

LEARNING RESOURCE



MAPS & MEMORIES



MARKING 200 YEARS SINCE THE FIRST DETAILED MAPPING OF IRELAND BY THE ORDNANCE SURVEY.



National Trust



QUEEN'S
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ORDNANCE SURVEY
OF NORTHERN IRELAND®



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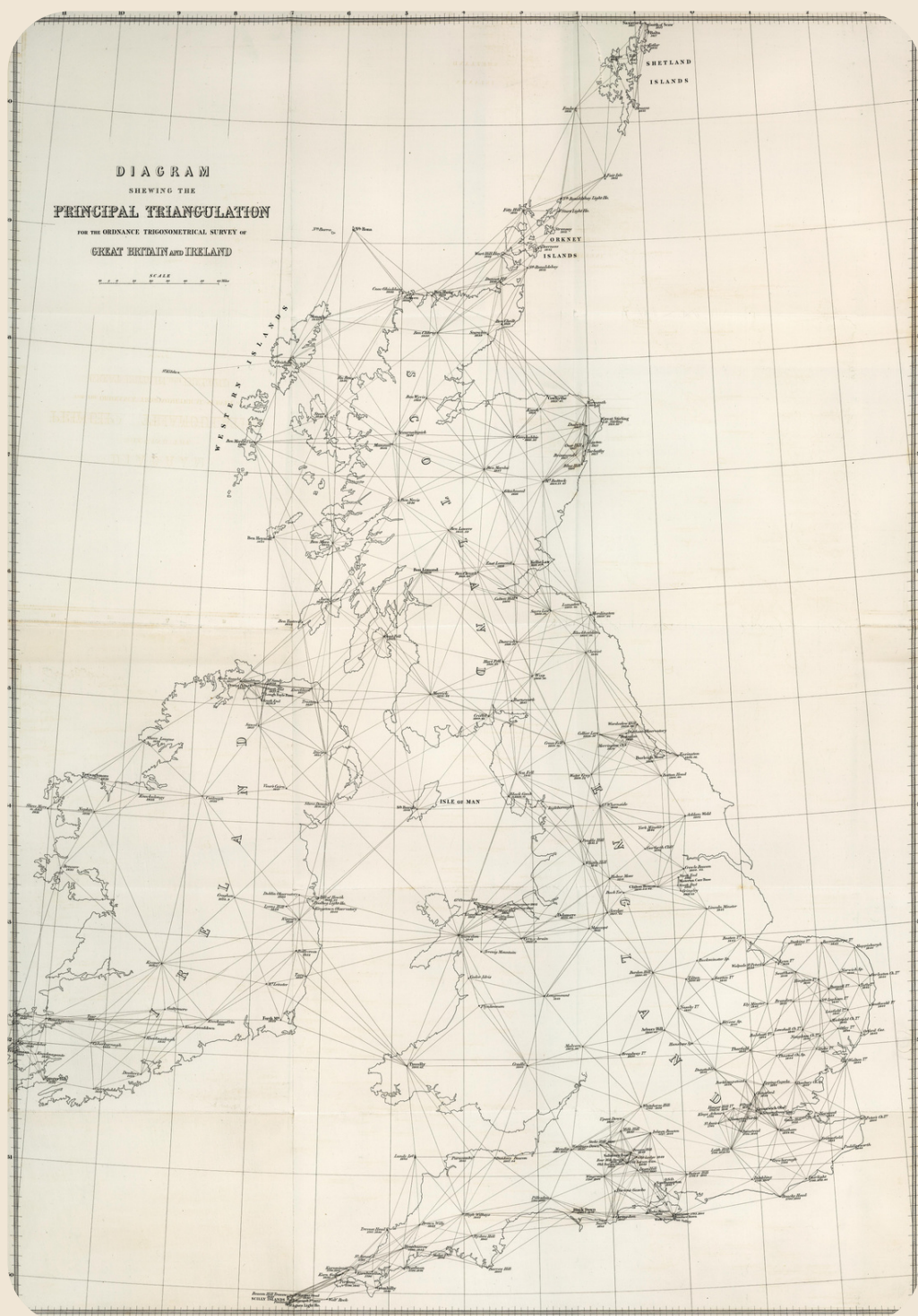
MAPS & MEMORIES



IN 1825, 200 YEARS AGO, THE ORDNANCE SURVEY SET ABOUT CREATING THE MOST DETAILED MAP OF ANY COUNTRY IN THE WORLD.

