

Wander past the historic remains of St. Mary's Abbey, to view the latest addition to York Museum Gardens.

This beautiful new artwork – a 4m x 4m walk-on pebble mosaic – depicts the Yorkshire section of William Smith's famous geological map of 1815.



A section of Smith's map, with Yorkshire outlined in black.

Artist Janette Ireland used many imaginative devices – including fossils, both real and formed from pebbles, discarded stone from the minster and tiny millstones made of millstone grit – to represent the ideas which Smith was demonstrating in his map.

The walk-on mosaic map was commissioned jointly by the Yorkshire Philosophical Society and York Museums Trust in 2015. It represents the Yorkshire part of William Smith's famous map – the subject of Simon Winchester's best seller *The Map That Changed the World*.

Smith's map was an incredible achievement. It was the first ever geological map of a whole country, and was surveyed by Smith alone, travelling on foot and horseback. It shows the rock groupings nearest to the surface, and illustrates Smith's discovery, based on his understanding of the embedded fossils, that rock strata are continuous across hundreds of miles, but generally tilted towards the east.

The pebbles in the mosaic reflect the colours Smith used in his map, but genuine Yorkshire rocks are displayed in the flower beds on either side of the mosaic, alongside strips of the pebbles used to represent them.

An original copy of this famous map can be seen in the Yorkshire Museum, which also houses one of the best fossil collections in the country. The museum, now run by York Museums Trust, was built in 1830 by the Yorkshire Philosophical Society, who sponsored a course of lectures by Smith, and employed his nephew, John Phillips, as the first Keeper of the Museum.

For further information on the map, Smith, Phillips and the geology of Yorkshire, go to the Yorkshire Philosophical Society website, [www.ypsYork.org](http://www.ypsYork.org) and type 'geological map page' into the search box.

#### York Museum Gardens Visitor Information

##### Open Daily – FREE ADMISSION

Summer: 7.30am - 8pm

Winter: 7.30am - 6pm

Christmas Eve and New Year's Eve: 7.30am - 4pm

Christmas Day, Boxing Day and New Year's Day: Closed

[www.ypsYork.org](http://www.ypsYork.org)

[www.yorkmuseumstrust.org.uk](http://www.yorkmuseumstrust.org.uk)

York Museums Trust



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## York Museum Gardens

FREE and OPEN DAILY

# Walk Across Yorkshire's Geology



York Museums Trust





## Features to look for

**York** is represented by an icon made from stone discarded in the renovation of York Minster.

The **scales** show distances in kilometres and miles. The full length of each is given – 30 miles and 50km.

**Rivers** are represented by lines of small grey stones.

**Names** of rivers, etc., have 1815 spellings. Thus the River Ure is spelled Yore.

Semi-precious stones indicate **lead and alum mines**.

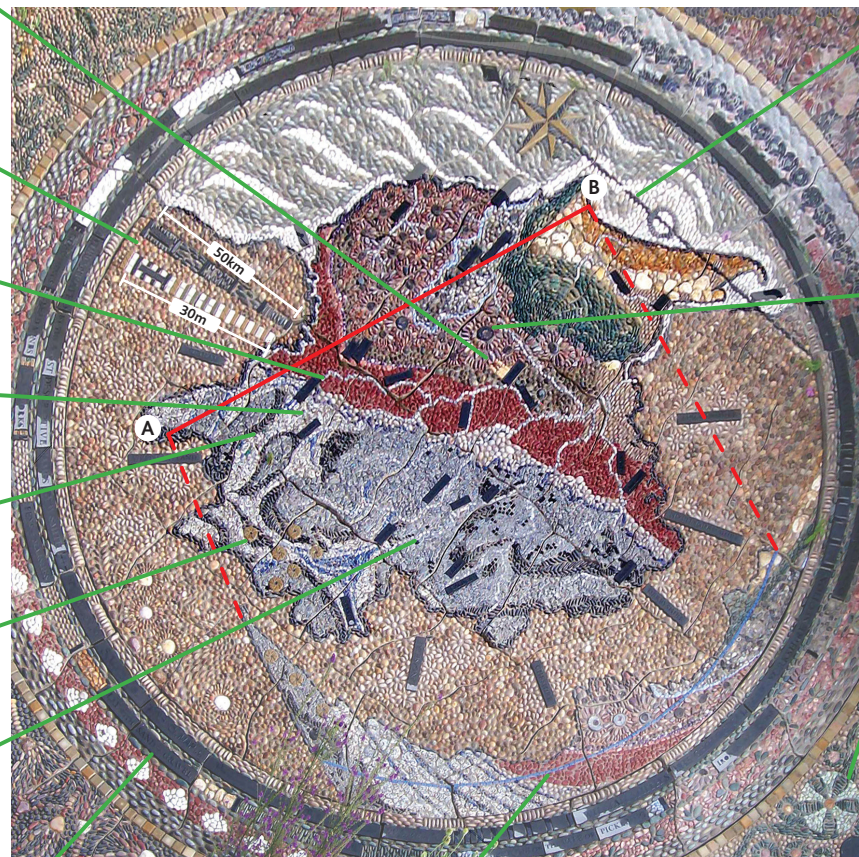
Small round **millstones** indicate where Millstone Grit was quarried.

The small black squares show where there were **coal mines**.

The names **William Smith gave to the rocks** are shown by labels set in a ring going round the map – with examples of the pebbles used to represent them.

The **shape of Yorkshire** is shown as it was in 1815. There have been many boundary changes since.

The counties round it are shown in brown because this map shows only Yorkshire rocks. Each type of Yorkshire rock has its own pebbles.



This is a **cross-section** of Yorkshire, from point **A** to point **B**, indicating the way in which the strata are inclined. The vertical scale is exaggerated, and the blue line shows sea-level.

Note the **pointer**. The map is lined up so this points North on the map and on the ground as well.

The line that the pointer takes across the map is the **Greenwich Meridian**.

Knowing that William Smith used **fossils** to identify the different strata, artist Janette Ireland made extensive use of fossils, some real, others made of pebbles, in the mosaic. She went to great trouble to establish the correct fossils for each stratum.

There are also **fossil patterns** in each of the four corners – fossil ferns, ammonites, crinoids and sea urchins.

**Large samples of real Yorkshire rocks** have been placed in the flower borders, near strips of pebbles which indicate how they are represented in the mosaic, and the order of deposition of the strata. A leaflet available on the Yorkshire Philosophical Society website [www.ypsYork.org](http://www.ypsYork.org) gives modern names for these and information on where these samples were obtained. Enter 'geological map page' into the search box.