



# Geography

## ESO 3

### 9. Population

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# 9. Population

## This chapter

In autumn 2011, the world's **population** reached 7 billion. The population is **growing** very fast in some places, while in other places it is stable or falling. This is partly **due to natural changes in population**, and partly **due to migration**. In this chapter we will find out about:

- the factors that affect **population** increase
- **population structures**, and how they differ between richer and poorer countries
- why people **migrate** from one place to another

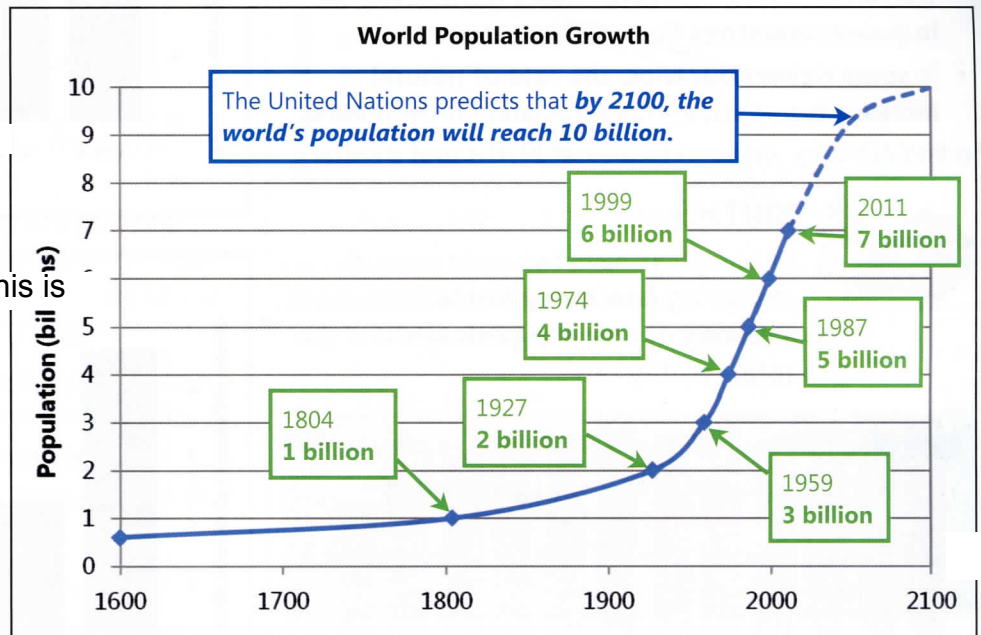
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= because of

## A growing population

The **population** of a country or area is the **number of people** who live in that country or area. Starting from 1800, the world's population is growing **very quickly** because **more babies are surviving** and people are **living longer**. The cause of this is:

- **better access to clean water**, which has reduced **diffusion** of many diseases
- **better sanitary care**, such as vaccinations
- **modernisation in agriculture and industry**, which mean we can produce **more food**



Source: UNFPA State of World Population 2011

## POPULATION DENSITY

The world's population is **not distributed** identically. For example, over a third of the people in the world live in China or India. As we saw in Chapter 1, most people live in the **best areas**, for example areas with a **nice** climate and sufficient water and other natural resources.

We say that places where **lots of people live close together** have a **high population density**.

**Population density:** number of people per unit area.

**Population density =  $\frac{\text{number of people in an area}}{\text{area (in km}^2\text{)}}$**

**Example:**

$$\begin{aligned} \text{Population density of Spain} &= \frac{\text{Spain's population}}{\text{Spain's area (in km}^2\text{)}} \\ &= \frac{46,000,000}{498,800} = 92 \text{ /km}^2 \end{aligned}$$

The population density of Spain is **92 per square kilometre**

## Questions

1 2 5

- How long did it take for the world's population to increase:
  - from 1 billion to 2 billion?
  - from 2 billion to 3 billion?
  - from 6 billion to 7 billion?
- Why is the world's population growing? Give at least two reasons.
- Look in the table in the back of the book.
  - Which country has the highest population?
  - Which country has the highest population density?
  - Which of these two countries is bigger?
- Which country has a higher population density – India or Finland? Why do you think this is?

= have impact on

# What factors affect population?

The **population of a country or area** and **how fast it increases or decreases** depend on:

- the **number of births** = people born
- the **number of deaths** = people dead
- **migration** – the number of people moving into or out of the area

tasso

crescita

## NATURAL CHANGE IN POPULATION

The **natural change in population** is the change in the population of a country or area if we ignore migration. It only depends on **births and deaths**. Geographers measure this using the **rate of natural increase**.

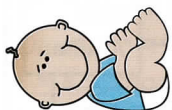
**Rate of natural increase:** the increase in population per 1000 people per year.

**Rate of natural increase =**

$$\text{Rate of natural increase} = \frac{\text{number of births per 1000 people} - \text{number of deaths per 1000 people}}{\text{1000}}$$

- The rate of natural increase is usually much **higher in poorer countries** than in richer countries.
- In **some richer countries, the rate of natural increase is negative** – the population is reducing

To find out why, we need to look at **births and deaths**.



