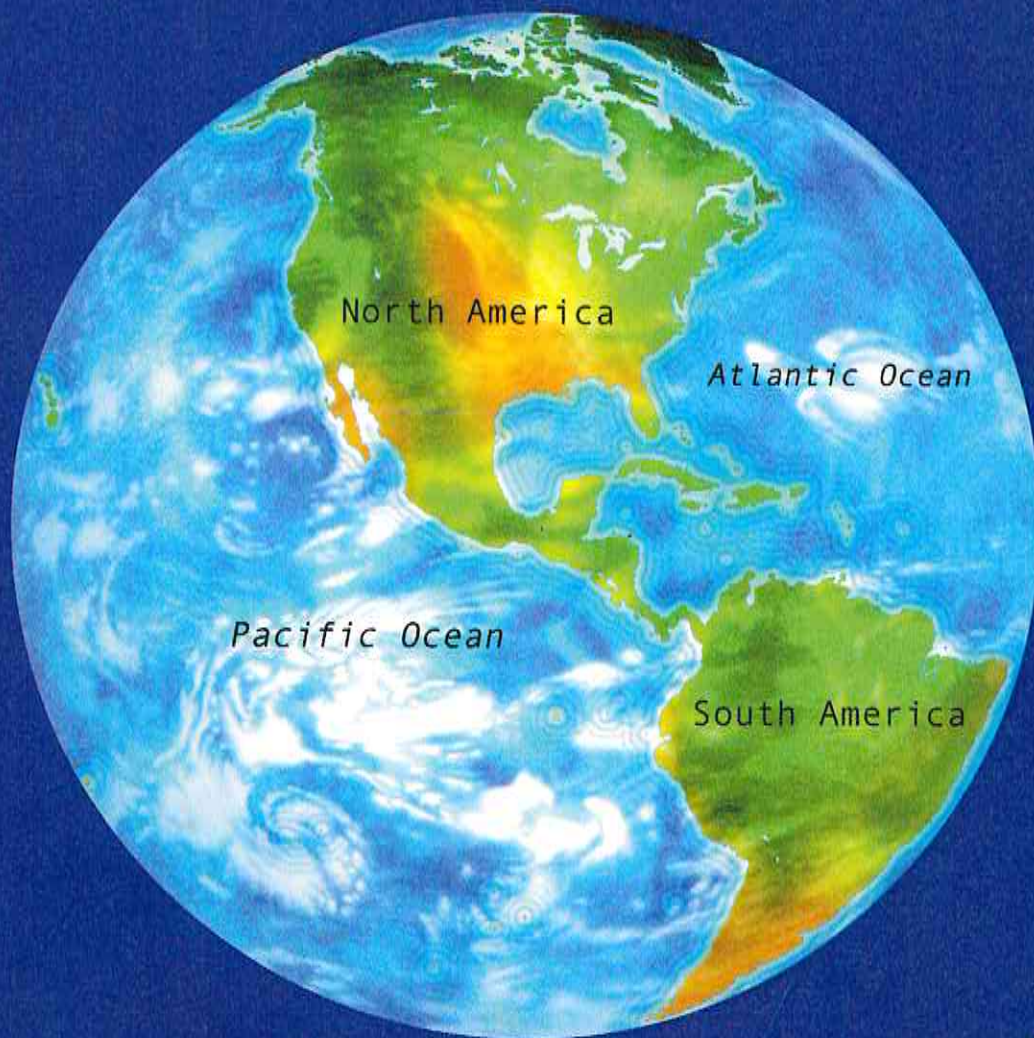


CAYMAN

Primary Social Studies

THE WORLD AT A GLANCE



TEXTBOOK

6

Cayman Islands Primary Social Studies

TEXTBOOK 6

The World at a Glance



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Foreword: A message from the Chief Education Officer

It is very fitting that as we enter into a brand new century and indeed a new millennium these Social Studies books of the Cayman Islands are introduced into our schools. For our country to move confidently into the future we must know about our past and these books will give valuable information regarding our past that must be passed on to all future generations. Our children must gain an appreciation of the sacrifices and contributions that have been made by the generations of Caymanians that preceded them and of the traditions of hard work, honesty, integrity and faith in God that have brought the Cayman Islands to prominence today. They must learn to appreciate Cayman's traditions of democracy and decency and practise those lessons throughout their lives, so that Cayman will continue to grow and prosper.

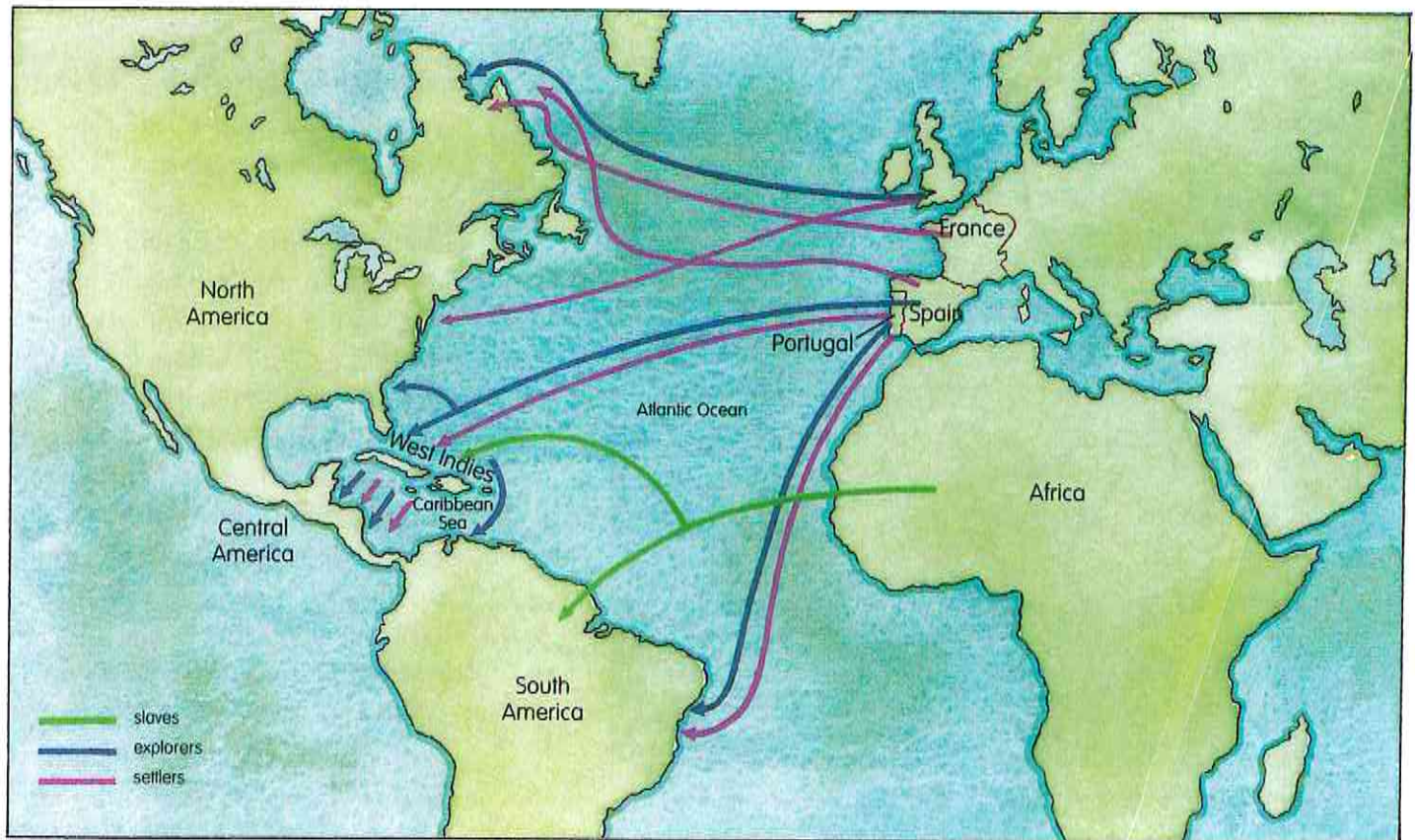
These books reflect the hard work and dedication of our teachers and education department staff to ensure that Caymanian culture, history, government and traditions are appreciated and practised by our children. I encourage the reader to infuse the lessons in these books into as many areas of our children's education as possible, so that Social Studies is not seen merely as a subject, but reinforces our very existence and culture in all areas of study. I offer congratulations and sincere appreciation to all those who have contributed to these books, but especially to Mr James Watler, for seeing the project through to completion.

Nyda Flatley, M.Ed., Chief Education Officer, Cayman Islands Department of Education, Grand Cayman, Cayman Islands

Coming to the New World



Explorers in the New World



The map shows the continents of America, and the Caribbean region. When the Europeans first discovered this area, they called it the New World. Explorers and settlers came from several countries in Europe to **colonise** the New World during the 16th century. (You can check the meaning of words in **bold** type in the List of Words and Meanings on pages 126–8.)

★ Why do you think this region was called 'the New World'? Where was the Old World?

Activity



- 1 Study the map and write down the names of the European countries from which explorers and settlers came.
- 2 Name four areas of the New World where Europeans settled.
- 3 From which other continent did people come in the 16th century?

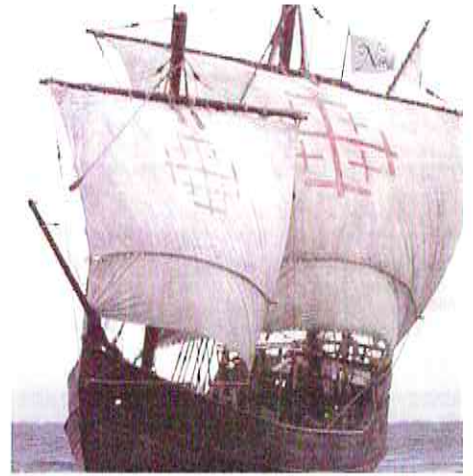
The discoveries of Christopher Columbus

You learned in Year 4 that Columbus was the first European to see the Cayman Islands. He sighted Cayman Brac and Little Cayman on 10 May 1503, on his way from Panama to Hispaniola. It was his fourth and last voyage from Europe to the New World.

★ What did Columbus call the Cayman Islands? Check the Fact File below if you cannot remember.

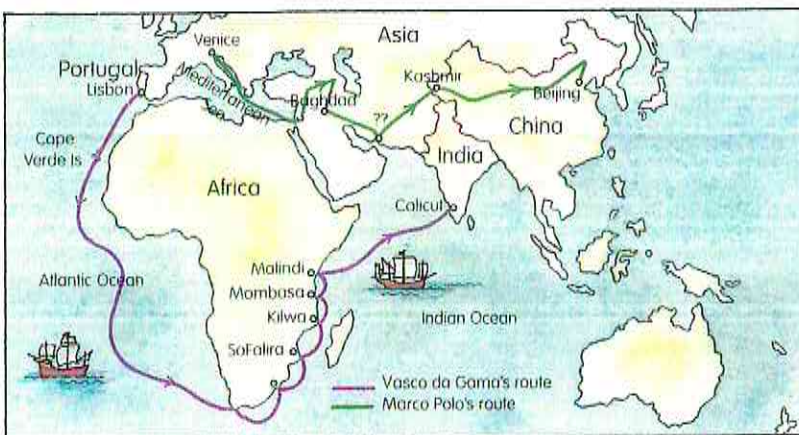
● FACT FILE – NAMES FOR THE CAYMAN ISLANDS

Las Tortugas	Columbus named the islands after the turtles he saw in the waters around them.
Lagartos	Early maps of the islands named them after alligators and large lizards.
Caimanas	The Carib word for crocodiles gave us this name.
Cayman Islands	Finally, the word Caimanas developed into Cayman, and our islands had their name.



A replica of Columbus's ship *Santa Maria* sailing near Madeira

Columbus was inspired by the Portuguese explorers who had charted the coast of Africa during the 15th century. China, India and the Spice Islands in the Indian Ocean were important sources of luxury goods. But the journey to these countries from Europe was long and dangerous. If the world was round, Columbus reasoned, it must be possible to sail westwards and reach India from Europe by sea. A sea route to the west would open up trade and help Europe to prosper.



Early sea and land routes across Europe to Asia



Picture study

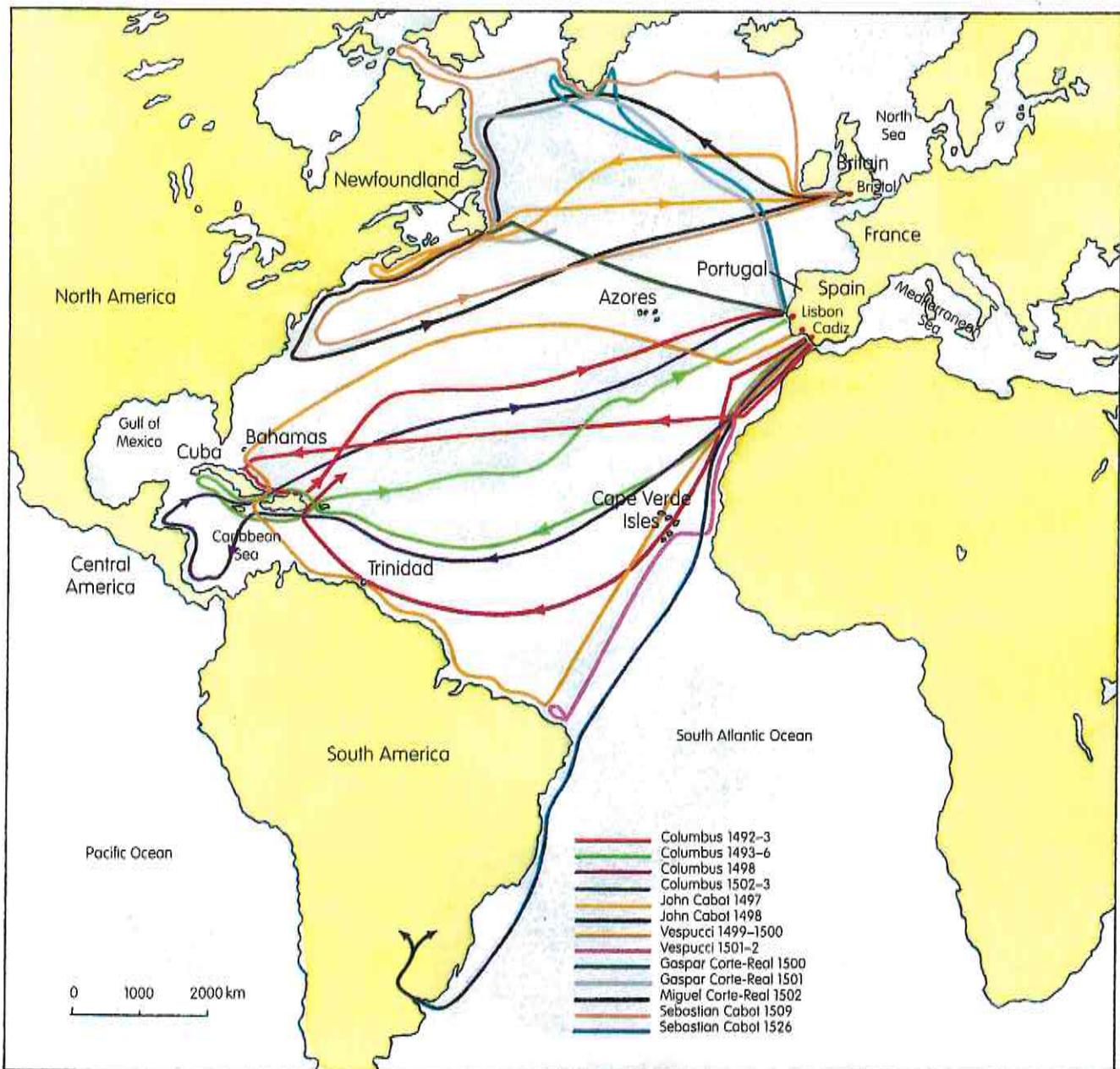
- 1 Trace the routes spice traders had to take from Europe to Asia and back. Write down the kind of **terrain** they had to cross.
 - 2 Discuss in a group or in class the reasons why Europeans thought trade by sea would be better than trade by land.
- E** Find out more about Amerigo Vespucci or one of the other explorers. Write a short biography of your chosen explorer.

For six years Columbus tried to get backing for an expedition westwards across the Atlantic. The kings of Portugal, England, France and Spain all turned him down in turn. At last, in January 1492, he persuaded King Ferdinand and Queen Isabella of Spain to appoint him high admiral of the Ocean Sea and governor of any lands he might discover on his way westwards. He set sail in August, and made his first **landfall** in San Salvador on 11 October 1492. He believed he had reached islands off the coast of India. So the region came to be called the West Indies.

Other important explorers in the region

Columbus was not the only explorer who sailed the Atlantic in the decades before and after 1500. John Cabot and his son Sebastian from Britain, and Pedro Cabral and Gaspar Corte-Real from Portugal, also made discoveries in Greenland, on the American continent and in the Caribbean.

Another important explorer was Amerigo Vespucci. The continent of (South) America was named after him. Other explorers, including Columbus, were angry that Vespucci was given the credit for this discovery.



The routes of European explorers in the Americas

The Conquistadors

The Spanish adventurers who came to explore and conquer the New World were called Conquistadors. You learned in Year 5 that, when the Europeans came, many Caribbean islands were inhabited by Arawaks and Caribs. Most of these Amerindians died out quite soon after the Europeans arrived. They had no resistance to European diseases, and the Europeans also killed many of them.

On the mainland, as well as the Amerindians, who lived simple **hunter-gatherer** lives, there were great empires. The most important of these were the empires of the Aztecs and the Incas in Central and South America.

The Aztecs – a great civilisation of Central America

When the Spaniards arrived in Central America, they discovered beautiful palaces and ancient civilisations. One of these civilisations was the empire of the Aztecs, in what is now Mexico.

When the Spaniards discovered the empire, the Aztecs had ruled central Mexico for about two hundred years. They grew food on special areas of **reclaimed land** surrounded by water, and on the slopes of the mountains. Their capital city, Tenochtitlan, was built on an island in the middle of Lake Texcoco. They collected taxes from other Central American peoples and traded with them. The rulers of the Aztecs were rich, but the ordinary people were poor.

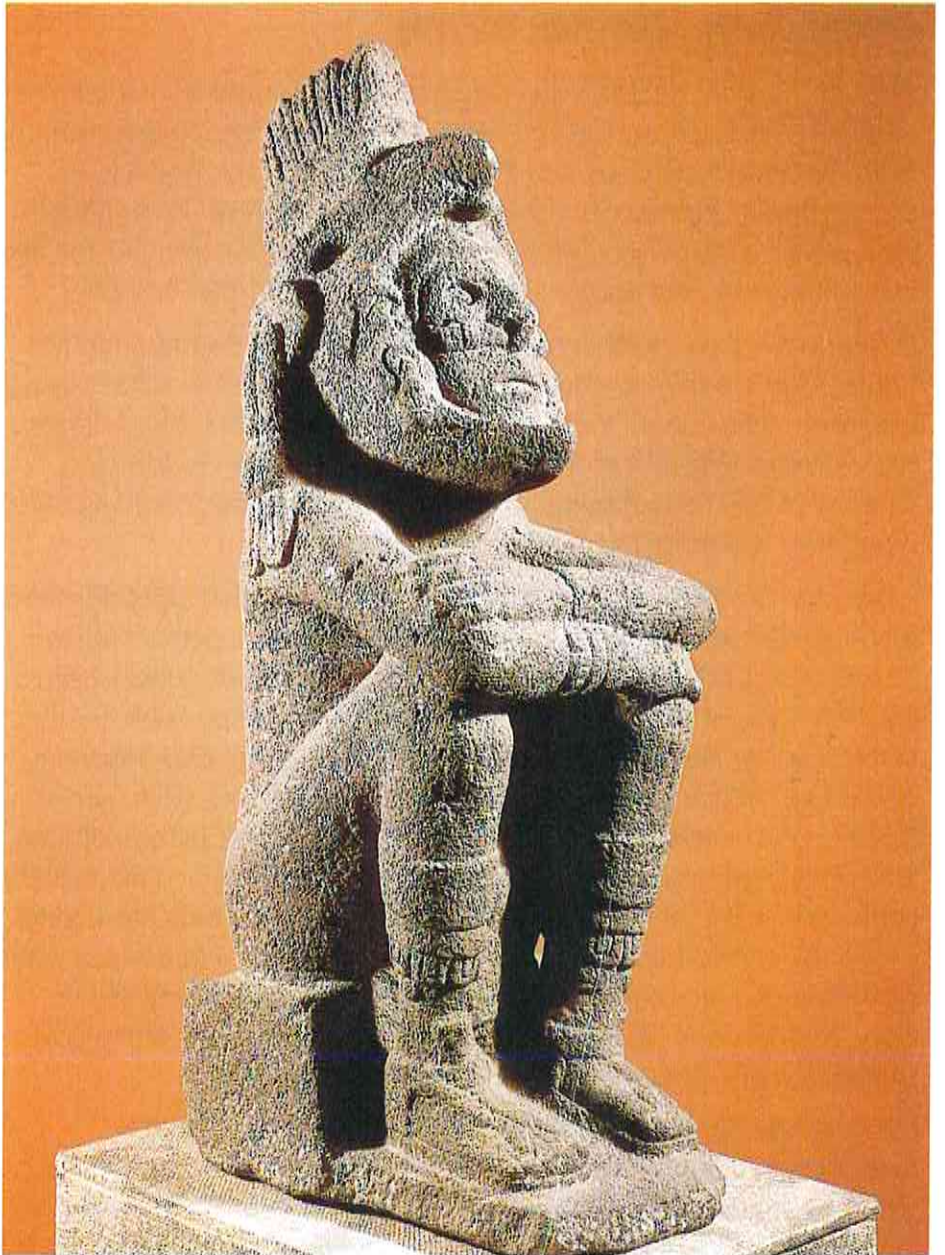
The Aztecs were a very religious people. They believed in many gods. They built great temples. The priests and the people held festivals to keep the gods happy. They used music and dancing in these festivals. They made human sacrifices of children and young people to their gods. They were also astronomers. They studied the stars and used their observations to predict the future.



The Aztec Pyramid of the Sun, Tenochtitlan

The legend of El Dorado

The wealth and splendour of these civilisations led to a legend among Europeans which told of a place called El Dorado, the city of gold. Spanish explorers and adventurers came looking for El Dorado. They never found it, but they managed to destroy the civilisations they encountered. They were fierce fighters. The Incas and Aztecs had spears and arrows as weapons, but spears and arrows could not match the Spanish guns, which terrified the local people with their smoke and noise.



The Aztec god Xochipilli

Activity



- 1** Read the information about the Aztecs carefully, and write your own account of Aztec civilisation.
 - 2** *Find out* about the Inca civilisation in the 15th century. What happened to the Incas when the Conquistadors came?
 - 3** In groups, create a wall map of Central America in 1500, showing where the Incas, Aztecs and other American peoples lived. Write some sentences about each civilisation and about the Conquistadors and paste the text on to the map.
- E** Draw a table comparing the Aztecs or Incas with the Amerindians who lived in the Caribbean islands before the Europeans came.

Settlers in the Cayman Islands

Most of the early settlers in the Cayman Islands came from the British settlement in Jamaica. The first settlers arrived in Little Cayman around 1658. Some islanders say that they were soldiers who had left the British army in Jamaica, but some think they may have been pirates who gave up their way of life to live peacefully on the islands. The first two settlers were Mr Bodden or Bowden and Mr Watler or Walter.

