



## CITY OF TACOMA

University of Washington Tacoma  
Institute of Technology  
TINFO 230 / TINFO 370  
Web Design and Programming  
Managing Technical Teams  
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# PREVENTABLE CAUSES OF STRUCTURE FIRE AWARENESS & EDUCATION



## Introduction

Established in 1881, the Tacoma Fire Department services its community by continually developing advanced and approachable safety strategies that it communicates to the public. The goal for the project is to create an educational web-based product on preventable structural fires, which will foster engagement, awareness, and knowledge in the greater Tacoma community. The students of TINFO 230/370 hope that this web-based application training will help the community to avert high cost property damages, and to keep its citizens and community service officers safe.



UWT Institute of Technology student Derek Miller, lead developer of the online fire safety application, instructs Boze Elementary's fifth graders on how to use the app. Photo Credit: Jessica Singo

## Methods & Approach

As the world continues to advance its focus on technology, fire safety training programs have an opportunity to better utilize technology in their community training efforts. After attending meetings with the local fire department and performing research on three different demographic focus groups, the students team began prototyping web applications for fire safety and structural fire prevention. A major focus for the team was the goal of strengthening the connection between the Tacoma Fire Department and local elementary schools. We are currently developing a web application that engages students in Tacoma Fire Department fire prevention teachings. This web application reiterates Tacoma Fire Department safety lessons through a user-friendly interface that rewards students for their participation and completion of training.



A local fire fighter interacts with Boze Elementary's fifth graders after demonstrating the safety features of his uniform and gear. Photo Credit: Jessica Singo

## Initial Findings

After gaining feedback on a series of prototypes from both the Tacoma Fire Department and Boze Elementary School's fifth graders, we realized that the application will be most engaging if it is gamified, thereby making it both educational and entertaining. A question that arose during prototyping was whether the activities might be too challenging for the target age group. Fortunately, in our first testing at Boze Elementary School, there seemed to be alignment of student abilities and concept difficulty. The focus group rated the application highly and, using the gamified web application, requested further teaching on fire safety and prevention. For the final iteration of the product, the students will deliver an application that will provide rewards to students for their

participation by connecting them with their local fire department. Our hope is that this fosters a more connected Tacoma community that is educated and involved in fire safety.



A local fire fighter explains the instruments and controls on the fire engine to Boze Elementary fifth graders Photo Credit: Jessica Singo



Fire Fighter Badge

Credit: Jessica Singo

Fire fighter badge graphic created for the online fire safety activities application.