

## **WorldView Software: World Geography**

### Introduction

Europe is subject to natural disasters because the forces of nature sometimes conspire to bring death and destruction. Though Europe has not had hurricanes or tornadoes, it has experienced severe weather in the form of high winds, heavy rains, and icy temperatures. Also, the Alpine System landform is a geologically unstable region prone to earthquake and volcanic activity.

#### Rainstorms, Blizzards, and Floods

The climates in the different regions of Europe are general patterns within which there can be considerable variations in day-to-day weather and occasionally very unusual weather. The contrast between warm ocean currents and Arctic winds in the North Atlantic can produce very severe storms that make the sea passage between Europe and North America a sometimes dangerous and often uncomfortable experience. When these storms move onto the land, they sometimes bring heavy rainfalls that cause floods and, especially when combined with high tides, endanger the dike system that protects the polders in the Netherlands. Northwest Europe experienced a winter blizzard in 1956 that killed 1,000 people and a flood in 1995 that left 40 dead. Icy gales in 1999 caused 120 deaths and extensive property damage in France, Germany, and Switzerland. Floods raged through parts of Northwest Europe in 2001. Though the climate in the Mediterranean region is drier than in the north, Italy and Spain have had damaging floods in recent decades. Rainfall combined with a rapid snowmelt in the mountains causes rivers to overflow their banks to ruin croplands and invade city streets. Sometimes the destruction is extensive. A flood in Florence, Italy in 1966 damaged or destroyed many priceless works of art. And a flood in Italy caused a dam to collapse in 1985 killing 361 people.

#### Earthquakes

Movements or cracks in the earth's crust also cause death and destruction. Tectonic activity takes place when the earth's crust rises, folds, and breaks because of movements within the earth's inner molten core. Mountains are created when the tectonic plates that float on the earth's mantle collide and move over or under each other. New mountains, such as the Alps, resulted from the most recent mountain-building activity over 25 million years ago when the Eurasian Plate collided with the African Plate. The meeting point of the two plates begins in the Atlantic Ocean, then extends from southern Spain across the Mediterranean Sea to Italy, up the spine of Italy, down along the coast of Croatia, Yugoslavia, and Albania to Greece before continuing on to the Middle East. This meeting point is where Europe's main earthquake activity takes place. Italy has experienced the most frequent and severe earthquakes. Over 100,000 people have died in Italy in the 20th century from earthquakes. A severe earthquake in Macedonia (then Yugoslavia) killed 1,100 people in 1963 and one in Romania in 1977 caused 1,500 deaths. The most recent European earthquake was in northern Italy in 2012 in which 27 people died and 45,000 were left homeless.

#### Volcanoes

Weakness in the earth's crust may also allow lava from the earth's molten core to erupt to the earth's surface. The two most active and well-known volcanoes are Mt. Vesuvius near Naples in Italy and Mt. Etna in Sicily. The most famous eruption was that of Vesuvius in 79 C.E. that buried the city of Pompeii in lava. Vesuvius erupted again in 1631. Mt. Etna has been the most active volcano in recent years with a major eruption in 1969 and lesser ones since then. Europe's most destructive eruption took place in Iceland in 1766 when over 9,300 people died.

### **CASE\_STUDY: Question 1**

***Why can severe weather develop over the North Atlantic Ocean?***

### **Question 2**

***Why is the Netherlands especially threatened by severe storms from the North Atlantic?***

**Question 3**

*Explain why earthquakes occur mostly in mountainous regions.*

**Question 4**

*What is lava and where does it come from?*