In the next few years other settlers came to join Mr Bodden and Mr Watler, and to settle on Cayman Brac. Some of the early settlers were fishermen who caught turtles to sell to Jamaican merchants. Others were probably **deserters** from the British army based in Jamaica. There were also **privateers** and planters. Some settled on the islands when they were shipwrecked along the coast.

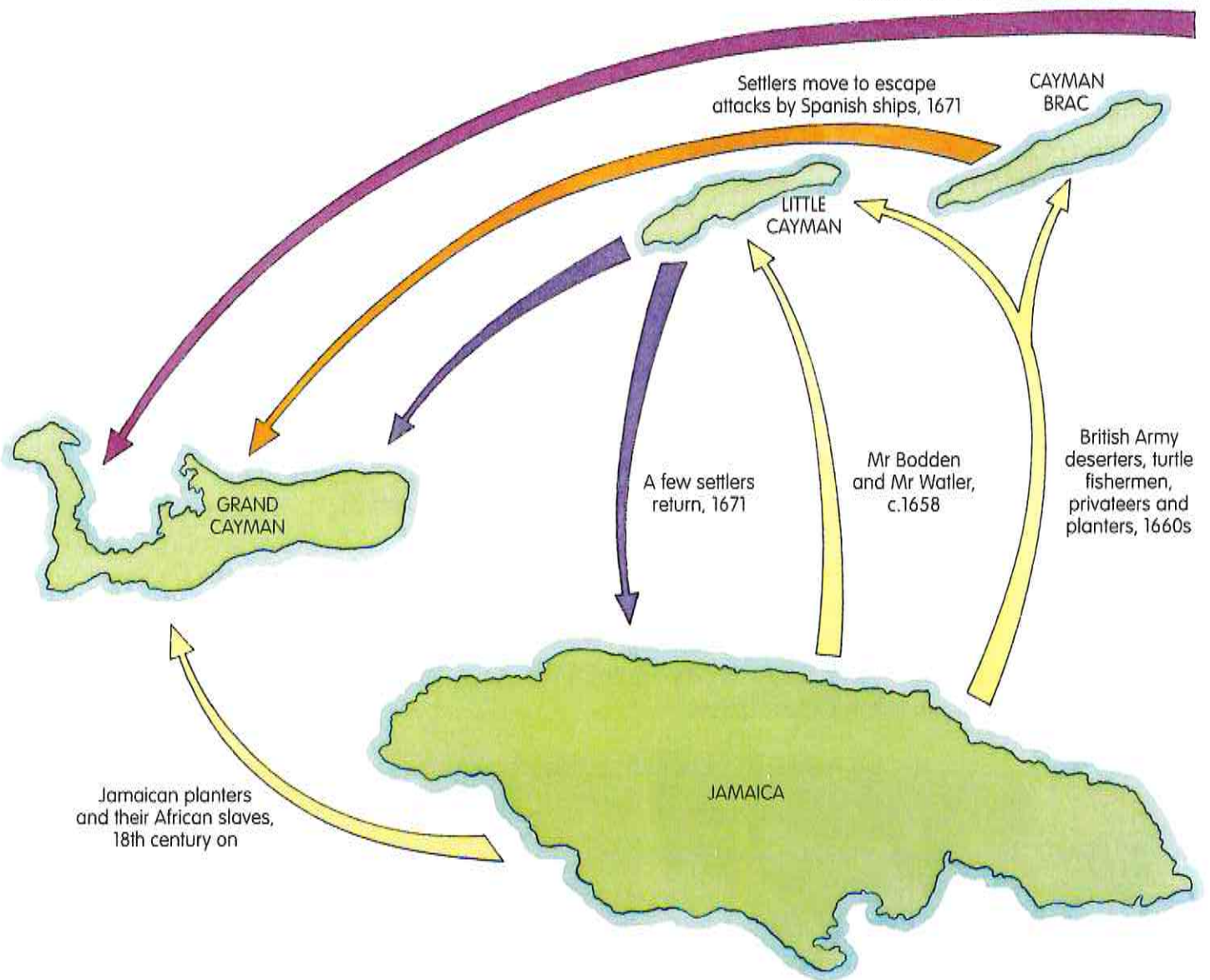
In 1671 the Governor of Jamaica sent a message (called a **proclamation**) to the settlers, asking them to return to Jamaica. The settlements of Cayman Brac and Little Cayman were constantly under attack from Spanish ships at this time and the Governor was responsible for the settlers' safety. He offered a **pardon** to the privateers and deserters, and a few settlers returned to Jamaica. The others moved to Grand Cayman and started a new settlement there. Grand Cayman offered them better protection from attack by Spanish ships, since the settlers could hide in the woodlands when necessary. There was more land available for cultivation. The settlements of East End and Bodden Town were founded around this time. One of Mr Bodden's descendants, Isaac Bodden, and his wife, Sarah, were early members of the East End settlement. They were married in Jamaica in 1735.

Life was hard for the early settlers. There were problems with mosquitoes and other insects. There were no shops or services as there are today. It was difficult to grow crops or keep animals on the land, because it was rocky and swampy. So the men became turtlers, boat-builders and fishermen. They developed seafaring skills for which they became famous all over the world.

Turtles were among the first **export products**. Caymanian turtlers sold their catch in Jamaica during the 17th century. They also exported mahogany, and they sold dye from the mangrove and buttonwood trees to Jamaican merchants. At first almost all the trade to and from the Cayman Islands was with Jamaica. At that time a schooner took between four and six weeks to sail from the Cayman Islands to Jamaica, if the wind was blowing in the right direction. Contrary winds might make the trip take twice as long.

In later centuries more settlers arrived. Jamaican planters and merchants brought their African slaves with them. Some settlers came from Britain to make a new life in the West Indies.

Settlers from Britain, 18th century on



Activity



A family history project

Find out more about your family history. Are you descended from one of the early Caymanian settlers, or did your ancestors come to the Cayman Islands later, during the 18th, 19th or 20th centuries? Write a family history of your own family. Use the records and memories of your own family members, and other information you can find locally, at the library or in the National Archive. If another class member is closely related to you (for example, a cousin), you might write a joint history.

E Write your own history of the first settlement of the Cayman Islands, between 1658 and 1700. Use the information given above, and find out more from libraries and the National Archive.

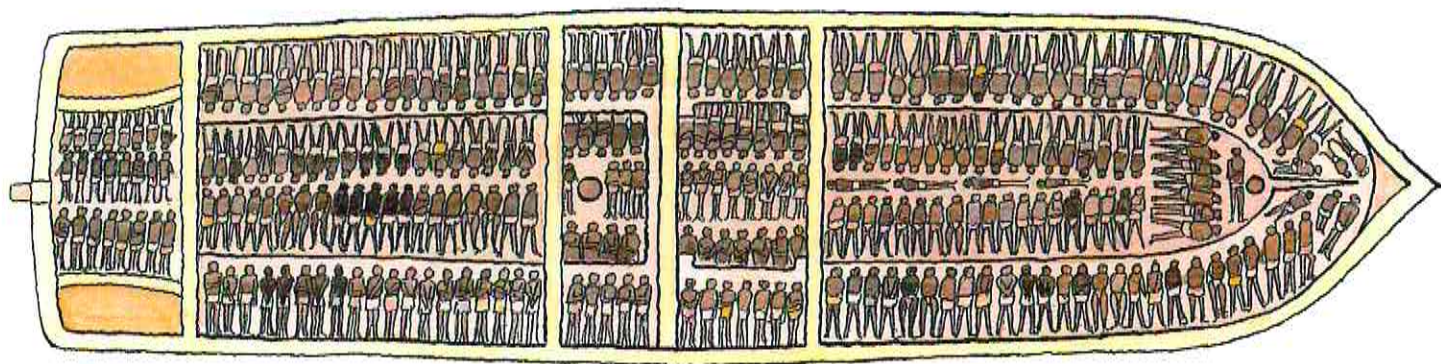
Africans come to the Cayman Islands

As we learned in Year 4, African slaves came to the Cayman Islands with their Jamaican masters. Other Africans were shipwrecked here when slave ships foundered on the reefs. These shipwrecked Africans were not treated as slaves. They were called 'free coloureds'. In 1802 there were 551 Africans in the Cayman Islands and only 382 Europeans.

Slavery in the New World

The Africans' arrival in the Cayman Islands is part of a much bigger picture. All over the Caribbean and in North, South and Central America the European settlers brought slaves from Africa to work for them. There were slaves in the southern British colonies in North America (now the United States), and in the Caribbean islands such as Jamaica, Barbados and Trinidad. There were slaves in Spanish colonies in Central and South America and in Caribbean islands owned by the Spaniards such as Cuba and Hispaniola. There were slaves in French-owned Caribbean islands such as Haiti and Martinique.

Most slaves came from West Africa. The European slave traders bought them in the coastal ports. They bought the slaves from Arab and African slave traders who had acquired them in the African **interior**. The slaves were then crammed into the holds of slave ships, where they barely had room to move. You can see the layout of a slave ship in the picture below.



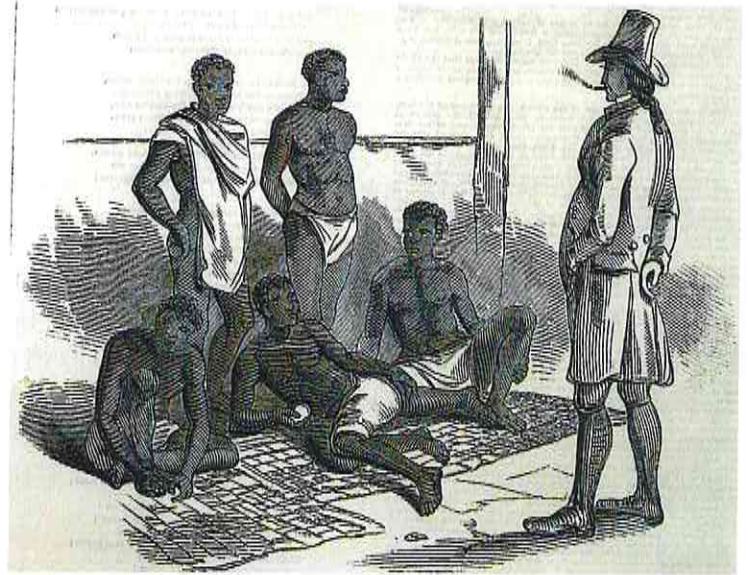
Many of these slaves died on the voyage from Africa to the New World. Some of the slave ships were shipwrecked and the slaves on board escaped. Those who arrived in New World ports were sold to Europeans. The slaves worked on the plantations growing cotton, tobacco and sugar, and as domestic helpers in rich households. Slaves in the Cayman Islands were mainly domestic helpers, working in the homes of their masters. They were treated better than slaves on some of the larger islands, who were given plantation work.

Slaves had no rights. Their masters could work them to death. They could kill them if they wished, to punish them for anything they had done wrong. Many of the female slaves were forced to live with their masters and have their children. Slaves took their masters' surnames. Today families with ancient surnames may be descended from either the master or the slaves in a household, or both.

Emancipation

In 1807 Britain declared the slave trade illegal. In 1833 the government began a process of freeing all slaves, called **Emancipation** (or **Abolition**). Between 1834 and 1838 the slaves were called **apprentices**. They were free in some ways but not in others. The idea was to give both the slaves and their masters a chance to get used to the new system. At the end of that time slaves could leave the plantations and estates where they had been working and make a life for themselves wherever they wanted. If they worked for Europeans, they had to be paid. Emancipation took effect in the Cayman Islands in 1835.

A little later in the 19th century, other European countries also abolished the slave trade and slavery in their colonies. Slavery continued in some parts of the United States, however, until the 1860s. Between 1861 and 1865 the Americans fought a civil war over abolition. The southern states (the Confederates) wanted to keep slavery. The northern states (the Union) wanted to abolish it. The Union won the war, and in 1866 slavery was abolished in the United States.



A slave market in Rio de Janeiro

Activity



- 1 Draw a time line for the abolition of slavery and the slave trade:
 - a) Start by putting on the time line the dates for abolition of the slave trade and Emancipation in the British Empire.
 - b) Add the date of abolition in the United States.
 - c) If you can, find out when the French, Spanish and Portuguese governments abolished slavery in their colonies. Add this information to your time line.
 - 2 Imagine you are a slave travelling from West Africa in the 1790s. Write a journal describing the voyage and the sufferings of the people around you. Your journal may end when you reach the Americas, or you may continue it into your new life.
- E** Find out more about the 'free coloureds' in the Cayman Islands. Find out where they settled and what work they did for a living. Are there descendants of free coloured people in the Cayman Islands today?

Life among the settlers

What was life like for the early settlers? As you read the next three pages, think about the differences between life in these early communities and life today. Which would you prefer?



Rankine House: a restored traditional Caymanian house in the Queen Elizabeth II Botanic Park

Living by the sea

We have learned that most settlers earned their living from the sea. It was not easy to travel inland. For these reasons most communities were near the coast. The sea breezes also helped to keep mosquitoes away.

There were dangers for coastal communities, however. Every year during the hurricane season people had to be prepared for major storms. These storms damaged homes and crops. Ships might be wrecked in harbour or lost at sea with all their crew and cargo.

Some ships were wrecked even when the weather was fair, because there were no lighthouses in the early days. Wrecks sometimes occurred along the coast near a community where settlers lived. The people who lived along the coast always rescued the crew and any passengers, and made sure they were safe on land. Then they **salvaged** any cargo from the wrecked ship which might be useful. They took lumber, furniture and other goods and used them to build or repair their homes.

Food

Although it was hard work finding food, as far as we know no one ever starved. People caught many kinds of marine life such as fish, turtles, conch and lobsters. They grew corn, vegetables and fruit in small plantations which they called 'grounds'. Cassava was used both for food and for starching clothes. Other root plants included yam, sweet potatoes and coco. Beans, peas, bananas, coconuts and plantains were also grown. Meat and fish were salted to preserve them from spoiling, because there was no refrigeration.

The women found ways to cook the limited foods they had. They made delicious stews from turtle meat or fish and dried beans. They made dumplings from cassava, sweet potato, banana, plantains, cornmeal and flour. They made heavy cake and bread on a wooden stove called a caboose.

Looking after the family

The men went fishing and tended some of the crops. The women stayed at home to manage the house and look after the family. There was a great deal to do. The week's washing timetable on the next page gives some idea of the amount of work which went into washing clothes. On top of that, mothers had to care for their children, cook the meals, bake bread, clean the house and do many other things. It was no wonder that they needed their Sunday rest.

How to make cassava starch

- 1 Peel the skin from the cassava.
- 2 Grate it by using a hand grater.
- 3 Put some water into the grated cassava.
- 4 Mix thoroughly and squeeze through a very thin cloth.
- 5 Let it settle overnight.
- 6 Carefully pour off the water and remove the starch settled at the bottom of the pan.
- 7 Let it dry until ready to use.

For clothes starch, a thin solution was made by pouring boiling water over the cassava starch. The clothes were then dipped into this starchy water, wrung out and hung in the sun to dry.

Washing timetable

- Monday* Collect dirty clothes and soap them on a washboard using a hard brown soap. Leave clothes to soak overnight.
- Tuesday* Collect water from the well. Heat water and boil white garments to remove stains. Scrub clothes on the washboard and rinse them in clean water. Hang clothes out in the sunshine to dry.
- Wednesday* Starch clothes which need it and hang them out in the sunshine again. (Men's shirts and women's petticoats were starched before ironing.) Fold clothes which do not need ironing and put them away.
- Thursday* Heat three or four irons. Sprinkle the clothes with water to stop them from being burnt by the iron. Press clothes and put them away.



Health and education

There were no doctors in the early settlements. The first doctor arrived on Grand Cayman in the early 1920s. People had to learn to use natural medicines made from plants. You will learn more about herbs and medicines later in this book, in Unit 8.

There were no government schools until the late 19th century. In the early days those who had some education, often settlers from Jamaica, became schoolteachers to the children of the community. Parents paid a small fee to these people to teach their children how to read and write. From 1846 onwards there were also a number of privately run church schools. Some of these crammed large classes into church buildings, others taught their pupils in a group under a big tree.

In 1887 the government began to pay these teachers a **subsidy**. A small sum of money was provided to help pay the salaries of the independent teachers who had established their own local schools. Although people were poor, they understood how important education was. In every family, as many children as possible were given the opportunity to attend school.



The Savannah Old School Room. One school room catered for all ages



- 1 Write menus for a week of dinners using the basic foods available to the early settlers. Try not to use the same dish twice.
 - 2 Read the information box on how to make cassava starch. How was the starch used during the washing process?
 - 3 Visit the Rankine House in the Heritage Garden at the Queen Elizabeth II Botanic Park. This is an old wooden house containing all its original furnishings. The garden around it contains many plants which people used for traditional medicines.
 - 4 In class, discuss the differences between settler life and our modern way of life.
- E**
- 1 Try making cassava starch, using a home-made grater or the food processor (or blender) you use in the kitchen at home.
 - 2 In pairs, discuss the advantages and disadvantages of early settler life compared with our life today. Draw a table comparing the two and decide which one you would prefer.

Plotting our position

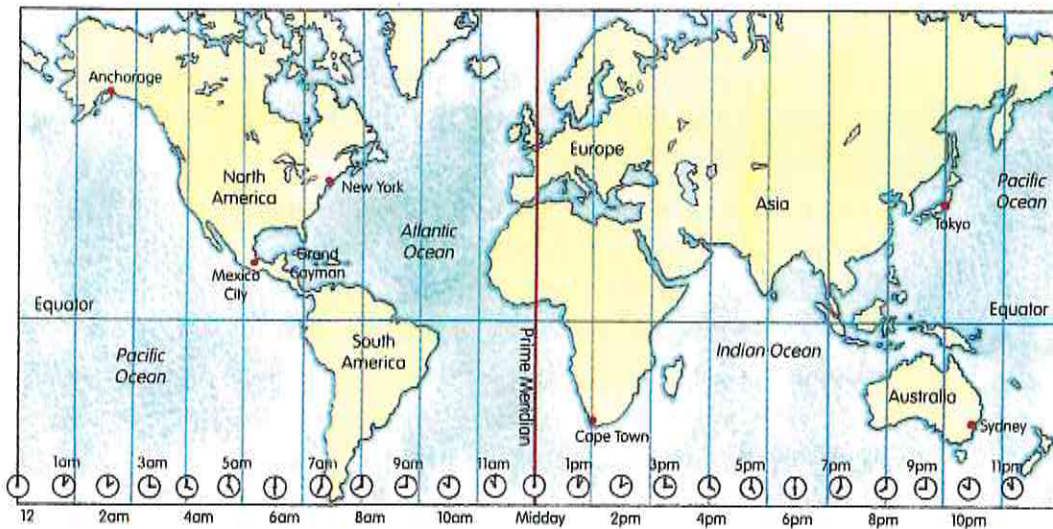
When we are in a ship on the ocean, or in an aircraft high above the ground, out of sight of land, it is important to know where we are. When we give our position, we use latitude and longitude, imaginary lines drawn across the Earth. This pinpoints exactly where we are, anywhere in the world.

Latitude and longitude

Latitude runs from 0° at the Equator, to 90°N at the North Pole and 90°S at the South Pole. Longitude runs east and west from the Prime Meridian (0°). There are 180 degrees of longitude east and 180 degrees west. The line of longitude 180° runs through the Pacific, on exactly the opposite side of the world from the Prime Meridian.

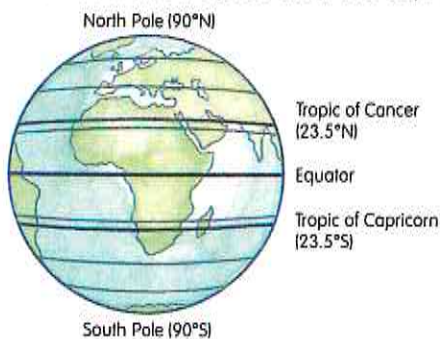
★ Which degree of longitude passes through Little Cayman?

The lines of longitude are used to create time zones around the world. For example, when it is noon in the Cayman Islands it is 10 a.m., two hours earlier, in Los Angeles, USA. The map shows how the time zones work.



Poles and Tropics

When we give our position, we always give the latitude first. Some latitudes are particularly important. As well as the North and South Poles, there are the Tropics of Cancer and Capricorn. These mark where the sun appears to be overhead in summer in the northern and southern hemispheres. The areas between the tropics and the Equator are the hottest places on the Earth.



Degrees and minutes

Each degree can be divided into 60 minutes. This allows us to find our position more accurately. The index of your atlas gives the position of many places using degrees and minutes of latitude and longitude. The position of George Town, for example, is given as 19 degrees 18 minutes North ($19^\circ 18' \text{N}$), 81 degrees 26 minutes West ($81^\circ 26' \text{W}$).

Clocks, compasses and quadrants

Today we have all kinds of instruments which we use to plot our position. But when the Europeans first came to the New World, their navigation instruments were very simple. They used the stars and the height and direction of the sun to check where they were. A special instrument called an astrolabe was used to find latitude. Early seamen also had quadrants, but both these instruments were difficult to use accurately at sea. Compasses were inaccurate, because early seamen did not know how to adjust a compass reading correctly.

Early navigators knew what latitude they were in from the height of the sun above the horizon at noon. Columbus sailed westwards by remaining at one latitude all the time. He also used a compass to help him to sail in a westwards direction. Often, however, seamen did not know how far west they had travelled. They did not know what longitude they had reached.



An early compass

- ★ Imagine that you can only work out your latitude, not your longitude. What problems will this cause, if you are sailing west across the Caribbean?

Activity



- 1 Draw a globe and mark on it the following lines of latitude: the Equator (0°), the Tropic of Cancer ($23\frac{1}{2}^\circ\text{N}$), the Tropic of Capricorn ($23\frac{1}{2}^\circ\text{S}$) and the two Poles.
 - 2 Look at the map showing time zones. When it is noon in Grand Cayman, what time is it in these places?
a) Mexico City **b)** New York **c)** Anchorage, Alaska
d) Tokyo, Japan **e)** Sydney, Australia **f)** Cape Town, South Africa.
 - 3 Find the following places in the index of your atlas. Give the exact position of each one, using degrees and minutes. Then find each place on a map.
a) Accra, Ghana **e)** New Delhi, India
b) Bridgetown, Barbados **f)** Reykjavik, Iceland
c) Cayman Brac, Cayman Islands **g)** Tai-pei, Taiwan
d) Helsinki, Finland
 - 4 Find out more about how a compass works. Why did seamen have to adjust their reading of a compass at sea?
- E** Carry out some experiments on time zones and longitude.
- a)** Make a floor map or wall map of the Atlantic, with the lines of longitude drawn on it. Make some small model ships to use on the floor map, or paper ships with pins to attach them to the wall map.
 - b)** Your ship starts from Miami and sails eastwards across the Atlantic. Decide what time on what date she starts out and write down the date and time in a ship's log in your notebook.

- c) Plot the course of your ship across the Atlantic. Somewhere in the middle of the ocean, the navigator wants to find his position. Decide how long it has taken the ship to get to this point and write down the date and time in the ship's log. This will be 'home' time – the time it is in Miami.
- d) Now work out what local time is. You can do this by using the time zones on page 17. The navigator would do it by working out a 'noon sight' of the sun, so that he knew exactly when noon was that day. Then he would compare the local time with the real time.
- e) Write down the approximate longitude of the ship.

This method doesn't give you a very accurate longitude, does it? Can you work out why? How could the method be improved to give a more accurate longitude? Work in groups to solve the problem.

