

*Explore the Great Fire of London through live fire science demonstrations, history, the Christian faith and the eyewitness account of Samuel Pepys, on the sites where he lived and worshipped.
Free family event for all ages.*



Faith & Fire Discovery Day

Saturday 5th September 2026
12pm-5pm

Fire has shaped our city, our stories and our understanding of the world. Join us to explore the Great Fire of London through history, science and faith. What will you discover today?



EQUIPPING
CHRISTIAN
LEADERSHIP in an
AGE of
SCIENCE



SAINT
OLAVE
HART STREET

Faith & Fire Discovery Day at St Olave Hart Street

Meet Samuel Pepys
in his “own church”!

Dress up as Samuel and Elizabeth Pepys.
Have your photo taken with him! Have a go at the shorthand he used to write his famous diary.

Stand in a
Great Fire survivor

Explore a church that survived the Fire of 1666.
Stand in Pepys’ footsteps. Visit the Vestry and Crypt that survived the Great Fire and the Blitz.

Discover how people
responded

Through songs, sermons and a historic Great Fire anniversary service book.

Join the experiment!
Cast your vote!

What does fire mean to you, which biblical image speaks to you most? Write or draw your own responses to fire, faith, science and rebuilding.

Faith & Fire Discovery Day in Seething Lane Gardens

See Fire Science
in action!

Watch live fire demonstrations with Professor Guillermo Rein and his team outside the church.

Faith & Fire Discovery Day at All Hallows by the Tower

See the Fire through
Pepys’s eyes!

Climb up to the Porch Room and look out towards the City from the church where Pepys watched the Great Fire spread.

Step into Pepys’s
London

Dress up as Samuel or Elizabeth Pepys. Have a go at the shorthand he used to write his famous diary.

Explore fire from
different angles

Thought-provoking displays exploring the Great Fire through the lens of history, science and faith.

Professor Guillermo Rein and the Hazelab

Professor Guillermo Rein leads Hazelab, Imperial College London's fire science research group, exploring how fires start, spread and behave and how understanding fire can help make communities safer. Visit our Fire Science Stations today:

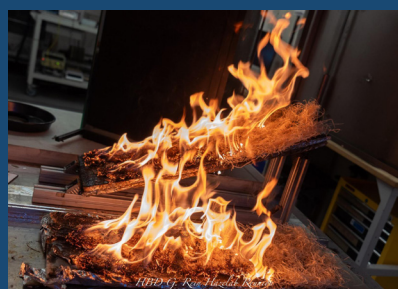
SIROCCO — What difference does the environment make? Watch identical fuels behave differently when airflow changes — even producing a miniature fire whirl.

SPREAD I — Why does moisture matter? Compare fire spreading through dry and damp vegetation.

SPREAD II — Why does fire travel faster uphill? See how slope brings flames closer to the fuel ahead.

FIREBRANDS — How can fire jump ahead? The Imperial Dragon creates burning embers to demonstrate “spotting” — important in wildfires and in the Great Fire of London.

ACM PANEL — When does a material become flammable? See how the same modern building material responds differently depending on where fire reaches it.



Photography and filming

Our photographer will be taking photographs and filming during the day. These may be used to create a video resource for future school visits and to share the Faith and Fire project. If you would prefer not to be photographed or filmed, please let our photographer know.

Please do share your own pictures and reflections from today with us!

Visit our Fire Science Stations on Seething Lane, the site of Pepys's home

Sirocco: What is the effect of the environment where a fire burns?

This demonstration compares two fires burning the same liquid fuel: heptane, a laboratory grade equivalent of petrol. The first flame burns in the open, where hot air rises and fresh air is drawn in from all sides. The second burns inside a box that is open at the top and has narrow openings on the sides. Instead of flowing in evenly, the incoming air begins to rotate, creating a small fire tornado known as a fire whirl. The spinning air supplies the flame with more oxygen and improves the mixing of fuel vapour and air. As a result, the flame becomes taller and brighter, and the fuel burns out more quickly.

