# What is Geography?

The aim of this Scheme of Work is to introduce the subject of Geography. The majority of the Year 7s will not have had any experience of geography at primary school therefore it is important to get an understanding of their start point. The first three lessons are aimed to break down the complexity of geography and explore the human and physical aspects. This will develop into exploring environmental geography and intertwining the human and physical factors together. The baseline test will also provide a clear overview of the student's abilities in a geographic context. The test is aimed to identify those who have studied geography and those who haven't. The test itself has elements of the upcoming topic such as basic map skills.

#### Students must be able to:

Ч	Define what is meant by geography.
	Differentiate between physical and human geography.

The reasoning behind starting with maps skills is based with the constant need to recap in future years. The complexity behind reading a map accurately is often missed or, if at all, taught in a basic way at primary school. The development of the topic is aimed to provide the skills needed for the students to be able to read a map and understand the concept behind how they are reading it. The key aspects include: symbols, grid references, scale and distance. The lessons which follow are designed to allow the students to use these skills in a practical sense and build on their proficiency with using OS maps. These skills will be used throughout their time at Turton School and will be transferable if they wish to partake in D of E. The underpinning of geography is based on a sense of place. In order to fully appreciate this sense of place, maps are used and the ability to read them is essential.

#### Students must be able to:

☐ Use Ordnance Survey maps to a standard that includes symbols, basic location, scale and simple relief.

Key word	Definition
Geography	Geography is the study of the Earth. Its Landscapes, peoples, places and environments.
Physical geography	The natural processes that shape the Earth's surface.
Human geography	The study of how people use our world.
Environmental geography	The study of how humans affect the natural world.
Atlas	A collection of maps which represent the world or certain regions. They display physical and human features.
Ordnance Survey	A mapping agency which produced highly detailed, accurate maps for the UK.
Symbol	A simplified picture to represent a feature on a map.
Contour line	Lines on a map which join up areas of equal heights.
Grid reference	A number which represents a specific location on a map using the eastings and northings.

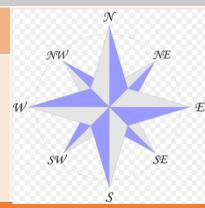
#### Direction

You need to know the 8 point compass for giving directions, saying which way long shore drift is going or if it says look at the headland in the northwest corner of the map.

#### The compass

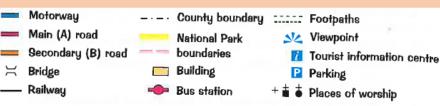
On most maps the direction 'north' will be straight up the map but check the compass carefully.

Use these when describing locations and directions



#### **Map Symbols**

Generally if you are given an OS map it will have a key telling you what the symbols mean. However, it's a good idea to learn some of the most common ones which are shown below.



#### Scale and Distance

Maps should always have a scale which can be shown with a ratio e.g 1:50,000 (which means 1 cm on the map equals 50,000cm (or 0.5km) in real life or a scale line which you can put your ruler alongside to see what distance is represented by 1cm on the map.

#### On the paper's edge

One method of measuring distance is to take a sheet of paper and place the corner of a straight edge on your starting point. Now pivot the paper until the edge follows the route that you want to take.

#### Step 1

Every time the route disappears or moves away from the straight edge of your paper, make a small mark on the edge and pivot the paper so the edge is back on course.

#### Step 2

Repeat this process until you reach your destination.

#### Step 3

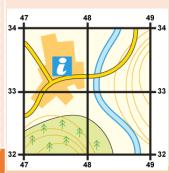
You should be left with a series of marks along the edge of your paper. You can now place the sheet against the scale bar on your map.

The last mark you made will tell you the real distance you need to travel.

#### **4 Figure Grid References**

Ordnance Survey maps have numbered gridlines drawn on them. The lines running up and down the page are called eastings (because their numbers get higher as you move eastwards) and the ones running across the map are known as northings (because their numbers get higher as you move northwards).

