programs until firefighters who deliver the Fire Ed program, or in any way interact with children, all have Checks. This means that the WPI team was not able to observe a program live during the course of the project.

Appendix E – Prep Fire Ed Resources

This section provides examples of the types of Fire Ed resources used at the Prep level. These resources are all hard-copy.

Figure 13. Prep banners with pictures

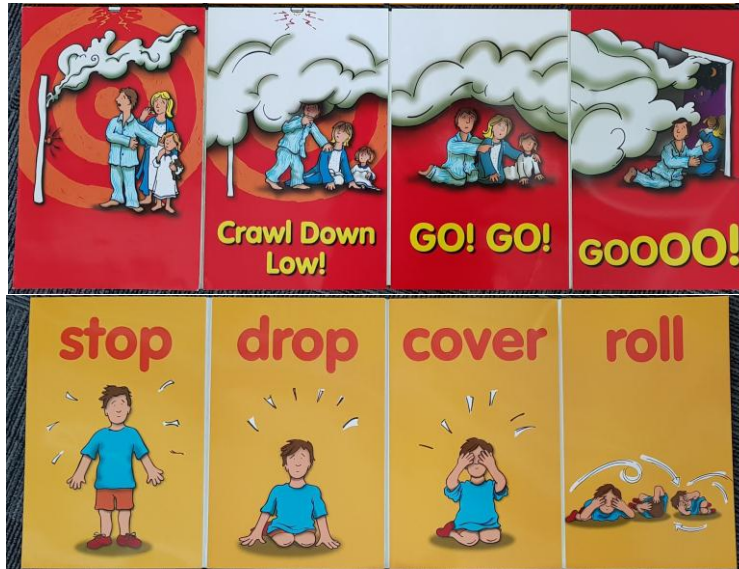


Figure 14. Prep banners without pictures



Figure 15. Back of Prep banners



Figure 16. Safe meeting place poster for Preps

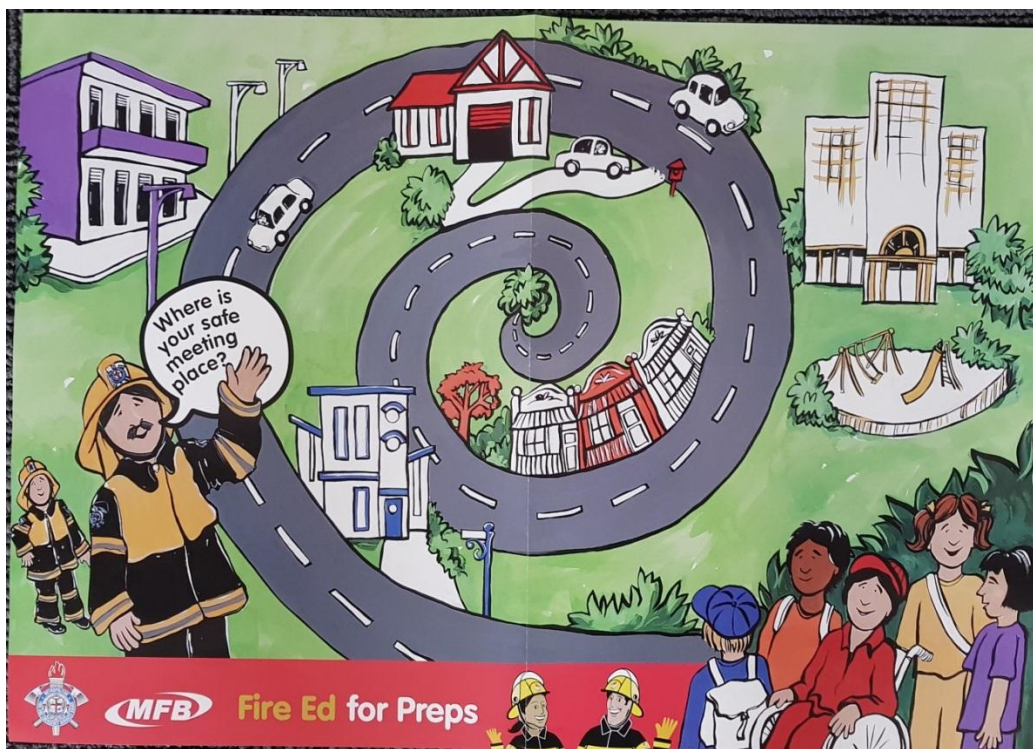


Figure 17. Back of safe meeting place poster for Preps

Safe Meeting Place Poster

1 Before you show the poster explain

Sample Explanation
If there is a fire, you need to get out. A Safe Meeting Place is where everyone has to go after they get out of their house. Everyone needs to go there so firefighters know that everyone is OK or if anyone needs help.

A Safe Meeting Place is:

- Away from smoke and fire
- Away from cars and trucks on the road
- Where the firefighter can see you when they arrive

Not everyone will have the same sort of Safe Meeting Place. Let's look at the poster and find out where the Safe Meeting Places are for these houses.

2 Show the poster

Say "Each of these houses look different. These children (point to them) live in the houses."

General discussion: Which child lives in which house?

3 General discussion: Which child lives in which house?