This experiment shows that the environment around a fire, and the way it controls airflow, can dramatically change fire behaviour, even when the fuel is the same.



Visit our Fire Science Stations on Seething Lane, the site of Pepys's home

Spread I: What is the effect of vegetation moisture on a fire?



This demonstration compares two identical beds of thin vegetation (wood shavings). One is left very dry, while the other is lightly sprayed with water before ignition.

The dry vegetation ignites easily, and the flames spread quickly across the fuel bed. The wet vegetation is harder to ignite, and the flames spread more slowly because

part of the heat from the fire is first used to evaporate the water rather than further increasing the temperature of the nearby vegetation. This delays ignition and slows the advance of the flames.

This experiment shows why dry vegetation sustains much faster wildfires than moist vegetation, even when everything else is the same.

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Spread II: What is the effect of slope on a fire?



This demonstration compares two identical beds of thin vegetation (wood shavings). One is placed horizontally, while the other is placed on an upward slope. Both are ignited at one end. On level ground, the flames spread steadily across the vegetation.

On the other bed, the flames are closer to the vegetation upslope, heating it more strongly.

As a result, the fire spreads much faster uphill.

This experiment shows why wildfires can accelerate rapidly when they encounter a slope, even when everything else is the same.

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Firebrands: How can a fire spread ahead of the flames?



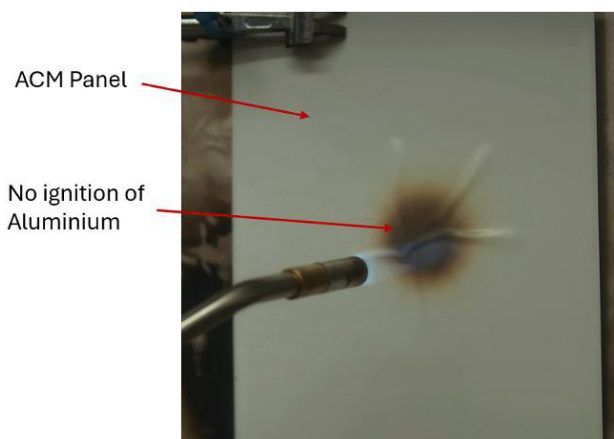
This demonstration shows how firebrands, small pieces of burning material, can carry fire through the air. During a wildfire, burning pieces of vegetation can be lifted by the smoke and carried by the wind over significant distances. When they land, they can ignite vegetation, buildings or other fuels far ahead of the flames. This process, known as spotting, allows a fire to jump across roads, rivers and highways, making its spread much faster and more difficult to manage.

Firebrands were also an important mechanism of fire spread during the Great Fire of London.

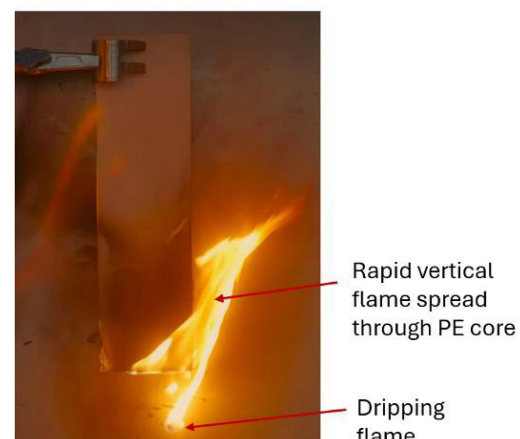
This experiment uses a device called the Imperial Dragon, which generates burning embers and releases them into an airflow, making this important mechanism of fire spread visible.

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ACM Panel: Does the flammability of a material depend on the direction of the fire?



a) Behaviour of ACM when exposed to a flame on front.



b) Behaviour of ACM when exposed to a flame from the side.