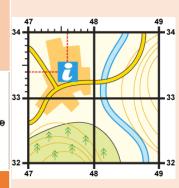
#### Four-figure grid references



To give the 4 figure grid reference for the information centre give the number of the line that runs up the left hand side of the square (47). The give the number of the line that runs across the bottom of the square (33).

This gives a four figure grid reference of 4733.

#### Six- figure grid references



To give a 6 figure grid reference for the information centre start by finding the line that runs up the left hand side of the square (47) then imagine that the square is divided into tenths (this has been done for you on the diagram) and count across the tenths (6). Then give the line that runs across the bottom of the square (33) and count up the tenths (4). Put it altogether to give a grid reference of 476 334

### **Year 7 Map and Atlas skills**

#### Relief

#### **Contours**

Contours are orange lines found on an OS map that join places of equal height above sea level. They show the height of the land in metres by the numbers marked on them. They also show the steepness of the land by how close they are together (the closer the lines the steeper the slope).

#### Spot Heights

Spot heights are black dots with a number next to them that give the height of that particular spot.

# Steeper slope Gentle slope

# 262

#### Inferring things from maps

# As a geographer you should be able to describe and interpret a map.

#### **Describing locations**

When you are asked to describe the location of something then write about what it is near. Use the scale calculate exactly how far away it is and also use compass points to describe he direction.

#### Inferring things from map evidence

You also need to be able to work something out using map evidence. For example you might be asked what evidence there is that tourism is important along a particular section of the coast, so you might look for a sandy beach, a cliff topic path and blue symbols which show tourist facilities e.g. a tourist information centre or a campsite.

#### Drawing a field sketch

A field sketch is used to show the main geographical characteristics of a landscape. It should be an accurate outline sketch and include labels and annotations.

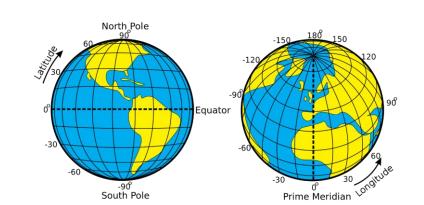


# The area surrounding the river is used for recreetional activities. The area surrounding the river is used for recreetional activities. The concrete canal has been transformed into a natural river.

#### Latitude and Longitude

Latitude lines on an atlas map run horizontally around the Earth and tell us how far north or south of the Equator (0°) you are. E.g. London is 51°N.

Longitude lines run vertically around the Earth and measure how far east or west of the Prime Meridian (a line of longitude that runs through Greenwich in London). So for example London would be 0° W.



#### **Settlement and Place**

This is the first main topic which the students take part in. The reasoning is that everyone lives somewhere and therefore everyone will have a basic understanding of this already in place. The initial design of an island is to engage students with the basic resources which are needed for life. It also seeks to challenge the misconception that modern technology is needed for life.

The topic is intended to break down the ideas behind why people live in certain locations and then apply this to Manchester. The early lessons will focus on the advantages and disadvantages of site locations which will contextualise the thought process behind the location of settlements. This will allow students to justify their ideas. Contact will be made 'real' by using OS maps such as those of Castleton and Mam Tor with the location of the Iron Age fort on the hilltop. In addition we will look at Warkworth in Northumberland. This aims to develop a sense of place, in this case a defensive location within a river meander