- The boy in red lives in the red house. Where would be a Safe Meeting Place for everyone who lives in the red house?
Answer: Letter Box
(Remind students about what makes up a Safe Meeting Place.)
- The girl in yellow lives in the yellow flats. Where would be a Safe Meeting Place for everyone who lives in the yellow flats?
Answer: The Playground
(Remind students about what makes up a Safe Meeting Place.)
- The boy in orange lives in the orange house. Where would be a Safe Meeting Place for everyone who lives in the orange house?
Answer: The Orange Tree
(Remind students about what makes up a Safe Meeting Place.)
- The boy in blue lives in the blue house. Where would be a Safe Meeting Place for everyone who lives in the blue house?
Answer: The Blue Street Sign
(Remind students about what makes up a Safe Meeting Place.)
- The girl in purple lives in the purple flats. Where would be a Safe Meeting Place for everyone who lives in the purple flats?
Answer: The Street Light
(Remind students about what makes up a Safe Meeting Place.)

4 Conclude:

Now we've helped all these kids find their Safe Meeting Places, you know all about Safe Meeting Places. Where do you think **your** Safe Meeting Place would be?

Your teacher will give you a special homework sheet. Tonight we want you to talk to your family about Safe Meeting Places. For your homework, draw where you live and your Safe Meeting Place. Bring it back to school tomorrow. We know that you'll do a great job! We'll look at them next time and that will be very soon!