## BIRTHS

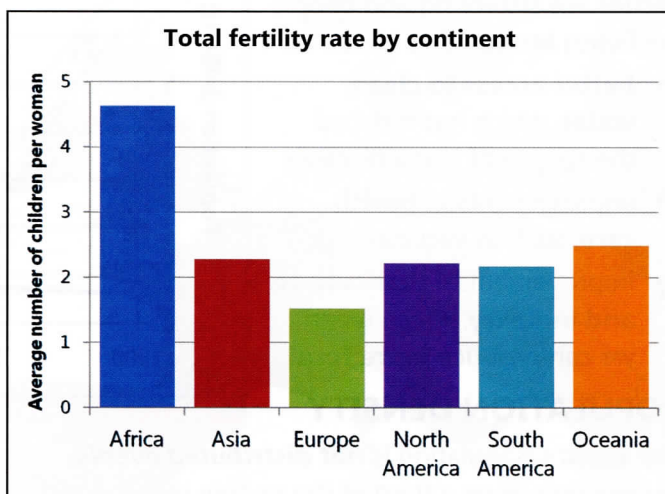
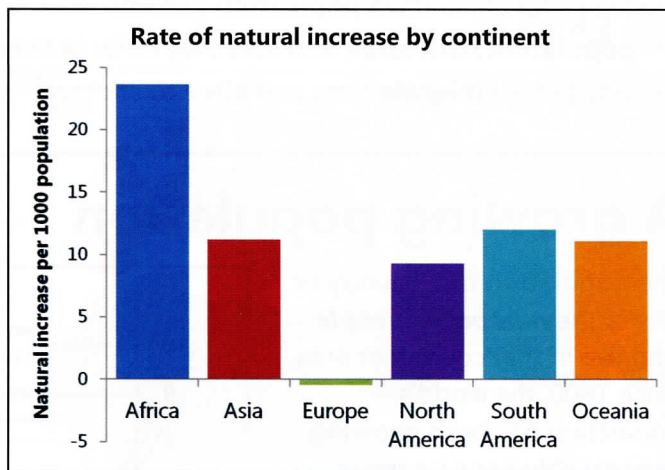
Geographers have two main ways of measuring **how many births** there are in a country or area: the **birth rate** and the **total fertility rate**.

**Birth rate:** number of births per 1000 people per year.

$$\text{birth rate} = \frac{\text{number of births in 1 year}}{\text{total population}} \times 1000$$

**Total fertility rate:** the average number of children each woman has in her life.

=medium



## Questions

1 2 5 7

- In which continent is the population growing most quickly? What is the rate of natural increase?
  - On average, how many children does each woman in that continent have?
- In which continent is the population decreasing?
  - On average, how many children does each woman there have?
- What are the main differences between these two continents that affect how many children women have?
- What happens if women have fewer than two children each on average?

The **birth rate** varies a lot from country to country, because the **total fertility rate** is higher in some places than others: **women in poorer countries have more children on average** than women in richer countries.

This is because **in poorer countries:**

- children can help with work and **help** their parents in old age
- people want more children in case some don't survive
- there is less access to contraception
- people want to have several children for religious and cultural reasons

=a certain number of

**In richer countries,** many young women want to concentrate on their own life and career, and not starting to have children at a young age. When they do have children, they usually only have a small number.

If, on average, women have **just over two children each**, the **population remains stable**: it neither increases nor decreases. If they have **fewer children** than this, the **population decreases** in the long term.



## DEATHS

Geographers use **life expectancy** to measure **how long people live on average**. They also look at **how many**

**deaths** there are using the **mortality rate**. They are often particularly interested in the **infant mortality rate**.

usually

### Mortality and infant mortality:

Over the last century, **the mortality rate has fallen a lot** in most countries. This is because.

100 years

- There are fewer people who don't have enough food, so **fewer people are dying of starvation**.
- There is **better access to clean water**, which has reduced the **spread** of diseases.
- The **health services** in most countries have improved.
- There are **new medicines and treatments**, including vaccinations
- In particular, these improvements mean that **fewer young babies are dying**.

the majority of

hunger

diffusion

=nonostante

In spite of the improvements, **there are still big differences** in the mortality rates between countries.

The **infant mortality rate** is a good measure of the level of economic **development** of a country:

- It is **very low in richer countries**, where babies have enough food and good medical services.
- It is **much higher in poorer countries**.

We will find out more about these differences in the next chapter.

progress

### Life expectancy:



All around the world, lower mortality rates mean that **people are living longer**. However, **life expectancy** still **varies greatly by country**, due to the differences in mortality rates.

= because of

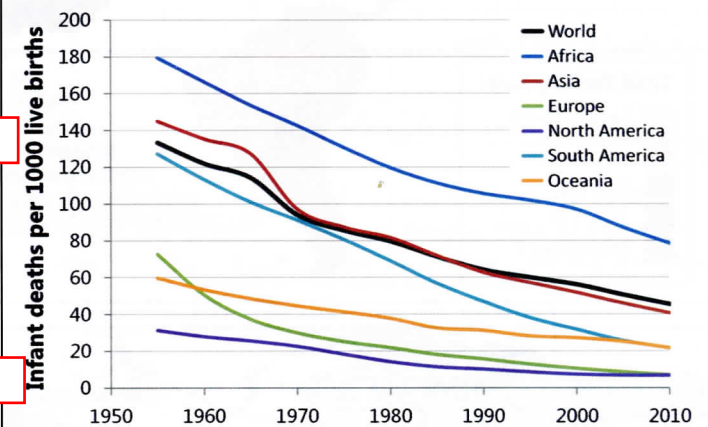
**Mortality rate:** number of deaths per 1000 people per year.

