

Mapland Scotland Activities and Lesson Plans

Mapland Scotland: Direction

Aims: To identify the points of the compass and to understand direction.

Resources: Compass cards.

Note: Please remind pupils of the no running, sliding and skidding rule.

Direction Activities	P1-P3	P4-P5	P6-P7
<ul style="list-style-type: none"> ▪ Hand out compass cards and ask pupils to stand on map at their point on the compass. ▪ Pupils to hold up cards for everyone to see. ▪ Go around the points of the compass, with each pupil calling out what point of the compass they are standing on. 	<ul style="list-style-type: none"> ▪ Use the 4 points of the compass. ▪ Rhymes to remember the points of compass: Never Eat Slimy Worms, Nobody Ever Swallows Whales. 	<ul style="list-style-type: none"> ▪ Use the 8 points of the compass. ▪ Do they know any rhymes to remember the points of compass? Never Eat Slimy Worms, Nobody Ever Swallows Whales. 	<ul style="list-style-type: none"> ▪ Use the 16 points of the compass
<ul style="list-style-type: none"> ▪ Ask pupils to stand on places. 	<ul style="list-style-type: none"> ▪ Ask pupils to stand on the place closest to the North Pole. 	<ul style="list-style-type: none"> ▪ Ask pupils to stand on most northern and western parts. This could be asked as “Stand on the place closest to the North Pole” “Stand on the place closest to America”. 	<ul style="list-style-type: none"> ▪ Ask pupils to stand on most northern and western parts. This could be asked as “Stand on the place closest to the North Pole” ▪ “Stand on the place closest to America”.

Mapland Scotland: Map Features

Aim: To identify map features.

Resources: Miniature models.

Note: please explain to all pupils the miniature models are not toys; they must not race the vehicles across the map. Please ensure all models are returned at the end of the session.

Map Features Activity	P1-P2	P3-P5	P6-P7 & S1-S2
<ul style="list-style-type: none"> Use Mapland to show and identify map features. 	<ul style="list-style-type: none"> Pupils to stand at the edge of the map and look at all the colours. Ask pupils what colours they can see and what that colour means. Cover: green forests, orange mountains, blue lochs, sandy beaches, dark towns & cities and islands surrounded by water. Play “Simon Says.....” e.g. everyone go and stand/sit/put one foot/one hand on their own: island, loch, forest, city, beach etc. Hand out miniature models for pupils to find the matching place on Mapland - such as trees, buildings, ferry, bus, train, person, lighthouse etc 	<ul style="list-style-type: none"> Point out the green forests, orange mountains, blue lochs, dark towns & cities. Explain to pupils how contour lines represent height. Show steep mountain sides, rounded hills and flat areas. 	<ul style="list-style-type: none"> Point out features such as forests (coniferous, non coniferous and mixed wood), mountains, lochs, glens, rivers, beaches (sand, mud, shingle), cliffs, scree, rock outcrop, estuaries, rocky coastline, high water mark etc. Explain to pupils how contour lines represent height. Show steep mountain sides, rounded hills and flat areas.

Mapland Scotland: Cities

Aim: To identify and locate the six cities of Scotland.

Resources: City Cards. Map of London (at same 1:50,000 scale).

Note: This activity works best with groups of 10 or fewer pupils - please remind pupils not to push and shove each other when they stand around each city and also remind them of the no running/sliding/skidding rule.