Using the marine chronometer to measure longitude

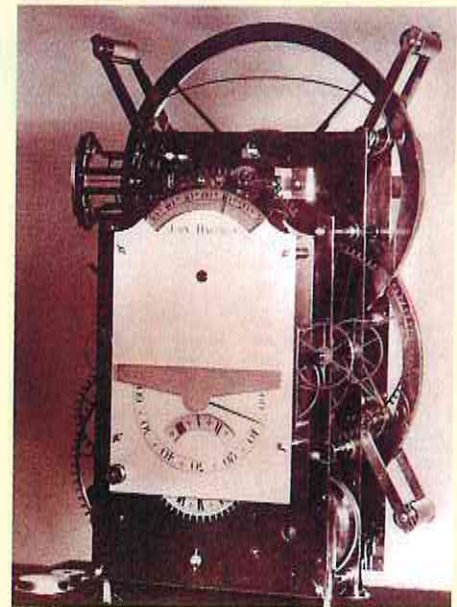
Scientists tried to solve the problem of measuring longitude by using astronomical observations. But these were unsuccessful. By 1700, it was still impossible to work out longitude while at sea.

On 22 October 1707 four British warships ran aground on the Scilly Isles, off the west coast of Britain. The ships were lost, and nearly 2000 men were drowned. The navigator had believed that they were much further west, far from any rocks or islands.

This accident caused the British government to offer a prize to the first person who invented a practical method of working out longitude. They believed the astronomers would win the prize. But a clockmaker, John Harrison, decided that the problem could be solved using time. Seamen reckoned the time of day by the height of the sun. When the sun was at its highest, it was noon. But this only told them what the local time was. It did not help them to work out their longitude.

Harrison worked out that if each ship could carry with it an accurate clock, or **chronometer**, the navigators could compare local time with the time on the 'home' clock which they had brought with them. The difference between local time and 'home' time would give them their longitude.

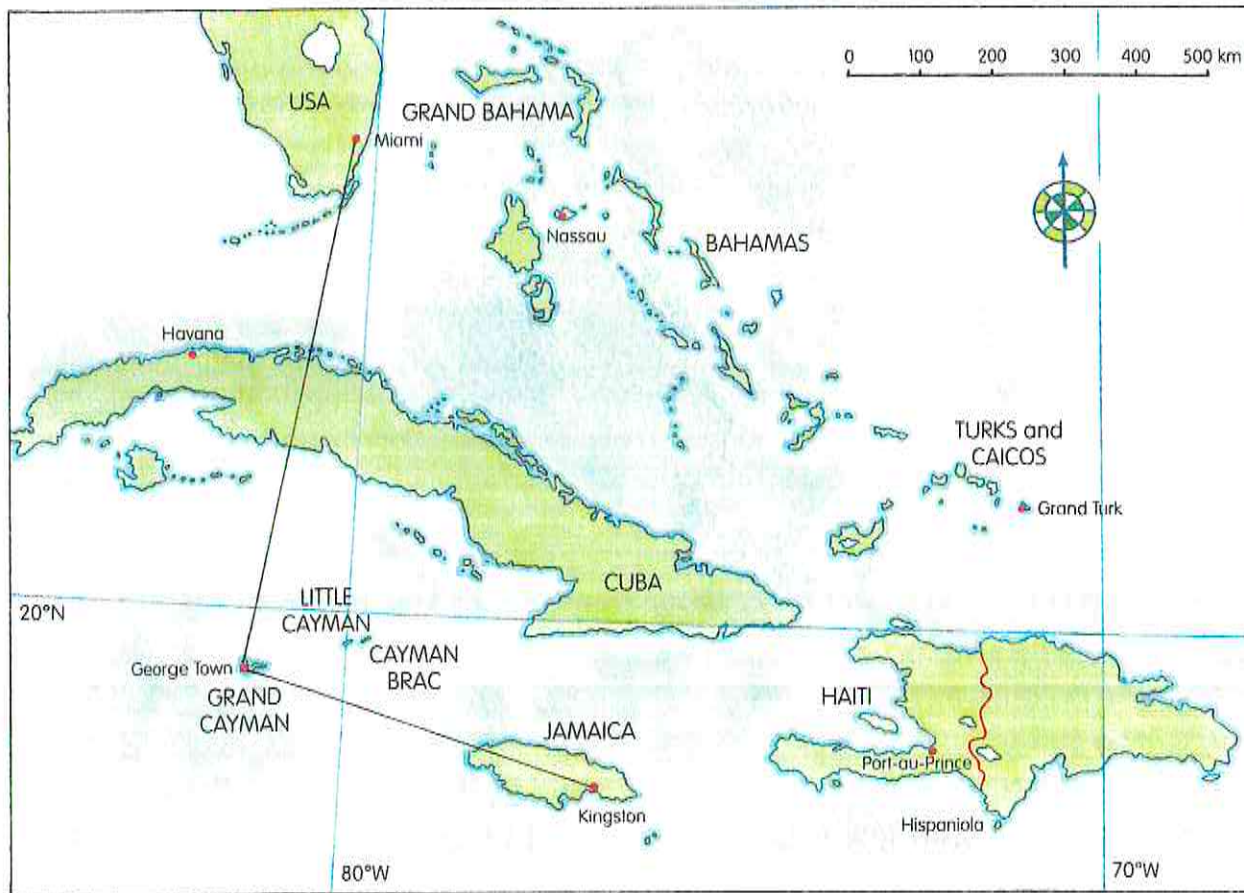
Unfortunately, this kind of accuracy was not possible at that time. It took John Harrison many years to design and build a clock which was accurate enough and strong enough to withstand storms and damp and still give the correct 'home' time. He was finally awarded the prize in 1773, after a lifetime devoted to the task.



Harrison's marine chronometer

Distance and direction

Another way of finding our position is by measuring the distances between places and noting the direction. The activities below will give you some practice.



- 1 Look carefully at the map. It shows the western part of the Caribbean region, and part of the United States.
 - a) Name the cities and towns shown on the map.
 - b) Which islands are labelled on the map? Give the approximate latitude and longitude of each one.
 - c) Name the **archipelagos** shown.
- 2 Measure the distance from George Town to Miami, and from George Town to Kingston, Jamaica. Use a ruler and the lines drawn on the map between those places.
- 3 Make a paper scale bar and measure the distances from
 - a) Miami to Kingston
 - b) Miami to Havana
 - c) Miami to Nassau
 - d) Kingston to Port-au-Prince
 - e) Kingston to Grand Turk Island.
- 4 Write down the direction you would have to fly to reach:
 - a) Miami, and b) Kingston, from George Town.

Land area

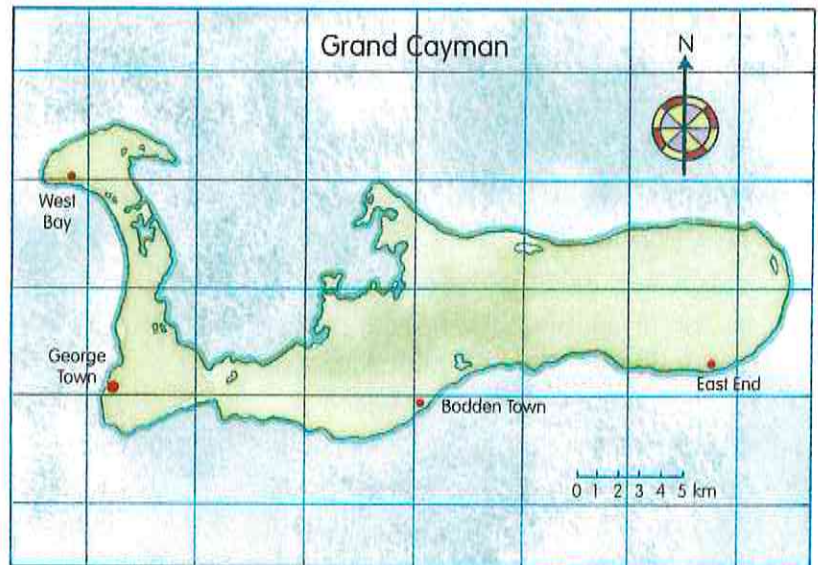
When we study a place, it is useful to know its land area as well as its position. We measure area by multiplying the length of a shape by the breadth. The answer is given in square kilometres (or metres, or miles or whatever unit we started with). This works accurately when the shape is a square or rectangle. Irregular shapes are more difficult to measure accurately.



- 1 Look at the map of Grand Cayman below. You can see that the map has a grid across it. The squares of the grid each cover 25 sq km (5 km × 5 km).

● FACT FILE – GRAND CAYMAN

Grand Cayman is the largest of the three Cayman Islands. It is 35 km (22 miles) long and about 12 kilometres (8 miles) wide, giving an area of 197 sq km (76 square miles). It is approximately 130 km (80 miles) south-west of Little Cayman. The highest point on the island is about 18 metres (60 feet) above sea level. The capital of the Cayman Islands, George Town, is located on the west coast of Grand Cayman.



● FACT FILE – LITTLE CAYMAN

Little Cayman is the smallest island of the Cayman Islands. It is only 25 sq km (10 square miles) in area. It is about 16 km (10 miles) long and only a little over 1.5 kilometre (1 mile) wide. Its highest point is only about 12 metres (40 feet) above sea level.

● FACT FILE – CAYMAN BRAC

Cayman Brac lies about 8 km (5 miles) further east than Little Cayman. It is 19 km (12 miles) long and about 1.5 km (1 mile) wide. It is 35 sq km (14 square miles) in area. The Bluff runs along the centre of the island, rising to 43 metres (140 feet) above sea level, the highest **elevation** of the three islands.

- 2 Count the number of squares in which there is land. Estimate what fraction of each of the other squares contains land. Add the figures together to get the approximate land area of Grand Cayman.
- 3 Trace a map of **a)** Little Cayman, and **b)** Cayman Brac. Draw a grid of 25 sq km squares across each map, using the scale bar on the map you have traced. Work out the approximate land area of each island.
- 4 **a)** Look at a map of the Cayman Islands in your atlas. What direction must we take to reach Little Cayman and Cayman Brac from Grand Cayman?
b) Read the Fact Files on the location and area of the three Cayman Islands.
c) Create a wall display containing the following: a map of the three islands, showing their correct size and position; a direction diagram; lines of latitude and longitude; text boxes giving the area of each island and its location in relation to the others.

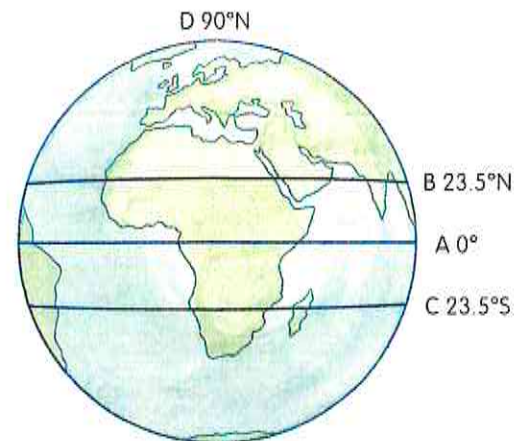
Round up

In this unit we have learned how the New World was discovered by Europeans. We have looked at the different origins of settlers and at the way they lived, compared with our life today. We have learned about the development of navigation, and ways of plotting our position.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

- The New World is a name given to
 - the Caribbean region and the United States
 - Europe
 - North, South and Central America and the Caribbean region
 - Africa.
- Columbus's first voyage to the New World took place in
 - 1485
 - 1492
 - 1495
 - 1503.
- America was named after an explorer named Amerigo
 - Cabot
 - Columbus
 - Corte-Real
 - Vespucci.
- The Aztecs built their capital city
 - on an island in the middle of Lake Texcoco
 - on an island in the Atlantic Ocean
 - on a mountain top in Mexico
 - on reclaimed land in a swamp in Guatemala.
- 'Free coloured' people were
 - African slaves after Emancipation
 - the children of slave women and Europeans
 - Europeans who were tanned by the sun
 - Africans who had escaped from slave ships.
- When we give our position, we give
 - latitude first always
 - longitude first always
 - latitude before longitude in the northern hemisphere
 - latitude before longitude in the southern hemisphere.
- The latitude of the Tropic of Cancer is the line or point on the map with the letter
 - B
 - C
 - D



Write a paragraph

Write a few sentences about four of the following:

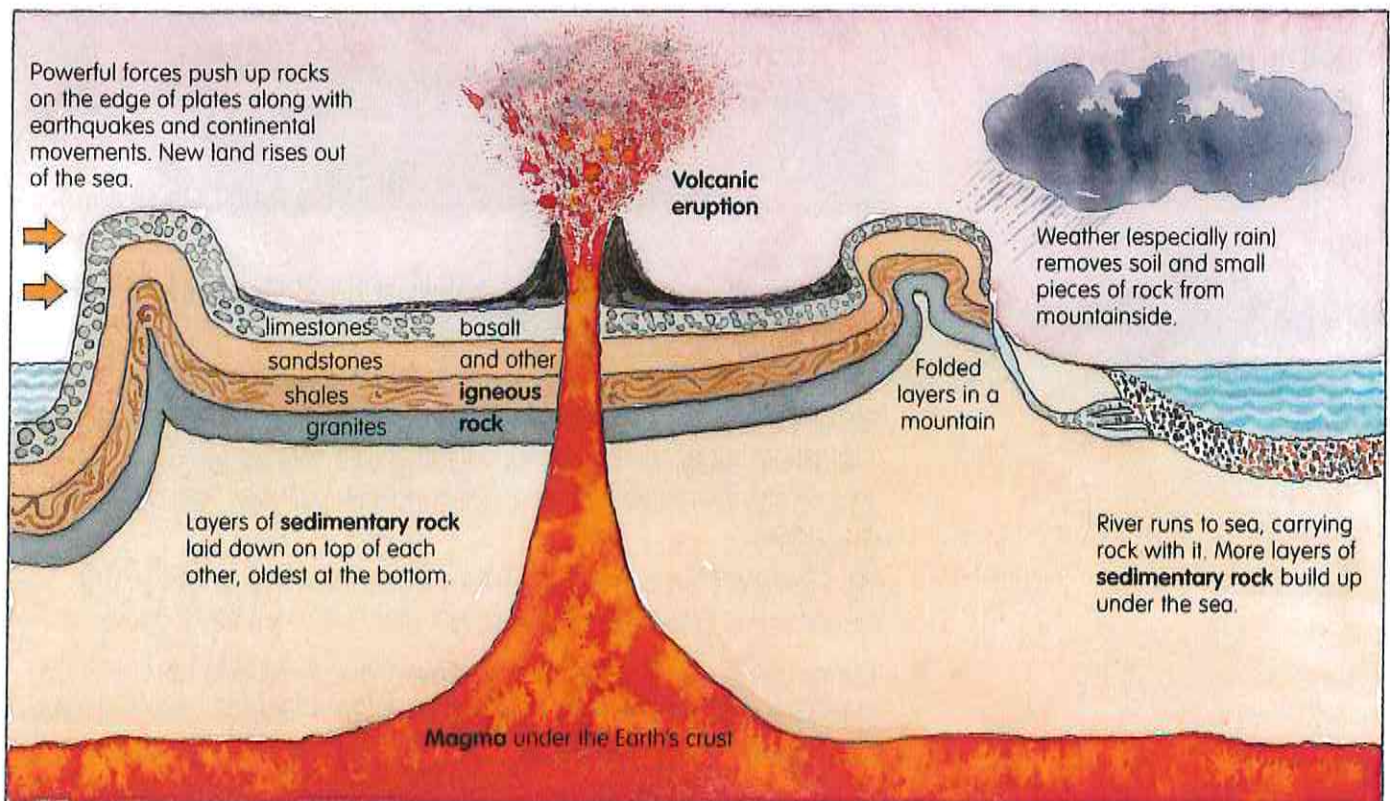
- Columbus's attempts to find a route to the Spice Islands across the Atlantic
- Aztec civilisation around 1500
- working out the land area of an island
- the African slave trade
- how early seamen measured their position
- settler life on Grand Cayman.



How our islands were formed

In the next few pages we are going to look at the rocks which shape our islands. The study of rocks is called **geology**. Geology tells us about the kinds of rock there are under the soil and along the coastline. It tells us how each layer of rock was formed, and **approximately** when. Scientists who study the formation of rocks are called geologists.

The movement of rivers, the action of volcanoes and earthquakes, and even the rain, are part of a constantly changing system. The diagram shows the processes which geologists believe helped to form the rocks we can see around us. These processes are still going on today.



Activity



Study the diagram carefully. Look up the words in **bold type** in the List of Words and Meanings on page 126, and write down what they mean.

E Find out more about one of the processes shown in the diagram.

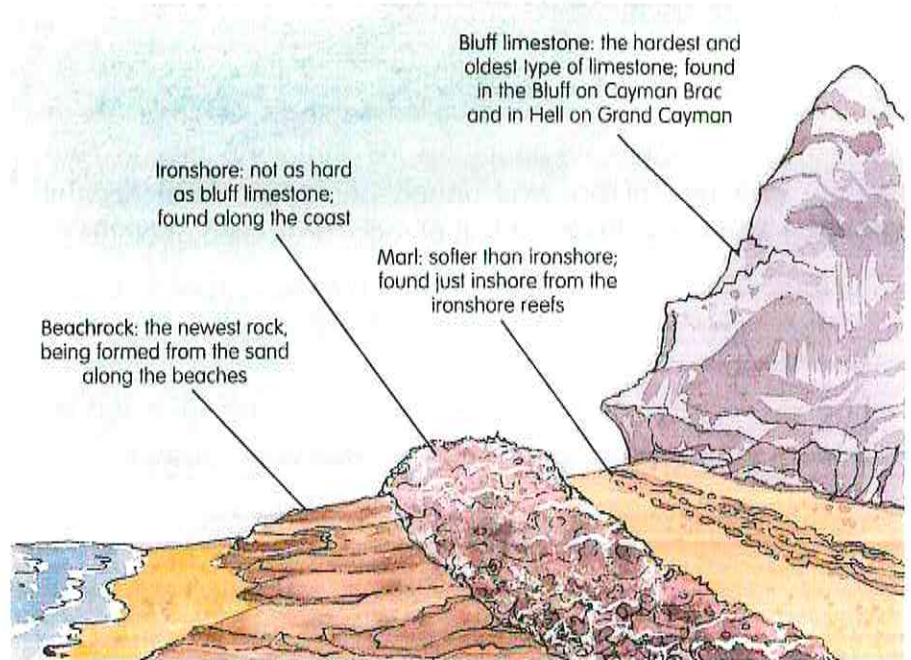
Four kinds of limestone

The Cayman Islands are made up of four different kinds of limestone rock. Limestone is the name we give to one type of calcium carbonate. This substance forms many rocks in the Caribbean region and in other parts of the world. Another kind of rock found around the shores of the Cayman Islands is coral. You will learn more about coral on page 26.

How limestone was formed

According to geologists, limestone was formed under the sea millions of years ago from the shells of small marine creatures. When these creatures died, their bodies sank to the bottom of the sea. The weight of the water on top of them packed them very tightly together to make hard rock.

★ Look at the diagram. What are the four different kinds of limestone called? Which is the hardest?



- 1 Read the story on page 25 carefully. What does it tell you about how the Cayman Islands were formed?
 - 2
 - a) Write a description of how limestone was formed long ago.
 - b) List the four kinds of limestone rocks found in the Cayman Islands in order of hardness, starting with the hardest.
 - c) List the four kinds of limestone in order of age, starting with the oldest.
 - d) Compare your two lists. What does this tell you about the relationship between age and hardness in limestone rocks?
 - 3 Collect some examples of limestone rocks and display them on a table in the classroom. If you can, find examples of other kinds of rock and compare them.
 - 4 Find out which types of rock are used in construction work by builders today. Are these the same kinds which were used in building old Caymanian houses?
- E** Draw a diagram to show how the movements of the land and the rise and fall in sea level made the Cayman Islands the shape they are today.

Jason and the Rocks

Jason's daddy owned a back-hoe. He used it to dig wells, cisterns, pits and trenches. Jason never got the chance to ride on the back-hoe, because he was always at school when his daddy used it.

Then holidays came and Jason got to ride on the back-hoe. The very first day Jason went with his daddy, the hole they were digging had such hard rock that one of the teeth on the back-hoe broke.

'Daddy,' asked Jason, 'why is there hard rock and soft rock in the same hole?'

'Well,' said Daddy, 'that's because of the way our islands were made many, many years ago.'

'I don't understand,' said Jason.

'Let me explain,' said Daddy. 'The first thing is that all the rocks in the Cayman Islands are made of limestone. The reason that some are hard and some are soft has to do with how each kind was made and how old it is.'

'You mean the old limestone is hard?' asked Jason.

'That's right,' said Daddy. 'The oldest rock in the Cayman Islands is called bluff limestone. That is what the Bluff in Cayman Brac is made of. It is also the kind of rock you find in Hell on Grand Cayman. When we get home, I'll show you some pictures of different types of rock. I have some good ones of bluff limestone, which I'll even give you.'

'OK, Daddy,' said Jason. Jason was not sure he understood where this hard rock came from. He waited until his daddy had finished digging the soft parts of the hole and was ready to go home. He then asked him to tell him more about how the islands were formed.

'Millions of years ago,' began Daddy, 'scientists say that the Cayman Islands were under the water.'

'Millions of years?' asked Jason.

'Well,' said Daddy, 'that is what scientists say. Anyway, a long, long time ago these islands were just part of the ocean floor. The rock on the ocean floor was limestone. It was packed very hard together because of the weight of all the water pushing on it. That is why it's so hard.'

'But how did it come up to the top?' asked Jason.

'It was pushed up,' said Daddy. 'You know how the rug by our front door goes up in the middle when somebody's foot pushes in one end? Well, the way the islands were pushed up is something like that. You see, the earth is not just one solid piece. Instead, it is broken up into big sections called plates. Each section is like a big piece of carpet. When one piece pushes against another, some parts bulge like the middle part of our rug.'

'What happened after the rock was pushed up?' asked Jason.

'Well,' replied Daddy, 'when those bluff limestone mountain tips were sticking out of the sea, coral formed around them. Then, believe it or not, the sea level fell. This made these reefs stand out of the water. That is where we get our ironshore along our coasts.'

'Ironshore is another kind of rock isn't it?' asked Jason.

'Correct,' said Daddy. 'And right behind the ironshore you usually find a lot of marl, which was formed when the shallow water area between the old reef and the first bluff limestone also came above water. That soft marl gives us our third kind of rock.'

'Are there other kinds of rocks?' asked Jason.

'One more,' answered Daddy. 'This we call beachrock. In fact, this is our newest rock. Some is being formed right now. You have seen it along the beach. Those flat ledges we find at the edge of the water are made of it. Some of the rock is made when sand is cemented together in some way by chemicals found in the mixture of sea water and ground water. Of course, you know coral rock is being formed in the sea all the time. Well, here we are, my son, home at last. I hope our digging tomorrow will further help you understand how our beautiful islands were formed.'



The Bluff on Cayman Brac

Coral

Around our coastlines we find a number of coral reefs. Like limestone, these reefs are made of sea creatures. But instead of being formed from the shells of long-dead marine creatures, the coral **polyps** are living. The polyps join together in a reef, sharing **nutrients**. They feed on tiny fish and plankton. You will learn more about coral polyps in Unit 3.



Activity



1 a) Here are four anagrams – words with their letters mixed up. These four words are the names of four different kinds of rock which make up the Cayman Islands.