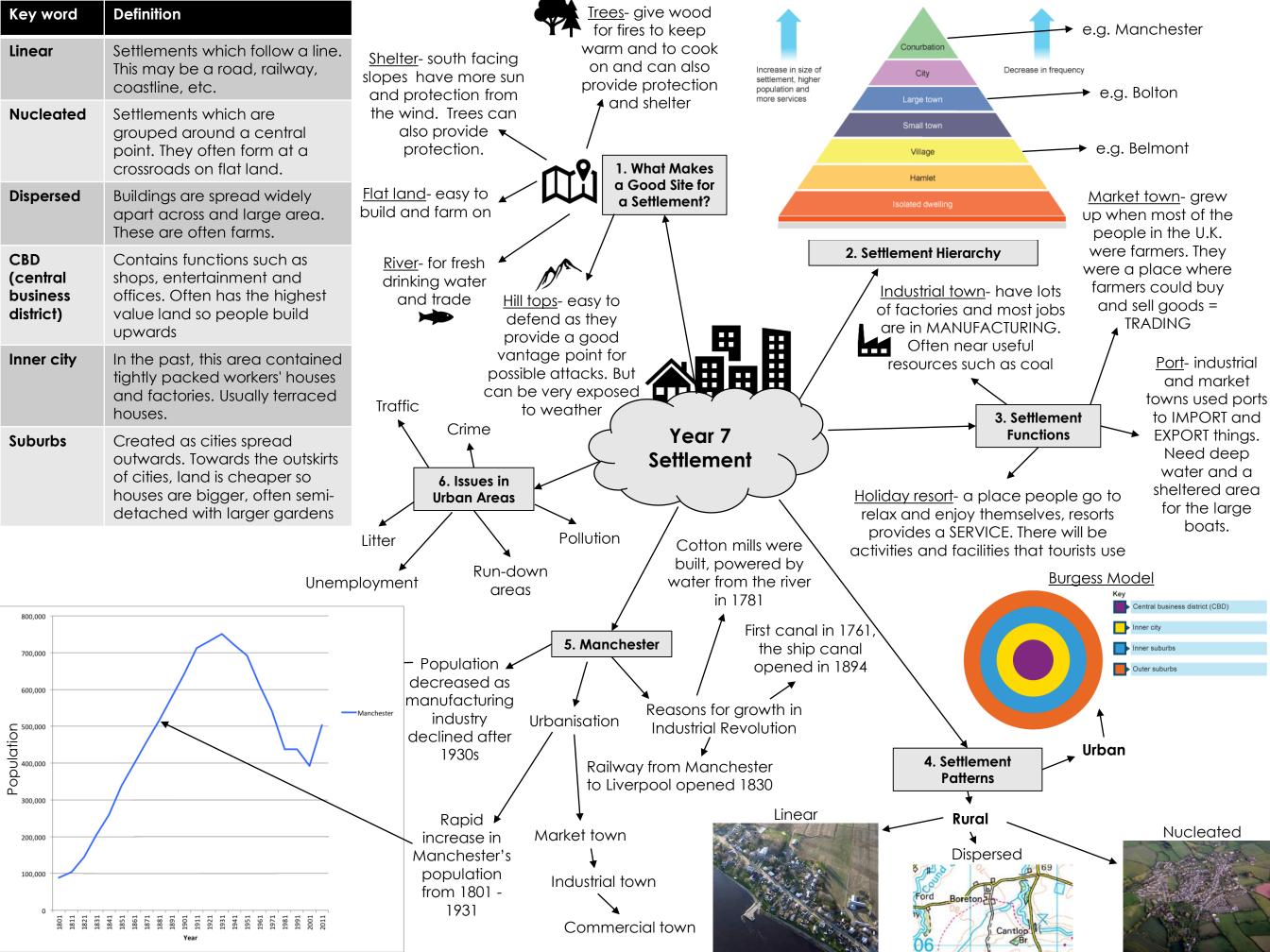
Past examples are then moved forward to identify reasons for settlement growth as functions grow in importance and multiply in number. Manchester is used to exemplify these changes over time. The human geography of the city is investigated in relation to ethnic diversity and sustainability.

#### Students must be able to:

Identify the physical geography that influences settlement location.
Recognise the site and situation of Bolton
Understand that cities and towns grow for different reasons and at different times.
Identify some of the benefits and issues associated with urbanisation.

Recognise and describe settlement and settlement hierarchy.