Figure 18. Safe fire poster 1 for Preps



Figure 19. Unsafe fire poster 1 for Preps



Figure 20. Safe fire poster 2 for Preps



Figure 21. Unsafe fire poster 2 for Preps



Figure 22. Safe fire poster 3 for Preps



Figure 23. Unsafe fire poster 3 for Preps

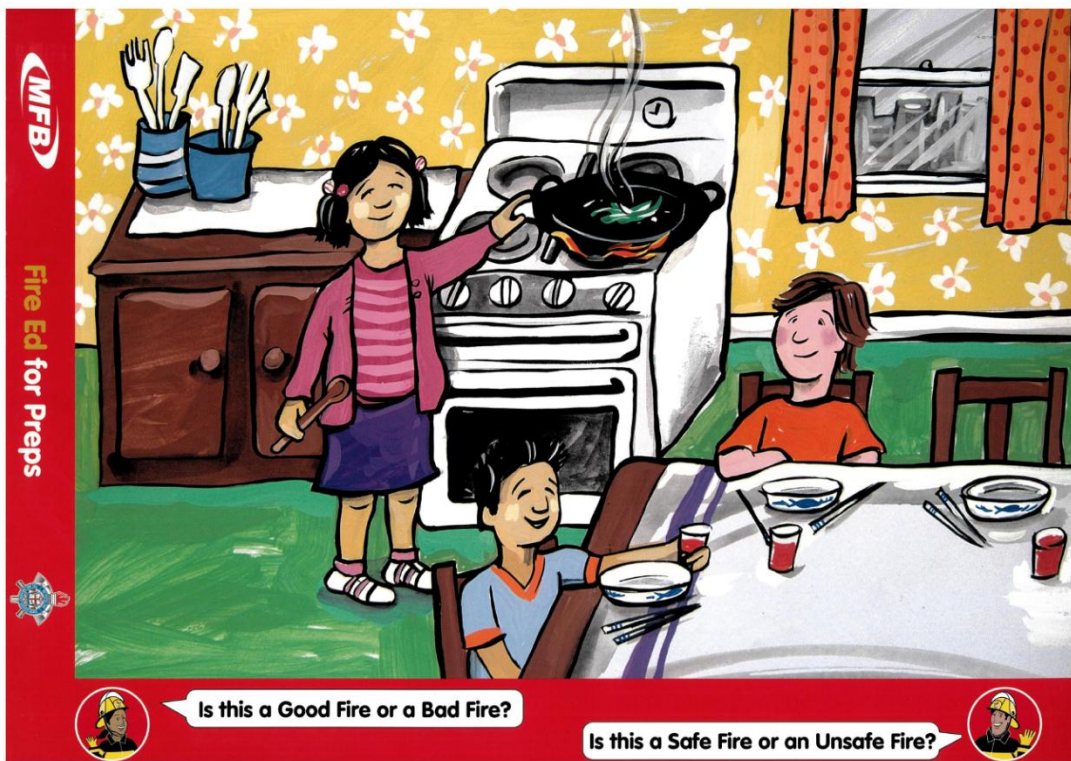


Figure 24. Safe fire poster 4 for Preps



Figure 25. Safe fire poster 4 for Preps

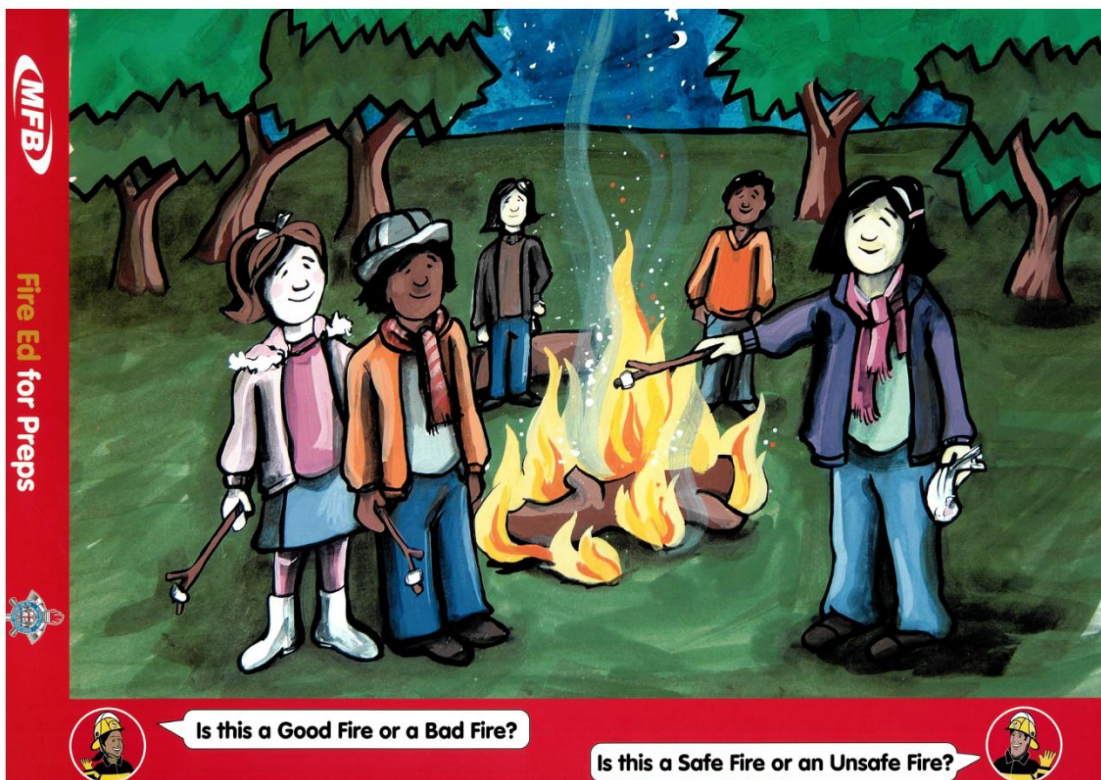


Figure 26. Prep level school resource pack



Appendix F – Upper Primary Fire Ed Resources

This section provides examples of the types of Fire Ed resources used at the Upper Primary level. These resources are all hard-copy.

Figure 27. Fire triangle poster for Upper Primary



Figure 28. Upper Primary level school resource pack



Figure 29. Upper Primary scenario cards (1)

Fire Triangle Scenario Card

The lint in your clothes dryer has caught fire.

- What is the fuel source?
(Lint, clothes)
- What is the heat source?
(Dryer)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(None safely)
➢ If safe to do so, turn off the dryer at the power point. If this is not possible or safe, turn off the power to the house at the fuse box. Close the laundry door and call the fire brigade on 000.



Fire Triangle Scenario Card

A small pile of leaves are on fire in a park. The fire was started by a discarded cigarette butt.

- What is the fuel source?
(Leaves)
- What is the heat source?
(Cigarette)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove heat using water to cool)



Fire Triangle Scenario Card

A gas barbeque jet is on fire – i.e. Normal operation

- What is the fuel source?
(Gas)
- What is the heat source?
(Matches, gas lighter)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove the fuel by turning off the gas bottle)



Fire Triangle Scenario Card

A candle has set fire to the loose curtain blowing near the window.

- What is the fuel source?
(Curtain)
- What is the heat source?