FFLUB SLONETIME

ROROSHINE

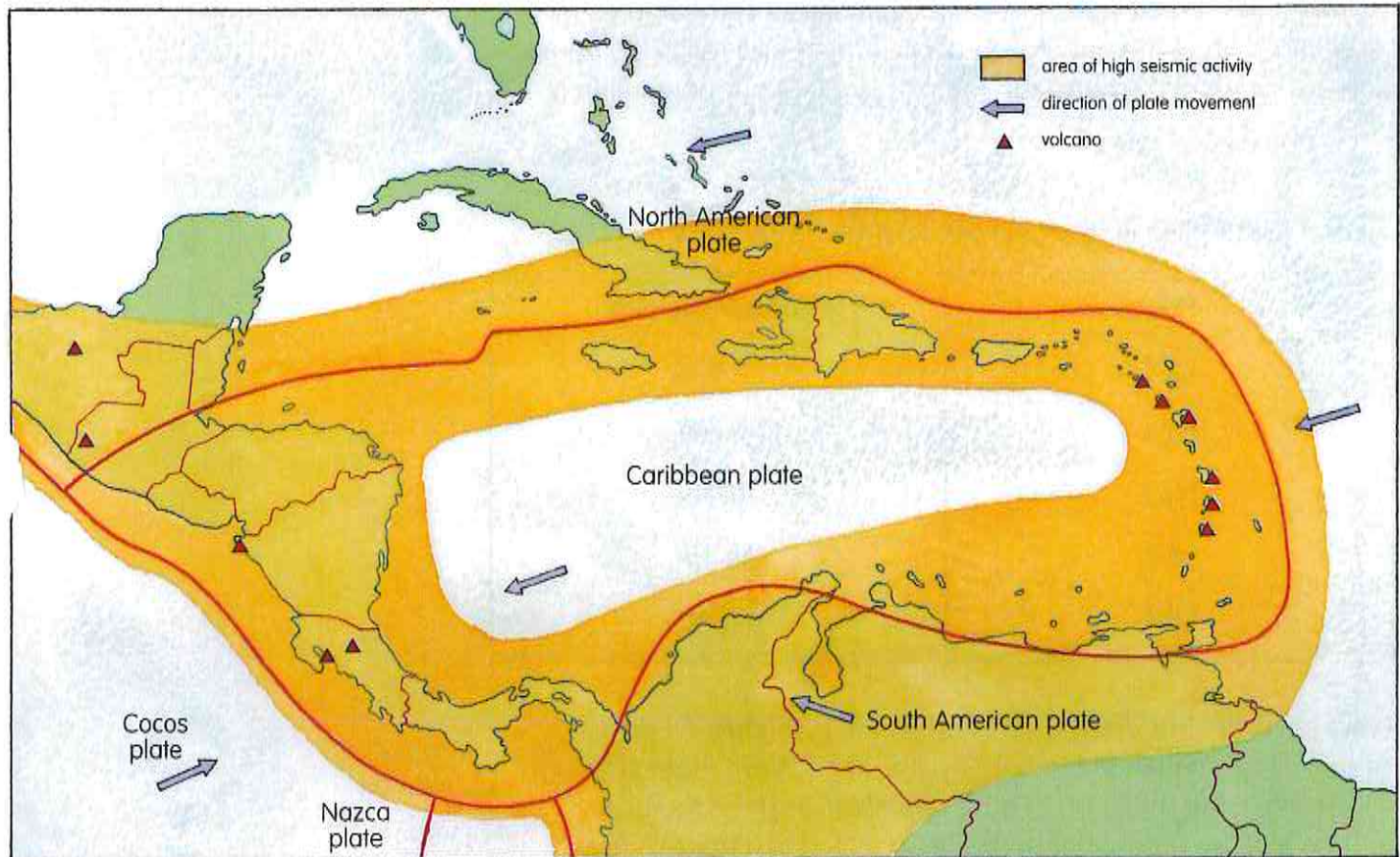
LARM

BACKROCHE

b) Invent an anagram for the word CORAL.
2 Explain how coral reefs are formed. Why do you think coral is so easily damaged?

Plates, earthquakes and volcanoes

We learned on page 25 that the Cayman Islands were pushed up out of the sea by the movement of sections of the Earth's crust called plates. The Cayman Islands, the Bahamas and Cuba are on the North American plate. Most of the other Caribbean islands are on the Caribbean plate. The Caribbean plate meets several other plates in our region. You can see these on the map.



Igneous rocks

These plates are also involved in forming the other main type of rock found in the Caribbean region – **igneous rocks**. Igneous rocks are formed when lava erupts from volcanoes and then cools. Volcanoes form along the edges of the plates. Often earthquakes also occur in the same areas. Volcanic eruptions and earthquakes are called **seismic activity**. The shaded area on the map shows where there is a lot of seismic activity in the region.



- 1 Look at the map carefully. How many different plates can you see? What are their names?
- 2 What does the shaded area on the map show? Explain why the shaded area follows the edge of the Caribbean plate.

The people of the Cayman Islands

You learned in Unit 1 that the first settlers lived on Cayman Brac and Little Cayman. Grand Cayman was settled later, in 1671, after the Proclamation.

The first time anyone counted the population of the Cayman Islands was in 1773. At that time there were between 400 and 500 people living in Grand Cayman. No one was living on Little Cayman or Cayman Brac at that time. The table below gives some figures for other years when the population was counted and recorded. Most of these figures are **estimates**. You can see that our population is still growing.

Table 1 Population of the Cayman Islands, 1802–1999

Year	Number of people
1802	933
1900	5,000
1960	10,000
1996	36,416
1999	39,000

Every ten years our government carries out a **census**. A census counts all the people of our country. It also finds out many different things about the make-up of our population, such as the age groups and the number of people who were born here or who have parents who are Caymanian. The government uses this information to provide the services which our people need, such as healthcare, education and so on.

Some people make a special study of population changes. They are called **demographers**. Demography is the study of populations, their movements from place to place, their structure and distribution, and their lifestyle. Demographers measure changes in the population by examining birth and death rates, immigration and emigration rates, and age groups. Let us look at each of these measurements in turn.

Birth and death rates

The birth rate measures how many people are born in a particular year, among every thousand people. If the birth rate goes up, there will be more young people in our population. If it goes down, there will be more elderly people. The death rate measures how many people die each year. Again, we can measure the death rate each year, or for each thousand people – or both. If the death rate goes down, there will probably be more elderly people in our population.

Immigration and emigration rates

We can also measure how many people are leaving our country or entering it each year. This figure affects the total number of people living here. If the emigration rate is higher than the immigration rate, there are likely to be fewer people living in our country at the end of the year than there were at the beginning, unless the birth rate is very high.

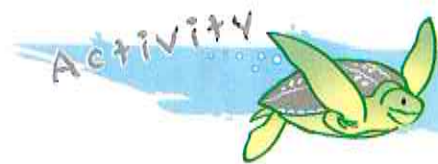
★ What do the words 'emigration' and 'immigration' mean?

Age groups

Demographers use diagrams called age pyramids to look at the numbers in each age group. If the pyramid looks like this: ▲

it means that there is a higher proportion of young people in the population than older people. If it looks like this: ▼

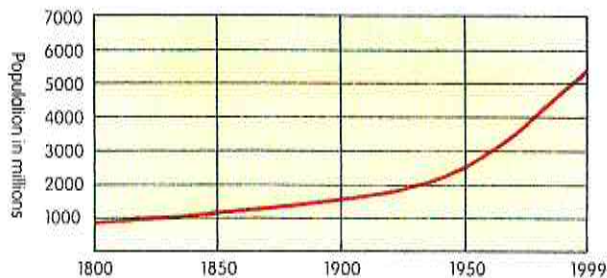
it means that there is a higher proportion of older people in the population than young people.



- 1 Use Table 1 to draw a graph showing population growth in the Cayman Islands between 1802 and 1999. How does this compare with the graph on page 30 showing world population growth during the same period?
 - 2 Ask your teacher for some information on the 1999 census. Use it to answer these questions.
 - a) How many people were there in each different age category? Draw an age pyramid to show this. Which way up is your age pyramid? What does this show?
 - b) How many non-Caymanians lived in the Cayman Islands in 1999? Which countries did they come from?
- E** Choose one other type of information that the census gives and write a short report on it. Explain why this information is important and how the government can use it to provide services for people.

Population growth

You have drawn a graph showing how the population of the Cayman Islands has grown since 1802. The same trend can be seen in most countries of the world, although the growth occurs at different rates.



World population, 1800–1999

A number of factors lead to population growth.

- 1 Rise in birth rate.** This may be caused by a rising **fertility rate**. If the fertility rate rises, on average each woman has more children than her mother did. If more children are being born to each woman, the birth rate rises. Sometimes governments encourage a rise in the birth rate by helping families with the costs of bringing up children. In some parts of the world the birth rate is falling.

More children are born



more people living
in our country



- 2 Fall in the death rate.** The death rate has been reduced throughout the world in recent years. This is a result of better healthcare in most countries. People live longer because they are able to recover from sickness. Healthcare measures such as immunisation help people to fight diseases. In most countries of the world, children born today will live longer and healthier lives than children in the past did. Older people are also living longer as a result of improved healthcare.

Fewer people die



more people living
in our country

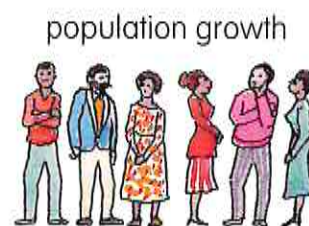


- 3 Immigration and emigration.** People come to live in a country (**immigration**) if they believe they will have a happier and more prosperous life there. People leave a country (**emigration**) if they are dissatisfied with their life there and believe they can live more happily somewhere else. Immigration and emigration are also factors which affect population growth. You will learn more about immigration to and emigration from the Cayman Islands in Unit 5.

More people arrive/fewer people leave



more people living
in our country



Limiting population growth

In some parts of the world population growth has become a serious problem.

Over-population causes a number of problems. These are:

- **environmental problems**, because of the pressure on physical resources such as water supply, sanitation and fuel. In areas where people depend on agriculture for food, this pressure may damage the environment because the land is over-used for grazing and crop-growing. Where wood is used as fuel, too many trees may be cut down, damaging the environment. If refuse disposal is not carried out properly, illegal dumping may occur.
- **economic problems**, because there are more people than jobs available for them; this means that many people do not have a way of earning a living. This creates poverty. There is also pressure on essential services, since there are not enough medical and educational facilities.
- **social problems**, because if people are crowded together, disputes are more likely to break out. There is also likely to be drug and alcohol abuse, and a higher crime rate.
- **medical problems**, because of a lack of water and sanitation, and sometimes because of inadequate refuse disposal. Poverty may also prevent people from having a good diet with the correct nutrients. Where over-population is severe, people may suffer from **malnutrition**.

In countries where population growth is a problem, governments and other organisations try to encourage people to have fewer children. This may be done by promoting modern methods of birth control.



Activity



- 1 Read the text above and write down some reasons why the population of a country grows. What role does the government play in population growth?
 - 2 Look at the graph on page 30. Would you describe the curve showing world population growth as steep (going up quickly) or gradual (going up slowly)? Does the rate of growth change over the two centuries?
 - 3 Draw a flow chart to show the factors of population growth. Which of these can a government control, if it wants to limit population growth?
 - 4 Write a case study on the problems caused by the numbers of non-Caymanians who have come to our islands in recent years. Think about the social, economic and environmental effects. Do the benefits brought by these **expatriates** outweigh the problems?
- E** In a group, discuss the factors which might cause population numbers to decline (population decrease). Draw a flow chart to illustrate these factors.

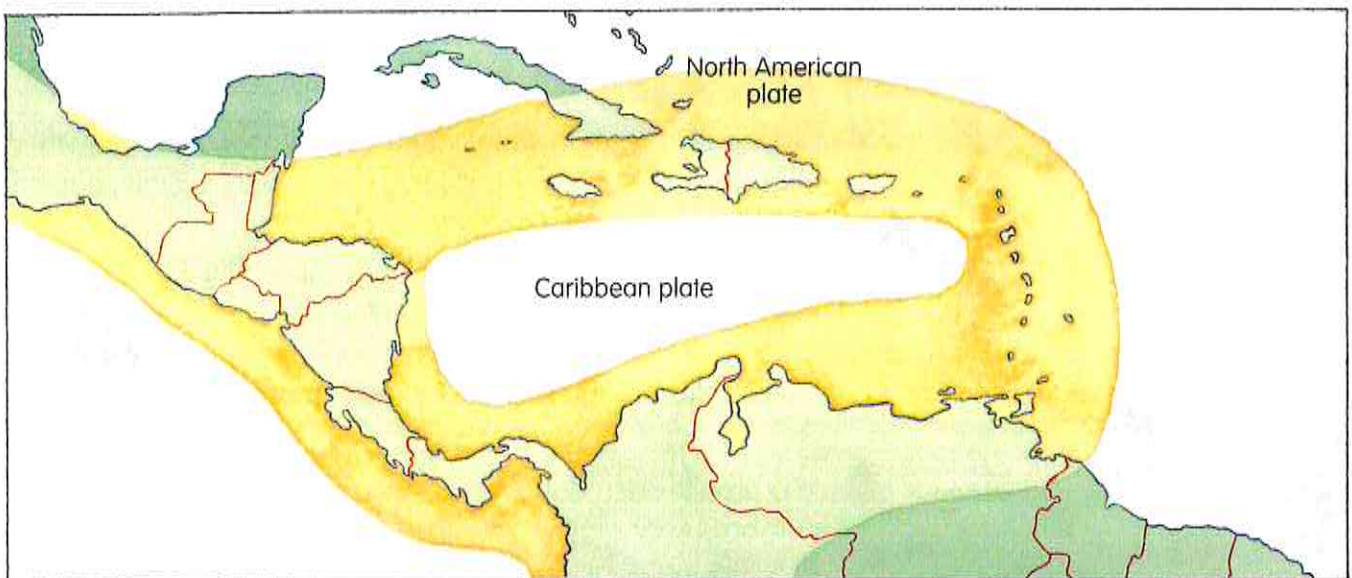
Round up


In this unit we have looked at two aspects of our islands today. First we studied the different rocks of which our islands are formed. Then we looked at the population of our islands and how it has changed over the centuries.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

- 1 Geology is the study of
 - A limestone
 - B rocks
 - C urban areas
 - D what happened long ago.
- 2 The Cayman Islands are made up of four types of limestone. Two of these are called
 - A marl and granite
 - B ironshore and marl
 - C coral and igneous rock
 - D beachrock and granite.
- 3 The oldest type of rock in the Cayman Islands is
 - A ironshore
 - B marl
 - C beachrock
 - D bluff limestone.
- 4 What does the shaded area on the map show?
 - A the Caribbean plate and neighbouring plates in the region
 - B the North American plate
 - C the areas of the Caribbean region where there is a lot of seismic activity
 - D the San Andreas fault.



- 5 When the government counts the population of our country, this is called a
- A taxation
 - B countdown
 - C pyramid
 - D census.
- 6 When the birth rate rises and the death rates falls, population will
- A grow
 - B fall
 - C stay the same
 - D move from one place to another.
- 7 When an age pyramid looks like this: 
- A there are more older people than younger people in the population
 - B there are more younger people than older people in the population
 - C there are about the same number of older people and younger people in the population
 - D there are more middle-aged people in the population than either older or younger people.

Write a paragraph

Write a few sentences about four of the following. Draw diagrams where these will make your answers clearer.

- a) how limestone and igneous rocks are formed
- b) the four different kinds of limestone which make up the Cayman Islands
- c) the plates which divide up the Earth's crust in the Caribbean region
- d) population growth in the Cayman Islands between 1800 and 1999
- e) the factors of population growth
- f) emigration and immigration.

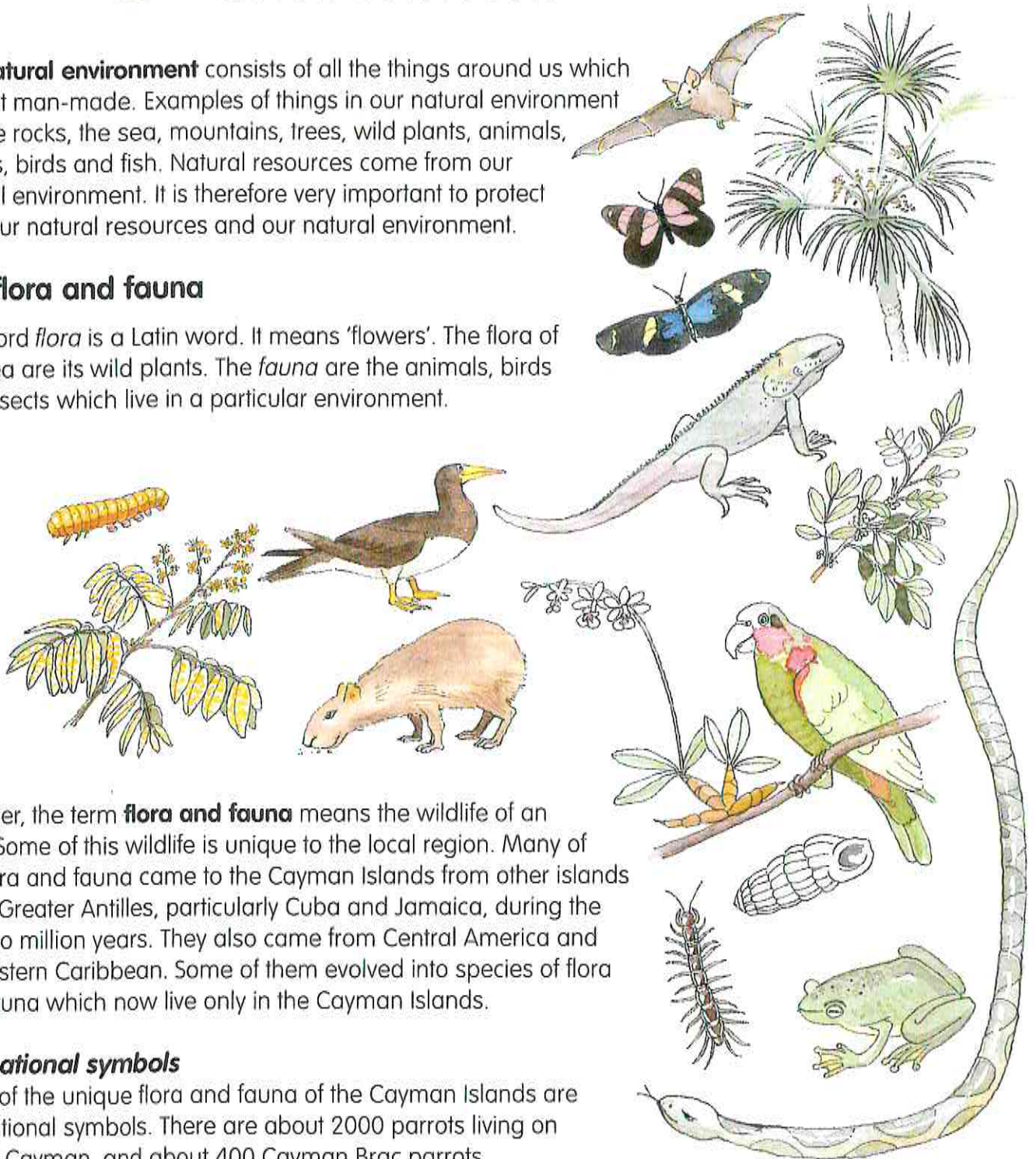
Our Natural Environment



Our **natural environment** consists of all the things around us which are not man-made. Examples of things in our natural environment are the rocks, the sea, mountains, trees, wild plants, animals, insects, birds and fish. Natural resources come from our natural environment. It is therefore very important to protect both our natural resources and our natural environment.

Our flora and fauna

The word *flora* is a Latin word. It means 'flowers'. The flora of an area are its wild plants. The *fauna* are the animals, birds and insects which live in a particular environment.



Together, the term **flora and fauna** means the wildlife of an area. Some of this wildlife is unique to the local region. Many of our flora and fauna came to the Cayman Islands from other islands of the Greater Antilles, particularly Cuba and Jamaica, during the last two million years. They also came from Central America and the eastern Caribbean. Some of them evolved into species of flora and fauna which now live only in the Cayman Islands.

Our national symbols

Some of the unique flora and fauna of the Cayman Islands are our national symbols. There are about 2000 parrots living on Grand Cayman, and about 400 Cayman Brac parrots.

- ★ Name our national symbols. Are they all flora and fauna of the Cayman Islands?

There are many other animals, birds, fish, insects, trees and other plants which live in the Cayman Islands. These include turtles, iguanas, owls, bats, conch, lobsters, whistling ducks, and dry evergreen woodland. Some of these are endangered species. You will learn more about endangered species later in this unit.

Habitats

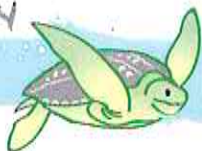
Plants grow where the right conditions exist. For example, black mangrove trees grow where the water is salty, but red mangroves, white mangroves and buttonwood trees grow in wetlands away from the shore. They like freshwater swamps and **brackish** wetlands.

In the same way animals, birds, fish and insects live where they find a **habitat** which suits them. For example parrots eat fruits and seeds. They nest in tall, old trees. Bats eat small insects. They roost high up in a tree or roof.

The habitats in which our fauna can flourish are easily destroyed. If this happens, not only the plants but also the animals and other creatures will disappear from our islands.



Activity



- 1** Look at the drawings of flora and fauna on page 34. Write down the names of each of the flora and fauna you can see.
 - 2** Write a definition of the word *habitat*. Choose three wild animals, marine creatures or birds and describe their habitats carefully.
- E** Find out more about the habitats of some of our other flora and fauna. With a partner, or as a group project, make a wall display with pictures and text showing various wildlife habitats on the Cayman Islands.

Natural vegetation

Natural vegetation is the name given to the plants which grow in an area naturally, without being planted by human beings. It includes trees and other plants, even grass. In the Cayman Islands mangroves, buttonwood, logwood, dry evergreen woodland and swamp woodland are all examples of natural vegetation.

Natural vegetation is very important. Long ago, Caymanians used the vegetation as an essential resource. They used the wood from trees to make ships, roof trusses and timber frames for houses, and as fuel. They used the bark to tan leather for shoes and boots. They used the thatch palm for rope and roofing material. They used many plants for medicines. Even today we use many of our flora as natural resources.

Mangroves

There are three main types of mangrove in our islands.

- The red mangrove is a kind of shrub. It grows on the sandy seashore and in brackish swamps and wetlands near the sea. It has curved prop roots. These roots form a tangled ball in which small marine creatures live. The bark of the red mangrove is pinkish red inside. A dye made from the bark used to be exported to Europe for tanning leather in the early part of the 20th century.
- The black mangrove gets its name from the dark **algae** which grows on its trunk. It grows in saltwater swamps. Its roots absorb the salt, and the tree then gets rid of the salt through its leaves. It also has **aerial roots** which grow upwards from the ground.
- The white mangrove tree prefers freshwater and brackish wetlands away from the coast. Lichens grow on its trunk and make it look pale in colour. Like the black mangrove, the white mangrove has aerial roots, though these are smaller than those of the black mangrove. Late in the wet season the tree produces seeds which float on the water until they come into contact with the soil.