THE ORDNANCE SURVEY, WHICH WERE A GROUP WITHIN THE BRITISH ARMY, MEASURED LAND AND MADE MAPS.

WHEN THEY DECIDED TO CREATE A 6 INCH TO THE MILE SCALE MAP OF IRELAND, IT HAD NEVER BEEN DONE BEFORE. IT TOOK THEM 22 YEARS TO MAKE AND PRINT THE MAP.



TO MAKE THE MAPS, THEY HAD TO CAMP OUTSIDE (SOMETIMES FOR WEEKS) ON TOP OF MOUNTAINS AND IN FIELDS. YOU CAN SEE WHAT THEIR TENTS LOOK LIKE IN THE DRAWING BELOW.

ON THIS MAP OF THE UK AND IRELAND, YOU MIGHT NOTICE LOTS OF LITTLE TRIANGLES AND LINES. THIS IS THE WAY THEY MEASURE BIG AREAS OF LAND, IT'S CALLED 'TRIANGULATION'.

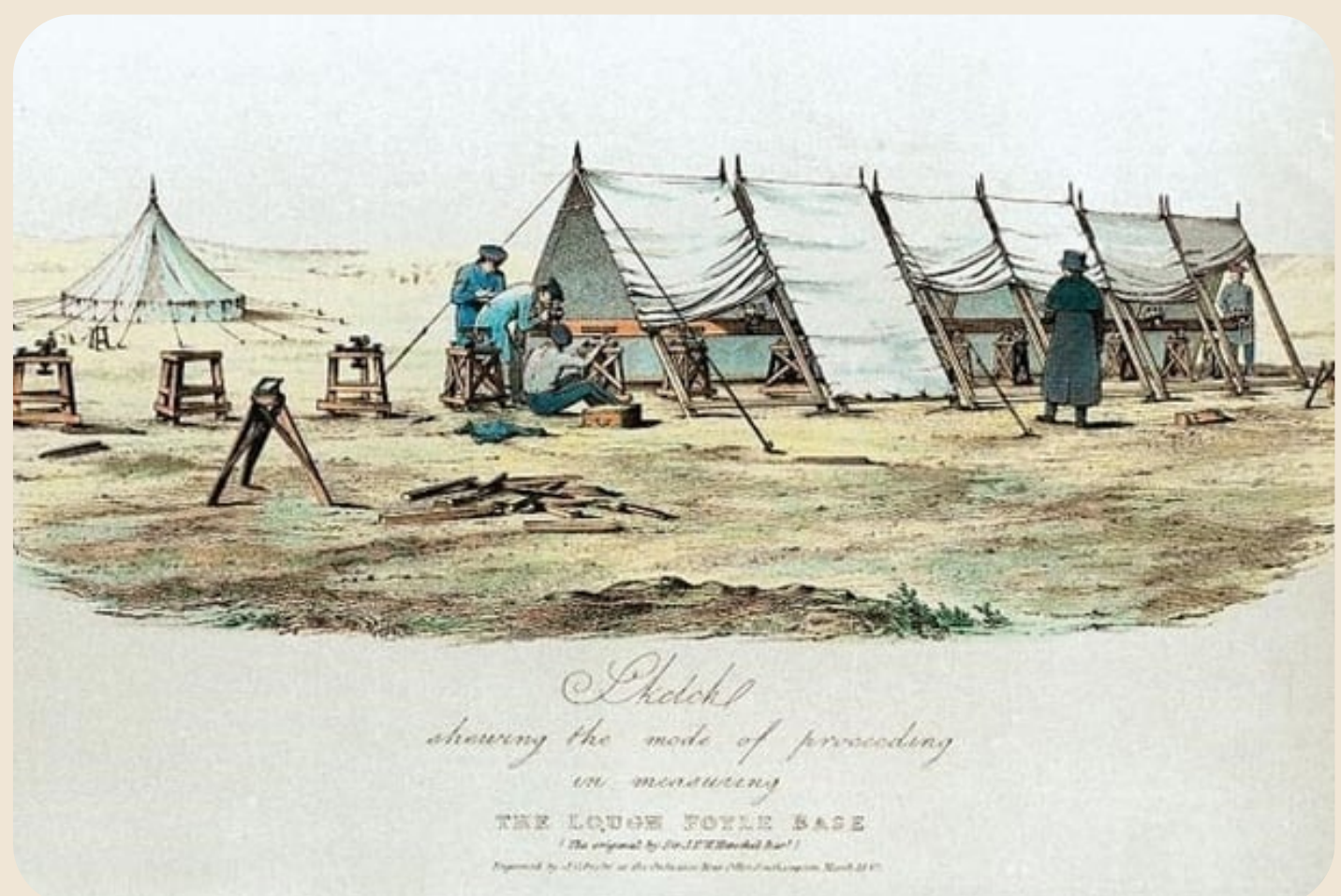
TO MAKE THESE MEASUREMENTS, THEY USED A 'THEODOLITE' TO LOOK OUT TO OTHER HIGH POINTS. FOR EXAMPLE, FROM DIVIS IN BELFAST TO SLIEVE DONARD IN THE MOURNES AND ALL THE WAY OVER TO SCOTLAND.

