

## WARM UP

**Activity 1.** Mark the following statements as true or false. Then, read the information below to check if you were right.

1. *The UK has a temperate continental climate.*
2. *The Atlantic Ocean influences the climate of the UK.*
3. *The coastal places are cool in winter and warm in summer.*
4. *The western parts of the UK are drier than the eastern ones.*
5. *The south of the UK is influenced by the polar masses of air.*

## 1. Climate

AIM: to identify the factors that influence the climate of the UK;

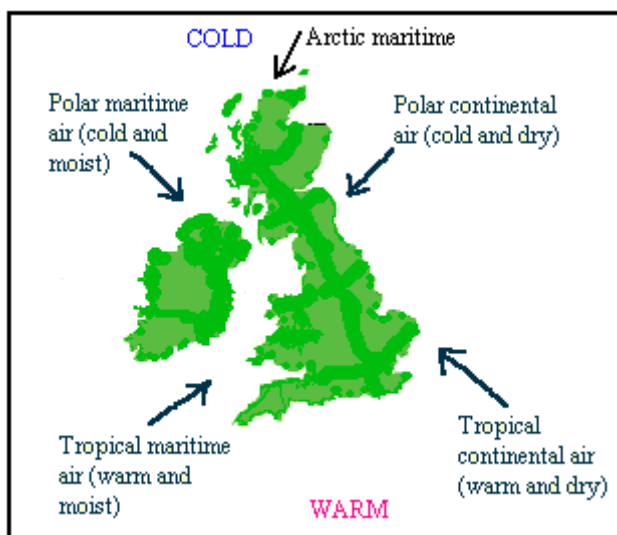
### 1. General Aspects:

The **climate of all of the United Kingdom** is classified as a *temperate oceanic climate* with warm summers, cool winters and plentiful precipitation throughout the year. The UK's climate varies greatly according to season and location, but on the whole can be described as mild with few extremes.

The principle factors of influence on the climate include:

- (1). the UK's northerly latitude (which ranges from 50° to 60° N); Places close to the Equator are warmer than those further away. In summer the south of the UK is warmer than the north.
- (2). its close proximity to the Atlantic Ocean which is crossed by a warm ocean current called the Gulf Stream (North Atlantic Drift) (a current of warm water from the Gulf of Mexico, keeps winters quite mild whilst during summertime, warm but not excessively hot temperatures are experienced), which makes the west and south-west of the UK milder than the rest of the country.
- (3). Prevailing winds. The prevailing winds that affect the UK are from the west and south-west. They are moist and mild. This means that the western parts are wetter than the eastern parts, which are sheltered.
- (4). Distance from the sea. The sea keeps coastal places warm in winter but may cool them in summer. Places far inland will have warmer summers and cooler winters.
- (5). Relief. The western side of the UK has more mountains and therefore receives more *relief rain* than the eastern side.
- (6). The climate of the United Kingdom is significantly influenced by the maritime tropical, maritime polar, continental polar and continental tropical air masses.

**Air masses:**



- Northwest: polar maritime (cold, moist)
- North: arctic maritime (very cold, moist; in winter)
- Northeast: polar continental (very cold, dry; in winter)
- Southwest: tropical maritime (warm, moist)
- South: tropical continental (hot, dry)