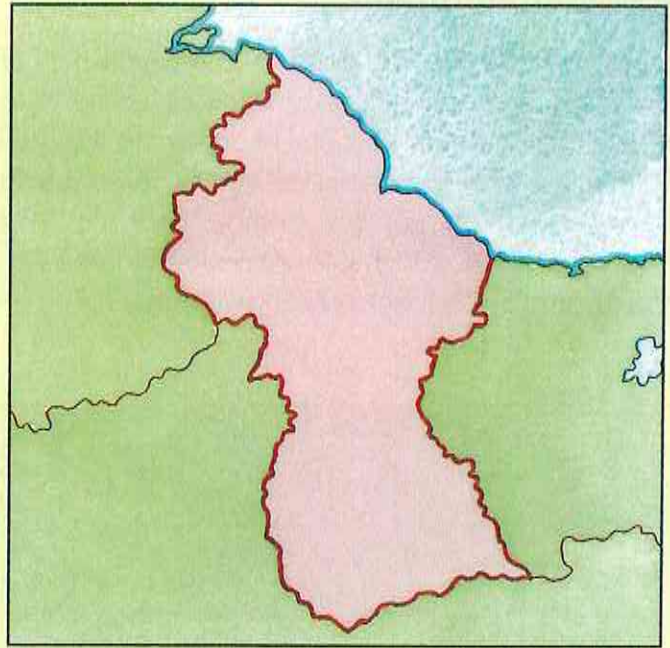


Mangroves anchor the mud with their roots. This prevents soil from being washed into the sea and lost. Without mangroves, our coastline would suffer from erosion.

There are mangroves in many other areas of the world, especially where swamps and wetlands occur close to the seashore. The box on page 37 tells you something about the mangrove forests of Guyana.

Mangroves in Guyana

Guyana is in South America. Its coastline is on the southern edge of the Caribbean Sea. There are three major rivers which flow into the sea on wide inlets or estuaries. Along the coastline and the estuaries there are mangrove forests. The climate of Guyana is warm all year round, and there is plenty of rainfall. Many types of forest grow well in these conditions. Lumbering is important in Guyana, but the mangrove forests are used very little because they protect the flat land along the coast. They help to keep the soil on the low-lying coastal plain from being washed away by the rain and the rivers. They also prevent the sea from flooding the plain except in extreme weather conditions.



Buttonwood trees

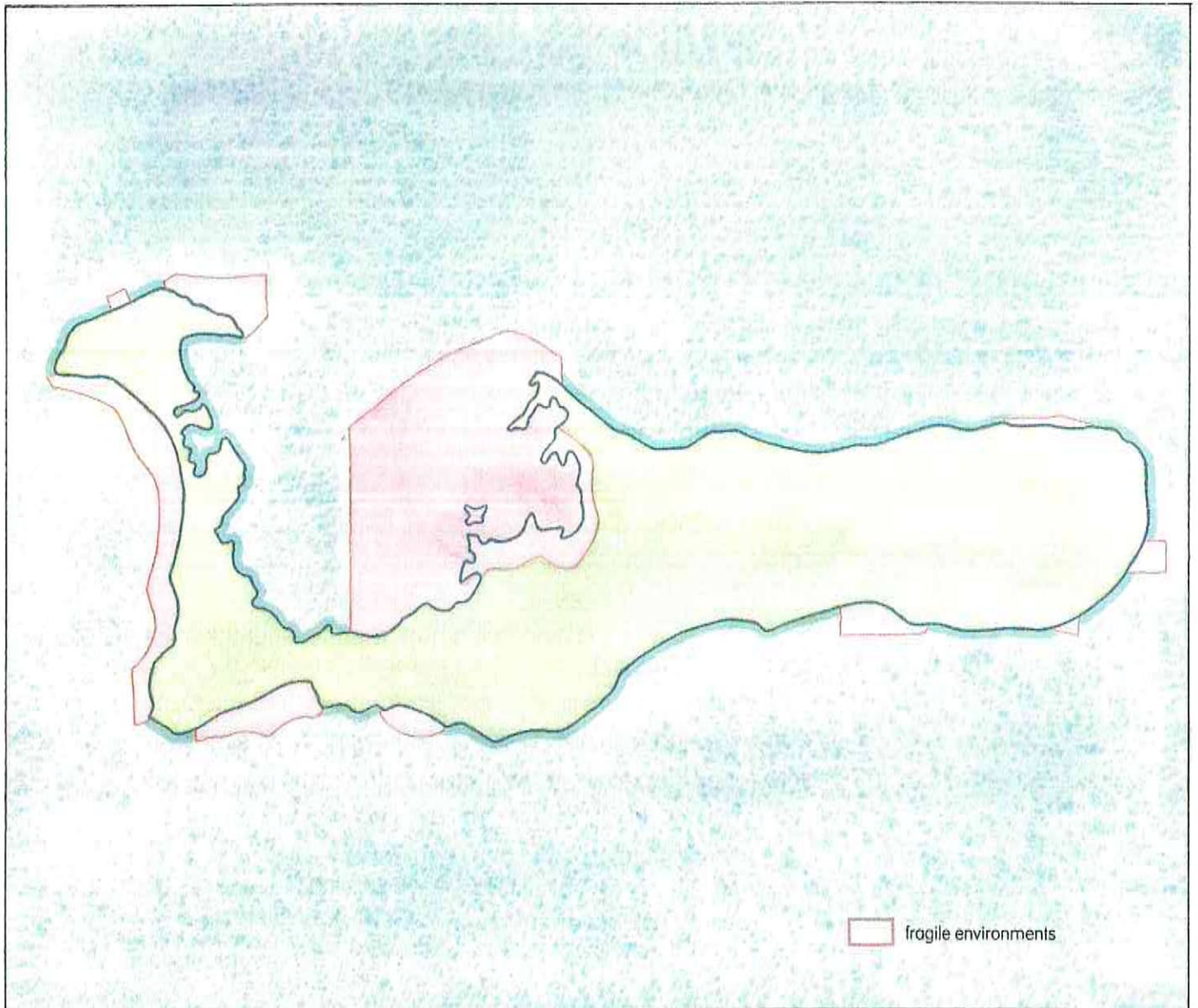
Buttonwood is another wetland tree. Its habitat is similar to that of the white mangrove. The branches of the buttonwood tangle themselves together. The wood is very hard and the older branches shed long, wooden strips of bark. In the past buttonwood was useful for making charcoal, and it was used as a fuel for cooking.



- 1
 - a) Write down a **definition** of natural vegetation. In pairs, compare your definition with your partner's and create a joint definition using the best elements of both.
 - b) Draw a table showing how we use different types of natural vegetation.
 - 2 Make up fact files on the different types of trees found in the Cayman Islands. Draw a picture to go with each one.
 - 3 Read carefully the information box on mangroves in Guyana. Use this information and your atlas to answer the questions below:
 - a) In which continent is Guyana?
 - b) Which countries have borders with Guyana?
 - c) Name the three major rivers of Guyana. Which of these does Guyana share with her eastern neighbour?
 - d) Which type of climate does Guyana have? Is it like our climate?
 - e) Why are mangrove forests important in Guyana?
- E** Write a report for the Department of the Environment explaining the importance of natural vegetation and recommending that it be protected wherever possible.

Fragile environments

As you have seen, some parts of our environment can be damaged very easily. Storms and floods can cause soil erosion. Modern life threatens the habitats of many of our fauna through pollution and construction work. We shall look here at three fragile environments: our wetlands, our coral reefs and our beaches. These are not the only environments which are under threat, however. The map shows where some of the most fragile environments are on Grand Cayman.



Wetlands

We have already learned how important mangrove forests in coastal wetland areas are. The wetlands themselves are also important. This is not only because they provide the right conditions for mangroves. Warm temperatures cause some of the moisture in the wetlands to evaporate. This water vapour becomes part of the clouds and helps to maintain the amount of rainfall we have. The trees also **transpire**, releasing moisture into the atmosphere. Draining and filling the wetlands during **land reclamation** can lead to a decrease in the amount of water available to us as a resource.

Wetlands also provide habitats for seabirds and other living creatures. They are like a nursery where marine animals can grow up.

Preserving our wetlands

In many areas of the world wetlands have been reclaimed for farmers to cultivate, or for building hotels or airports. Wetlands can also become polluted. Wetlands should be valued for their contribution to rainfall and as habitats for wildlife.

The National Trust for the Cayman Islands is working to preserve fragile environments such as wetlands through various nature reserves, like the Salina Reserve. You can read about the Salina Reserve below.

The Salina Reserve

The Salina Reserve is a large freshwater wetland in north-eastern Grand Cayman. The National Trust set up the Salina Reserve in 1988. It is about 625 acres of sedge and buttonwood swamp, dry thicket and other woodlands. Access to the interior of the Reserve is difficult, and this protects the endangered species which live there from **predators**. Various types of bats, as well as many birds and butterflies, live in the Reserve. In 1993 the National Trust began releasing Grand Cayman blue iguanas into the Reserve. The iguanas had been bred in captivity because there was no suitable habitat for them on the island.

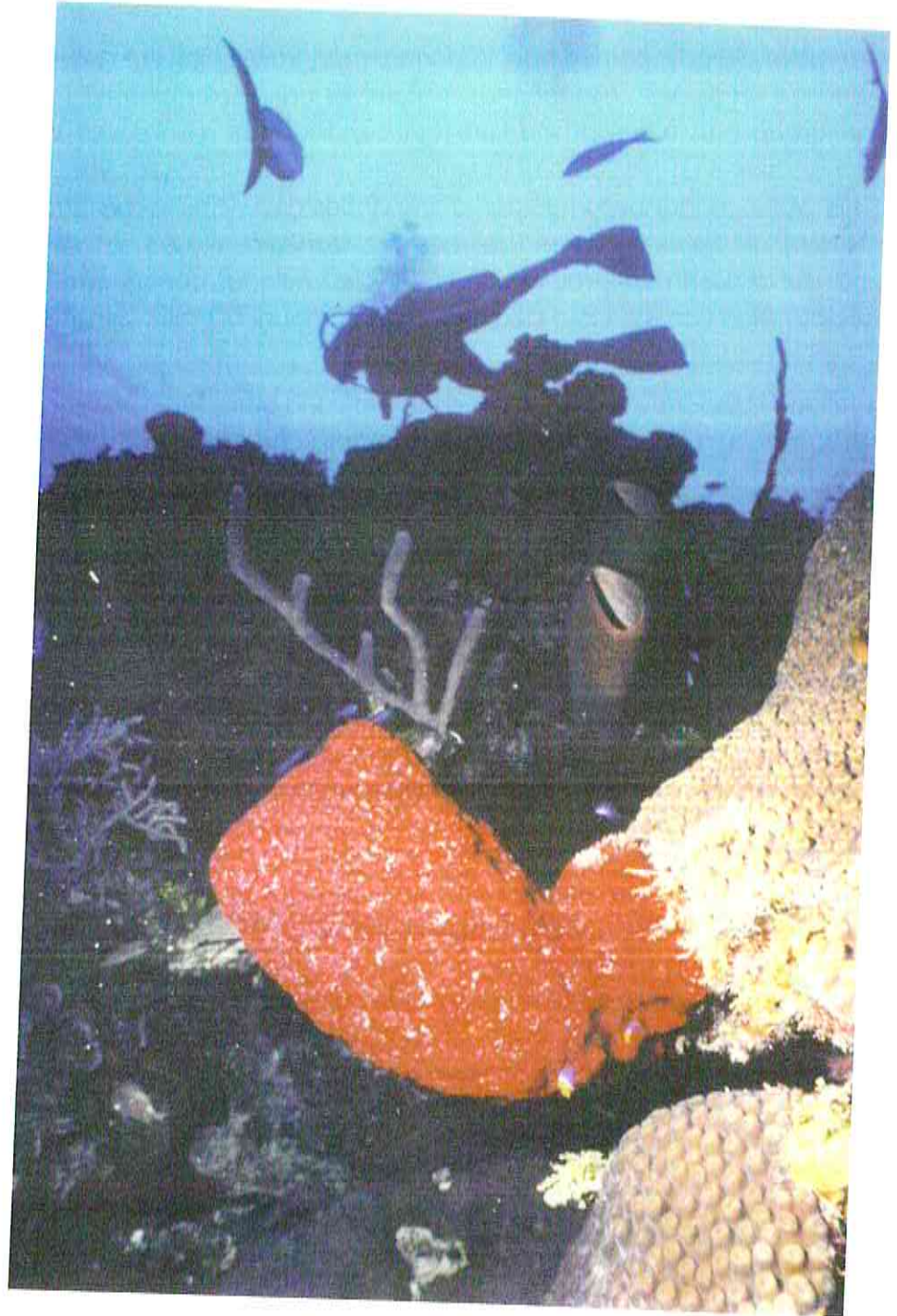
Activity



- 1** Visit a wetland reserve such as Governor Gore's Bird Sanctuary, the Booby Pond Nature Reserve or the Brac Parrot Reserve. Make notes on the wildlife and plants you can see there. Write a report on the kind of habitat these creatures and plants need.
- 2** Draw a diagram showing how wetlands help to maintain our rainfall.
- 3** Study the map on page 38. Locate your community on the map and note the fragile environments that occur near to your community. How can your community avoid damaging these environments?

Coral reefs

As you learned in Unit 2, coral reefs are made of living sea creatures, called *polyps*. There are two main types of coral polyps: hard (stony) corals, such as brain coral, and octocorals, such as sea-fan and black coral. Both types are found in the Cayman Islands. The stony corals have an **exoskeleton**. This means that their bony structure is outside their bodies, rather than inside, like ours. They can only live near the surface of the water, because they depend on light to make their food. The octocorals have a skeleton inside their bodies, so that their soft tissue is on the outside. This makes them very vulnerable to damage. Each polyp has eight feathery tentacles.



Why we should protect our coral reefs

Coral reefs are important. They protect our beaches from erosion by big waves. The polyps are part of the fauna of our islands.

Coral polyps prefer warm, clear water. The reefs can be damaged by sudden changes in water temperature, and by pollution by chemicals. Cruise ships can damage them by mooring too close to them. The routes of these ships need to be **regulated**. We must make sure that our waters remain clear and unpolluted.

Divers, too, contribute to the destruction of our coral reefs. Coral is very fragile. Divers often touch or break off pieces of coral. When this happens, it can stunt the growth of the coral or even kill it.

Other dangers to our coral reefs come from the disposal of garbage such as plastics, chemicals and waste water, and the pumping of bilge from tankers which dump their waste at sea near the islands. This waste can smother the coral polyps, causing them to die.



A cruise ship at anchor

Coral reefs in other seas

It is not only in the seas around the Cayman Islands, or in the Caribbean region, that coral reefs are threatened. In 1994 a special project called the International Coral Reef Initiative was launched. This works towards protecting coral reefs all over the world. The year 1997 was declared a special Year of the Reef.

Beaches

Our beaches protect the islands from **inundation** by the sea. They also attract tourists because they are beautiful. However, beaches are also fragile. The sea erodes them. Local people use them as a source of sand, for fishing, and for leisure activities. Tourists enjoy swimming, snorkelling, diving and other watersports from the beaches. If too much sand is removed, the beaches will vanish. It is now illegal to remove large amounts of sand from our beaches.



- 1** Take a trip on a glass-bottomed boat across coral reefs. Notice the colour and appearance of the reef. When you return, draw pictures of the living coral.
 - 2** Draw three diagrams showing the threats faced by **a)** wetlands; **b)** coral reefs; and **c)** beaches. Draw another diagram showing how one of these fragile environments provides important natural resources.
 - 3** Find out how we can protect our beaches from sea erosion. Create a wall display about protecting beaches. Use pictures from magazines and newspapers and collect information to go with them.
- E** Find out more about the different kinds of coral. Research where these grow around the Cayman Islands or elsewhere in the Caribbean. Use this information to draw a map showing where different kinds of coral are found.

Protecting endangered species

As we learned on page 35, the habitats of some of our native flora and fauna have been destroyed, or are threatened. Overfishing also depletes the stocks of marine creatures. There are now too few blue iguanas, agouti, owls, bats, parrots, conchs, lobsters and whistling ducks. When the total number of a species decreases too far, it is called an *endangered species*. Plants such as orchids and some mangrove trees in the wetlands are also endangered. These species need special protection, if they are not to be lost for ever.



The blue iguana, an endangered species

Ways we can protect endangered species

The government has declared closed seasons for some endangered species, so that they are not disturbed when they are breeding. They have also set up zones where various marine animals cannot be caught. Some rare orchids cannot be picked from wild sources. You will learn more about the marine conservation laws later in this unit.

One important way of helping to protect endangered species is by supporting the organisations which try to conserve their habitats. The National Trust for the Cayman Islands is an example of a conservation organisation. The National Trust **collaborated** with the government of the Cayman Islands to set up the Queen Elizabeth II Botanic Park. There are also bird sanctuaries on all three of our islands. The Turtle Farm is partly a conservation organisation and partly a business which makes a profit.



- 1 On page 43 there is a **case study** on the Queen Elizabeth II Botanic Park.
 - a) Read this carefully and then visit the Botanic Park yourself, either with your family or with other members of your class.
 - b) Write an account of your visit to the Park. Describe what you saw. Say what you liked best about your visit. Make a list of the new garden areas the Park is planning to create.
 - c) Explain how the Botanic Park is helping to conserve the natural environment of the Cayman Islands.
- 2
 - a) Find out about the National Trust for the Cayman Islands and its work. Apart from the natural environment, what else does it try to conserve?
 - b) Draw a poster advertising the National Trust for the Cayman islands.

3 In pairs, discuss how we can protect endangered species of plants and animals. Make a list of at least five ways we can help to protect our flora and fauna.

E Write a case study of another conservation organisation or project, such as the Turtle Farm or one of the bird sanctuaries.

CASE STUDY – THE QUEEN ELIZABETH II BOTANIC PARK



The Botanic Park was set up by the National Trust and the government of the Cayman Islands in 1994. The Park provides information and guided walks for visitors, including tourists and school parties. It contributes to the conservation of our native species by encouraging people to respect them and be aware of their needs.

The Botanic Park consists of 65 acres in which native species of plants grow, providing habitats for a large number of wild creatures including butterflies and moths. About 45 acres are native woodland in the interior of the island of Grand Cayman, away from the coast. In this part of the Park there is a Woodland Trail, a path 3.35 metres (11 feet) wide, covered in crushed aggregate. This surface has been specially designed for people to walk along easily, and it is even suitable for wheelchair use. When the path was laid out, the route taken was carefully chosen through existing woodland so that as few species as possible had to be relocated.

The Park provides a self-guided tour containing information on the various native species which can be seen from the path. Most of the native woodland, with its many plants and animals, was already flourishing when the Park was set up. Research undertaken by the National Trust indicates that almost half of all our native species are present in the Park. There are swamps, fresh and seawater ponds, dry evergreen woodland, clumps of buttonwood, and a grassy meadow.

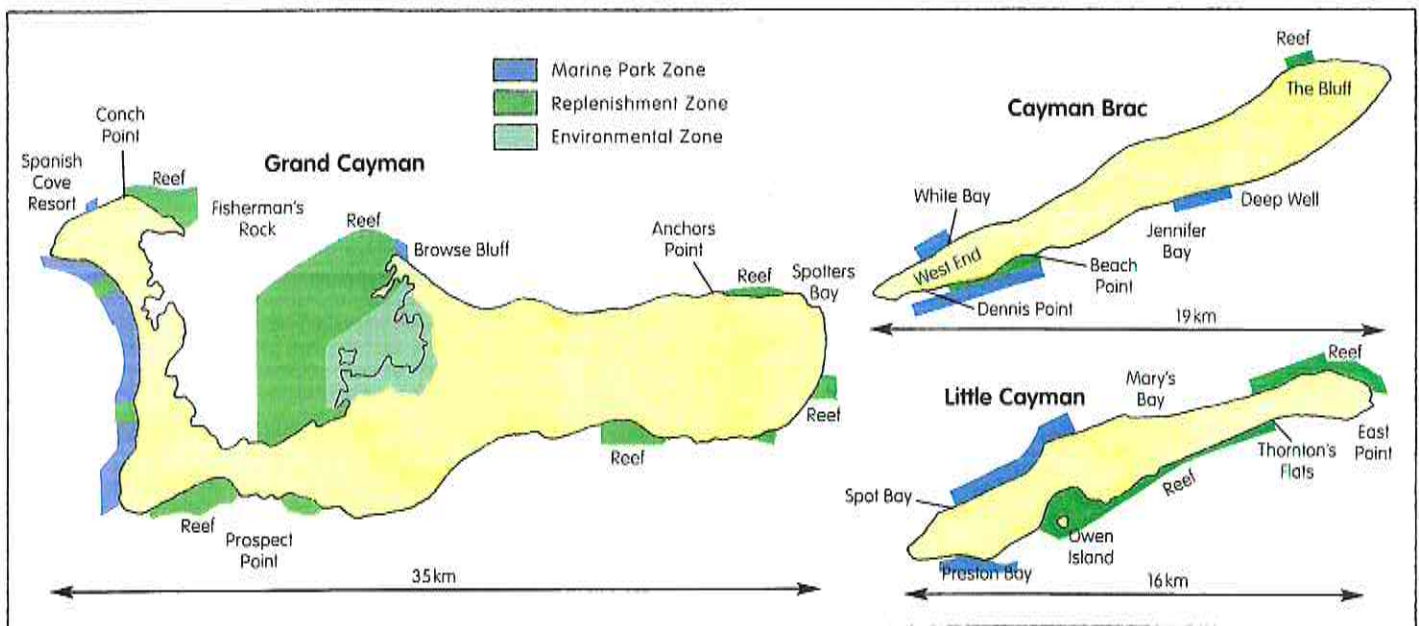
As well as the Woodland Trail, the Park has created garden areas. The Heritage Garden and the Floral Colour Garden were opened in May 1997. A Visitor Centre was also opened at that time. Other garden areas are planned, including a special children's garden.

Conservation laws

When we use the word **conservation** we mean looking after and preserving our environment.

The first conservation law in the Cayman Islands was passed in 1978. This established marine conservation zones to protect marine life from over-fishing. There are three of these:

- **The Marine Park Zone.** Here you may only fish using rod and line and cast nets.
- **The Replenishment Zone.** Line fishing and anchoring are permitted, but you must not catch conch or lobster.
- **The Environmental Zone.** Here it is illegal to remove any marine life, even if it is dead.



The government has also declared closed seasons for lobster. At these times of year no lobster may be caught. This is to allow the animals time to breed. In 1988 a law was passed making it illegal to catch turtles at any time. In 2001 legislation was drafted to restrict the catching of groupers and conchs.

Activity



- 1 Make a list of the marine conservation laws. Which environments do these protect?
 - 2
 - a) Find out when the closed seasons are for lobster. Are there any other closed seasons?
 - b) Draw a calendar for fishermen, showing the closed season periods.
- E** Write an essay (research paper) on the importance of preserving a natural balance in the **ecosystem** of the Cayman Islands.

Protecting our water sources

There are no rivers or streams on our islands. In the past, the main water sources for most Caymanians were wells, groundwater or rain water. Wells used water from sources deep below the surface. Groundwater sources included the wetlands and ponds. Caymanians also collected rain water on the rooftops and stored it in barrels, drums and cisterns.

★ Where does the water you use come from?

Protecting groundwater sources

Groundwater can be contaminated easily. The following can all cause groundwater contamination:

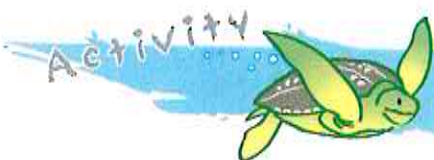
- dumping of household garbage in wetland areas
- dumping of old vehicles and equipment in wetland areas
- discharge of sewage into wetlands or ponds
- seepage of toxic materials such as acid, pesticides and insecticides into wetlands and ponds.

The Water Authority

Our water supplies are protected by the Water Authority of the Cayman Islands. This organisation closely monitors the standard of water supplied to Caymanians. A controlled sewage system has also improved the problem of groundwater contamination.



