



# FIRE SCIENCE 101 STEAM WORKSHOP

OVERVIEW

1ST - 3RD GRADE



## STEAM WORKSHOP - FIRE SCIENCE 101

This STEAM workshop is a program designed for 1<sup>st</sup> - 3<sup>rd</sup> grade students. It teaches fire science from the basics of the fire triangle, to at home fire prevention. It is a great way to build on fire safety beginnings and also learn a little science in the process. The workshop duration is 2 hours (120 minutes). Each student will leave with a stronger knowledge of fire safety behaviors and a greater understanding of the science behind fire and how it works.



## 2 HOUR SESSION OVERVIEW

### Segment 1) What is Fire?

- Students will learn how past firefighters fought fire, and how that compares to today. They will also be introduced to the Fire Triangle, and how we can use those elements to put out fires.

### Segment 2) Fire as a Chemical Reaction

- Students will discover what chemical reactions are, and how they differ from physical reactions. They will then explore how fire acts as a chemical reaction.

### Segment 3) Types of Fires and putting them out

- Students will go over the types of fires that firefighters encounter, and how to put them out. They will also discuss wildfires and how to camp in a fire safe way that leaves no risk behind.

### Segment 4) Fire Safety Behaviors

- Students will wrap up the workshop by linking various fire safety behaviors to the fire science concepts they studied during the workshop.

## CONTACT

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# COLORADO ACADEMIC STANDARDS

The STEAM Workshop Presentations meets, but is not limited to, the following Colorado Academic Standards for Students 1<sup>st</sup> Grade - 3<sup>rd</sup> Grade:

## STANDARDS MET



### Comprehensive Health

#### Standard 4: Prevention and Risk Management

- Apply fire safety knowledge and skills to prevent injury to themselves or others.
- Demonstrate strategies to avoid hazards in the home and community that can lead to fire injuries.

### Drama and Theatre Arts

#### Standard 1: Create

- Participate in skits to practice fire safety behaviors.

#### Standard 3: Critically Respond

- Evaluate lesson imagery and determine facts about its content.

### Mathematics

#### Standard 4: Geometry

- Understand the fire triangle and its components.

### Physical Education

#### Standard 3: Social and Emotional Wellness

- Follow the rules of group activities.

### Reading, Writing and Communicating

#### Standard 1: Oral Expression and Listening

- Engage in dialogue and learn new information through active listening
- Participate cooperatively in group activities.
- Communicate using appropriate language in informal and formal situations.

### Science

#### Standard 1: Physical Science

- Fire exists as a different state of matter than, liquid, gas or solid.

#### Standard 3: Earth and Space Science

- Fire can double in size every 30 seconds.
- A variety of weather hazards result from natural process;
- Wild fires can be detrimental to an ecosystem and terrain.

### Social Studies

#### Standard 1: History

- Ask questions and discuss ideas about the history of firefighting and how it has improved over time.

#### Standard 2: Geography

- Explain how people in communities make their world more fire safe.

#### Standard 4: Civics

- Investigate ways in which fire safety ideas and actions can improve communities.
- Explain the role that governments and city entities have on helping communities stay fire safe.