THEY WOULD SET UP CAMP AND WAIT UNTIL THEY COULD SEE A LIGHT FROM THE OTHER MOUNTAIN. IT COULD TAKE A WHILE FOR BOTH MOUNTAINS TO BE CLEAR OF CLOUDS AND RAIN.

HAVE YOU WALKED UP A MOUNTAIN OR BIG HILL?

DO YOU REMEMBER WHAT THE WEATHER WAS LIKE?

WHAT COULD YOU SEE FROM WHERE YOU WERE?



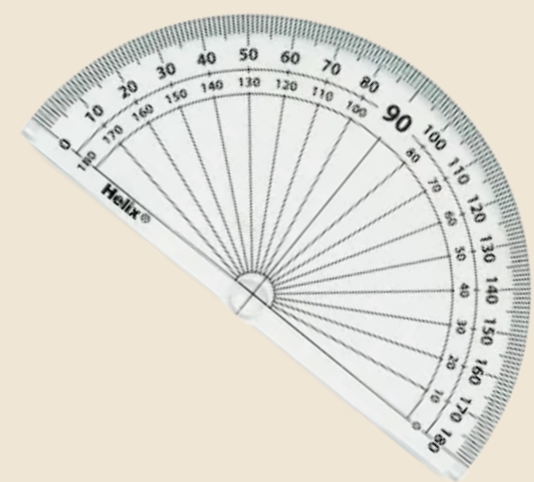
MAPS & MEMORIES



THE ORDNANCE SURVEY STILL MAKE MAPS BUT THEY NOW USE MODERN TECHNOLOGY TO UPDATE THEM OR MAKE ANY NEW ONES.

ONE THING THAT THE ORDNANCE SURVEY STILL USE TODAY IS A THEODOLITE. ALTHOUGH IT LOOKS A LITTLE DIFFERENT NOW, YOU CAN SEE AN OLD AND NEW THEODOLITE IN THE PHOTOS BELOW.

A THEODOLITE HELPS US MEASURE ANGLES. IT'S LIKE A SUPER FANCY PROTRACTOR BUT FOR REALLY BIG THINGS LIKE BUILDINGS, ROADS AND HELPS US TO MAKE MAPS. PEOPLE CALLED SURVEYORS USE IT TO MEASURE HOW HIGH AND HOW FAR THINGS ARE. THEODOLITES CAN SEE FROM FAR AWAY AND TELL YOU THE EXACT ANGLE BETWEEN TWO POINTS.



HERE ARE SOME FACTS FROM THE SCIENCE MUSEUM ON RAMSDEN'S 3-FOOT THEODOLITE (1790S) USED 200 YEARS AGO BY THE ORDNANCE SURVEY:

'OPERATING THE THEODOLITE WAS HARD WORK – IT WEIGHED 200 LB (AROUND 90 KG), AND HAD TO BE WINCHED TO THE TOP OF CHURCH STEEPLES, HILLTOPS OR ITS OWN SCAFFOLDING TOWER FOR OBSERVATIONS TO BE MADE. IT WAS TRANSPORTED ACROSS THE COUNTRY MAKING OBSERVATIONS FOR ORDNANCE SURVEY WORK UNTIL THE 1850S.'

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WHAT INVATION WOULD YOU MAKE TO MEASURE THE EARTH?

WHAT TOOLS WOULD YOU USE TO MAKE A MAP?

