DOLLHOUSE FIRE BEHAVIOR PROP

Fundamentals of Fire Behavior

Instructor Guide



Lesson Plan

In this lesson, participants will enhance their understanding of the fundamentals of fire behavior through a visual demonstration on a Dollhouse Fire Behavior Prop.

Big Picture

It is imperative for firefighters to understand how a fire grows and spreads in order to be effective on the fireground. Seeing fire behavior play out under these controlled conditions will deepen their understanding of fire behavior and help them make connections to what they see on the fireground.

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 the fire tetrahedron, the stages of fire development, and flow paths.

Watch the Demonstration

Key Takeaways

- Due to the fuels in today's fireground, a structure fire is almost always a ventilation-limited fire and may have multiple growth and decay stages due to available oxygen.
- Smoke is fuel and can create hazardous situations such as vent-point ignition, which can cause fire or flame spread.
- Even when the ventilation opening is far from the seat of the fire, ventilation does not equal cooling.

Discussion

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

- Ask your participants if they were surprised by the temperature data that showed such significant differences between isolated and non-isolated compartments. Discuss what that means for their actions on the fireground.
- Discuss the visual cues that were present in this demonstration to indicate isolation of a compartment, flow paths, and/or the fire's location and what this means for firefighting activities.
- Ask your participants about a time they saw vent-point ignition on the fireground. What did it mean for the fire? How was it addressed with fireground actions?

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