$$\text{mortality rate} = \frac{\text{number of deaths in 1 year} \times 1000}{\text{total population}}$$

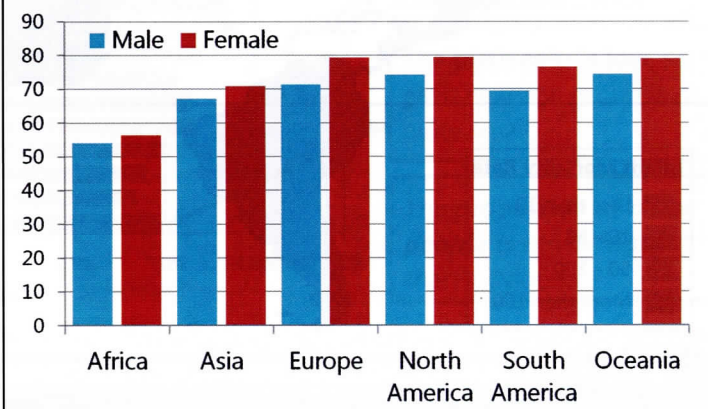
**Infant mortality rate:** number of babies who die when they are less than one year old per 1000 live births.

**Life expectancy at birth:** the number of years that a new baby is expected to live.

Changes in infant mortality rate by continent



Life expectancy (years) by continent and sex



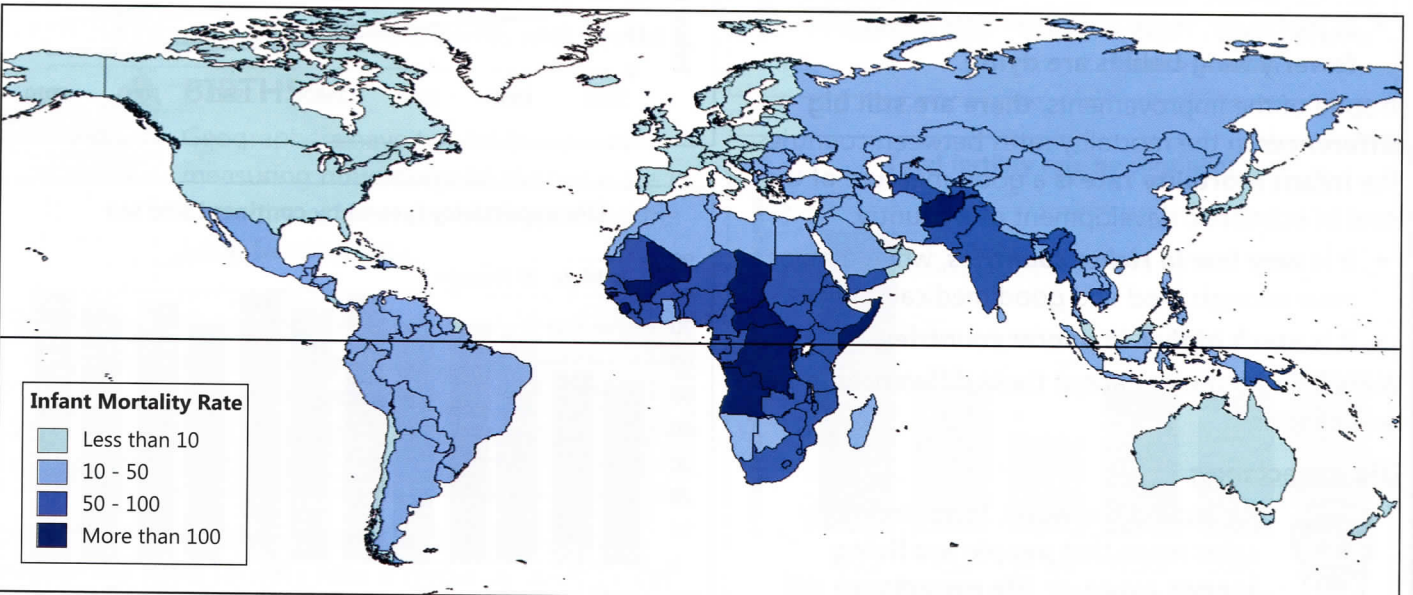
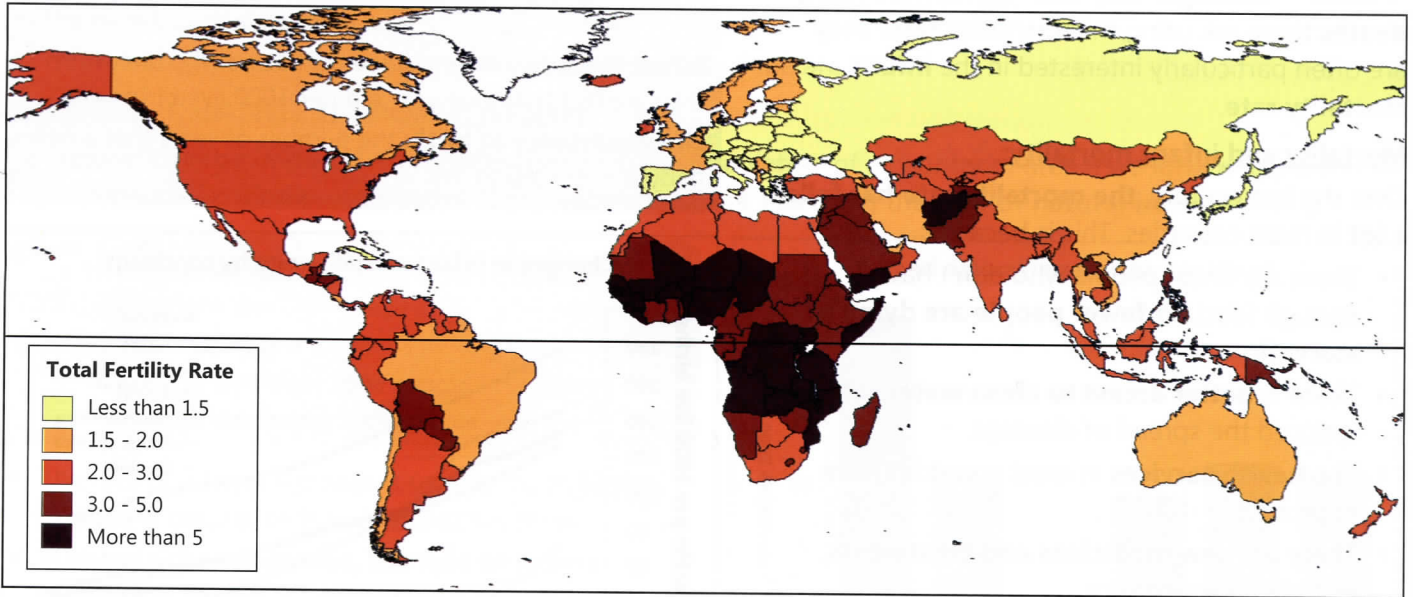
## Questions