Cities Activity	P1-P3	P4-P5	P6-P7 & S1-S2
<ul style="list-style-type: none"> Identify and locate the six cities of Scotland 	<ul style="list-style-type: none"> Point out the dark areas of towns & cities. Pupils to stand in a circle around where they live. Find the main cities by playing “Simon Says.....” e.g. everyone go and stand in a circle around: Edinburgh, Glasgow, Dundee, Aberdeen, Inverness, Stirling. 	<ul style="list-style-type: none"> Point out the dark areas of towns & cities. Pupils to find and stand in a circle around the 6 cities of: Edinburgh, Glasgow, Dundee, Aberdeen, Inverness, Stirling. 	<ul style="list-style-type: none"> Pupils to find and stand in a circle around the 6 cities of: Edinburgh, Glasgow, Dundee, Aberdeen, Inverness, Stirling.
<ul style="list-style-type: none"> Show the Map of London 	<ul style="list-style-type: none"> Show how big London is compared with Glasgow or Edinburgh. 	<ul style="list-style-type: none"> Pupils to stand on the bottom edge of the map. Hold up the map of London & ask what city is this? Show how big London is compared with Glasgow or Edinburgh. Place the London map over where you are to demonstrate how large it is. Explain the population of London is larger than the whole of Scotland, about 7 million c.f. 5 million. 	<ul style="list-style-type: none"> Pupils to stand on the bottom edge of the map. Hold up the map of London & ask what city is this? Show how big London is compared with Glasgow or Edinburgh. Place the London map over where you are to demonstrate how large it is. Explain the population of London is larger than the whole of Scotland, about 7 million c.f. 5 million.

Mapland Scotland: Map Symbols

Aim: To identify map symbols used on Ordnance Survey maps.

Resources: Map symbol cards. Map symbol key. Miniature Models. Forestry Commission - An Easy Guide to Forest Trees.

Note: please explain to all pupils the miniature models are not toys; they must not race the vehicles across the map. Please ensure all models are returned at the end of the session.

Map Symbols Activity	P1-P3	P4-P5	S1-S2
<ul style="list-style-type: none"> Hand out OS symbol cards; pupils to identify what the symbol is from the symbol key and then find the symbol on Mapland. Use miniature models in conjunction with the symbol cards. Get together as a group and go over the symbol cards asking the group to identify what each one is. 	<ul style="list-style-type: none"> Give pupils easy to find symbol cards such as phone box, church, lighthouse, pine trees, golf course, caravan park, castle etc Show pupils how to look up their symbol from the symbol key. Use miniature models in conjunction with the symbol cards. Help pupils to find their symbol on Mapland. 	<ul style="list-style-type: none"> Use all the symbol cards. Pupils to work out what the symbol is from the symbol key and then select the matching miniature model. Pupils to think about where they might find their symbol e.g. a lighthouse on an island, caravan parks in tourist areas and then find their symbol on Mapland. Go over the 3 symbols for forests and ask what the difference is and what types of trees might be found in each forest type. Use the Forestry Commission - An Easy Guide to Forest Trees. 	<ul style="list-style-type: none"> Use all the symbol cards. Pupils to work out what the symbol is from the symbol key - use the more difficult OS map format key. Pupils to think about where they might find their symbol e.g. a lighthouse on headland then find their symbol on Mapland. Go over the 3 symbols for forests and ask what the difference is and what types of trees might be found in each forest type. Use the Forestry Commission - An Easy Guide to Forest Trees.

Mapland Scotland: Map Scale

Aims: To understand the concept of map scale.

Resources: Felt cut outs of Ben Nevis and Mt Everest. Wall map of Scotland.

Map Scale Activities	P4-5	P6-7	S1-S2
<ul style="list-style-type: none"> Explain the concept of map scale. 	<ul style="list-style-type: none"> Introduce scale by explaining that the real Scotland is 50,000 times bigger than Mapland, or another way of saying this is Mapland is 50,000 smaller than the real Scotland. 	<ul style="list-style-type: none"> Explain the 1:50,000 scale, explaining that the actual Scotland is 50,000 times bigger than Mapland. Explain that every physical feature shown on Mapland such as a loch or area of forest is exactly 50,000 times smaller than the real loch or forest. 	<ul style="list-style-type: none"> Explain to pupils that a scale of 1:50,000 means every 2cm on Mapland is equivalent to 1km and so each grid square is 2cm because each square is exactly 1km. Look at the smaller scale map of Scotland and ask pupils to confirm what scale it is and what does that mean.
<ul style="list-style-type: none"> Group around Ben Nevis and show the mountain cut outs. Ask pupils if Mapland was 3-dimensional which is Ben Nevis & why? 	<ul style="list-style-type: none"> Show pupils the two mountain cut outs and explain this is how high Ben Nevis would be if the map was 3 dimensional. Remind pupils the real Ben Nevis is of course 50,000 times bigger. Explain the other cut out is Mt Everest the highest mountain in the world. 	<ul style="list-style-type: none"> Can pupils work out which is Ben Nevis and why? Remind pupils that one square equals 1km or 1000m and Ben Nevis is 1343m or 1.3km high. Ask pupils to determine how high the other mountain cut out is by laying flat and counting squares. What mountain is it? 	<ul style="list-style-type: none"> Can pupils work out which is Ben Nevis and why? Remind pupils that one square equals 1km or 1000m and Ben Nevis is 1343m or 1.3km high. Ask pupils to determine how high the other mountain cut out is by laying flat and counting squares. What mountain is it?

