

World's first underground railway marks 150th birthday

On January 9, 1863, the world's first underground train pulled out of Paddington station on its first passenger journey, travelling 3.5 miles (5.6km) under the streets of London to Farringdon Street in the heart of the city – and into the record books

METROPOLITAN RAILWAY TANK LOCOMOTIVE

Steam: Diverted from cylinders through pipe to water tank

Classic underground steam locomotive built in 1866, fitted with water tanks that act as condensers to limit smoke emission in tunnels

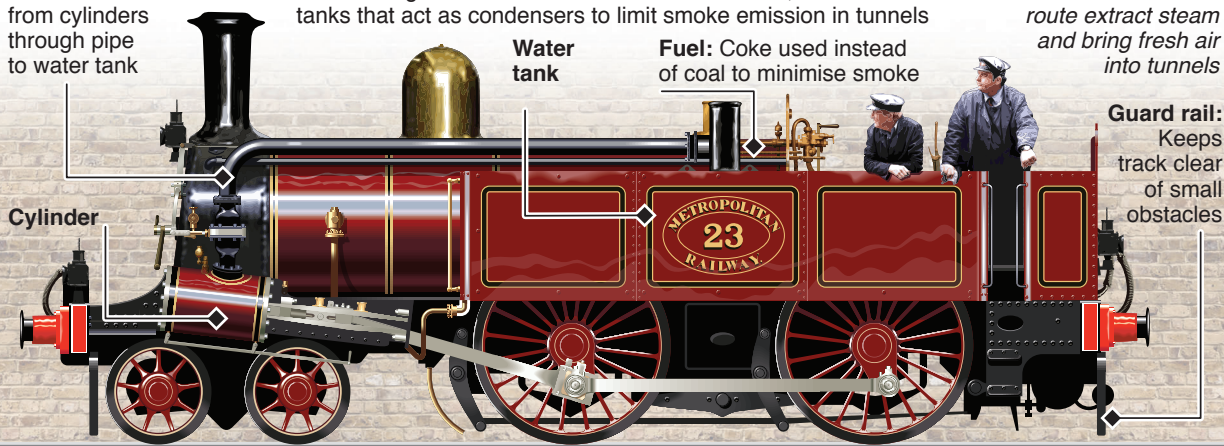
Ventilation shafts on route extract steam and bring fresh air into tunnels

Cylinder

Water tank

Fuel: Coke used instead of coal to minimise smoke

Guard rail: Keeps track clear of small obstacles



Inner Circle:
Completed 1884

TIMELINE

■ **1845: Charles Pearson**, Solicitor to City of London, proposes underground railway to bring passenger and goods services into business district

■ **1863:** Metropolitan Railway opens – 26,000 passengers travel each day in first six months as line proves hugely successful

■ **1870:** First tunnel under river built using circular shield lined with segmental cast-iron rings

■ **1890:** First deep-level electric railway line opens. Network becomes known as **Tube**



■ **1908:** First version of famous bar and circle "roundel" logo introduced on station nameboards

■ **1933: Harry Beck's** iconic tube map becomes instant popular classic



■ **1938:** New rolling stock design introduces classic London tube train



CUT AND COVER: Line built mostly by hand by over 2,000 workers, digging shallow cutting for track before roofing it over to form tunnel



■ **1939-45:** Thousands of Londoners shelter in tube stations during wartime bombing



■ **1969:** New Victoria line is world's first computer controlled metro system



■ **1983:** Introduction of zonal fares and travelcard

■ **1987:** Escalator fire at King's Cross station kills 31 people

■ **2005:** July 7 suicide bomb attacks on three tube trains and a bus kill 52 people in London's worst terrorist attack

■ **2011:** Work on Crossrail starts – new east-west line below central London with Underground interchange. Due to open in 2018

■ **2013: London Underground celebrates its 150th anniversary**

TUBE TODAY

■ World's third largest metro system after Shanghai and Seoul, with 402km of track serving 270 stations

■ Europe's third busiest metro system after Moscow and Paris, transporting more than one billion passengers each year