1 2 5 7

- Give three reasons why the mortality rate is falling in most countries.
- In 2010:
  - Which continent had the highest infant mortality rate?
  - Which two continents had the lowest infant mortality rates?
- True or false?
  - By 2010, the world infant mortality rate had fallen to less than half of its level in the 1950s.
  - Since the 1950s, infant mortality has fallen much more quickly in Oceania than in South America.
- In 1960, infant mortality in Asia was less than the world average.
- Infant mortality in Asia is still higher than it was in Europe in 1955.
- Which continent do you think has the lowest average level of economic development?
- In which three continents do people live the longest?
- Do men or women live longer?
- Approximately how much longer do women in Europe live than men in Africa?

# Differences between countries

We have already seen how fertility and mortality rates are quite different in different parts of the world. Now let's look at the rates in individual countries.



## Questions

1 2 5

Use the two maps above, and the political map in the back of the book, to help you answer these questions.

16. In which continent are there most countries with:
- a total fertility rate greater than 5?
  - an infant mortality rate of more than 100?
17. Copy the sentences below and choose the correct answers:
- Russia / The US** has a similar total fertility rate to Spain, but a higher infant mortality rate. Meanwhile, **Russia / the US** has a much higher total fertility rate than Spain.
  - Tanzania and Angola have similar total fertility rates, but **Tanzania / Angola** has a higher infant mortality rate.
  - Ireland / Italy** has one of the highest total fertility rates in Europe.
  - Chile and **Argentina / Brazil** are two of the countries with the lowest total fertility rates in South America.

## Exercise 1

1 2 5 7

Work in pairs. Each choose three different countries (from different continents).

Tell your partner:

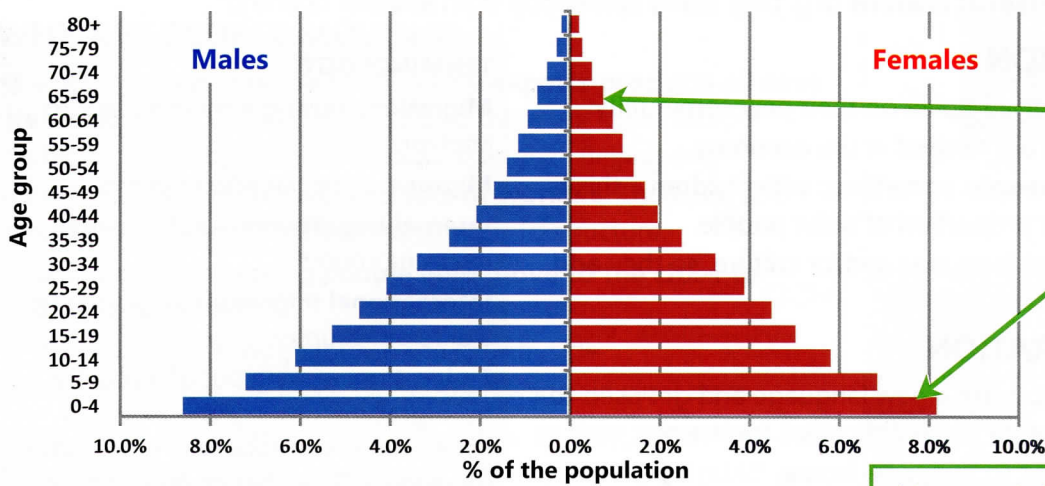
- whether the total fertility rate is high, medium or low
- whether the infant mortality rate is high, medium or low
- what you think the reasons for this are – look at the previous two pages to help you