Mapland Scotland: Measuring Distance

Aims: To measure distance on a map.

Resources: Pieces of string. Measuring Distance Cards. Wall map of Scotland

Measuring Distance Activities	P3-P4	P5-P7	S1-S2
<ul style="list-style-type: none"> Show how to measure distance: counting grid squares (1 square = 1km) and pieces of string (from knot to knot). 	<ul style="list-style-type: none"> Show pupils how they can measure distance by counting squares and with pieces of string. Explain to pupils the string from knot to knot is 10km for 10 square lengths of string and 20km for 20 square lengths of string because 1 square = 1km on Mapland. 	<ul style="list-style-type: none"> Show pupils how they can measure distance as P3-P4. 	<ul style="list-style-type: none"> Pupils to determine what distance their length of string represents given 1 square = 1km. Do they know the difference between a kilometre and a mile? Remind pupils everything on Mapland is metric - kilometres not miles and meters not feet.
<ul style="list-style-type: none"> Pupils pair up and practise measuring distance using the measuring distance cards. 	<ul style="list-style-type: none"> Hand out the easier measuring distance cards for pupils to practice measuring distance. 	<ul style="list-style-type: none"> Pupils to use the map measuring cards and practise measure distance using string. 	<ul style="list-style-type: none"> Pupils to use the map measuring cards and practise measure distance using different lengths of string. Show pupils how to cross check their answers on the smaller scale map of Scotland by measuring the distance of mainland Scotland.

Mapland Scotland: Find an Island

Aim: To find an island and describe it in terms of its physical and human geography.

Resources: The Islands of Scotland prompt cards.

Find an Island Activity	P4-5	P6-7
<ul style="list-style-type: none">Pupils to find and describe an island in terms of physical and human geography. Pupils to use the prompt cards.	<ul style="list-style-type: none">Pupils to pair up, choose an island & describe it: name of island, how to get there, what it would look like, highest point, N, E, S and W points of island; hilly? flat? wooded? cliffs? fields? Where do all the people live? What might it be like living here?	<ul style="list-style-type: none">Pupils to pair up, choose an island & describe it as per P4-5.Pupils to consider how the island may change in the next 50-100 years.

Mapland Scotland: Did you Know?

Aim: Discover some interesting facts about Scotland.

Resources: Did you Know? cards.

Did you Know? Activity	P1-3	P4-P7	S1-S2
<ul style="list-style-type: none"> Use the Mapland Did you Know? cards to find out some interesting facts about Scotland. Pupils to find and stand on places. 	<ul style="list-style-type: none"> What is the highest mountain in Scotland? Help pupils to find and stand around Ben Nevis. What is the biggest loch in Scotland? Help pupils to find and stand around Loch Lomond. Where is the home of the Loch Ness Monster live? Help pupils to find and stand around Loch Ness. 	<ul style="list-style-type: none"> What is the highest mountain in Scotland? Help pupils to find and stand around Ben Nevis. What is the biggest loch in Scotland? Pupils to find and stand on Loch Lomond. Compare with Loch Ness & explain Loch Ness does contain much more water as it is very deep. How much of Scotland is covered with trees? Pupils to stand at the bottom of the map, look at the green tree cover on Mapland & guess the tree cover as a percentage or a fraction. Discuss the 90% forest cover reduction in past 5000 years and reasons why. Where is the sunniest, wettest, coldest, warmest place in Scotland? Pupils to find and stand on places. Discuss why. 	<ul style="list-style-type: none"> As per P4-P7. Discuss in more detail the reasons for the 90% loss of forest cover over the past 5000 years. Include the development of human societies from Hunters and Gatherers to Farmers re the clearing of forests to create farms for grazing livestock and growing crops. Discuss modern sustainable forest management. Discuss in more detail the climatic differences across Scotland.

