

Explore Wildfires!

phenomenal science

From **Sunday, September 2nd to Wednesday, September 5th 1666**, a fire consumed London's central district. It destroyed over 70,000 houses, 87 parish churches, and the famous **St. Paul's Cathedral**. Many Londoners were left homeless, injured, or both. The fire started at a bakery on Pudding Lane a little past midnight, then fanned out into a full fire storm by daybreak. The combination of high winds, closely-clustered buildings, and human error created one of the most infamous fires in history: **The Great Fire of London**.

Looked upon with fear and awe, fire's impact on humankind is undeniable. *Fires are often so powerful that they are capable of creating their own weather system.* The heat from a wildfire can create wind vortices and fire tornadoes powerful enough to uproot and spit them a mile away. Due to the dangerous, unpredictable nature of wildfires, it is important to understand how a fire starts, grows, and dies.

A fire starts with access to three elements: **fuel, oxygen,** and a **heat source**. These three factors compose the **Fire Triangle**. For example, if you wanted to build a campfire, you would need a match (*heat source*), firewood (*fuel*), and an open pit (*access to oxygen*). A fire that has easy access to these three things, combined with the right weather and topography, can quickly spread into a wildfire. The only way to stop a fire is by removing one or more factors from the **Fire Triangle**. For example, you can take away a fire's access to oxygen by smothering it with water or dirt, thereby extinguishing the fire.

Tightly-packed buildings and high winds, combined with human error, are what made **The Great Fire of London** disastrous. In 1666, people didn't have the fire safety technology that we have now. Today, people have access to modern extinguishers, hydrants, and firefighters prevent major fire disasters.

Fire safety continues to save millions of lives and prevent events like **The Great Fire of London** from repeating. Today, human error is responsible for *four out of five wildfires*. With persistent fire education and safety, many wildfires are preventable.

Historical Fires

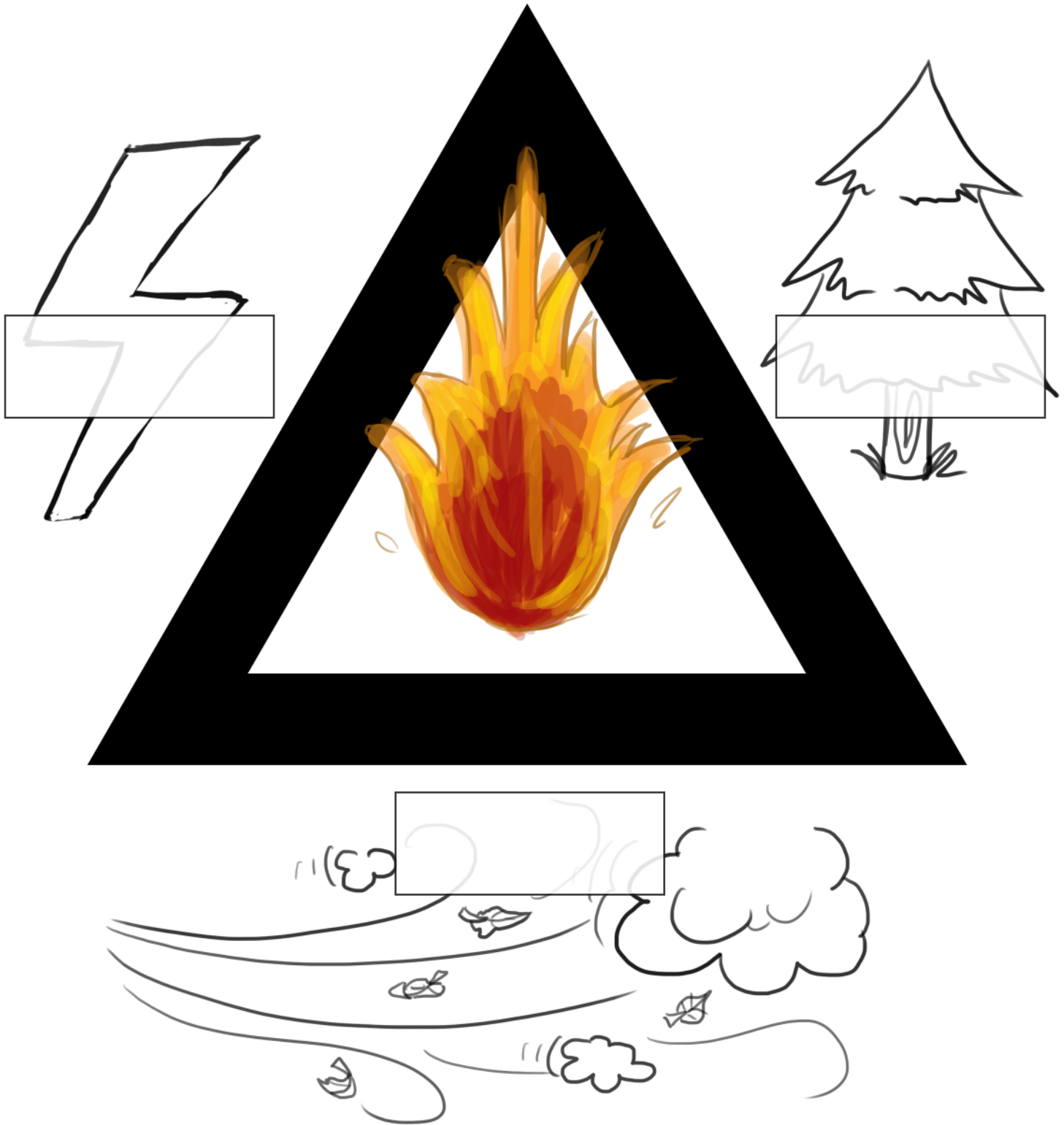
- 1666** **Great Fire of London**
The Great Fire of London destroyed 70,000 homes within three days, gutting the city's center.
- 1825** **Great Miramichi Fire**
These massive forest fires destroyed nearly 4 million acres of forest and residence.
- 1988** **Yellowstone Fire**
This historical fire continued to burn for several months after it sparked, affecting 36% of Yellowstone Park.
- 2003** **The Cedar Fire**
This human-caused wildfire burned over 280,000 acres and killed 15 people within two weeks before being contained.

Safety Tips

- 1 Never leave a fire unattended.
- 2 Find out if your area is prone to wild fires.
- 3 If your clothing catches fire, stop, drop, and roll.
- 4 Prepare a disaster kit in case of future emergencies.
- 5 Check if your garden hose can reach around your house.
- 6 If advised to evacuate, do so immediately.
- 7 Never play with fire.

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Using information provided by the article, correctly identify each element of the *Fire Diagram* above.