For example: *Germany is a rich country. Its total fertility rate is low because many women want to concentrate on their own life and career. They have children quite late. Germany's health services are very good, so not many babies die. The infant mortality rate is therefore low.*

# Population structure

**Population structure** tells us *how many males and females there are in each age group*. Geographers use **population pyramids** to show population structure. The population structure of a country **depends on its level of economic development**. Look at the population pyramids for **Nigeria** and the **United Kingdom**:

## NIGERIA



only very few people get to

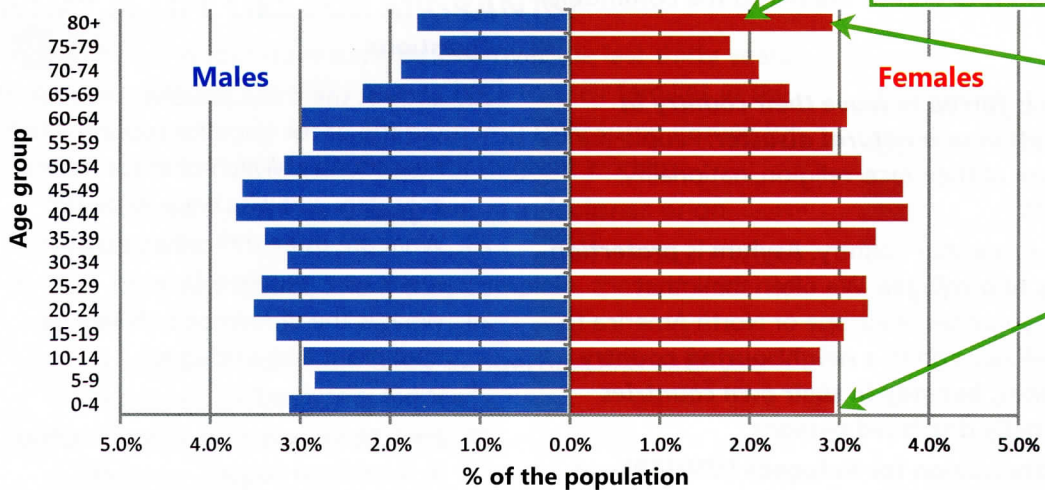
The **mortality rate is high**, so **hardly anyone** reaches old age.

The **birth rate is high**, so each new age group is bigger than the **last**.

previous

There are **more young people than old people**.

## UNITED KINGDOM



This group is big because it includes **all** women over 80.

There are more older people because the **mortality rate is low** and **life expectancy is high**.

The **birth rate is low**, so each new age group is quite small.

The **proportion of older people is much higher** than in Nigeria.

The population pyramids for Nigeria and the UK clearly show the **differences in population structure between richer and poorer countries**:

- **Poorer countries** usually have a **triangular population pyramid**, like the one you can see above for Nigeria. There are many more young people than older people. This indicates that the population is **growing quickly**.
- **Richer countries** like the UK have a **"tunnel-shaped" population pyramid**. There is much less difference in size between the age groups. This shows that the population is **quite stable**.

### Questions

1 2 5 7

- Approximately what percentage of the population is under 15:
  - in Nigeria?
  - in the UK?
- In the UK, are there more women or men over the age of 80?
- Explain why:
  - There is a higher proportion of younger people in Nigeria than in the UK.
  - There is a higher proportion of older people in the UK than in Nigeria.
- Which of these issues do you think can be a problem in poorer countries and which can be a problem in richer countries?
  - The population is growing too fast and there are not enough resources (food, water, land etc.) for everybody.
  - There are not enough people of working age (15-66) to look after the older people (67 and over).

# Migration

People have moved from one place to another throughout history. People move for lots of **different reasons**, either **voluntarily** or because they are **forced to** move. Here are some of the main reasons:

1. They are **looking for better opportunities** in another country (e.g. better jobs, better education).
2. They are **escaping from problems** in their own country (e.g. war, persecution, starvation).
3. They want to move for **personal reasons** (e.g. they marry somebody from another country).

## BENEFITS OF MIGRATION

Immigrants often have a positive impact on their new community:

- They bring **job skills** that are needed in the economy.
- They are usually **young people**, sometimes with children – this is good in areas with a high proportion of older people.
- They often have a different language and/or culture, so they **add diversity**.

## DIFFICULTIES OF MIGRATION

New immigrants often have to learn a new language and get used to different customs. This can create some difficulties for them:

- It is hard for them to adapt to their new home.
- It is hard to find work.
- Some local people don't want to accept them into the community.