Mapland Scotland: Tour of Scotland

Aim: Use a map in order to work out a travel route.

Resources: Miniature models.

Note: please explain to all pupils the miniature models are not toys; they must not race the vehicles across the map. Please ensure all models are returned at the end of the session.

Tour of Scotland Activity	P1-P3	P4-P5
<ul style="list-style-type: none">Pupils to use map skills to work out a travel route and modes of transport between places.	<ul style="list-style-type: none">Use the miniature models and take the pupils on a tour of Scotland and ask them how they could travel at different places e.g.<ul style="list-style-type: none">in a bus along a roadon a bike through a forestin a boat across a lochon a ferry across to an islandin a train along a railway lineby foot walking over mountains.Take pupils to Tobermory (Balamory), the highest mountain of Ben Nevis and Loch Ness the home of the Loch Ness Monster.Give pairs of pupils a miniature model each for them to find a place on Mapland where it could be used.	<ul style="list-style-type: none">Pupils to pair up and give each pair a start and an end point and ask them how they could travel between the two places. They have to use as many types of transport as possible, e.g. walking on paths, cycling through forests, across lochs on a boat, by bus on the roads, by train on railways, by ferry to islands etc.

Mapland Scotland: Map Navigation

Aim: To use a map to navigate from place to place.

Resources: Navigation Quests.

Map Navigation Activity	P1-P3	P4-P5	P6-P7 & S1-S2
<ul style="list-style-type: none">Complete Navigation Quests	<p>Pupils form a line and play a game of 'Follow the Leader'. Leader call out:</p> <ul style="list-style-type: none">Start at the border & walk up the coastline to Edinburgh.Take the bus to Glasgow.Step across all the islands out to the Western Isles - don't get your feet wet!Swim across the Minch to Cape Wrath.Walk around the top of the north coast.Step across the Orkney and Shetland islands.Go for a big swim down to Inverness.Go down Loch Ness - watch out for Nessie!Finish up by everyone go and stand on your own island.	<ul style="list-style-type: none">Pupils use map skills to complete the navigation quests in pairs or threes.Pupils may also enjoy the 'Follow the Leader' activity to finish off the session.	<ul style="list-style-type: none">Pupils use map skills to complete the navigation quests in pairs or threes.

Mapland Scotland: Life and the Landscape

Aims: To describe landscape using a map, and how this is linked to human geography and activity.

Resources: None required.

Life and the Landscape Activity	P1-3	P4-7	S1-S2
<ul style="list-style-type: none"> Take pupils to different places on Mapland and ask them what the landscape might look like. 	<ul style="list-style-type: none"> Point out the green forests, orange mountains, blue lochs, dark towns & cities, sandy beaches and islands surrounded by water. Play “Simon Says.....” e.g. everyone go and stand/sit/put one foot/one hand on their own: island, loch, forest, city, beach etc. 	<ul style="list-style-type: none"> Walk over Mapland & ask pupils what different places might look like & what the land use may be, such as: farming, industrial estates, forestry plantations, Highlands. 	<ul style="list-style-type: none"> Walk over Mapland & ask pupils what different places might look like & what the land use may be, such as: hill farming, arable farming, dairy farming, industrial estates, forestry plantations, moorlands and mountainous areas. How have human processes changed the landscape? How might the landscape change in the future?
<ul style="list-style-type: none"> Take pupils to different places on Mapland and ask pupils what it might be like living in these different places. 	<ul style="list-style-type: none"> Walk over Mapland and ask pupils what it might be like to live at different places such as on an island, in a National Park, in a city, in a seaside town. 	<ul style="list-style-type: none"> Walk over Mapland and ask pupils what it might be like to live at different places such as on an island, in a National Park, in a city, in a coastal town, Western Highlands etc. 	<ul style="list-style-type: none"> Walk over Mapland and ask pupils what it might be like to live at different places, such as: National Park, Western Highlands, Shetland islands, Central Belt, Borders etc

Mapland Scotland: Grid References

Aims: To read and give grid references.

