



# Bright sparks

Statement	Answer - true or false
The great fire of Rome which started on the 19 <sup>th</sup> July 64 AD, took 6 days to extinguish.	<b>True</b> The fire left more than 70% of the city in ruins.
Most of the fuels we use to make fire get their energy from the sun.	<b>True</b> Much of the fuel we use to make fire is in the form of fossil fuels, that used the energy of the sun as either a primary or secondary energy source. For example, trees and plants that slowly turned into coal and oil, harnessed energy from sunlight and turned it into chemical energy through the process of photosynthesis.
Fires can burn on the planet Jupiter.	<b>False</b> Earth is the only known planet where fire can burn. Jupiter's atmosphere is composed of 90% hydrogen, and 10% helium. Burning is a chemical reaction between substances, usually including oxygen, that produces heat and light energy. On earth, hydrogen burns because it combines with oxygen. There's no oxygen to fuel a fire on Jupiter.
Humans have been using fire for as long as 200,000 years.	<b>False</b> Humans have used fire for much longer than 200,000 years. Scientists believe that humans have been using controlled fire for about 1 million years.
The Olympic torch is lit using a mirror.	<b>True</b> Ancient Greeks used parabolic mirrors (a mirror with a concave reflective surface) to focus the sun's rays in order to start a fire. This technique is still used today to light the Olympic torch.
The Great Fire of London ended the last major outbreak of the bubonic plague in the city.	<b>True</b> In 1666, the Great Fire of London destroyed 80 percent of the city and killed the rats and fleas that spread the bubonic plague. Unfortunately, it also killed more than 65,000 people.
A fire requires fuel, oxygen, and heat to burn.	<b>True</b> Without all these elements of the fire triangle, a fire cannot start.
People have used signal fires and smoke signals to 'talk' to each other for centuries.	<b>True</b> Signal fires and smoke signals are some of the earliest forms of communication as they could be used over a long distance. This communication method has been used across the world including China, North America, and Greece. Beacons or fire beacons were lit at well-known locations on hills or high places to transmit news, signal danger, or gather people together. The signal was given by smoke during the day and by light during the night.



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Spontaneous combustion, a situation in which something suddenly starts to burn without any obvious cause is not real.	<p><b>False</b></p> <p>Spontaneous combustion is real. Some fuels can get hot enough on their own without any obvious cause and start to burn.</p> <p>For example, pistachio nuts have a lot of natural oil which can lead them to spontaneously combust. Haystacks, compost heaps, flour and piles of newspapers and magazines can also spontaneously combust.</p>
Fire flames can be different colours.	<p><b>True</b></p> <p>The colour of flames depend on the substance being burned.</p> <p>Most wood fuels burn with an orange flame as they contain sodium, which, when heated, emits orange light.</p> <p>Carbon and hydrogen burn with a blue/violet flame.</p> <p>Lithium burns with a red flame.</p> <p>Copper burns with a green/blue flame.</p> <p>Oxygen supply influences the colour of the flame. A low-oxygen fire will give off a yellow glow. A high-oxygen fire burns blue.</p> <p>Candle flames burn blue at the bottom because that's where they have access to the most oxygen, and yellow at the top because the rising smoke from below partly suffocates the top part of the flame.</p>
Candle flames don't get very hot.	<p><b>False</b></p> <p>A candle flame burns at around 1,000 degrees Celsius (1800 Fahrenheit).</p>
Fires can be stopped in 3 different ways.	<p><b>True</b></p> <ol style="list-style-type: none"> <li>1. Removing the fuel source by exhausting it or taking it away.</li> <li>2. Removing the oxygen by smothering the fire.</li> <li>3. Removing the heat by absorbing it with water or other non-flammable material.</li> </ol>
Some wildfires can have a beneficial effect on the natural environment.	<p><b>True</b></p> <p>Naturally occurring wildfire and controlled burns play an important role in nature. They burn dead and decaying matter, returning nutrients to the soil. They act as a disinfectant, removing diseased plants and harmful insects from an ecosystem.</p> <p>Wildfire thins out forest canopies and undergrowth so sunlight can reach the forest floor and allow a new generation of seeds to grow. Some species of trees, like sequoias, rely on fire for their seeds to open.</p>
Witches were the only criminals to be burned at the stake.	<p><b>False</b></p> <p>Burning at the stake, a method of execution that was practiced in the ancient Middle East and later adopted in Europe and North America. As well as witchcraft, burning at the stake was used for a wide range of offences including treason (the crime of betraying one's country, especially by attempting to kill or overthrow the sovereign or government) and heresy (opinion or belief that is the opposite of or against what is the official or popular opinion).</p>



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If you discover a wildfire you should try to put it out.	<p><b>False</b></p> <p>If you discover a wildfire, you should:</p> <ol style="list-style-type: none"> <li>1. Get to a safe place.</li> <li>2. Ring 999 and ask for the Fire and Rescue Service.</li> <li>3. Tell them the location, size, and any other relevant information about the fire.</li> </ol>

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