

FIRE

From 10 April 2018 to 6 January 2019
At the Cité des sciences et de l'industrie

“A few months after the opening of the exhibition on cold, things are hotting up at the Cité des sciences et de l'industrie with a new exhibition: Fire. Once again, the aim is to explore a phenomenon that has fascinated humanity since the dawn of time; one that humans have always sought to master. An accidental fire at the Cité in the summer of 2015 sparked the idea for the exhibition. It is a way for us to ‘tame’ that kind of fire and, in doing so, pay tribute to those who devote their lives to fighting it. That is why we are particularly proud that the military fire service in the French capital has agreed to act as the scientific partner of this unique, original exhibition.”

Bruno Maquart, Chair of Universcience

Mastering fire has been crucial for humanity. It has driven radical change in our everyday lives and thinking. Our relationship with fire has evolved over time. Still today, it is both fascinating and frightening, conjuring up images of heat, vitality, well-being, creation, progress and technology, but also danger and destruction.

The Fire exhibition presented at the Cité des sciences et de l'industrie from 10 April 2018 to 6 January 2019 explores the theme of humanity's mastery of fire. Aimed at visitors from age 9 upwards, it features audio and video installations, multimedia systems and interactive experiences, as well as many other exhibits, an investigation game and a smoke room, which aim to increase our visitors' knowledge and deconstruct preconceptions.

In partnership with the Brigade de sapeurs-pompiers de Paris.

TAMING FIRE

How did humanity discover and domesticate fire? What did the discovery of fire bring to people? The first part of the exhibition examines the empirical mastery of fire by prehistoric humans. The first evidence of the appearance and use of fire by human communities dates back 400,000 years. It immediately became an essential asset: on the one hand in everyday life, providing lighting and heating, and enabling cooking; on the other in social organisation, cycles of life and communication. The role of fire as a tool to transform matter is also underlined. Such transformation has always been associated with human technical ingenuity in the field of arts and crafts. Here, visitors discover a number of myths and legends related to fire, as well as fire rituals and celebrations all over the world.

UNDERSTANDING FIRE

What is fire? What are today's issues related to it and what are the prospects for the future? Why is there research into combustion and flames? What are scientists looking for?

In this second section of the exhibition, we learn about the scientific and industrial appropriation of fire. Although there has been a scientific fascination with fire since ancient times, our understanding of the phenomenon is quite recent. Fire is linked to a chemical oxidation-reduction reaction called ‘combustion’ which requires three components (fuel, an oxidant and energy to ignite them). The exhibition explains what flames really are by exploring their physical and chemical characteristics.

It was not until the end of the 18th century that humanity realised it could turn the heat released by fire into driving force. Use of this driving power created by fire was a crucial factor in the development of our ‘thermo-industrial’ society.

The exhibition also looks at the darker side of fire. The massive use of combustion is largely responsible for high levels of CO₂ in the atmosphere and, consequently, the phenomenon of climate change. All combustion also emits tiny particles that harm health and the environment. Combustion physicists make efforts to improve combustion efficiency by reconciling environmental, energy and economic constraints. Visitors are encouraged to think about these issues and the solutions we need to apply to reduce the impact of human activities.



**For visitors aged 9 and over /
Translated into English
and Italian**

EVENT

Call the firefighters! 14 and 15 July 2018

To accompany the Fire exhibition, Universcience is organising an original event with the participation of the Brigade de sapeurs-pompiers de Paris (BSPP – Paris military fire service) on 14 and 15 July 2018.

On the evening of Saturday 14 July, a traditional Bastille Day's Eve firefighter ball will be held in the heart of the Cité for the first time. The building will be dressed up in blue, white and red to welcome the public to a festive popular celebration.

On Sunday 15 July, the firefighters will be introducing visitors to their jobs. The day's programme for young and old will include activities presenting ladder use, hose operation, acrobatic gymnastics and abseiling, not to mention workshops passing on safety tips, and many other surprises.

FIGHTING FIRES

What are destructive fires? How do they spread? How can we prevent them and protect ourselves? How can we fight fires?

The third and final part of the exhibition looks at destructive fires and how humans try to get them under control. Here, visitors learn about the different stages of a fire, as well as prevention and protection resources.

A few examples are presented, looking at great fires that have gone down in history and contributed to changes in our way of planning and building our cities and organising firefighting. Urban fires have evolved with constraints imposed by the expansion and densification of our cities, as well as new construction materials. Visitors also discover that forest fires can have a positive impact on some ecosystems.

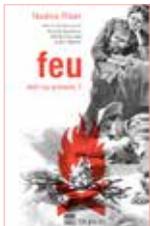
They learn about the three ways in which fire spreads –through conduction, convection and radiation– and their importance in firefighting. Physicists, engineers and ecologists try to gain a better understanding of the behaviour of fire in the course of destructive blazes. They construct fire-simulation models that serve as valuable prevention and information tools. In this part of the exhibition, among other things, a post-fire investigation adds to the public's knowledge of fires, facilitating prevention, providing information and explaining how to fight fires.

Finally, the exhibition reveals the huge variety of tools and objects developed in the fire-safety and engineering sector. Visitors can 'step into the shoes' of a firefighter and find out about their often very stressful working environment. Fire can also be used to fight fire! In this last section, visitors learn what to do if there is a fire, a few simple ways of protecting themselves from smoke (the main danger) and why water remains the main weapon in firefighting.

LINKED TO THE EXHIBITION

Ciudad Quemada – Burnt City, 2018, Roberto Diago

Until the *Fire* exhibition closes, the Cité des sciences et de l'industrie's entrance hall is hosting an installation by the artist Roberto Diago. *Ciudad Quemada* was presented in the Cuban Pavilion at the 57th Venice Biennale art exhibition in 2017.



Fire: friend or foe? The exhibition book

Éditions Dunod / Cité des sciences et de l'industrie. Nadine Ribet. Together with Vincent Bontems, Danièle Escudé and Éric Rigolot.

The book uses thirty-one keywords to explain fire in its every historical, scientific, philosophical and cultural dimension.

Two exclusive products

Objects and works related to the Fire exhibition are on sale in the gift shop of the Cité des sciences et de l'industrie, including two exclusive items produced by Universcience: a box of giant matches and an oven glove decorated with the chemical formula of combustion.

Practice informations

Cité des sciences et de l'industrie

30, avenue Corentin-Cariou - 75019 Paris
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Opening times

Open every day except Mondays from 10 am to 6 pm, and to 7 pm on Sundays.

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cite-sciences.fr

Ticket prices

Full €12 – Reduced: €9 (over 65s, teachers, 2-25s, large families and students).

The ticket includes admission to the Argonaute and the Planetarium.

→ Free for the under 2s, job seekers and benefits recipients, and people with disabilities including their companion.

This exhibition is part of the editorial line **Get Your Hands Dirty / Technical Genius at Work**.

The programme category includes exhibitions that explain technical skills, showcase industrial innovation and creativity, and introduce engineering sciences. The aim is to X-ray, strip down and understand any object of high user value made by humans or machines. For those not afraid to get their hands dirty!



In partnership with



SIEMENS



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#ExpoFeu