This demonstration shows the complexity of modern materials such as aluminium composite material (ACM) panels and how the same material can respond very differently to fire depending on how it is exposed. ACM has been widely used on the exterior walls of buildings around the world, including in the UK. The panel has two thin layers of aluminium with a combustible plastic (polyethylene) core between them.

When a flame is applied to the aluminium surface, very little happens because the metal protects the plastic inside. However, when the flame reaches an exposed edge, the plastic core can ignite and continue to burn.

This experiment shows that the flammability of a material depends not only on what it is made of, but also on how its components are arranged and the direction from which the fire reaches them.

Science, faith and the Great Fire of London

Science and faith work in different ways, but both contribute to protecting life and building more resilient communities. Science and engineering give us hope through understanding. By understanding fire, we can limit its consequences and design safer communities. Faith strengthens the human dimension of resilience — bringing people together, encouraging care for one another and sustaining the conviction that rebuilding is worthwhile.

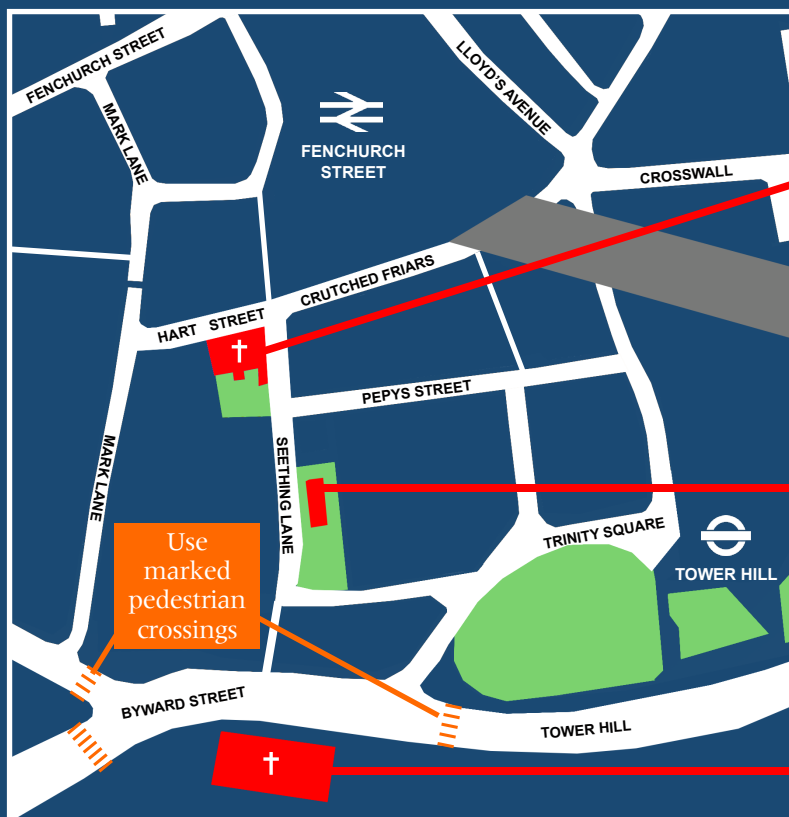
Science tells us what happened and how to do better. Faith reminds us why it matters, and gives us the strength to keep going together. The Great Fire can be both a case study and a parable — a story from which we can learn:

What happened? Why did it happen?

What can we do better?

What kind of community do we want to become?

Follow Samuel Pepys on a Great Fire walk....



St Olave Hart Street
8 Hart Street, EC3R 7NB
www.saintolave.com

Pepys' "own church" - and his burial place. The church survived the Great Fire. Activities and displays in church and the churchyard.

Seething Lane Gardens
Visit the site of Pepys' home.

All Hallows by the Tower
Byward Street, EC3R 5BJ
www.ahbtt.org.uk

Pepys watched the Great Fire here and recorded what he saw. Activities in the Porch Room.



Thank you for visiting! Let us know what you have discovered! Please contact us if you have any questions or know of a schoolteacher who would be interested in arranging a visit here with their class in the future.