(Candle)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove heat using water to cool)



Figure 30. Upper Primary scenario cards (2)

Fire Triangle Scenario Card

You are wearing pyjamas in front of a heater and they catch fire

- What is the fuel source?
(Pyjamas)
- What is the heat source?
(Heater)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove the oxygen, Stop Drop Cover Roll)



Fire Triangle Scenario Card

There is a grass fire in a vacant block. The fire was started by a piece of broken glass in the middle of summer.

- What is the fuel source?
(Grass)
- What is the heat source?
(Glass and Sun)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove heat using water to cool)
(Remove fuel in the path of the fire)



Fire Triangle Scenario Card

There is some food in your gas oven that has caught fire.

- What is the fuel source?
(Food)
- What is the heat source?
(Oven)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove heat by turning off the oven)
(Remove/reduce oxygen by putting a lid on or using a fire blanket)
(Remove heat by cooling with water, if not oil etc.)



Fire Triangle Scenario Card

A saucepan containing oil was left on the gas/electric stove and has caught fire.

- What is the fuel source?
(Oil)
- What is the heat source?
(Stove)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove heat by turning off stove, if safe to do so)
(Remove/reduce oxygen by putting a lid on the saucepan or using a fire blanket)
> Never try to move the burning saucepan or put water on an oil fire




Figure 31. Upper Primary scenario cards (3)

Fire Triangle Scenario Card

There is paper in a bin. Someone has thrown a cigarette into it and started a fire.


- What is the fuel source?
(Paper)
- What is the heat source?
(Cigarette)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove heat using water to cool)



Fire Triangle Scenario Card

Some clothes are on a rack in front of a heater. A jumper has caught fire.