## REFUGEES

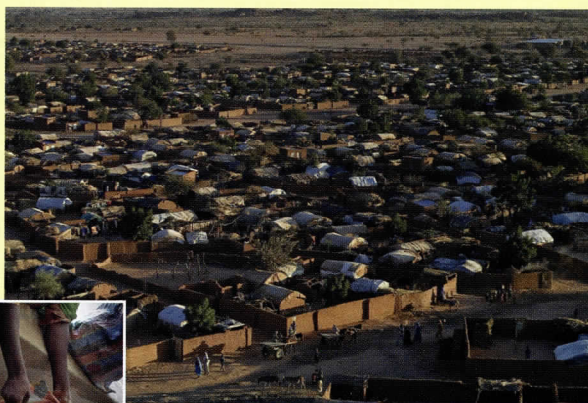
A **refugee** is **somebody who is forced to leave their country in order to escape war, persecution or a natural disaster**. People are sometimes persecuted because of their race, religion, nationality, social group or political beliefs.

Refugees can ask for **asylum** in another country. **Asylum** is **protection that a foreign country gives to a refugee**. We often think that refugees always travel to rich countries in Europe or North America to get asylum, but really most refugees go to a **neighbouring country**. Some people **leave their homes, but stay in their own countries** – these people are called **internally displaced persons**.

The **United Nations High Commission for Refugees (UNHCR)** was founded in 1950 in order to:

- lead and coordinate international action to **protect refugees**
- **make sure that refugees can find asylum**
- **solve other problems** related to refugees

The UNHCR helps to establish **refugee camps**. Refugees in the camps are given housing and food.



Above: a refugee camp in Chad for refugees from Darfur in Sudan  
Left: refugees are given bags of flour

## TERMINOLOGY

**Migration:** moving from one place to another.

**Migrant:** someone who migrates.

**Internal migration:** migration within the same country.

**International migration:** migration to a different country.

**Emigration:** moving out of a country.

**Immigration:** moving into a country.

For example, someone who moves from Germany to Spain has *emigrated from Germany* and *immigrated to Spain*.

## Questions

1 5

22. Look at the three reasons given at the top of the page for moving to a new country. Which of them are voluntary and which are forced?
23. What are three difficulties that many new immigrants face?
24. What is the difference between an immigrant and a refugee?
25. What is asylum?
26. Look at a world map. Where is Chad in relation to Sudan?
27. Look in the data table at the back of the book. Is Chad a rich country?
28. Why do refugees from Sudan go to Chad?

## Exercise 2

1 5 8

Think of somebody who has moved from one country to another: either a famous person or somebody you know. Tell the class about him/her. Think about these questions:

- Where did he/she move to and from?
- When did he/she move?
- Why did he/she move? Was it a forced or voluntary migration?
- Is he/she still living in the new country? Do you think that he/she is (or was) happy living there?

# Case study: Internal migration in China

Some of the biggest movements of people happen **within countries**, often when people move from the countryside to towns and cities. China is one place where **urbanisation** is happening very quickly. In 2011, for the first time in China's history, the urban population was bigger than the rural population.

## WHY ARE PEOPLE MOVING?

As a result of **globalisation**, China now **exports products all over the world**. Most exports go by sea, so there are many factories in the big cities near the coast, such as Shanghai, Beijing and Shenzhen. These **factories need lots of workers**. There are also jobs building flats, offices and transport infrastructure.

Most migrants are **young people who move to the cities to find work** because:

- there are not enough jobs in the countryside
- wages in cities are much higher than wages in rural areas

Many young people move to nearby cities, so they are not too far away from their families. However, some migrants travel hundreds of miles to the biggest cities, where they can find the best jobs.

## WHAT IS LIFE LIKE FOR MIGRANTS?

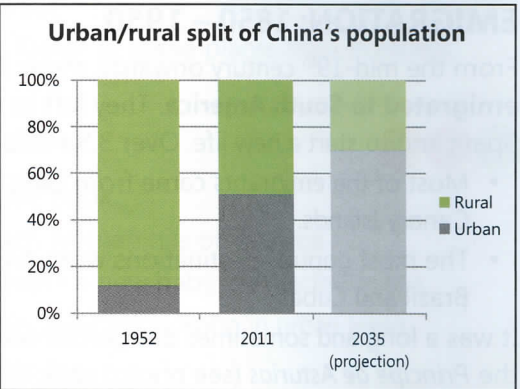
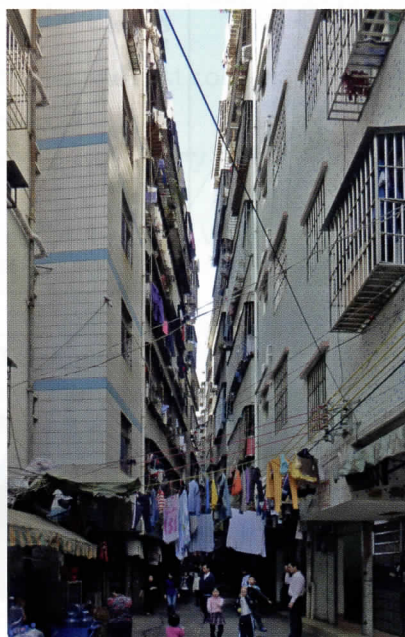
In many cities, wages have risen quickly over the last thirty years, so migrant workers can send money back to their families in the countryside. If they are lucky, they can also save some money for themselves. However, life isn't easy for migrant workers:

- They normally **work very long hours** in factories or on building sites.
- They have **few rights**, and if they complain, they can lose their jobs.
- The jobs they do are often **very dangerous**, and each year thousands of people die in accidents.
- Many migrants can only afford to travel home once a year to see their families.