MAPPING IRELAND TIMELINE

1824

Colonel Colby recommends a 6''-to-1-mile survey to be made for Ireland. Accompanied by Lieutenant Drummond, they travelled from the north to the south of Ireland, selecting suitable mountains for principal triangulation.

1826

The survey gains momentum, the team consists of 203 men, 28 officers, 4 cadets, 106 Sappers & Miners and 65 labourers.

The station at Slieve Donard is established and observations are completed.

1828

Measurements of the Lough Foyle baseline are completed to an impressive accuracy, an achievement that is still marvelled at today.

The Lough Foyle Baseline was remeasured in 1960 using a Tellurometer and the result differed by only 2.5cm.

Observation completed at Cuilcagh.

1846

The original survey of Ireland, at a scale of 6 inches to 1 mile, was completed in 1846.

Ireland became the first country in the world to be entirely mapped at such a detailed scale. The survey also gathered information on local customs, place-names and archaeology. Valuable documentation of the landscape of Ireland pre-famine.

1922

The Ordnance Survey of NI was founded as a distinct body after the partition of Ireland.

1950

Re-triangulation of Northern Ireland by the Ordnance Survey began.

Many of the trig pillars and benchmarks in Northern Ireland date back to this time period.

1825

Trigonometrical work begins in the north of Ireland, led by Colby.

The station at Divis is established and observations are made.

1827

Baseline measurements take place in the Lough Foyle.

A number of observations are made on Sawel, Knocklayd, Slieve Snacht and Vicar's Carn.

1830

Memoirs by the Ordnance Survey begin, including records of place-names, population records, drawings and sketches.

1887

Populated areas of Ireland were re-surveyed at a scale of 25 inch to 1 mile to gain a higher level of accuracy.

This was as a result of Land Purchase Acts that were introduced in Ireland in the late 19th century.

The original 6 inch survey focused on the boundaries of townlands and wasn't considered detailed or accurate enough to calculate the areas of individual plots. Mountainous and certain bog land areas were not resurveyed.

1924

On the establishment of the new Irish Free State, responsibility for the Ordnance Survey Office of Ireland was transferred to the Irish Government's Department of Finance. Ordnance Survey Office staff were recruited through military channels until the 1970s, when the first civilian, and the first female, employees were recruited.

BENCHMARKS

Benchmarks were used by the Ordnance Survey to mark points where the height above sea level has been accurately measured.

Some benchmarks date all the way back to 1831, but most of the benchmarks in Northern Ireland date from the 1950s and 60s. There were over nineteen thousand benchmarks in Northern Ireland, but these are slowly disappearing.

They look like this:



Can you help find and photograph all the benchmarks on the map?

Make sure you keep your eyes peeled for more and share them with us at [#maps_memories](#).

Here is a photo of a benchmark you can find in Donaghadee today.>



TRIG PILLARS

You might have seen a trig pillar (or trig point) when walking in the hills or mountains. Built out of concrete by the Ordnance Survey, they were used to re make maps of the UK and Ireland in the 1930s and 50s.

These pillars provide a stable, solid base for mounting theodolites (surveying instruments) to measure angles and distances for map-making, though they are now not used any more.

Trig Pillars look like this:



Can you help find and photograph a trig pillar on your next walk?

Like our benchmarks, they are also disappearing, so make sure you keep your eyes peeled for them.

Here is a photo of a trig pillar you can find up on the summit of Divis, in the Belfast Hills today.>



THIS IS A 200 YEAR OLD MAP OF DONAGHADEE:



USE THE QR CODE TO VISIT THE NATIONAL LIBRARIES OF SCOTLAND 'MAP VIEWER' TO EXPLORE MORE HISTORICAL MAPS OF IRELAND. YOU CAN USE THIS SIDE BY SIDE MAP VIEWER TO LOOK AT BOTH CURRENT AND HISTORICAL MAPS OF A LOCATION AT THE SAME TIME.



CAN YOU SEE ANY CHANGES? WHAT'S DIFFERENT?

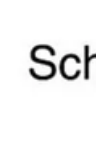
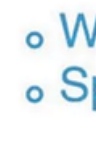
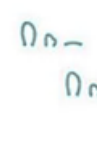
WHAT IF YOU MADE A MAP OF YOUR HOME - WHAT WOULD THAT LOOK LIKE?