- What is the fuel source?
(Jumper)
- What is the heat source?
(Heater)
- Which side of the fire triangle can you remove to extinguish the fire and how would you do it?
(Remove heat by turning off heater, if safe to do so)
(Remove heat by cooling with water if the heater is not electrical. Turn off the heater at the power if it is electric)



Appendix G – Tony Jarrett Interview Questions

This appendix presents interview questions created by the WPI team for Tony Jarrett, the Community Engagement Coordinator at NSW RFS. The purpose of this interview was to enable the WPI team to learn more about NSW RFS and Project FireStorm.

Background

What is your position at your organisation and how long have you been in this position?

Objectives of the Organisation

- How would you describe the objective of your organisation? Are the program objectives formally articulated in any documents?

Program

- Does your organisation make any efforts to align fire safety (bushfire or home) to Australian Curriculum? Do you have curriculum links available anywhere?
- How long have your resources for primary school children been available for teachers online?
- Do you believe teachers teach fire safety in their classrooms with the resources you provide them with?
- Can you tell us why the Stage 3 Geography Lesson was created and why it's required for Grades 5 and 6? What role does NSW RFS typically have with this? How long does it typically take a school to complete? (ex. a period, day, week, etc.)
- We saw that schools can book a program through your website, what does your program include and how popular is this?
- Do you have other fire safety education for the community?
- Do you think online resources such as e-books work better than hard copy resources? Why?
- Why did the NSW Rural Fire Service decide to allow feedback from children on things such as practice emergency drills? Do you believe their feedback helps the organisation as a whole to become better at educating the community on fire safety?
- Is your program evaluated? How often?

Project FireStorm

- Could you briefly explain the Rural Fire Service's role in Project FireStorm with St Ives?
- Have any other schools besides St Ives North Public school done something similar to FireStorm? Why or Why not? Do you know how much the STEM Grant St. Ives North Public School got for this project? Did NSW RFS provide any additional funding? Do you believe the project is scalable and sustainable to do with other schools?
- Do you know who created the syllabus links for the Project FireStorm?

Target Audience

- What ages/age groups did/do you want target within the organisation? Why?

Effectiveness

- What aspects of the organisation, in terms of educating the community, work well?
- What aspects of the organisation, in terms of educating the community, could be improved?

Appendix H – Briony Towers Interview Questions

This appendix presents interview questions created by the WPI team for Briony Towers, an expert in CC-DRR. The purpose of this interview was to enable the WPI team to learn more about CC-DRR from a broad perspective and to gain insight into what an expert in child safety might believe would improve MFB’s Fire Ed program.

Background

- Can you tell us a bit about your background and what you do on a day to day basis?
- Why do you believe CCDRR is important?

General

- The framework states that “the topics of hazards and disasters, disaster risk reduction (DRR) and resilience have been included in the Australian Curriculum.” Can you speak to that quote a little more?
- What do you believe should be children’s role in DRR? How can organisations promote feedback from children as well as families and teachers?
- You mention that children have agency. What do you believe is appropriate home fire safety information to be taught to Foundation (Prep) students? Upper Primary (Grades 5 and 6) students? At what age do you think children can play an active role in making their home a safer place?
- Do you think that showing children fire and/or real life emergencies (maybe in video format) is beneficial or a hindrance to their education? At what age do you believe children are mature enough to be able to view emergencies and not be afraid? Do you know if there is any research on this?
- In the framework it states that programs “should consider the different needs, interests and technologies used within communities.” What do you think MFB should be considered responsible for in terms of accommodating for special requirements? Where is the line?
- At what age do you think children should complete assessments to see what they know and have learned? Do you think assessments helps children learn? How would you suggest children be assessed on fire safety? (*Summative vs. formative assessment*)
- How do you think technology can be used to enhance the engagement of children in their DRR education?
- At what age do you think children should start using technology to enhance their education and to what lengths should they be exposed to it?
- How do you address all the different learning types of children through one program? (Is one type more popular? Is one more effective?) (Talk about options for teachers)
- What aspects of pedagogy need to be considered in the development of a CCDRR program? What aspects have been most crucial/most focused on in programs? How would we apply that to the Fire Ed program?
- The MFB sent out surveys to teachers and the general response about professional development was that the teachers were not interested. How would you recommend that the MFB approach teachers’ professional development in relation to Fire Ed?
- How often do you believe organisations should evaluate and update their safety programs to stay current with Victorian Curriculum?