## WHERE DO THEY LIVE?

Many migrant workers live in **urban villages**, because they cannot afford to live in a modern apartment in the city. In the urban villages, people live in overcrowded buildings, and there are problems with disease, drugs and crime. Nevertheless, people normally have electricity and running water, so the conditions are much better than in many **slums**. Most urban villages also have their own schools and medical clinics, although they are not as good as the ones in other parts of the city.

An urban village in Shenzhen



## TERMINOLOGY

**Urbanisation:** an increase in the proportion of the population living in urban areas.

**Urban village:** an area of a Chinese city with cheap housing for migrant workers.

**Slum:** an area of a city with low-quality housing that is built illegally.

## Questions

1 5 6

29. Do more Chinese people live in urban areas or in rural areas?
30. Why do Chinese factories in coastal cities need lots of workers?
31. Write down two reasons why young people in China move from the countryside to cities.
32. What problems are there in urban villages?
33. In what ways are conditions in urban villages better than in many slums?
34. How do the schools and medical clinics in urban villages compare with the ones in other parts of the city?

## Discussion 1

1 5 6 8

Many migrant workers in China work in the construction industry, building modern flats. However, they are paid so little that they cannot afford to buy these flats. Instead, they live in urban villages.

Do you think that this is fair? Should construction workers be paid enough to buy a modern flat in the cities where they work? Why do you think that construction workers are badly paid? Think about what you know about the labour market (supply and demand, skills, experience, etc.).



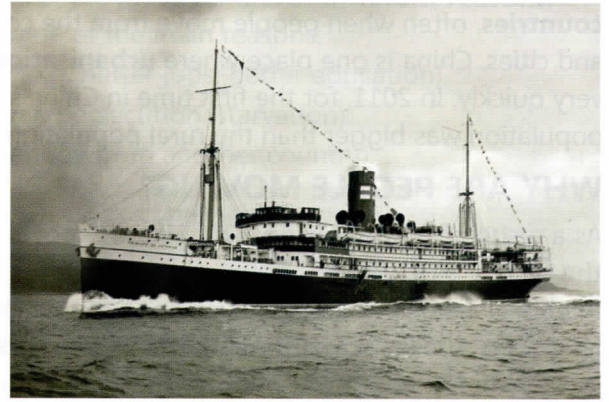
# Case study: Migration to and from Spain

## EMIGRATION: 1850 – 1950

From the mid-19<sup>th</sup> century onwards, many Spanish people **emigrated to South America**. They left to escape poverty in Spain and to start a new life. Over 3.5 million people left in total.

- Most of the emigrants came from Galicia, Asturias and the Canary Islands.
- The most popular destinations were Argentina, Uruguay, Brazil and Cuba.

It was a long and sometimes dangerous sea journey. In 1916, the *Principe de Asturias* (see photo) sank on its way to Brazil, killing over 400 passengers.



## EMIGRATION AND INTERNAL MIGRATION: 1950s, 60s AND 70s

From the 1950s to the 1970s, there was high unemployment in Spain, so people **emigrated to northern European countries** such as Germany, France, Sweden and Belgium. There was lots of work in these places, helping with reconstruction after the Second World War. People also **migrated within Spain**, particularly from poor rural areas in the south to cities in the north, where there were more jobs and opportunities.

In the 1970s, due to an economic crisis, there were a lot fewer jobs in northern Europe. Emigration almost stopped, and many migrants returned to Spain.

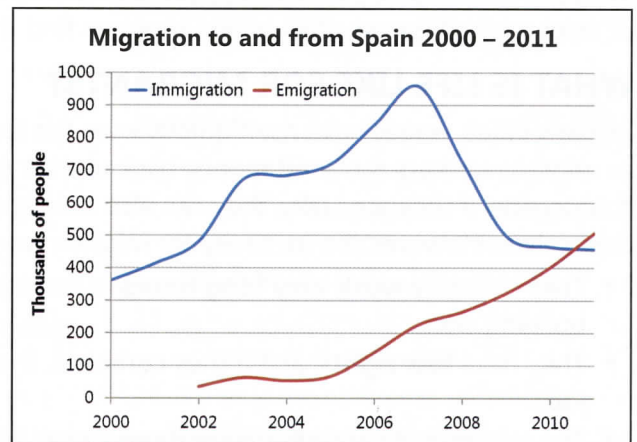
## IMMIGRATION: 1980s ONWARDS

Since the 1980s, millions of foreigners have moved to Spain. There are two main types of immigrants:

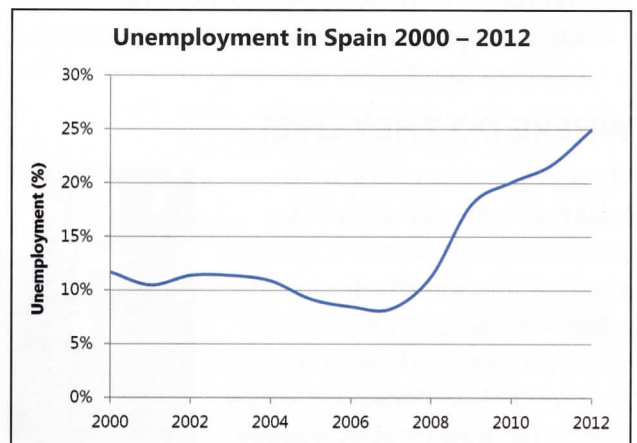
- **young people** from **Latin America, northern Africa and Eastern Europe** coming to **find work**
- **retired people** from **northern Europe**, who are attracted by Spain's warm climate

Immigration increased very quickly in the first few years of the 21<sup>st</sup> century (see top graph). By **2011** there were **over five million foreigners living in Spain**, compared with only 1.5 million in 2001. The biggest foreign communities in Spain were the Romanians, Moroccans, Ecuadorians and British.