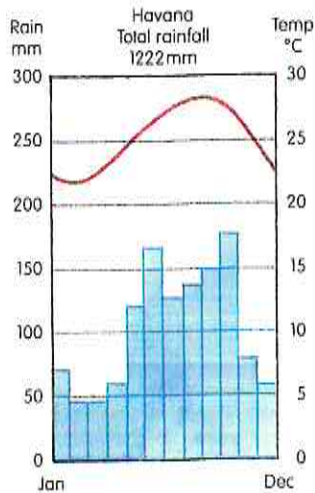
Illegally dumped garbage



- 1** Collect samples of water from various sources, such as the sea, a pond, a cistern, a well (if one is available locally), and the Water Authority tap water. Make a home-made filter and test the water for the presence of dirt or plant organisms. Use litmus paper to test how acidic the water is. **DO NOT DRINK** water from the sea or a groundwater source without checking with your teacher first.
 - 2** Visit a Cayman Water Company reservoir. Find out how the water is purified before it becomes part of the main water supply.
- E** Discuss with your science teacher other tests which might be performed on samples of water. Set up experiments to carry out these tests and note the results.

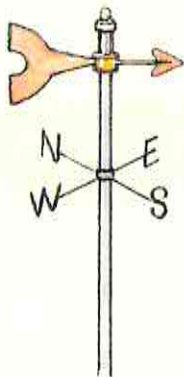
Rainfall and temperature

In Year 5 you learned about different kinds of climate. You also learned about the kind of climate which the Cayman Islands has. Work through this activity to see how much you remember. Choose your answers from the box at the bottom of the page.



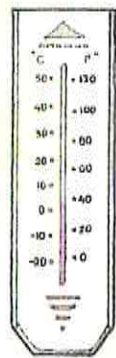
- a) What type of climate does the Cayman Islands have?
 - b) Which season comes between November and April?
 - c) What is the average sea temperature in that season?
 - d) In which month does the rainy season start?
 - e) When does the hurricane season end?
- a) Climates with high average temperatures occur near which line of latitude?
 - b) Climates with low average temperatures occur near which points on the globe?
 - c) What is the name given to climates with four distinct seasons?
- Which instruments do we use to measure the following?
 - a) temperature b) rainfall c) wind direction d) wind speed.
- Which part of this graph shows rainfall? Which part shows temperature?

dry
temperate
November



windvane

rainy
tropical marine
North Pole



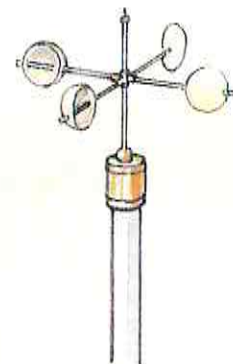
thermometer

29°C (85°F)
polar
South Pole



rain gauge

May
25°C (75°F)
Equator



anemometer

Factors which affect our climate

Two of the main factors which affect our climate are the sea around our coastlines and the wetlands.

The wetlands

As you learned earlier in this unit, there are two ways in which moisture from the wetlands helps to maintain the water vapour in the atmosphere.

- 1 The wetland trees and shrubs release moisture into the atmosphere through transpiration.
- 2 Moisture from the water bodies contained within the wetlands evaporates in the warm temperatures.

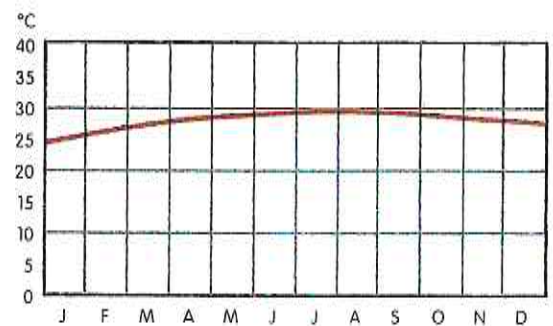
Both these factors are important in keeping the **hydrological** (water) **cycle** of the Cayman Islands operating correctly.

★ What is the hydrological cycle? How does it work?

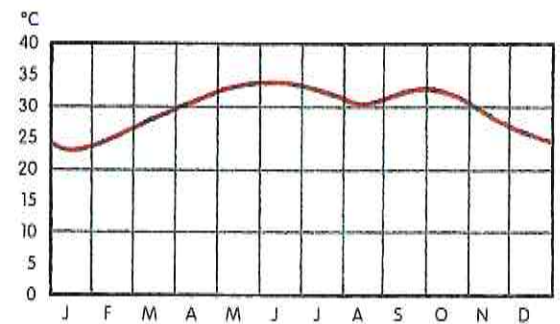
The Caribbean Sea

Our islands are surrounded by the Caribbean Sea. There are four ways in which our position in the middle of a large water body such as the Caribbean affects our climate.

- 1 The sea helps to **moderate** the temperature. Large water bodies do not heat up or cool down as fast as landmasses. The climate on an island is always less extreme than the climate in the centre of a continent at the same latitude. Compare the temperature graph of the Cayman Islands with the graph for Khartoum, in Africa, whose latitude is also about 20°N.
- 2 Large water bodies also cause local sea breezes to form, which make the coastal areas of our islands feel much cooler.
- 3 Warm temperatures over large water bodies cause a build-up in the atmosphere of moisture in the form of clouds. These bring rain to the islands in the middle of oceans and seas.
- 4 The North-East Trade Winds blow constantly across the Atlantic towards the Caribbean. They also help cool the high tropical temperatures and bring rain.



Temperature graph for the Cayman Islands (year 2000)



Temperature graph for Khartoum

Activity



- 1 Draw a diagram to show how the wetlands maintain the moisture levels in our atmosphere.
 - 2 Make a wall chart showing the different factors which affect our climate. Illustrate your work with pictures, sketch maps and diagrams.
- E** Make a careful comparison of the two temperature graphs above and write down the differences between them. What would you expect rainfall graphs of the same places to show?

Round up

In this unit we have learned about our natural environment. We have looked at flora and fauna, and considered how they should be protected. We have also learned about our water sources and the importance of protecting them from pollution and from drying up.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

- 1 The flora of a region are its
 - A fish
 - B animals
 - C birds
 - D wild plants.

- 2 Saltwater wetlands provide the correct growing conditions for
 - A red, black and white mangroves
 - B black mangroves only
 - C black and red mangroves
 - D white mangroves only.

- 3 Living coral are
 - A polyps
 - B fish
 - C limestone rocks
 - D algae.

- 4 The word *transpiration* describes the process by which
 - A moisture from ponds and wetlands evaporates
 - B sea breezes cool our coastlines
 - C moisture is released into the atmosphere by the leaves of plants and trees
 - D the hydrological cycle maintains our levels of rainfall.

- 5 Wells allow us to draw water from
 - A deep under the ground
 - B groundwater sources
 - C reservoirs
 - D cisterns.

- 6 It is illegal to fish in our coastal waters for
 - A codfish
 - B conch
 - C lobster
 - D turtles.

- 7 The North-East Trade Winds blow
- A across the Pacific from Australia to California
 - B across the Atlantic to the Caribbean
 - C across the Atlantic to Africa
 - D across the Indian Ocean to Indonesia.

Diagrams

Draw labelled diagrams to illustrate the following:

- a) the hydrological cycle
- b) groundwater contamination
- c) a thermometer.

Our Industries Past and Present



In Year 4 you learnt that long ago in the Cayman Islands our main industries were rope-making, turtling, fishing and shipbuilding. Today our main industries are banking, tourism and business.

Rope-making

As you learnt in Year 4, ropes were made from the leaves and the unopened bud, or 'top' of the thatch palm. A special winch cart was used to make the rope, which when finished was made into coils 25 fathoms long. Rope was measured in fathoms. A fathom is a little under 2 metres (6 feet). Caymanian rope was highly prized by Jamaican fishermen and other seamen, because it outlasted other ropes used at sea. Caymanian rope did not rot so easily in sea water as other ropes.

★ Why do you think Caymanian rope lasted longer in sea water than other ropes?



A rope-making winch cart

As late as 1960 many people in the Cayman Islands did not have cash (paper money and coins) to pay for the goods they bought in the shops. Instead, they used rope to pay for goods such as flour, cornmeal, sugar and lard. The shops exported the rope to Jamaica. The Jamaicans paid for the rope in English pounds, shillings and pence.

Revision activity



Caymanians used the thatch palm to make other things, as well as rope. Can you remember some of the things they made? Make a wall display of pictures showing these items.

E Work out and explain how the economic system worked when people used rope instead of money. Draw a diagram to illustrate your explanation.

Seamanship

The industries which were important in the Cayman Islands in the past were all related to the sea. We have already seen that the ropes which Caymanians made were well suited to use on ships and at sea. The other industries, fishing and turtling, and shipbuilding, required seamanship skills. Caymanian boys learnt these from an early age. They went out with their fathers to catch fish, conch or turtles, and to set fish-pots and fish-traps. Here they learned how to 'man' the boats, and handle canoes and catboats. They learned to paddle, using oars, and how to operate the sails.

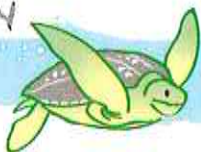
When they grew up, these boys joined crews who sailed long distances to fish for turtles. Those who survived the dangers developed special skills and became excellent seamen. Some of them became sea captains responsible for their own ships. Many learned to navigate, using the stars to work out their position.

During the 20th century, Caymanians began to sail on merchant ships belonging to the United States, Spanish Honduras and Panama. During World War II, between 1939 and 1945, many Caymanians also served in the British Merchant Navy and the American Merchant Service. Many merchant ships were attacked by enemy submarines, warships and aircraft. The Caymanians gained a reputation for seamanship and discipline. After the war, many Caymanians worked on National Bulk Carriers. Captain M.G. Southwell **recruited** many Caymanian seamen to work for the company.



A National Bulk Carriers vessel and Caymanian seaman Errol Waller, who sailed on Captain Southwell's ships

Activity



- 1 Find out more about the role of Captain Southwell and the National Bulk Carriers.
- 2 Write a list of seamanship skills required by the Caymanian seafarers of the past. How many of these are still needed today?

The turtle industry

In the early days, turtling was one of our most important industries. Small sailing **vessels** journeyed about 480 km (300 miles) to the Mosquito Cays off the coast of Nicaragua. They would return loaded with green turtles and some hawksbill turtles. Some were kept in the North Sound in a special pen called a 'crawl' and later sold as fresh meat to Caymanians. There was also a turtle crawl operated by the Merren family in Kingston, Jamaica, which shipped live turtles to England. Other turtles were sold alive to the turtle factories in Florida, at Key West and Marathon Key, where they were killed and shipped to other countries. If a New Yorker or a Londoner, a Parisian or a Chicago resident, bought a turtle steak, it was probably caught by a Caymanian crew on a Caymanian-built boat.

In the 1950s efforts were made to process turtle meat in the islands. A turtle canning factory was built in George Town, and the following year the factory began producing turtle soup. Unfortunately there were marketing difficulties in the USA, and the factory had to stop producing soup. The site of the canning factory became part of the Caribbean Utilities Ltd on North Sound Way, in George Town.

The Turtles' Song

Down in dear old Cayman
Where the soft winds blow
Out upon the ironshore, though
Mosquitoes bite me night and day,
Cayman girls are sweet of yore
How my heart is yearning to be there once
Just to hear the girls' gay song.
Breezy Castle mangoes call me back
To the place where I was born.
When the parrot calls I'm lonesome
When I sing old songs I'm blue
When a crawl boat comes I'm longing
For some turtle stew.
Makes no difference where I wander
Any place I chance to roam
When I hear the songs I used to sing
Then I'll think of home.

The musical score for 'The Turtles' Song' is written in G major and 2/4 time. It consists of 16 staves of music with lyrics underneath. The lyrics are: Down in dear old Cayman Where the soft winds blow Out upon the ironshore, though Mosquitoes bite me night and day, Cayman girls are sweet of yore How my heart is yearning to be there once Just to hear the girls' gay song. Breezy Castle mangoes call me back To the place where I was born. When the parrot calls I'm lonesome When I sing old songs I'm blue When a crawl boat comes I'm longing For some turtle stew. Makes no difference where I wander Any place I chance to roam When I hear the songs I used to sing Then I'll think of home.

(A traditional song of the Cayman Islands. Published by: C. I. National Archive.)

The Turtle Farm

Today, the Cayman Islands has the only turtle farm in the world. In 1968 a company called Mariculture Ltd was formed, and they began raising turtles in captivity at Salt Creek, North Sound. The site was later moved to Goat Rock, North West Point, where it remains today. There are three reasons why the turtle farm is important:

- It is a tourist attraction, with a gift shop and information gallery.
- It is a **commercial enterprise** which provides local people with turtle meat.
- It is a conservation service which **replenishes** the wild turtle population by breeding turtles in captivity and releasing some of the young turtles into the sea.



In 1978 the US government decided to ban all turtle products from entering the USA. This means that we cannot sell turtles or turtle products in the USA. However, the Turtle Farm has continued to be successful. They raise about 3000 turtles every year for meat, and release several hundred into the wild.

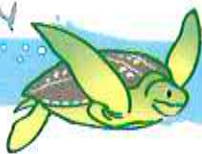
Extract from *The Islands Time Forgot* by John Maloney

One day, a schooner builder took me across the island to an immense bay called North Sound. There the very latest wrinkle in turtleology is developing – a natural crawl in the form of a big lagoon that makes in from the sea. I saw boatloads of immense turtles being taken from a schooner there and duly impounded. Palisades of logs prevented their escape. Nearly 1000 have already been imprisoned. Turtle grass grows in the lagoon, so the captives board themselves with no trouble at all to the owners.

Questions

- 1 Where was the natural crawl?
- 2 Who were the 'captives' referred to in the passage?
- 3 How did the turtle grass help the owners?
- 4 Use your dictionary to find out the meaning of these words, and write them down:
a) impounded b) palisade c) board.

Activity



- 1 Read the paragraph in the box above and answer the questions. The passage is taken from *The Islands Time Forgot*, by John Maloney. It is an account of his visit to a Grand Cayman turtle crawl in the late 1940s.
 - 2 Make a replica of a crawl and display it in class.
 - 3 Read the Turtles' Song on page 52. Learn the tune and practise singing it. Work out an accompaniment with musical instruments and perform the song to other classes in your school, or to parents.
- E** Interview an older Caymanian person about turtles laying their eggs on our beaches. Make a tape recording of your interview and play it to other members of the class.

Shipbuilding

The first ship that we know for certain was built in the Cayman Islands was the *Susan and Kitty*, in 1783. This vessel weighed 46 tons and was owned by William Bodden. However, some people believe that schooners were being built in the Cayman Islands as early as 1710.

The *Susan and Kitty* was a schooner, but sloops and yawls were also built in the Cayman Islands. The Fact File gives definitions of these different kinds of vessel.

During the 19th century larger vessels were built, made of local mahogany. A little mahogany was also imported from Honduras for the shipbuilding industry.

★ Why is mahogany a suitable wood for shipbuilding?

Shipbuilding continued into the early part of the 20th century, but the difficulty of exporting ships during World War II prevented the industry from expanding further. The widespread adoption of steam- and later diesel-powered vessels in place of sail put an end to shipbuilding as a major industry in the Cayman Islands. Table 2 gives the names, dates, owners and tonnage of some of the schooners built in Heber James Arch and Sons Shipyard. The case study on the *Goldfield*, on page 55, reminds us of the magic of the Cayman Islands' seafaring past.

Table 2 Some ships built at Heber James Arch and Sons Shipyard

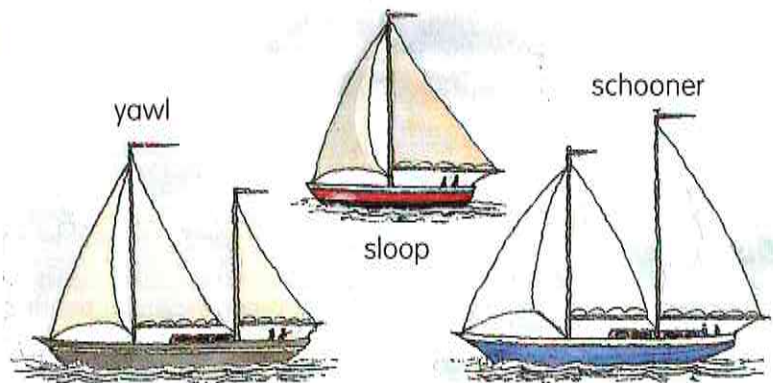
<i>Ship's name</i>	<i>Owner</i>	<i>Date</i>	<i>Tonnage</i>
<i>A.M. Adams</i>	Thompson Enterprise	unknown	116
<i>Armistice</i>	James Arch	1930	27
<i>Arbutus</i>	Warren Bodden	1915	100
<i>Genevra</i>	James Bodden	1850	41
<i>Goldfield</i>	W. Conwell Watler	1930	99
<i>Leader</i>	Smiley Connolly	unknown	unknown
<i>Leah</i>	Crighton Brothers	1921	unknown
<i>Lilly</i>	John E. Bodden	1939	unknown
<i>Rainbow</i>	A.E. Panton	1946	unknown

● FACT FILE – DIFFERENT KINDS OF VESSEL

Schooner Sailing vessel with at least two masts, and all lower sails rigged *fore-and-aft*. Many larger schooners had three masts.

Sloop Single-masted sailing vessel, rigged *fore-and-aft*. The mast is stepped about one-third of the ship's length aft of the bow.

Yawl Two-masted sailing vessel, rigged *fore-and-aft*, with a large mainmast and a smaller mizzenmast stepped aft of the rudder post.



CASE STUDY – THE GOLDFIELD

The *Goldfield* was the sixth ship launched into the waters of Hog Sty Bay during 1930. She was a schooner, 99 tons in weight and 32 metres (105 feet) long. The *Goldfield* was built by William Conwell Watler at the shipyard of James Arch, Sr, in 1929. The ship was designed by the shipbuilder's son, Fossie Arch, who made three alternative models to show the owner. The design Watler chose was developed from a vessel built in Nova Scotia which had been featured in the *Rudder* magazine. The construction was carried out by Fossie, his brothers Elroy, Jim and Seth, and their father, James Arch himself, with the help of Felex Thompson, Lemuel McField and Ashley Bodden.

In those days launching involved laying the ship on its side on rollers and pulling it down to the sea using a block and tackle. It was very hard work. Food and drink were provided for the crowd, who then sang sea **shanties** as they hauled the ship down to the shore. The boat had a **shallow draught** so that it could enter the waters of the North Sound, where the deepest water is only about 3 metres (10 feet) deep. The vessel's framework was made of Caymanian hardwood, mainly mahogany, with planking made from Louisiana Yellow Pine.

The *Goldfield* was built for the turtling trade. It sailed to Mosquito Cays, off the coast of Nicaragua, to the turtle-fishing grounds, and then took its catch to Key West, Florida, to be sold. Many captains skippered this proud vessel. Among them were Reginald Parsons and Charlie Farrington. Some of the others whose names were recorded included an Ebanks, a Bodden and a McLaughlin.



A ship launching

Activity



- 1 Collect some pictures of different types of sailing vessel and put them into the categories *schooner*, *sloop* and *yawl*.
- 2 Read the case study about the *Goldfield*.
 - a) Draw a picture of a ship being launched.
 - b) Draw a sketch map showing the route taken by the *Goldfield* on her turtling trips.

E Write a case study of another famous Caymanian-built ship. Find out where she was built and when, what she was built for and who skippered her.

Modern industries

Today our main industries are banking, tourism and business. We are going to look closely at one of these industries, tourism.

The development of tourism

Today tourism has an important role to play in the **economy** of the Cayman Islands. But before the 1960s very few tourists came to our islands. In 1964 the total number was 500. In 1970 the figure was approximately 22,800, and by 1999 there were 1.3 million tourists. There has also been an enormous increase in the number of people who visit the Cayman Islands more than once. Before 1970 there were no major hotel chains or resort facilities. Tourists were looked after in privately owned cottages, boarding houses and small family hotels. Today many facilities are provided for the tourists. In the year 2000–1 there were 209 licensed properties offering accommodation to tourists, including 27 hotels and 92 guest houses. Most of the other licensed properties are apartments or apartment blocks.

The Department of Tourism

In 1966 a Tourist Board was created, to build up the tourist industry in the Cayman Islands. On 1 January 1974 this became the Department of Tourism, a branch of government. The Department is responsible for marketing, research, planning and development of tourism. It is led by the Director of Tourism. The Department has tourist offices in the USA, Argentina, Canada and Europe, as well as in the Cayman Islands. The office for tourism in Miami, Florida, opened in 1968.

The Department of Tourism works with the Hotel and Condominium Association to set standards in the tourist industry, and to **promote** the islands abroad. There are also other associations involved in tourism, such as the Taxi Association and the Water Sports Association, as well as tour operators, **restaurateurs**, and businesses operating entertainment and general recreational activities.



The effect of tourism

Caymanians have received many benefits from tourism. Here are a few:

- Tourism provides jobs and creates a demand for goods.
- Tourism creates the right conditions for new business enterprises to flourish.
- Tourists pay for goods and services, bringing more money into our economy.
- The extra revenue earned by tourism allows the government to improve the services it provides for local people.
- Greater wealth has given us more opportunity to own our own houses, take part in **higher education** and travel overseas ourselves.

On the other hand, tourism can also have disadvantages. Tourists can cause problems for our **infrastructure**, because of the number of people using our roads, medical and social services, the police force and other essential services. Too many tourists may cause damage to our fragile environment and ecosystem.

These problems and benefits affect other countries in the Caribbean which have developed an important tourist industry. On pages 58 and 59 we shall look at two very different Caribbean countries with important tourist industries. We shall try to find out whether their experience of tourism has been similar to or different from our own.

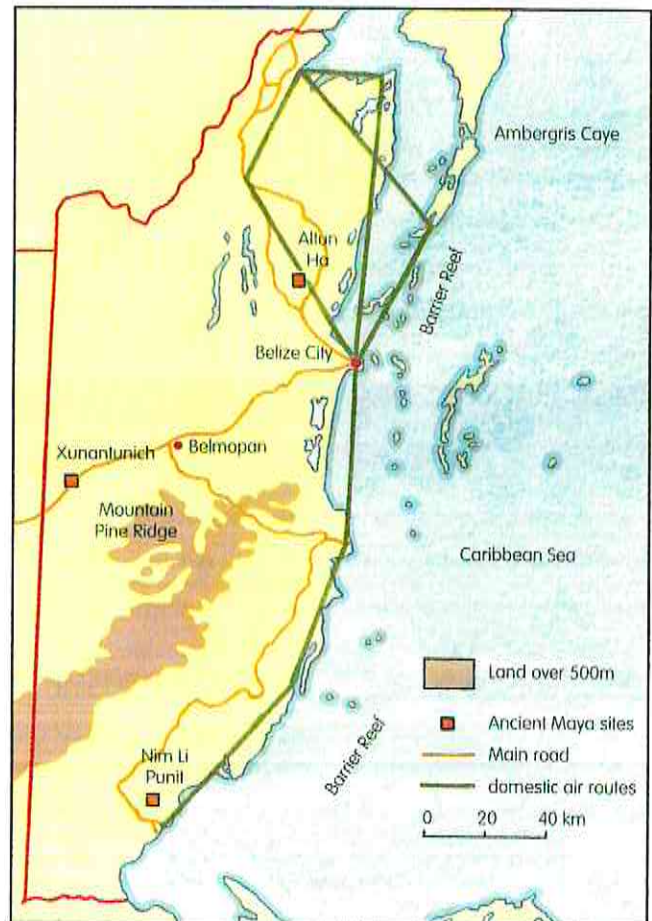


- 1 Design and draw a poster which promotes the Cayman Islands and encourages more tourists to visit our islands.
 - 2
 - a) Discuss in class the ways in which the Cayman Islands and Caymanians have been affected by tourism.
 - b) Draw a table of advantages and disadvantages (or benefits and problems) associated with tourism.
 - 3 Give an example of each of the following, in your local area if possible:
 - a) a golf course
 - b) a resort hotel
 - c) a guest house
 - d) a watersports facility.
 - 4 Write an information booklet on the Department of Tourism, explaining its function and the methods it uses to promote tourism. Use the information on this page and your own research.
 - 5 Read the case studies of tourism in Belize and St Lucia on pages 58 and 59.
 - a) Write a comparison of tourism in these countries. In what ways is their experience of tourism similar? How is it different?
 - b) Compare the experience of tourism in Belize and St Lucia with our own experience in the Cayman Islands. Do we have anything to learn from their experience?
- E** Find out where the major tourist offices in the Cayman Islands are located. Interview the manager or a member of senior staff at one of these tourist offices and find out the methods they use to promote tourism and help the tourists who visit their office.