Appendix I – Description of App

This appendix describes the brainstormed structure of what an effective game application would look like for a student in year five or six. The WPI team based this design off of the structure of the Everyday Lifesaver app created by LSV and the key messages of MFB's Fire Ed program.

Stage One

For the first stage of the game, the user is placed in a household with a kitchen, bedroom, living room, and bathroom. The user has to go through each room identifying 3 possible fire hazards in 30 seconds and if they identify more than three they can earn bonus points. At the end of the thirty seconds the app will identify any of the hazards the user missed and explain why each item is a fire hazard. Examples of items the user would select are a lit candle near curtains, a fireplace being used without a screen, an unattended hot pan on the stove, a straightening iron left plugged in, clothes on the radiator, many devices left plugged into a power strip, etc.

Stage Two

In stage two, a firefighter appears on the screen with a dialogue box. The firefighter explains that they need the students help getting dressed to go on a call. The firefighter stands in the center of the screen with their station uniform on with all of their gear around them. The student then has to click and drag different pieces of gear onto the firefighter in the correct order; the dialogue box next to the firefighter will provide hints to the student if they struggle with the order. As each piece of equipment is put on correctly, the firefighter's dialogue box provides information on why that piece of equipment is important. Once the last piece of equipment, the breathing apparatus, is placed on the firefighter a message will appear on the screen telling the student to make sure their volume is turned on so they can hear what the apparatus sounds like. The user can earn maximum points by making no errors placing equipment on the firefighter.

Stage Three

Stage three walks the user through an emergency situation. The user will be reminded to keep their volume on. The situation will start with the user being in their bedroom and hear the sound of a smoke alarm and smoke starts coming into the room. The situation will freeze and text box will read: "the smoke alarm is going off! There's smoke in the house, what should you do?". Then the screen will display three options to the user:

1. Go back to bed.
2. Get out of the house! Crawl down low and go, go, go!
3. Try to find where the fire is.

Once the student selects the correct answer it will be explained what that terminology means. Next, the user is on the front porch of the house and a text box will read "good job, you safely made it out of the house. What should you do next?" and the user will be given the options:

1. Go to your family's safe meeting spot.
2. Go back into the house for your belongings.
3. Go to the neighbor's house.

Once the correct response is selected it will be explained how a safe meeting place could be a mailbox at the end of the driveway, a park, a cul de sac, etc. Next the user is next to their mailbox with their family. A textbox will read “your family has made it safely out of the house, but your cat is still inside! What should you do?” Next the screen will display the options:

1. Go back inside to get the cat,
2. Go back towards the house, but don't go in, just call the cat's name.
3. Call 000 and explain the situation.

Once the correct option is selected and explained, the user will be reminded to turn their volume up again. A phone keypad appears on the screen and the student has to type 000. Then, the voice of a simulated emergency respondent plays through the device. The student then has to answer the emergency respondent through a series of multiple choice questions and typing in their address so the services know where to respond to. Stage three concludes with the user viewing firefighters arriving and they will be reminded to stand somewhere the firefighters can see them easily. The same firefighter the student helped dress in stage two appears and tells the user what a great job they did and has the cat in their arms. The user will earn points from this section based on how many attempts it takes them to correctly make their way through the situation. The student's final score is displayed on the screen and has the option to share the score on social platforms or via email.

Appendix J – Life Saving Victoria Interview Questions

This appendix presents interview questions created by the WPI team for Kate Simpson, the General Manager in Education at Life Saving Victoria. The purpose of this interview was to enable the WPI team to learn more about the Everyday Lifesaver App.

Background

- What is your position at your organisation and how long have you been in this position?

Creation

- Why did you decide to create an app to teach children?
- Could you please speak to how the app was developed and funded?
- Who is in charge of the app now?