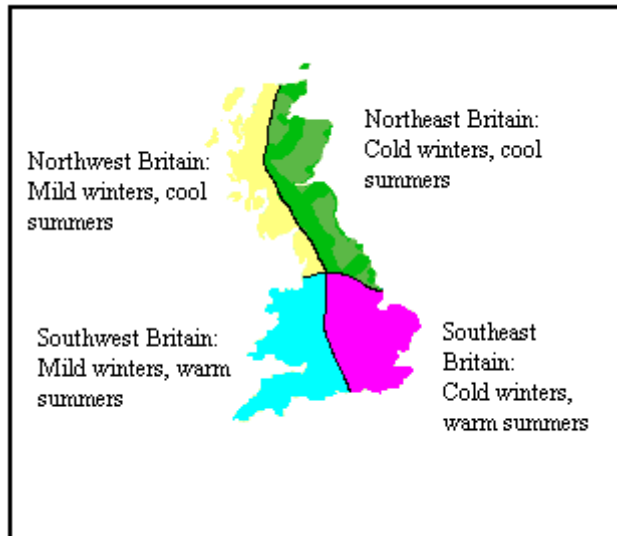
The UK is at the boundary of convergence between the warm tropical air to the south and the cold polar air to the north. In this area, the large temperature variation creates instability and this is a major factor that influences the notoriously changeable and often

unsettled weather the UK experiences, where many or all types of weather can be experienced in a single day.

The weather can be notoriously changeable from one day to the next but temperature variations throughout the year are relatively small.

## Geographical variation in the British climate

The general patterns of climate experienced in Britain have been identified. However, there are also noticeable differences that occur throughout Britain. The coldest winter temperatures in Britain occur in eastern Scotland and England. The western side of Britain is warmed by the influence of the tropical maritime airstream. Temperatures are therefore colder in the east than in the west during winter. During summer the south is warmer than the north. This is due to the differences in solar heat received, being greater in the south.



The British climate can be divided into four parts as shown on the map below. The northwest section is characterised by mild winters and cool summers and the northeast with cold winters and cool summers. The southwest experiences mild winters and warm summers and the southeast with cold winters and warm summers. Western parts of Britain generally experience a more maritime climate during winter whilst eastern Britain is influenced by the cold airstreams from the European continent.

In summer, climate differences are more dominated by latitude.

### Activity 2. Answer the following questions (NOTEBOOK):

- The UK and Romania lie at temperate latitudes. However, they have a different climate. Why?
- Which are the factors that influence the climate of your country? Are they the same as those that influence the climate of the UK?
- Why is the UK's weather changeable?

## 2. CLIMATIC ELEMENTS

### Great Britain:

#### TEMPERATURE:

Mean annual temperature: 7-11°C

Mean maximum temperature: 13-18°C (Orkney, Shetland: 11°C)

Mean minimum temperature: 3-7°C

#### Temperature extremes:

Highest: 38.5°C (Brogdale, Kent; August 10, 2003)

Lowest: - 27.2°C (Braemar, Scotland, January 10, 1982)

#### PRECIPITATION

Precipitation: 600 to 1500 mm (extremes: 553 mm in Cambridge; 2-4000 mm in Scottish Highlands)

FOG: more than 50% of the days overcast;