CASE STUDY – TOURISM IN BELIZE

Tourism is an important industry in Belize. In 1999 the industry earned US\$111.45 million in **foreign exchange**. In that year 326,642 tourists visited Belize. There is a Belize Tourist Bureau, which is run by the government as part of the Ministry of Tourism. There is also a Belize Tourist Industry Association, run by people who work in and own facilities catering for tourism.

Tourists visiting Belize come mostly from the USA (42 per cent), but some come from Belize's neighbours in Central America, Mexico and Guatemala, and from Europe and Canada. They come to enjoy the warm waters of the Caribbean Sea and to look at the coral reefs and the offshore islands (called *cays* or *cayes* in Belize). They visit places of natural beauty, such as the forest reserves and Mountain Pine Ridge. They also come to see Belize's wildlife, including the animals in the Jaguar Reserve, which is **unique** – the only Jaguar Reserve in the world. Tourists also want to learn about Belize's ancient history and culture. They visit ancient sites such as the Maya ruins at Altun Ha.



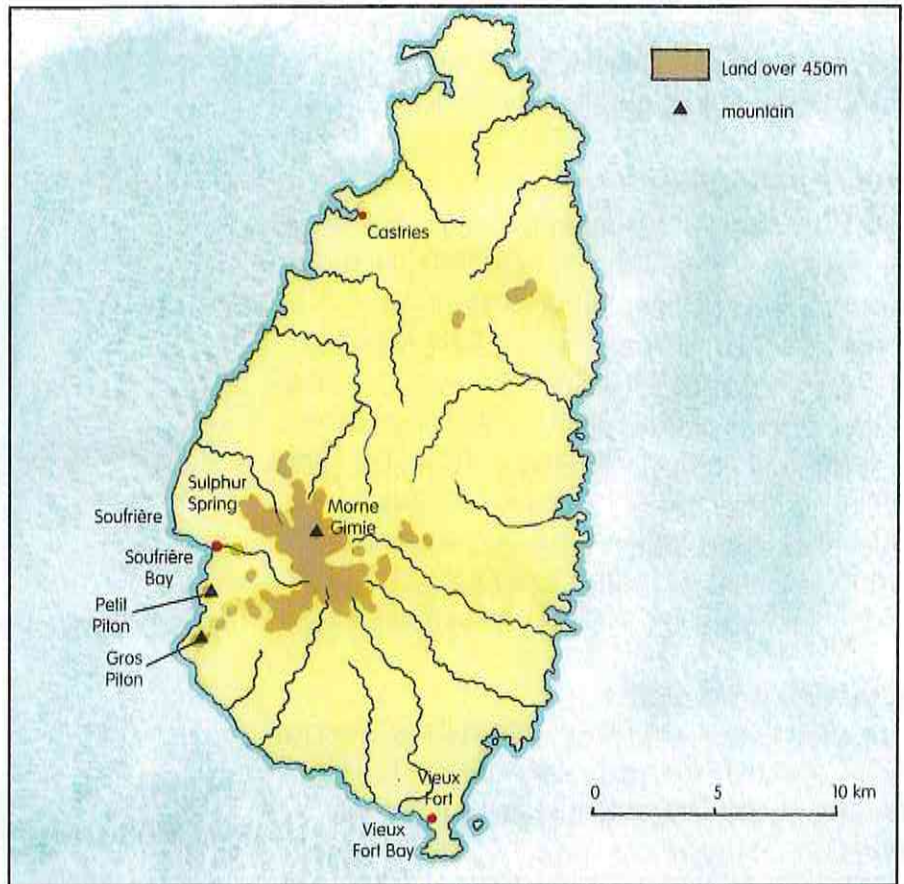
Maya ruins at Altun Ha

Belize has several domestic air routes and major highways linking the different parts of the country. You can see these marked on the map above. A good **communications network** like this is important for tourism in a country like Belize which is large and difficult to cross.

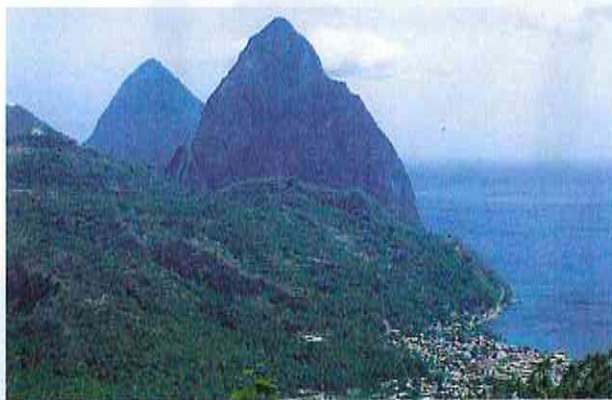
There are concerns that opening up too many historical sites and fragile environments for tourism may damage these attractions. But tourism has brought much-needed revenue to Belize, which is used to provide services for the people there and import goods they need from other countries.

CASE STUDY – TOURISM IN ST LUCIA

Tourism is St Lucia's major industry. The country does not have an offshore banking facility like the Cayman Islands, or citrus and lumbering industries like Belize. Tourists come to enjoy watersports and beaches, and the natural beauty of the island. Although it is small (about 35 km (21 miles) from north to south, and about 15 km (9 miles) from east to west at its widest point), it is quite mountainous and there are cliffs along the western coast. Three peaks, Morne Gimie (950 metres), Gros Piton and Petit Piton dominate the landscape in the south of the island. A long mountain ridge, called the Barre de L'Isle Ridge, runs from south to north. There are also some lovely bays, such as Soufrière Bay and Vieux Fort Bay. One important tourist attraction is the Sulphur Springs, near Soufrière in the south-west of the island. These are hot springs full of minerals, including sulphur. In the 18th century when St Lucia belonged to France, the French King Louis XVI built mineral baths at the Sulphur Springs so that his soldiers could bathe there.

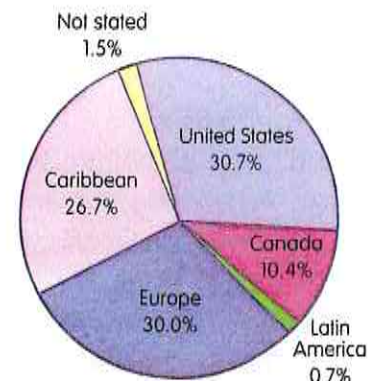


A long mountain ridge, called the Barre de L'Isle Ridge, runs from south to north. There are also some lovely bays, such as Soufrière Bay and Vieux Fort Bay. One important tourist attraction is the Sulphur Springs, near Soufrière in the south-west of the island. These are hot springs full of minerals, including sulphur. In the 18th century when St Lucia belonged to France, the French King Louis XVI built mineral baths at the Sulphur Springs so that his soldiers could bathe there.



Gros and Petit Piton, St Lucia

Tourists come to visit St Lucia from many places, including Europe, North and South America and other parts of the Caribbean. The pie chart shows the proportion who come from each area.



Cruise ship arrivals are an important part of tourist activity in St Lucia. Most cruise ship passengers arrive in January, February and March, and in November and December. Many of them go ashore at Castries and spend the day in St Lucia before returning to their ship, instead of staying at one of the hotels or guest houses.

Primary, secondary, tertiary

We can divide industries into three types: primary, secondary and tertiary industries.

Primary industries

Some products do not need to change very much before we use them. We can sell them just as they are. We call these primary products. Foodstuffs like milk, meat, fish, vegetables and fruit are primary products. So are raw cotton and timber. Some minerals such as clay or sand are also primary products. Farming, fishing (including turtling), lumbering and mining are primary industries. These industries produce primary products for sale. Less than 2 per cent of our national income comes from primary industries.



Fishing is a primary industry

Secondary industries

Many resources need processing before they are used. Some of them are primary products, like timber or cotton. We call these raw materials. Wood can be made into paper, or ships, or furniture. We make cotton into cloth, and clay into bricks. The industries which process raw materials are called secondary industries. The traditional rope-making industry, for example, used the thatch palm as a raw material.

Some industries process secondary products as well as primary ones. For example, car manufacturers and computer manufacturers use components which are made beforehand.

Secondary industries are important, but they earn only about 3 per cent of our national income.



Traditional rope-making, a secondary industry

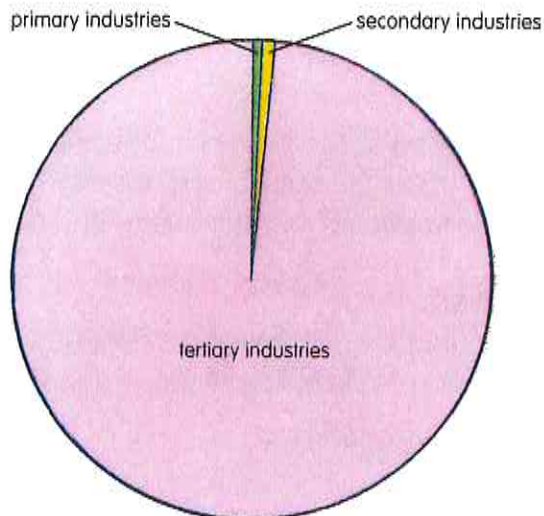
Tertiary industries

Some industries do not produce or process raw materials. Instead they provide services. Bank clerks, hotel waiters, mechanics, doctors, teachers and typists all work in tertiary or service industries. You may have guessed by now that service industries are very important in the Cayman Islands.



Teachers work in a tertiary industry

About 95 per cent of our national income comes from service industries.



- 1 Learn the rhyme 'Primary, secondary, tertiary' from the box below to help you remember the three kinds of industry. If you want, you can sing it to the tune of the old nursery rhyme 'Hickory, Dickory, Dock'. (The word 'tertiary' comes on the note that usually goes with 'Dock'.)

Primary, secondary, tertiary,
Three different kinds of industry.
We fish, grow and mine,
Make and refine,
And serve other people most willingly.

- 2 Choose one primary product and draw a flow chart showing how that product is processed.
 - 3
 - a) Copy the pie chart which shows the proportion of our national income which is earned from service industries.
 - b) Write a list of service industries. Beside each one, write down how the people who work in that industry serve other people. Why are service industries important?
 - 4 Revise the work you have done in this unit and draw a table with three columns, Primary, Secondary and Tertiary. Put each industry we have learned about in the correct column.
- E** Compare some prices of primary products with the prices of things which have been made from them.
- a) Weigh some cottonwool and work out how much it costs per 100 grams. Weigh a small piece of cotton cloth and work out how much that costs.
 - b) Work out the cost of the ingredients for a cake or pie. How much does the prepared product cost in a store? Do you think secondary products are more expensive than primary ones? Why?

Round up

In this unit we have learned about the major industries of the past – rope-making, turtling, fishing and shipbuilding, and about the seamanship for which Caymanians are justly renowned. We have also learned about the important tourist industry, one of the major industries of the present.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

- 1 Caymanian rope was made from
 - A buttonwood bark
 - B thatch palm tops
 - C 'bull thatch'
 - D cassava roots.

- 2 During World War II, Caymanian seamen served mainly with the
 - A American Air Force
 - B Caymanian Royal Marine
 - C British Merchant Navy
 - D Jamaican Naval Reserve.

- 3 Vessels from the Cayman Islands sold many of their turtles in
 - A Mosquito Cays, Nicaragua
 - B Ambergris Cays, Belize
 - C Montego Bay, Jamaica
 - D Key West, Florida.

- 4 The original site of the Turtle Farm was
 - A Salt Creek, North Sound
 - B Goat Rock, North West Point
 - C Sparrowhawk Point
 - D Owen Island, Little Cayman.

- 5 'A single-masted sailing vessel, rigged fore-and-aft' is a description of
 - A a schooner
 - B a sloop
 - C a yawl
 - D the *Goldfield*.

- 6 Shipbuilding ceased to be a major industry in the Cayman Islands as a result of
 - A too many ships being lost at sea during storms and hurricanes.
 - B a decline in shipbuilding skills among Caymanians.
 - C a US ban on importing ships from the Cayman Islands
 - D the change from sail- to steam- and diesel-powered ships.

- 7** In 1974 the Tourist Board became
- A the Department of Tourism
 - B the Ministry of Tourism
 - C the Hotel Association
 - D part of the Florida tourist industry.
- 8** Shipbuilding is an example of
- A primary industry
 - B secondary industry
 - C tertiary industry
 - D none of these.

An evaluation

Write an essay about the benefits and problems brought by tourism. Compare the effect of tourism in the Cayman Islands with its effect in one other Caribbean country.

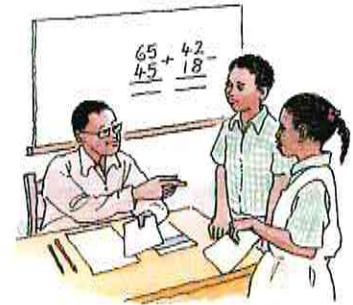
Unit 5 Our Changing Community



Being a citizen

Think of all the groups to which you belong. You are a member of a family. You are a student at a school, and you are a member of your class. Perhaps you belong to a sports team, or a church or another religious group. You are also a citizen, which means that you belong to a country.

★ Do you belong to any other groups? Make a list of them.



Rights and responsibilities

When we belong to a group, we have both **rights**, or privileges, and **responsibilities**, or duties. Let us think about some examples of these.

- Your family provides a place for you to live, food for you to eat, and the love and care you need. In return, you may help at home by making your bed, raking the yard, weeding the garden or washing the dishes.
- In a sports team we have the right to wear a special uniform and play in games. We practise regularly and learn how to help our team by playing well.
- As citizens of a country, we have a homeland to which we belong. Our laws grant us certain rights. At the same time we have a duty to be good citizens and work towards the development of our country. The box on page 65 tells us how to be good citizens. There is a list of the rights and responsibilities of citizens on page 66.

Rules and laws

Families, schools and teams all have rules. The rules tell us what we must do as a member of the group. Rules protect the members, because when people break the rules the whole group works less well. In most groups, when people break the rules, they are punished. Sometimes the punishment may be a fine, or a privilege may be withdrawn.

If you break the rules too often, some groups may refuse to allow you to belong any longer.

★ What happens at home if you break the family rules?

In the same way, our country has rules, called laws. They tell us the things that we may not do. For example, it is against the law to steal, or kill someone (murder). If people break the law, they are tried in a court of law and punished. They may be asked to pay a fine, or they may be sent to prison.

Being a good citizen

Good citizens act responsibly.

- They obey laws and try to help the leaders of the community or country.
- They accept that they are responsible for their actions. If they do something wrong, they accept that they may be punished for it. They do not blame someone else for what has happened.
- They vote in elections and try to choose the best leaders from among the candidates.
- They find out about important things that are happening around them in the community and the world beyond.
- They discuss these things with other citizens and think about what should be done about them.
- If citizens disagree with what their leaders are doing, they tell them so. They may work to elect new leaders. They may take part in a peaceful protest.

Who is a Caymanian citizen?

If you were born in the Cayman Islands and your parents are Caymanian, you are a Caymanian citizen. For example:

- Everyone who was born in the Cayman Islands before 27 March 1977 is a Caymanian, whether or not their parents were Caymanian.
- If you were born after 15 October 1977 you are a Caymanian if at least one of your parents was a Caymanian when you were born, and if at least one of your parents was living in the Cayman Islands at the time of your birth.

Caymanians can enter, live and work in the Cayman Islands. They do not have to have an entry permit or a work permit. Non-Caymanians need such a permit.

Sometimes people who are not Caymanian citizens wish to become Caymanians, or acquire 'Caymanian Status'. We call them 'paper Caymanians'. There are several ways this can be done. If you are not born a Caymanian, you can gain Caymanian Status if:

- 1 You have lived in the Cayman Islands for over ten years; or
- 2 You have been adopted by people who are Caymanian citizens; or
- 3 You have a parent or parents who are Caymanians; or
- 4 You marry a Caymanian.

Anyone who has Caymanian Status may apply for a Caymanian passport. This looks rather like a British passport, but it is marked 'Cayman Islands' on the cover.

It is important that all citizens of the Cayman Islands remember their rights and responsibilities.



Rights and responsibilities of Caymanian citizens

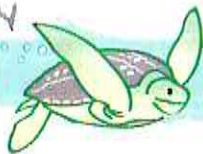
Some of our rights are:

- to speak freely
- to worship as we choose
- to own property
- to live where we choose
- to be given a fair trial in a court of law if accused of a crime
- to be protected, and to protect our home and property.

Some of our responsibilities are:

- to obey the law
- to take part in community and national life
- to serve others in the community
- to be willing to lead others in the community if we are called on and are able to do so
- to be aware of what is going on in our country and community
- to respect the rights and property of others.

Activity



- 1 Write down some other examples of groups to which we may belong, and make a list of the rights and responsibilities we have when we belong to each group. What are the rules for members, and what happens if we break them?
- 2 In groups, take it in turn to role-play being a good citizen and being a bad citizen. Make a list of the kinds of behaviour which would make someone an undesirable member of the community. Discuss suitable punishments or **deterrents** for being a bad citizen.
- 3 Write a story about a boy or girl who had a number of opportunities to be a good citizen, all in one day. How did the character in your story respond to these opportunities? Did he or she behave like a good citizen?
- 4 Read the list of rights and responsibilities.
 - a) Discuss what these responsibilities mean in practice. How can we act as responsible citizens?
 - b) Which of these rights are the most important to you? List the rights in their order of importance. Compare your list with those of other members of the class.

E On your own, or in a group or pair, find out more about some of our laws, and the punishment for disobeying them. Write an information booklet on law and punishment.

Our multicultural society

The Cayman Islands is a **multicultural society**. People from many cultures and nations live here. Some of them are citizens of the islands, but many are not. We call them non-Caymanians. They work here but are not citizens in our country. They are citizens of other countries. However, they make an important contribution to our society. We need these workers because today there are more jobs in the Cayman Islands than there are Caymanians to do them. This is because of the way our country has developed since the 1970s.

★ What changes have occurred since the 1970s to create so many jobs? Which industries do most non-Caymanians work in?

You learned in Year 4 that the Cayman Islands is a British Overseas Territory. This means that our country is still protected by the British government. The British **sovereign**, Queen Elizabeth II, is our Head of State. The Governor of the Cayman Islands represents the sovereign. You will learn more about the government of our country in Unit 6.



Activity



- 1
 - a) Carry out a class survey on the nationalities of people in your class. A person's nationality tells you to which country he or she belongs.
 - b) In your atlas, locate all these countries on a map of the world.
 - c) Draw a sketch map of the world and draw lines from the Cayman Islands to each of these countries.
 - d) Use the results of the survey to draw a bar chart to illustrate the information.

- E Do some research on other British Overseas Territories. Use the Internet and your local library to get this information. Choose one British Overseas Territory and write an information leaflet or wall display about it. Draw a map showing where it is, and write about its climate, its geography, its history, and something about the people who live there.

Communication

Communication means collecting and distributing information. We use all kinds of different ways to communicate. For example we speak to each other and we write words and sentences on paper. We even use our bodies to communicate, through gestures and the way we move, sit and stand. This is called 'body language'.

Most communication uses language. Language is very ancient: early human beings used language tens or even hundreds of thousands of years ago, although at that time they probably did not write words down. In the earliest times there were probably very few languages, possibly only one. As time went by, different languages developed until today there are thousands of different languages. However, experts in **linguistics**, the study of language, can detect relationships between these different languages.

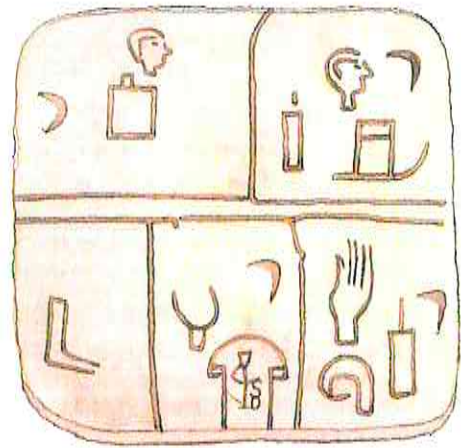
The development of writing

Writing developed about six or seven thousand years ago. At first people used number systems to record financial deals and reckon up tax debts. These probably began as **tally systems** which gradually became more complicated. Then people began to use picture-writing, where a small picture is used to express a word or phrase. The most famous type of picture-writing was the hieroglyphic system used in ancient Egypt.

Eventually the pictures developed into alphabets. Each picture was simplified and stood for a single letter. The first alphabets probably developed in the Middle East, where Africa meets Asia Minor, in the area where the countries of Israel, Syria, Jordan and Iraq are.

People wrote mainly on clay tablets, a specially made block of clay which could be carved with a sharp stick or piece of metal. Some very early writing was also carved on stone blocks.

Today most western countries use the Roman alphabet. Table 3 shows the relationships linguists think exist between the Egyptian hieroglyphs and the letters of the Middle Eastern Phoenician alphabet. It also shows the letters which are their **equivalents** in our own alphabet.



Egyptian hieroglyphs inscribed on a temple wall



The Rosetta Stone has early inscriptions in three different languages. The picture shows its discovery in Egypt in 1799



A tablet with a cuneiform inscription

Activity















































- 1 Make a soft clay tablet and experiment with writing on it. Let the clay dry and see whether the writing can still be read.
- 2 Find out about some of the different alphabets people use in other parts of the world, such as Greece, Russia, China and Japan. Can you see any relationship between any of the characters they use and the Egyptian hieroglyphs or Phoenician letters?
- 3 Invent your own picture-writing or code and use it to write some messages.
- 4 Study Table 3 on page 70 carefully. Write down the Egyptian hieroglyphs which mean:
 - a) throwing stick
 - b) hank of rope
 - c) palm.

What are the equivalent Roman letters or sounds? Which letters in our modern alphabet do not appear in Table 3?

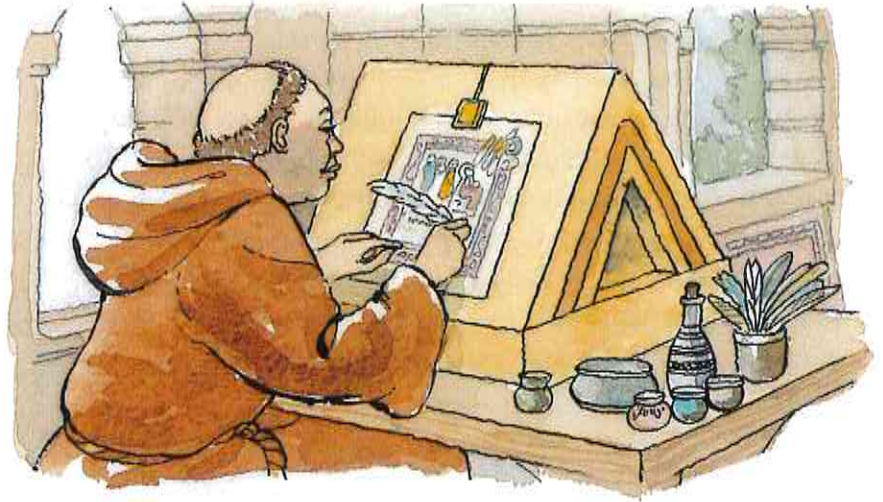
- E** Find out more about Egyptian hieroglyphics. Use your local library and the Internet to find the information you need. How did the Egyptians use their picture language?