Key word	Definition
Settlement	Places where people live
Hierarchy	A way of classifying settlements according to their size and importance
Function	The main purpose or reason for a settlement to be where it is.
Site	The place where the settlement is located, e.g. on a hill or in a sheltered valley
Situation	Where the settlement is in relation to other settlements and the features of the surrounding area, e.g. is the settlement surrounded by forest or is it next to a large city?
Urban	A built-up place, e.g. a town or city.
Rural	The countryside.
Urbanisation	The increasing proportion of people who live in urban areas (towns and cities)
Migration	When people move from one place to another.



## **Rivers**

Two thirds of the Earth's surface are covered by water, indeed it is this water, as one of the key factors, that grants our planet the ability to support life, and as such should be studied in all of its guises. Therefore the aim of the scheme of work is to introduce students to the concepts of how and why rivers link to the water cycle as well as the human relationships with rivers through comparison of management techniques in contrasting environments.

Rivers will ultimately be studied through the context of environmental, social and economic factors in order to explain the contrasting effects of flooding in the UK and Bangladesh. The unit begins by introducing the concept of rivers, defining, 'What a river is?' And the location of some of the world's major rivers, incorporating important map skills, one of the fundamental cornerstones of good geographical knowledge. Students will then learn about drainage basements and catchment areas promoting an understanding of features of a river valley. This begins to introduce the following river processes and landforms and the importance of rivers ability to shape the land.

The unit will end with an essay which asks students to discuss the theory and issues associated with rivers on a global, national and local scale. This will again develop our students' extended writing skills including the ability to synthesise knowledge for a variety of sources and state clear and well-argued points of view.

#### Students must be able to:

Identify the features of a river basin.
To describe the different processes of river erosion, transportation and
deposition.
To recognise and describe the features and simple formational
sequences of waterfalls, meanders and oxbow lakes.

Recognise the importance of rivers for human development.

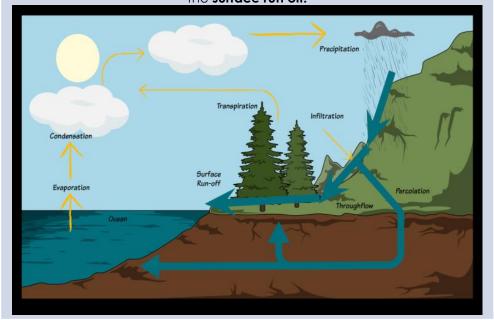
Key word	Definition
Drainage basin	The area drained by a river.
Source	The start of a river, often in an upland area.
Tributary	A small river that joins the main river channel.
Confluence	Point where two rivers meet
Mouth	The place where a river meets the sea.
Watershed	The place that divides two river basins.

## Rivers

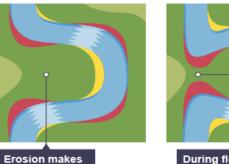
Key Words	Definition
Erosion	The wearing away of rocks, soil or other solid materials
Transport	The movement of rocks, sand & silt by the river.
Deposition	The 'dumping' or dropping of the material.
Meander	Large horseshoe shaped bend in the river
Evaporation	Liquid water changes state into a gas as water vapour

#### The Water Cycle

The water cycle is the journey water takes as it moves from the land to the sky and back again. It follows a cycle of evaporation, condensation and precipitation. In the diagram below a river would usually be part of the surface run off.