### Ireland:

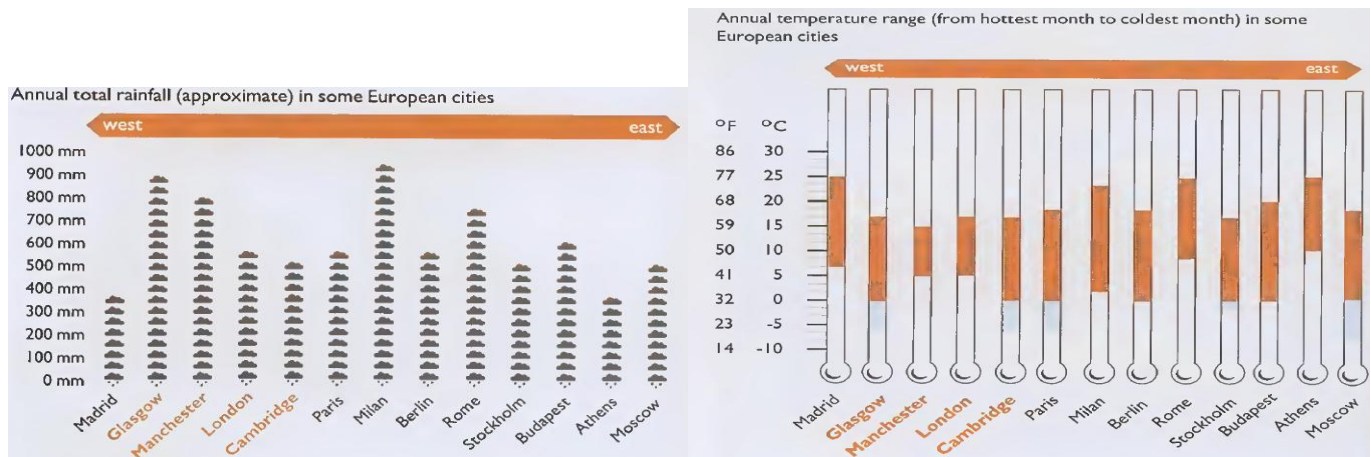
#### TEMPERATURE

Mean maximum temperature: 14-16°C

Mean minimum temperature: 4-7°C

PRECIPITATION: 700-1400 mm (60% of it between August and January)

**Activity 3.** Look at the following diagrams showing the annual total rainfall and annual temperature range in some European countries and answer the following questions: (IN YOUR NOTEBOOK)



- Why is the annual total rainfall in Glasgow higher than in Cambridge?
- Why is the annual total rainfall in Madrid lower than in London?
- Why are the annual temperatures in London lower than in Athens?
- The annual temperatures in Moscow are almost the same as in London. Why?

### 3. Seasons. Characteristics

AIM: - to identify the main characteristics of the seasons in the UK;  
- to identify the similarities and differences between UK's climate and Romania's;

**Winter** in the UK is generally a cool, wet and windy season. Temperatures at night rarely drop below  $-10^{\circ}\text{C}$  and in the day rarely rise above  $15^{\circ}\text{C}$ . Precipitation is plentiful throughout the season, though snow is relatively infrequent despite the nations' high latitude. Snow falls intermittently and mainly affects northern and eastern areas and chiefly higher ground, especially the mountains of Scotland where the amount of lying snow may be significant enough on occasions to permit skiing. Snow however rarely lasts more than a week in most areas.

**Spring** is generally a calm, cool and dry season, principally since the Atlantic has lost much of its heat throughout the autumn and winter. However, as the sun rises higher in the sky and the days get longer, temperatures can rise relatively high and thunderstorms and heavy showers can develop. There is a fair chance of snow earlier in the season when it is colder. Some of the country's heaviest snowfalls of recent years have happened in the first half of March and snow showers can occur infrequently until mid-April, even in southern areas.

**Summer** climatic differences are more influenced by latitude and temperatures are highest in southern and central areas and lowest in the north. Generally, however, summer temperatures rarely go above  $30^{\circ}\text{C}$ . The record maximum is  $38.5^{\circ}\text{C}$  recorded in Kent, in August 2003 - due to its proximity to the European land mass, the South East usually experiences the highest summer temperatures in the UK. The north-west and north east have cooler summers (average  $12.2 - 14.8^{\circ}\text{C}$ ), the south west has rather warmer summers (average  $14.9 - 15.4^{\circ}\text{C}$ ) and the south and south east have the warmest summers (average  $15.5 - 17.7^{\circ}\text{C}$ ).

Summer can often be a dry season but rainfall totals can have a wide local variation due to localised thunderstorms. These thunderstorms mainly occur in southern, eastern, and central areas and are less frequent and severe in the north and west.

**Autumn** in the UK is notorious for being extremely unsettled. As cool polar air moves southwards following the Sun in the sky, it meets the warm air of the tropics and produces an area of great disturbance along which the United Kingdom lies. This combined with the warm ocean, which due to heating throughout the spring and summer, produces the unsettled weather of autumn. In addition, when the air is particularly cold it may actually be colder than the ocean and this can result in significant amounts of condensation, producing clouds which eventually condense and bring rain to the UK. As such, autumn, particularly the latter part, is often the stormiest time of the year.