Objectives of the App

- How would you describe the objective of your app? Why is it structured the way that it is?

Target Audience

- Who is the target audience of your app and why?
- How is it more fitting/appropriate for Upper Primary than Prep age?

School Curriculum

- What additional skills or knowledge do students gain from your app other than water safety?
- Does the app make a connection to making any links to school curriculum?

Recent Updates

- Does LSV have any plans to update/change the app at all in the future?

Effectiveness

- What aspects of the app do you think make it successful?
- Is there anything you would like to see be added to the app/does not work as well?
- Do you have statistics or evidence to know that the app has been successful so far?
- Do you think that the MFB's Fire Ed program would benefit from creating an app that educates children on the key messages of residential fire safety as a pre-lesson to a program?

Appendix K – VCAA Roundtable Discussion Questions

This appendix presents questions created by the WPI team for representatives of the Victorian Curriculum and Assessment Authority. The purpose of this interview was to enable the WPI team to learn more about the curriculum in Victoria and how it is created.

Background

- Can you tell us a bit about your background and what you do on a day to day basis?

General

- How would you say that primary school curriculum has changed recently? Have learning expectations of Preparatory and/or Upper Primary students changed?
- Are they more or less difficult?
- What do you think students at the Prep and Upper Primary age levels can handle in terms of the appropriateness of educational content? (i.e. can children handle seeing a burning building in a video, etc.)
- How do you think technology can be used to enhance the engagement of children in their education? At what age do you think children should start using technology to enhance their education and to what lengths should they be exposed to it?
- At what age do you think children should complete assessments to see what they know and have learned? Do you think assessments help children learn? How would you suggest children be assessed on fire safety? (*Summative vs formative assessment*)
- How would you suggest the MFB incorporate fire safety into the school curriculum to engage both students and teachers?
- The MFB sent out surveys to teachers and the general response about professional development was that the teachers were not interested. How would you recommend that the MFB approach teachers professional development in relation to Fire Ed?
- How often do you believe organisations should evaluate and update their safety programs to stay current with Victorian Curriculum?

Appendix L – Fire Ed Booking Information

This appendix contains examples of documents used by firefighters to contact schools and record the booking dates and confirmations of visits.

Figure 32. School allocation list for each station

FS07 – Thomastown – Fire Ed Schools 2017					Fire Ed for Preps	Fire Ed for Upper Primary
Platoon	School	Address	Phone	School Email	Contact	Contact
7A	Reservoir Primary School	Duffy Street, Reservoir	94605798	reservoir.ps@edumail.vic.gov.au	Foundation Level Coordinator	Upper Primary Coordinator
7A	St Clare's School	Harbard Street, Thomastown West	94658535	principal@stclaresthomastown.catholic.edu.au	Foundation Level Coordinator	Upper Primary Coordinator
7A	St Joseph The Worker School	79 Wilson Boulevard, Reservoir North	94697800	principal@sjwreservoirnth.catholic.edu.au	Foundation Level Coordinator	Upper Primary Coordinator
7B	St Stephen's Primary School	71 Whitelaw Street, East Reservoir	94603566	principal@ssreservoireast.catholic.edu.au	Foundation Level Coordinator	Upper Primary Coordinator
7B	Thomastown West Primary School	Main Street, Thomastown	94654317	thomastown.west.ps@edumail.vic.gov.au	Foundation Level Coordinator	Upper Primary Coordinator
7B	William Ruthven Primary School (Merrilands College Campus)	60 Merrilands Road, Reservoir	94601668	william.ruthven.ps@edumail.vic.gov.au	Foundation Level Coordinator	Upper Primary Coordinator
7C	Lalor Gardens Primary School	134 Kingsway Drive, Lalor	9465 1351	lalor.gardens.ps@edumail.vic.gov.au	Foundation Level Coordinator	Upper Primary Coordinator
7C	St Catherine's Primary School	2 Lascelles Drive, Lalor West	94662480	principal@sclalorwest.catholic.edu.au	Foundation Level Coordinator	Upper Primary Coordinator