Resources: Where is This? cards. Grid Reference Sheet.

Grid References Activity	P4-P5	P6-P7 & S1-S2
<ul style="list-style-type: none">▪ Show how to read grid references. “Along the corridor & up the stairs” is a good way for pupils to remember that grid references are first Eastings and then Northings.	<ul style="list-style-type: none">▪ Pupils to pair up and practise 4-figure grid references by finding the funny place names on Where is this? Mapland Cards.	<ul style="list-style-type: none">▪ Pupils to pair up and practise 4-figure grid references by finding the funny place names on Where is this? Mapland Cards.▪ Pupils to then give the 6-figure grid reference of the place.

Mapland Scotland: Population Density

Aims: To understand the concepts of population density and population distribution.

Resources: none needed.

Population Density Activity	P6-S2
<ul style="list-style-type: none"> Ask pupils to guess what percent of the world's population lives in Scotland? 10%? 1%? 	<ul style="list-style-type: none"> There are about 6.6 billion people in the world, and the population of Scotland is about 5 million, which is less than 0.1% of the world's population.
<ul style="list-style-type: none"> Explain the concept of population density as numbers of people per square kilometre. If one pupil represents 100 people/square km illustrate differences in population density by having the correct number of pupils stand on places as listed below. 	<ul style="list-style-type: none"> Explain Glasgow has the highest population density of 3290 people/sq. km would need 33 people standing on it. Edinburgh with a population density of 1699 people/sq. km would need 17 people standing on it. What do the pupils notice about the areas where population density is high versus areas where population density is low? What clues does the map show about population density and distribution.

Place	Population Density ¹	No. of pupils ²
Glasgow	3290	33
Edinburgh	1699	17
Orkney Islands	19	0.19 Have pupil sit down to represent 1/5 th of a person.
Western Highlands	8	0.08 Have pupil sit down and crouch into a ball to represent 1/10 th of a person.

1. Number of People per square kilometre
2. Where 1 pupil represents 100 people/square km

Mapland Scotland: Standard Grade Geography

Aims: Activities for Standard Grade Geography

Resources: Loch Fyne Glaciation Card, Glaciation & Rivers Cards.

Standard Grade Geography Activities	
<ul style="list-style-type: none"> Glaciation 	<ul style="list-style-type: none"> Explain glaciation using the Loch Fyne example. On Mapland show pupils examples of u-shaped valleys, lochs, sea lochs, corries, pyramidal peaks, raised beaches and remnant volcanoes. Pupils to find other examples of these features using the glaciation cards. Describe the Great Glen.
<ul style="list-style-type: none"> Climate and Weather 	<ul style="list-style-type: none"> Overlay of a high pressure and low pressure weather system. Pupils to describe weather, wind direction. Where is the sunniest (Tiree), wettest (western highlands), coldest (highland), warmest (borders) place in Scotland? Why these locations? Why is the coldest not the Shetlands? Why is the wettest western highlands? Why is Tiree so sunny? Why are The Borders the warmest? Go through the 5 main air masses that effect the British Isles: Continental, Maritime, Tropical, Polar, Arctic,
<ul style="list-style-type: none"> Land Use - Upland and lowland landscapes 	<ul style="list-style-type: none"> Walk over Mapland & ask pupils what different places would look like & how land might be used, including: hill farming, arable farming, dairy farming, aquaculture, forestry plantations, military areas, mountain sports, tourism, hydro-electric power.
<ul style="list-style-type: none"> Urban Development 	<ul style="list-style-type: none"> Show 1950s map of Glasgow and compare against Mapland. What are the key differences? (no M8, no Erskine bridge, small airport, small satellite towns).
<ul style="list-style-type: none"> Rivers 	<ul style="list-style-type: none"> Cover physical characteristics and land use of the upper course, middle course and lower course.