HOW TO BECOME A MAP-MAKER: READING AND MAKING YOUR OWN MAP!

A MAP SHOWS A BIRD'S-EYE VIEW (FROM DIRECTLY ABOVE) OF A CERTAIN PLACE AND OFTEN INCLUDES SYMBOLS, COLOURS AND A KEY TO EXPLAIN ALL THE DIFFERENT THINGS YOU MIGHT SEE OR FIND IN THAT LOCATION.

ONCE YOU KNOW HOW TO READ A MAP, IT'S LIKE BREAKING A CODE AND YOU WILL BE ABLE TO UNDERSTAND LOTS OF THINGS ABOUT THE LANDSCAPE AND HISTORY OF A PLACE. MAPS ARE TIME-DEPENDENT, EVEN IF RECENTLY DRAWN OR UPDATED, AND NEED TO BE CHECKED AGAINST THE PLACES THEY SHOW SO THAT THEY CAN BE UPDATED.

OS Map Symbols

						
Railway Station	Level Crossing	Motorway	Trunk or main road	Footpath	Bridleway	National Trail/Long Distance Route; Recreational Route
						
Camp site/caravan site	Viewpoint	Picnic site	Access information point	Building of historic interest	Recreation/leisure/sports centre	Museum
						
Site of battle	Castle/fort	Cadw: Welsh Historic Monuments	Historic Scotland	English Heritage	National Park boundary	Nature reserve
						
Access land in woodland area	Access land boundary and tint	Cycle trail	Information centre	Telephone	Parking	Garden/arboretum
						
Place of worship with spire, minaret or dome	Place of worship with tower	Place of worship	Youth hostel	School	Post office	Public convenience
						
Bus or coach station	Cliff	Wind pump; wind generator	Electricity transmission line	Quarry	Footbridge	Well; spring
						
Non-coniferous trees	Coniferous trees	Marsh, reeds or saltings	Orchard	Bracken, heath or rough grassland	Scrub	Contours

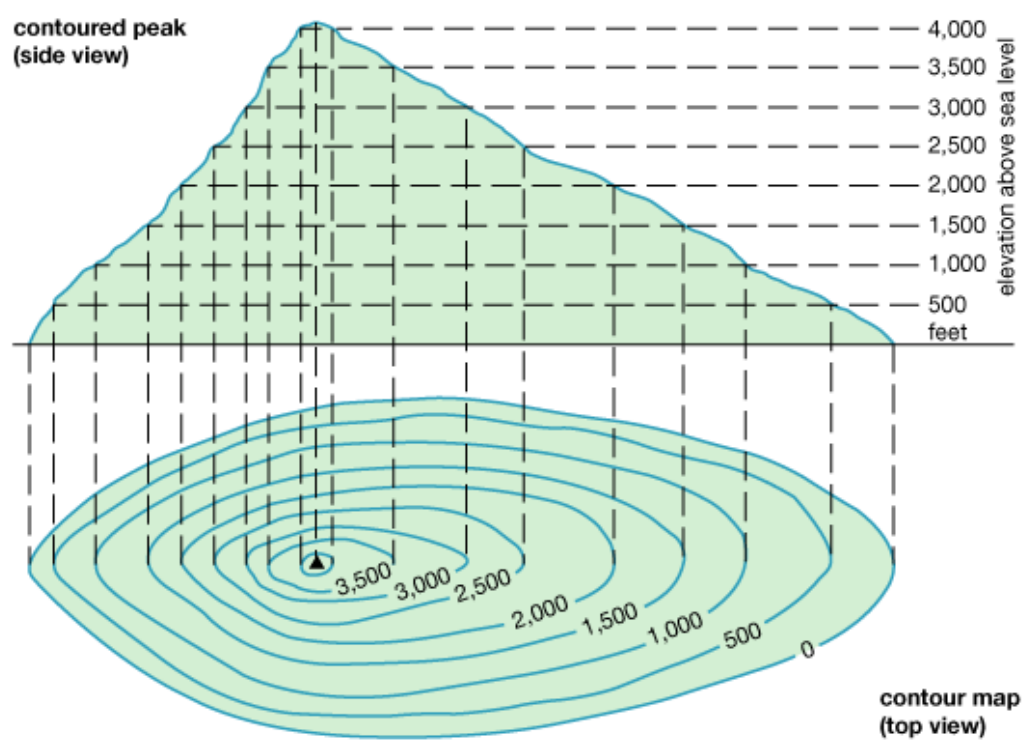
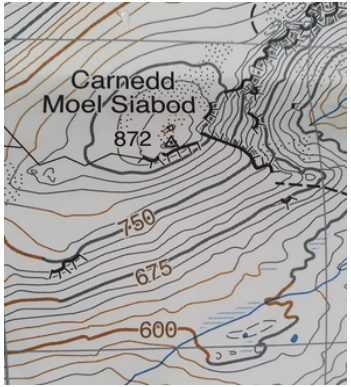
1:25 000 scale Explorer™