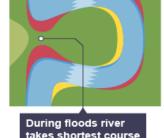


#### Meanders and Ox-Bow Lakes



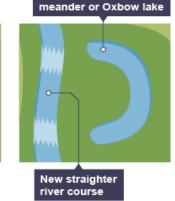
the neck narrow

Areas of deposition



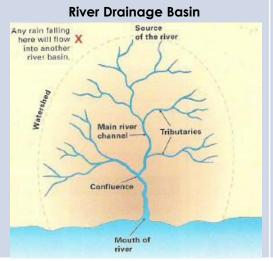


Areas of erosion



Cut off / abandoned

#### A River's Journey



#### The River Long Profile

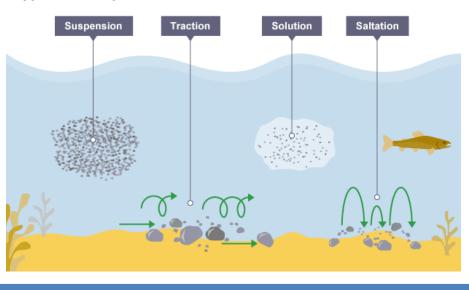
All rivers tend to follow the same pattern; as they flow from the source to the mouth; they start off narrow and get wider; they start off straight and end up meandering.



#### **River Processes**

Types of erosion	Explanation
Hydraulic Action	the force of the river against the banks can cause air to be trapped in cracks and crevices. The pressure weakens the banks and gradually wears it away.
Abrasion	rocks carried along by the river wear down the river bed and banks
Attrition	rocks being carried by the river smash together and break into smaller, smoother and rounder particles.
Solution	soluble particles are dissolved into the river.

#### Types of transport



#### A Hard Rock B Steep-sided gorge develops Waterfall retreats as waterfall retreats C Plunge pool Overhang в Fallen rocks Key

#### **Waterfalls and Gorges**

Waterfalls are found in the **upper course** of a river, towards the source where the river is flowing fast, water has a lot of energy & rates of erosion are high.

- 1.A band of hard rock lies on top of softer rock. As the water falls into the plunge pool (C) below the splash back of the water erodes the soft rock (B) causing erosion & undercutting of hard rock (A).
- 2. Eventually, the hard rock is left **overhanging** and unsupported and falls into the plunge pool below. This causes further erosion and undercutting along with the water of the river and the process repeats.
- 3. After many cycles of this process, the waterfall moves **backwards**, retreating upstream, leaving behind a steep-sided feature known as a gorge.

Meanders and Ox-Bow Lakes - Meanders and Ox-bow Lakes are found in the middle and lower course of a river, where there are processes of both erosion and deposition.

Erosion happens on the

outside bend of a meander where the water flows fastest as hydraulic power and/or abrasion

Erosion causes the **neck** of the meander to **narrow** Eventually the river will cut across the meander neck

The river now flows straight, leaving the old meander as an ox-bow lake, separated by deposition. Eventually, the ox-bow lake dries out, becoming a meander scar.

#### **Weather and Climate**

The climate of the UK is unique and is largely influenced by its global position. It lies within an atmospheric battleground between warm tropical air and cold polar air. As these two distinctly different types of air mix the UK subsequently experiences contrasting and changeable weather conditions as a result.

Students must understand that the global position of the UK also affects our weather. We experience significant differences in the relative position of the sun during the year. This influences our weather and consequently provides us with seasons. Other influences on our climate include; ocean currents, prevailing winds, maritime influence, continentality and altitude.

At GCSE students study the theme UK Environmental challenges. Part of this theme looks at Extreme weather in the UK. This includes how air masses, the North Atlantic Drift and continentality influence the weather in the UK. Also, how air masses cause extreme weather conditions in the UK, including extremes of wind, temperature and precipitation. Finally, students must focus on a case study of a flooding event within the UK.

By students having studied UK weather and climate in Year 7, this helps to build their knowledge for Year 8 when they look at ecosystems and also ready for the start of GCSE study in Year 10. Following onto A-level students study the topic of Climate change. Therefore, having a thorough understanding of weather and climate at Key Stages 3 and 4 will help with their knowledge at A-level.

#### Students must be able to:

Students must be able to.	
	Recognise and describe the difference between weather and climate.
	Recognise that different elements of the weather and how they are measured including some of precipitation, temperature, wind speed, wind direction, visibility, sunshine hours, cloud type and cloud cover.
	Simply describe why it rains.
	Recognise the basic features of both high and low pressure systems and be able to describe their associated weather.



