



# ENGINEERING IN THE FIREHOUSE

OVERVIEW

3RD - 5TH GRADE



## STEAM WORKSHOP - ENGINEERING

This STEAM Workshop is a program designed for 3<sup>rd</sup> - 5<sup>th</sup> grade students. It teaches fire preparedness and problem solving through an engineering lens. It is a great way to build on fire safety basics and also learn a little engineering in the process. Through this class students will learn the aspects that can impact a fire's severity, as well as the technology that has developed to keep citizens and fire fighters safe.



## 2 HOUR SESSION OVERVIEW

### Lesson 1: Aspects of Fire Behavior

- Students will learn the complex nature of how fire burns. Through analysis of the important aspects of fire, fire fighters are able to create more safety regulations and equipment.

### Lesson 2: Engineers are problem solvers!

- Students will learn the problems that firefighters faced throughout history and today. They will have a chance to problem solve an experiment in a group activity that will show the steps of the Engineering process. This class will help students understand the benefits of engineering and how it has changed firefighting over the years.

### Lesson 3: Layers of Fire Prevention

- Students will learn the basics of fire prevention and safety. This is broken down into 6 layers, Prevent, Detect, Escape, Contain, Extinguish, Stability. Engineers study the 6 layers of prevention to better serve fire fighters and the communities they protect.

## CONTACT

📞 (303) 892 - 1432

✉ Educator@denverfirefightersmuseum.org

📍 1326 Tremont Place  
Denver, CO 80204

🌐 <https://denverfirefightersmuseum.org/>





# COLORADO ACADEMIC STANDARDS

The STEAM Workshop Presentations meets, but is not limited to, the following Colorado Academic Standards for Students 3<sup>rd</sup> grade - 5<sup>th</sup> grade.



## STANDARDS MET

### Comprehensive Health

#### Standard 4: Prevention and Risk Management

- Identify ways to prevent injuries at home, in school, and in the community.
- Demonstrate basic first aid and safety procedures.

### Drama and Theatre Arts

#### Standard 3: Critically Respond

- Connect artistic experiences to our world; past, present, and future.

### Mathematics

#### Standard 3: Data, Statistics, and Probability

- Represent and interpret data.

### Physical Education

#### Standard 3: Social and Emotional Wellness

- Work cooperatively and productively in a group.

### Reading, Writing and Communicating

#### Standard 4: Research Inquiry and Design

- Participate cooperatively in group activities.
- Gather, interpret, and communicate information discovered during short research projects.

### Science

#### Standard 1: Physical Science

- Energy can be moved from place to place.
- Chemical Reactions that occur when substances are mixed can be identified by the emergence of substances with different properties

#### Standard 3: Earth and Space Science

- A variety of weather hazards result from natural process; humans cannot eliminate weather-related hazards but can reduce their impacts.

### Social Studies

#### Standard 1: History

- Identify how people in the past influence the development and interaction of different communities or regions.

#### Standard 2: Geography

- Examine the relationship between the physical environment and its effect on human activity