However, the UK often experiences an 'Indian Summer', where temperatures particularly by night can be very mild and rarely fall below 10°C. Such events are aided by the surrounding Atlantic Ocean and seas being at their warmest, keeping the UK in warm air, despite the relatively weak sun. Examples of this were in 2005 and 2006, where September and, especially, October saw above average temperatures which felt more like a continuation of summer, than autumn. Autumn, especially September, has been very mild or warm in recent years with notable extremes of precipitation as the UK has seen some of its wettest and driest autumns since the turn of the millennium.

**Activity 4.** Find similarities and differences between the seasons in the UK and those of your country. Refer to: temperatures, precipitation, differences between regions, extreme events etc. (NOTEBOOK)

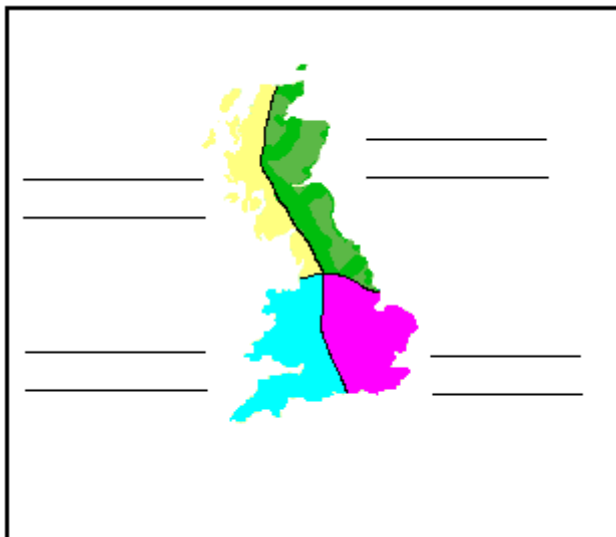
| SEASONS | the UK | ROMANIA |
|---------|--------|---------|
| Spring  |        |         |
| Summer  |        |         |
| Autumn  |        |         |
| Winter  |        |         |

**Activity 5.** Choose the correct answer:

- Britain has \_\_\_\_\_ summers and cool winters.
  - hot
  - warm
  - cool
- Generally speaking, which part of the UK gets most of the rain?
  - the east
  - the south
  - the west
- The polar maritime masses of air influence the \_\_\_\_\_ parts of the UK.
  - southern
  - north-western
  - western
- The highest temperature in the UK was recorded in \_\_\_\_\_ in 2003.
  - Scotland
  - Wales
  - Kent
- The UK's climate varies greatly according to \_\_\_\_\_ and location.
  - prevailing winds
  - season
  - relief
- Temperature variations throughout the year in the UK are relatively \_\_\_\_\_.
  - high
  - moderate
  - small

7. The amount of lying snow in the mountains of \_\_\_\_\_ may be significant enough on occasions to permit skiing.
- Wales
  - Northern Ireland
  - Scotland
8. \_\_\_\_\_ is often the stormiest time of the year.
- summer
  - winter
  - autumn

**Activity 6.** Label the map below with the correct climate summary for each part of Britain.



*Cool summers*                      *Warm Summers*                      *Mild*  
*winters*                      *Cold winters*    *Cool summers*                      *Warm*  
*Summers*                      *Mild winters*    *Cold winters*

**Activity 7.** Some of the words below are mixed up. See if you can unscramble them.

Britain is in the **merteatpe** ..... climate **noze** ..... British **eatwher** ..... is dominated by frontal **piodressens** ..... which give changeable weather. The Gulf **remSat** ..... Drift causes western Britain to have **ldmi** ..... winters. Eastern Britain has **lerdoc** ..... winters which are influenced by continental air masses. In **numers** ..... the south of Britain is warmer than the north due to higher levels of **lrsoa** ..... heat in the south.