

## 5. Climate and Landscape

The last Ice Age in Britain ended around 10,000BC (c. 12,000 years ago), when the ice sheet that covered northern Britain began to melt. The ice sheet contained masses of frozen water and sea levels around Britain were around 50 metres lower than they are today.



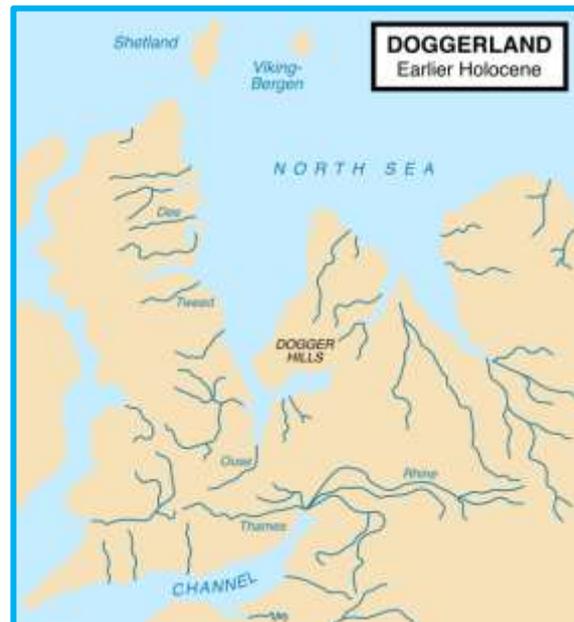
As global temperatures rose, a natural period of global warming, the ice sheets started melting, releasing melt water back into the seas surrounding Britain. What we now know as Britain was joined to the European continent by an area of land, known as Doggerland, that stretched from Britain's east coast to the Netherlands and the western coasts of Germany and Denmark. This low-lying landscape consisted of open tundra, rivers and grassland, the land was inhabited by our Mesolithic ancestors. As the climate

became wetter and warmer, large herds of animals, such as reindeer and horses, returned to Britain to graze. Hunter-gatherer people followed the migrating herds across the landmass and into southern Britain, following their food source, expanding their territories. But this was not Britain as we would recognise it.

### Doggerland

Doggerland is the name given to a former landmass in the southern North Sea. In the Mesolithic period, it connected Britain to Mainland Europe and survived until 6,500 - 6,200 BC. Doggerland now lies at the bottom of the North Sea, a submerged Mesolithic landscape. Since 1931, fishing trawlers have dredged ancient artefacts and soils to the surface, from land that once rose above the waves of the North Sea. Analysis of these items has shown that Palaeolithic land mammals once roamed the land bridge. Woolly mammoth, wolves, cave lions, hyenas, brown bears, woolly rhinos, horses, Irish elk, reindeer and bison roamed freely. Other species dated to the Mesolithic period, include red deer, moose, auroch (giant cows) and wild boar.

Archaeological artefacts dredged from the same areas include worked bone and antler tools, these artefacts and some of the faunal remains dated to the Mesolithic. Humans and animals inhabited Doggerland at the same time, a time before the sea claimed the land.



Subsequent investigations have revealed that around 8,000BC, the north facing coast of Doggerland had a coastline of lagoons, salt marshes, mudflats, beaches and lakes. Detailed mapping has shown that rivers including the German Rhine once flowed into Britain.

## ACTIVITY 2: Finding Doggerland



The ice continued melting and retreating northwards and sea levels rose. Around 6,500BC, the greater part of Doggerland became submerged beneath the sea, **causing Britain to become an island**, separated from the continent by the North Sea and English Channel. A recent hypothesis suggests that around 6,200 BC, a devastating tsunami, caused by a submarine landslide off the coast of Norway, crashed onto the British shores with catastrophic impact, forever altering the outline of the British Isles. The Doggerbank, an upland area of Doggerland, survived these natural catastrophes and remained as an island in the North Sea until around 5,000BC. Doggerbank now lies 15 metres below sea level at its shallowest point.

WATCH: [Japan 2011 tsunami](#) (1.58 minutes) and [Tsunami explained](#) (3.36 minutes)

## WORKSHEET 2: Tsunami eye witness account

## **Ponder: What was once the highest part of the land is now the shallowest surface of the sea bed.**

The shape of Britain was not what we know today. Continued sea level rise and coastal erosion over thousands of years have defined the British Isles that we now live in. But the isles that we know today are constantly changing, becoming further eroded and submerged (crumbling cliffs, longshore drift and continued sea level rise). The landmass is also tilting towards the south, a process that began when the huge, heavy ice sheet covering Scotland began to melt. The land, free from the massive weight, has been settling back ever since, like slowly shifting weighing scales.



### **ACTIVITY 3: Sea Level Experiment**

#### **What will Britain look like in the future?**

- Will the whole of the British Isles one day be completely submerged beneath the sea?
- Will there be any more ice ages in the future?
- Would those ice ages cause sea levels to drop and submerged landscapes to reappear?
- Will future Britons be able to walk to Norway?

#### **Climate Change**



By 9,600BC, Britain's climate was steadily becoming warmer. Temperatures rose by as much as 7 degrees Celsius in 50 years. Summer temperatures reached modern levels and two or three degrees higher. The climate was increasingly dry until around 8,000BC, where a marked rise in rainfall coincided with a rise in sea levels.

#### **Isolated**

The hunter-gatherers who followed the herds over to Britain were now a land-locked community. They could not simply walk back over to Europe. Thus, island life began and with the change in climate and landscape came a change in the natural world.

# Talking about Climate and Landscape

**These prompt questions should help you discuss the topic with your students**

- What do the British Isles look like today?
- Have they always looked like that?
- Will they look like that in the future?
- What is the weather like today?
- Does the weather change with the seasons?
- Can you imagine if it was always snowy and cold?
- Where is the English Channel?
- Where is the North Sea?
- Have the English Channel and the North Sea always been there?
- What happened to the land around the British Isles at the end of the last Ice Age?
- Why did it happen?
- What is a tsunami?