DOLLHOUSE FIRE BEHAVIOR PROP

Impact of Ventilation on Fire Behavior

Instructor Guide



Lesson Plan

In this lesson, participants will enhance their understanding of how different types of ventilation impact fire behavior through a visual demonstration on a Dollhouse Fire Behavior Prop.

Big Picture

Any action you take on the fireground that impacts an opening, whether it is forcing a door for entry or breaking a window for search, can alter the ventilation profile and therefore the fire's growth and spread.

Prop Information

A Dollhouse Fire Behavior Prop is a great way for participants to visualize fire behavior concepts and tactics on a small scale for enhanced understanding. Consideration should be given to the fact that this is a small-scale prop, and fire may react more quickly than it would on the fireground. The Dollhouse Construction Plans and Basic Assembly Instructions and Build video can be found online at training.fsri.org/resources or by clicking the links below.

Download the Construction Plans

Watch the Build Video

Background Information

In order to fully understand the topics presented in this lesson, participants should have a solid understanding of how oxygen impacts a fire. It may also be helpful for participants to understand your department's policies related to the types of ventilation and coordination with suppression.

Watch the Demonstration

Key Takeaways

- Controlling ventilation is key to controlling the growth and spread of a fire.
- Coordinating ventilation and suppression actions is imperative to an effective fire fight.
- No matter the location of the ventilation opening, if it is connected to the fire room via a flow path, the addition of oxygen will cause the fire to grow and will transport heat and smoke to that space.

Discussion

After viewing the demonstration, consider the following topics to engage your participants in a discussion.

- Discuss examples of planned and unplanned ventilation and how your department's policies address these situations.
- Discuss the intersection of your department's ventilation, suppression, and search policies.
- Practice predicting where a fire will move (or not move) depending on different fireground actions.

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