OS Map Symbols Poster - 60x40cm
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MAKING YOUR OWN MAP

AS WE NOW KNOW, MAPS CHANGE AS OUR CITIES AND LANDSCAPES CHANGE.

ALONGSIDE MAP SYMBOLS, YOU MIGHT SEE WIGGLY LINES LIKE THESE ONES. THE CLOSER THE LINES ARE TO EACH OTHER, THE STEEPER THE HILLSIDE.



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WHY NOT TRY TO MAKE YOUR OWN MAP OF YOUR FAVOURITE PLACE, HOME OR MAYBE FROM YOUR IMAGINATION.

USE OS SYMBOLS OR MAKE YOUR OWN AND SEE IF OTHERS CAN READ AND UNDERSTAND YOUR MAP AND LANDSCAPE.



THE ORDNANCE SURVEY HAVE LOTS MORE INFORMATION ON HOW TO READ MAPS. SCAN THE QR CODE HERE OR VISIT THEIR WEBSITE FOR MORE INFORMATION.



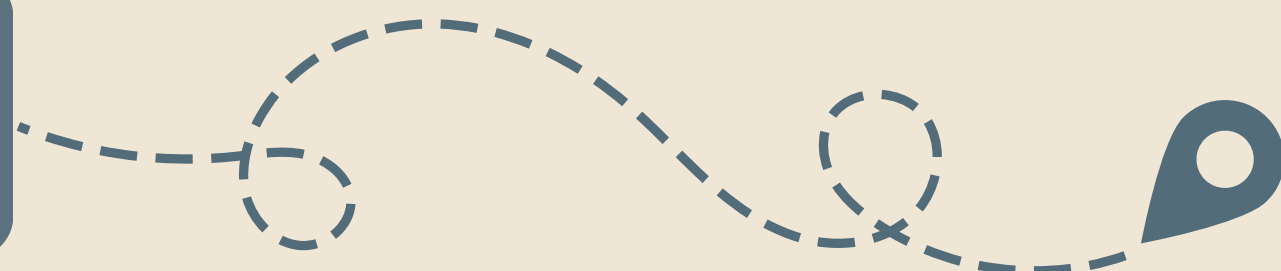
WHAT SYMBOLS OR CODES WOULD YOU MAKE UP FOR YOUR MAP?

WHAT AREA WILL YOUR MAP SHOW?

MAPS & MEMORIES



SHARE YOUR MAP WITH US!



CONGRATULATIONS ON BECOMING A MAP-MAKER!

NOW THAT YOU HAVE YOUR MAP, WHY NOT SHARE IT WITH OTHERS IN YOUR COMMUNITY. MAPS ARE A GREAT WAY TO SHARE YOUR VIEW OF THE WORLD AND TO SHOWCASE WHAT IS IMPORTANT TO YOU IN YOUR LOCAL AREA.

IF YOU WOULD LIKE TO SHARE ANY OF YOUR MAPS WITH US AT THE NI SCIENCE FESTIVAL, PLEASE SEND A PHOTO TO: [INFO@NISCIENCEFESTIVAL.COM](mailto:info@nisciencefestival.com)

HERE IS A RECAP OF SOME USEFUL MAPS YOU CAN LOOK AT ONLINE:



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FIND OUT MORE ABOUT MAPS & MEMORIES BY SCANNING THIS QR CODE OR BY VISITING: [NISCIENCEFESTIVAL.COM](http://nisciencefestival.com)



HAVE SOME FEEDBACK YOU WOULD LIKE TO SHARE WITH US ON HOW WE COULD IMPROVE MAPS & MEMORIES? SCAN THIS QR CODE TO COMPLETE OUR FEEDBACK FORM.

THANKS FOR TAKING PART IN MAPS & MEMORIES!