Figure 33. Reporting sheet 1



Fire Education Recording Sheet – Thomastown Fire Station (FS07) – 2017

	Primary School	Email Sent to School	Preps				Grade 6		
			Student Nos.	Visit 1	Visit 2	Program Complete?	Student Nos.	Visit	Program Complete?
A	Reservoir Primary School	__/03/17 __/05/17		__/__/__	__/__/__			__/__/__	
A	St Clare's School	__/03/17 __/05/17		__/__/__	__/__/__			__/__/__	
A	St Joseph The Worker School	__/03/17 __/05/17		__/__/__	__/__/__			__/__/__	
B	St Stephen's Primary School	__/03/17 __/05/17		__/__/__	__/__/__			__/__/__	
B	Thomastown West Primary School	__/03/17 __/05/17		__/__/__	__/__/__			__/__/__	
B	William Ruthven Primary School (Merrilands College Campus)	__/03/17 __/05/17		__/__/__	__/__/__			__/__/__	

COMMENTS:

Please email dates and student numbers to Community Resilience Emergency Management. Use this address: **Fire Ed-Community Resilience**

- Emails should be sent when:
- Each school is booked and AGAIN when
 - Each grade's visits are completed

Figure 34. Reporting sheet 2



Fire Education Recording Sheet – Thomastown Fire Station (FS07) – 2017

	Primary School	Email Sent to School	Preps				Grade 6		
			Student Nos.	Visit 1	Visit 2	Program Complete?	Student Nos.	Visit	Program Complete?
C	Lalor Gardens Primary School	__ / 03 / 17 __ / 05 / 17		__ / __ / __	__ / __ / __			__ / __ / __	
C	St Catherine's Primary School	__ / 03 / 17 __ / 05 / 17		__ / __ / __	__ / __ / __			__ / __ / __	
C	Thomastown Primary School	__ / 03 / 17 __ / 05 / 17		__ / __ / __	__ / __ / __			__ / __ / __	
D	Reservoir Views Primary School	__ / 03 / 17 __ / 05 / 17		__ / __ / __	__ / __ / __			__ / __ / __	
D	Thomastown Meadows Primary School	__ / 03 / 17 __ / 05 / 17		__ / __ / __	__ / __ / __			__ / __ / __	
D	Merriang Special Developmental School	__ / 03 / 17 __ / 05 / 17		__ / __ / __	__ / __ / __		Not applicable – Special School modified Prep program only		

Special School sessions - Contact Community Resilience for further information and assistance before visiting school

Please email dates and student numbers to Community Resilience Emergency Management. Use this address: **Fire Ed-Community Resilience**

Emails should be sent when:

- Each school is booked and AGAIN when
- Each grade's visits are completed

COMMENTS:

Figure 35. Platoon planner for school bookings



Fire Ed for Preps
Planner for 2017 – “D” Platoon

For the Attention of the Prep/Foundation Coordinator

To assist with the booking of the Fire Ed program for your students please nominate the dates you would like from those available listed below. To deliver the first and second visits for Preps we will require the times for both dates, as well as the number of students participating.

Note: MFB advise that preference be given to choosing dates in Terms 3 and 4 as by that time, students have settled in to school, are more mature and better able to understand the program’s key topics.

Please complete and email completed planner to (insert email address of OIC of relevant Fire Station). A member of the MFB will be in contact to confirm the dates/ times chosen

Month	Mon	Tues	Wed	Thur	Fri	Circle Date, Times a.m./p.m. Indicate Grade and student numbers
February			21	22		
March			1	2		
				9	10	
					17	
April		18	19			
			26	27		
May				4	5	
					12	
	29					
June	5	6				
		13	14			
			21	22		
				29	30	
July	24					
	31					
August		1				
		8	9			
			16	17		
				24	25	
September					1	
	18					
October			11	12		
				19	20	
					27	
November	13					
Days available for Fire Ed = 40						
School name						
Address						
Contact name						