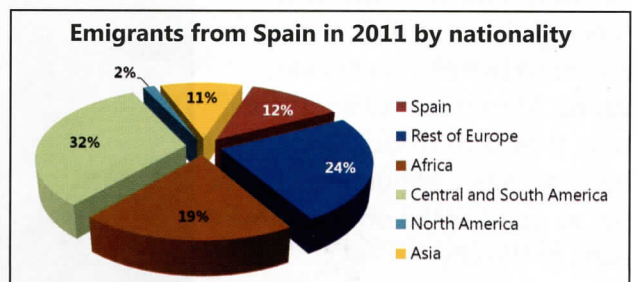
More recently, due to the recession, both Spanish people and foreigners have emigrated from Spain to look for better opportunities in other countries (see pie chart).



Source: EUROSTAT



Source: EUROSTAT



Source: INE, Spain

### Questions

1 5 6

35. What was the main reason that people emigrated:
    - a) between 1850 and 1950?
    - b) in the 1950s, 60s and 70s?
  36. What are the main reasons that people immigrated to Spain from the 1980s onwards?
- Look at the three graphs on the right:
37. In which year was the number of people leaving Spain higher than the number of people arriving in Spain?
  38. What do you think was the main reason why people left?
  39. Which group was bigger in 2011?
    - a) Spanish people emigrating
    - b) Foreigners leaving Spain

# POPULATION - SUMMARY

This chapter was about **population and migration**. You learned about:

- why **the world's population is growing**, and why it is growing faster in some places than in others
- why people **migrate** from one place to another

## A. KEY CONCEPTS

1 2 5

A1. Choose the correct answer and copy the sentences into your exercise book.

- The **total fertility rate / birth rate** is the number of children each woman has on average.
- The **mortality rate / life expectancy** at birth is the number of years a new baby is expected to live.
- Urbanisation / Migration** is an increase in the proportion of the population living in urban areas.
- Internal migration / Immigration / Emigration** is leaving a country.

A2. What does an infant mortality rate of 100 mean?

- 100% of babies die before they are one year old
- 10% of babies die before they are one year old
- 1% of babies die before they are one year old

## B. POPULATION PYRAMIDS

1 2 5 8

B1. Draw a population pyramid for Spain using the data in the table on the right.

B2. What does Spain's population pyramid look like? Is it more like the UK's pyramid or more like Nigeria's?

B3. What does this tell you about the level of economic development of Spain, the UK and Nigeria?

Age	Men	Women	Age	Men	Women
0-4	2.1%	2.0%	45-49	2.8%	2.8%
5-9	1.9%	1.8%	50-54	2.4%	2.5%
10-14	1.7%	1.6%	55-59	2.0%	2.1%
15-19	1.8%	1.7%	60-64	1.9%	2.1%
20-24	2.1%	2.0%	65-69	1.6%	1.7%
25-29	2.8%	2.6%	70-74	1.3%	1.6%
30-34	3.4%	3.1%	75-79	1.2%	1.6%
35-39	3.3%	3.1%	80+	1.3%	2.3%
40-44	3.1%	3.0%			

## C. TANZANIA - A FAST-GROWING POPULATION

1 2 5 8

C1. Use the data in Table 1 to **draw a graph** showing how the populations of Spain and Tanzania have changed since 1950.

C2. Describe how the populations of the two countries have changed.

C3. What do you think will happen in the future? Which country will have the biggest population?

C4. In Tanzania, the **total fertility rate** is almost 6, whereas in Spain it is less than 2. Look at how much difference this makes after just two generations (see Table 2).

- Count up all your brothers, sisters and first cousins. How many are there in total?
- Ask your parents to do the same. How many brothers, sisters and first cousins do they have?
- Share your results with the rest of the class. What can you conclude about population growth in Spain?

	Spain	Tanzania
1950	28.1	7.6
1960	30.4	10.1
1970	33.8	13.6
1980	37.5	18.7
1990	38.9	25.5
2000	40.3	34
2010	46.1	44.8

Table 1: Total population (in millions)

Total Fertility Rate	2	6
Children	2	6
Grandchildren	4	36

Table 2: Number of children and grandchildren by total fertility rate

## D. MIGRATION

1 5

D1. Match up the descriptions below with the correct migration:

- People went to other countries and to cities in their own country to find jobs.
- People were forced to leave their country because it wasn't safe.
- People are moving to the cities to find work.

- Migration in Spain in the 1950s.
- Migration in modern China.
- Refugees migrating from Sudan to Chad.

D2. In which of the three situations did a country's overall population change?