Table 3 The Egyptian, Phoenician and modern alphabets

Egyptian hieroglyph	Meaning	Phoenician letter	Modern (Roman) letter or sound
	ox		A
	house/courtyard		B
	throw(ing) stick		G
	door		D
	exclamation		H
	prop		W
	arrow		Z
	hank of rope		Kh
	ball of twine		Th
	hand		Y
	palm		K
	shepherd's crook		L
	water		M
	snake		N
	fish		S
	eye		no modern equivalent
	mouth		P
	monkey		Q
	head		R
	hills		Sh
	mark		T
	grasshopper		Ts

Learning to read and write

For thousands of years, most people, even those who were rich, could not write. Writing was a specialist skill learned by people called scribes, who were employed by kings, governments and rich people. They recorded financial deals and important family events and relationships, and drew up contracts and bills of sale. They drafted government legislation and acted as secretaries to important people.



All writing was done by hand, with a pen made out of a bird's feather (a quill pen). Papyrus reeds were made into a type of paper. Later, scribes wrote on parchment, made from stretched animal skin. Many early documents were kept in the form of scrolls rather than books. There were no typewriters or computers at this time.

About four hundred years ago most wealthy men (but not all wealthy women) could read and write, in most places in the world. But it was only during the 19th and 20th centuries that education began to be provided for most ordinary people.

In most Western countries the **literacy rate** today is very high – over 95 per cent. Most children go to school and learn to read and write. Many learn how to operate computers and word processors. There are still some countries in the world where the literacy rate is less than 50 per cent. This is usually because many people in these countries are too poor to send their children to school.

● FACT FILE – THE QWERTY KEYBOARD

When typewriters were first invented, there were many different keyboard layouts. The QWERTY keyboard which we use today was actually designed to slow operators down so that the levers with the letters on wouldn't stick! It was the most effective layout for the typewriters of the time, so everyone had to learn to use it. Soon the other layouts were not used any more.



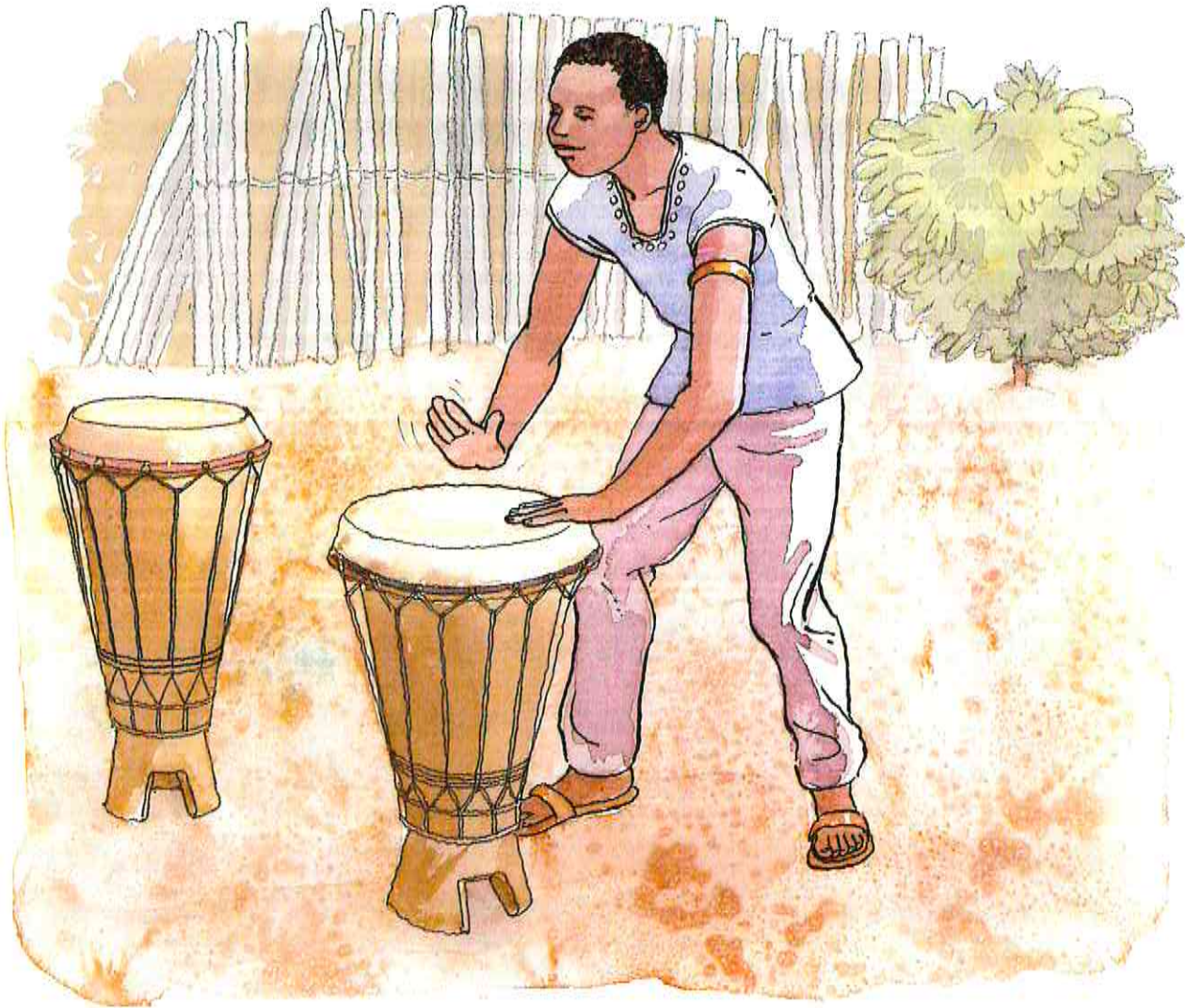
Activity



Ask older members of your family whether their parents and grandparents could read and write. Find out what kind of schools were available in your community between 1900 and 1950.

Long-distance communication

In order to communicate over long distances, ancient peoples used smoke signals, or sounds which could be heard far away such as drum-beats or yodelling (a special sound made in the throat). They also sent messengers who had to remember a few sentences to pass on. The messengers ran across country or used other means of transportation such as boats to reach the person for whom the message was intended. When writing was invented, people could write down longer messages and send these with couriers, or messengers, often on horseback.



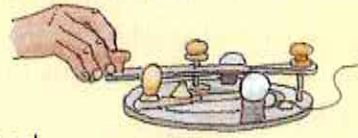
New ways of communicating

During the 19th century, people began to develop new means of communication. Some of these made use of one of the new inventions of that time, electricity. Development in communications continued throughout the 20th century. The box on page 73 gives you some details.

★ Which of these developments do you think used electricity?

Communications developments in the 19th and 20th centuries

1837 Invention of the telegraph



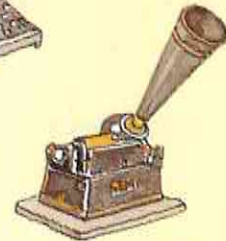
1860s The first typewriters developed



1876 Invention of the telephone



1877 First sound recordings made



1884 Invention of the fountain pen (to replace the quill pen, made out of a bird's feather, which had to be dipped in ink)



1895 First public cinema showing; Marconi sends radio messages using Morse code



1899 Tape recorders developed

1900 Speech messages sent by radio

1927 First 'talking' movie



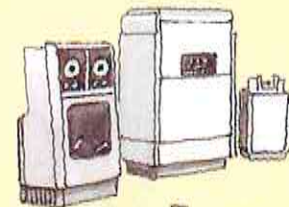
1928 First television demonstrated



1938 Invention of the ballpoint pen

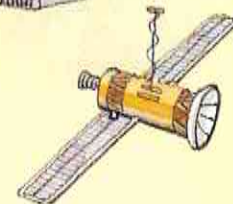
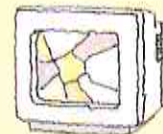
1940 Development of the first photocopiers

1944 The first mainframe electronic computers are introduced



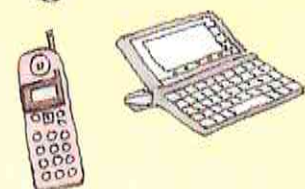
1956 Invention of videotape

1962 The first communications satellite in operation



1980s Small personal computers (PCs) developed

1990s Development of the World Wide Web, or Internet, and e-mail
Development of cellphones (mobile phones)



Telecommunications

Today we can send messages anywhere in the world very quickly by fax, telephone or e-mail. Communications satellites in orbit thousands of miles above the Earth make this possible. They also allow us to receive television signals from all over the world. All these forms of communication are known as **telecommunications**.

- ★ Look again at the box about communications on page 73. Which of these are telecommunications?

Telecommunications in the Cayman Islands

The Cayman Islands has an up-to-date system of telecommunications, as you can see from the list below.

- The whole telephone system in the Cayman Islands is a modern digital one – we are one of the few countries in the world who have this.
- You can make a direct international call to more than 175 countries round the world, using a satellite link.
- There is a submarine cable linking Grand Cayman, Cayman Brac and Jamaica.
- There are over 25,000 telephone lines in use in the islands.
- In March 1998 there were over 4000 cellular phone customers, which puts the Cayman Islands among the top ten countries in the world for cellphone use.

Cable & Wireless

The main supplier of our telecommunications is Cable & Wireless (C&W), which has been developing services in our islands since 1965. The word wireless was used when radio was invented, because until that time speech messages were sent by wire, along the telephone line. You can learn more about C&W in the Cayman Islands in the box on page 75.

Activity



- 1**
 - a)** Collect pictures of various forms of communication for a wall display.
 - b)** Discuss in class which are most suitable for different types of communication.
 - c)** Make a primitive telephone using two tin cans and a piece of string or wire. Keep the string tight.
- 2** Visit Cable & Wireless, CITN or Radio Cayman and find out more about the services they provide in the Cayman Islands.
- 3** Write a report for a newspaper on telecommunications in the Cayman Islands, using the information on this page and any other information you can find.

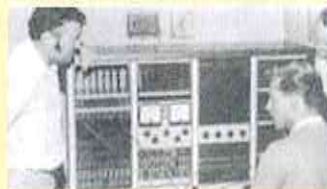
- 4 Play the communications time line board game. A design for the board is given on pages 76 and 77. The text for the cards to go in the middle is on pages 78 and 79. You will also need dice and one counter for each person. The first person to reach the 21st century wins.

E Imagine that Western civilisation has come to an end suddenly, owing to some terrible catastrophe. There is no electricity and the communications satellites have all been destroyed. How would you build a new communications system in the Cayman Islands? Would you be able to build new links with other places in the Caribbean or the American continent?

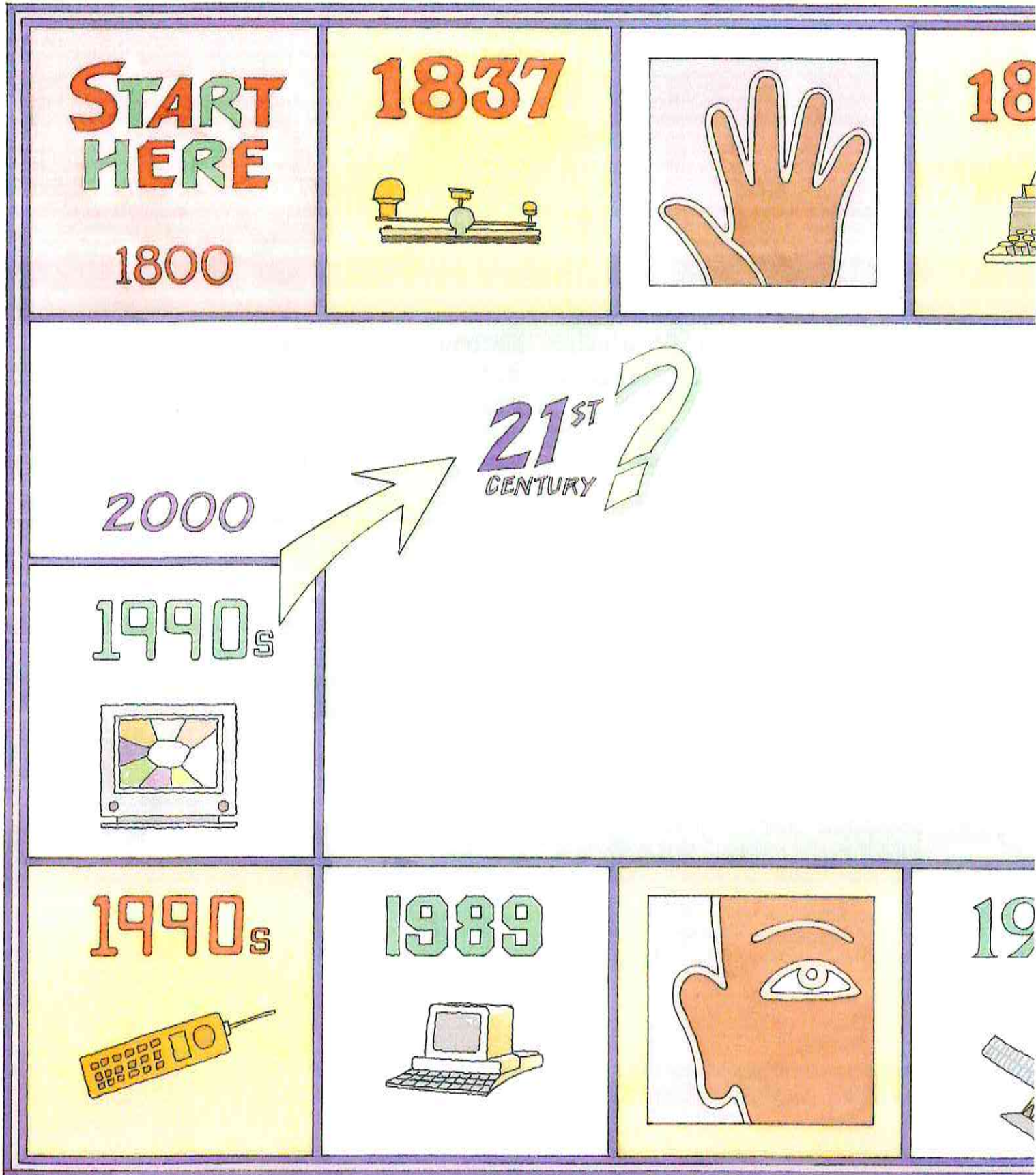
Cable & Wireless, telecommunications giant

In 1965 the government of the Cayman Islands granted a franchise to Cable & Wireless to provide telecommunications services in the islands. The George Town telephone exchange was opened on 2 December 1966. The Cayman Brac exchange was opened in 1967. By 1973 there were 2109 direct telephone lines in the islands, and the number continued to grow. By 1982 the total was 5316. In 1979 C&W announced the building of a satellite earth station near their technical complex at Shedden Road, at a cost of US\$2 million. This was the first small dish earth station on a Caribbean island. In 1987 C&W introduced mobile (cellular) phones, and in 1992 the whole system became digital.

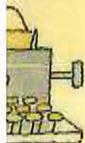
Cable & Wireless is very much involved in the Cayman community. The company trains Caymanians to work in telecommunications. In 1997–8 it invested C\$1 million in training. More than 100 local staff were sent overseas for training, in addition to training programmes provided on the Cayman Islands. C&W also sponsor sports, health and education programmes. One example is the Cricket Crazy weekend, held every year, which brings some of the top West Indies cricketers to the islands. They also support the National Trust, Little League Softball, the National Council of Voluntary Organisations, and many other organisations. In 1998 C&W set up the Internet for Schools project, which provides every school with a free Internet connection.



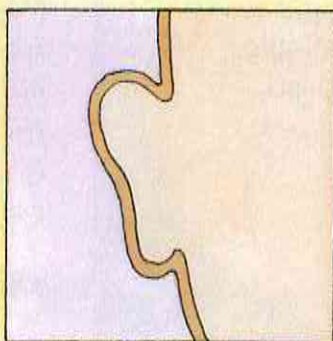
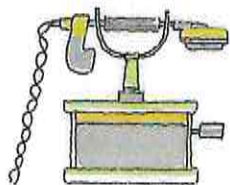
Communications time line game



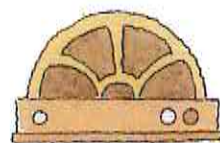
60



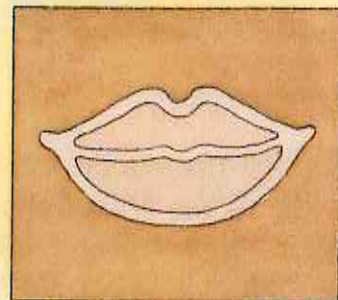
1876



1900



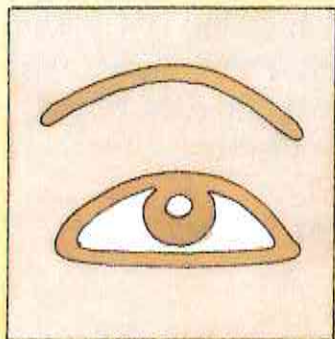
INFORMATION
CARDS



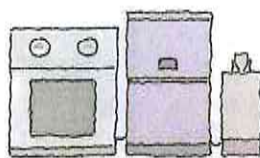
1927



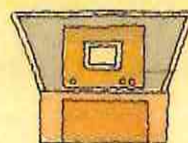
62



1944



1928



Here is the text for each of the information cards. Write the title, 'Telegraph', 'Typewriters' and so on, on the front of each card. Turn the card over and copy the text on to the back. (Use a computer or word processor and a printer to produce neat, typed text if possible.) You can see where the pack of information cards should go on the board, on page 77.

Telegraph

The telegraph was invented in 1837. It was a series of electric cables with a buzzer, using Morse code, or a similar code system. It was used for messages which could be decoded and written down. The message was called a telegram.

MOVE ON 1 SQUARE

Typewriters

The first typewriters were developed in the 1860s. They used special levers, each with a letter carved into the end of it. When the keys were struck the letter was pressed into an ink ribbon to make a mark on the paper.

MOVE ON 2 SQUARES

Telephone

The telephone was invented by Alexander Graham Bell in 1876. It worked by linking two receivers with a taut wire. When Bell spoke, his assistant, at the other end of the wire, could hear his voice.

MOVE ON 3 SQUARES

Radio

Radio transmitters and receivers use radio waves to send messages. In 1895 Marconi sent the first radio messages using Morse code. The American scientist R.A. Fessenden sent speech by radio in 1900.

MOVE ON 1 SQUARE

'Talkies'

Silent films had been popular in the cinema. In 1927 the first 'talking movie', with a soundtrack, was made. It was *The Jazz Singer*, starring Al Jolson.

MOVE ON 1 SQUARE

Television

In 1928 James Logie Baird demonstrated the first television set. Television was different from the cinema because it could transmit live pictures.

MOVE ON 2 SQUARES

Mainframe computers

The first electronic computers were invented during World War II in the course of military research into new weapons such as the nuclear bomb. Computers allowed scientists to complete calculations much faster than had been possible using old-fashioned adding machines.

MOVE ON 3 SQUARES

Communications satellites

In the 1960s the first radio satellites were launched. Satellites orbit the Earth and can be used for weather observation, and for radio and telecommunications transmissions.

MOVE ON 1 SQUARE

Personal computers

Personal computers (PCs) were developed from the much larger mainframe computers during the 1980s. Within 20 years they have become an important part of working life and leisure for many people around the world.

MOVE ON 2 SQUARES

Cellphones

Cellphones or mobile phones are portable telephones which use radio technology. Instead of using wires, like an ordinary telephone, they transmit signals using radio waves, which are relayed by transmitter dishes or towers.

MOVE ON 1 SQUARE

The Web

The World Wide Web, or the Internet, is a method of linking computers using electronic telecommunications technology. Messages (electronic mail, known as e-mail) and information can be sent across the world in a few seconds.

MOVE ON 1 SQUARE AND WIN

Transportation

Transportation means moving people and things from place to place. People travel to work, on business, to do their shopping, or for leisure or a vacation. We collect goods from the producers or from the docks if they have come from abroad. Then we transport the goods to the stores and supermarkets. It is very important to have a good transportation system.

★ **CHALLENGE:** How many different kinds of transportation can you think of? Which ones do we use for both goods and people?

Transport long ago

Thousands of years ago, before human beings invented the wheel, people walked from place to place. They transported goods on the backs of animals, or on boats. In some countries, where the roads are too bad for wheeled transport, or where there are no roads, animals are still used to transport goods. Llamas carry goods in the mountains of South America. Camels carry goods in the deserts of Saudi Arabia and in parts of the Sahara in Africa.



Early transport in the Cayman Islands

When settlers first came to the Cayman Islands, there were no roads. Communities were located near the coasts. People travelled by boat and canoe around the coast, and from our islands to other parts of the Caribbean region and North America. When roads were built they used carts and buggies drawn by horses and donkeys.

One of the main types of local transport was the cat boat. These were single-masted boats, rigged fore-and-aft, which could also be rowed close to shore. They had a shallow draught to allow them to be beached. Most families owned one of these boats. They used them for fishing and to travel from one community to another.



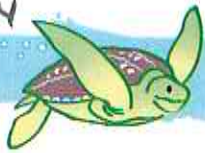
Transport today in the Cayman Islands

In the last 100 years the roads in our islands have been improved greatly. There are now 406 km (252 miles) of roads in total, 304 km (189 miles) of them paved. On paved roads we can use bicycles, cars, vans, trucks and buses. There are now severe traffic problems on our roads because of the increase in our population and because most families now own at least one car.

Large container ships, cruise ships and aircraft bring goods and people here from other countries. Our harbour can accommodate both passenger liners and large cargo ships. The Owen Roberts International Airport handles intercontinental airliners on long-haul (long-distance) flights to Europe and beyond.



Activity



- 1 Carry out a survey over a week of transport used by your family. Count the number of times a member of the family uses a car or a bicycle for transport, and estimate how many miles each journey covers. Make a note of other types of transport used as well.
 - 2 Find out more about the development of transportation in the Cayman Islands from 1900 until the present day. Use the information to create a time line.
 - 3 Collect pictures of early means of transport and modern ones, and compare them. Make a wall display or a scrapbook of early and modern types of transport.
 - 4 Arrange some 'races' between groups of your classmates to compare different types of transportation. For example, one group might take a cat boat or another kind of small sailboat by sea to the next community along the coast, while another group goes by road on bicycles. Ask your teacher or your parents to help with this activity.
 - 5 Discuss in class the road traffic problems we have in the Cayman Islands and try to suggest some solutions.
- E** Research the shipping companies which carry goods in and out of our harbour. Find out their names, and the goods they transport. Carry out a similar research programme on the airlines that serve the Cayman Islands. Note their names and logos and find out how many flights per week they make into Owen Roberts International Airport.

Transport in other countries

Some types of transportation, such as road and air travel, are available in most, if not all, countries of the world. Not all countries can easily use the sea, however. Some countries are **land-locked**. This means that they are surrounded by other countries. They have no coastline.

- ★ Find a map of Africa or Asia in your atlas. Identify some countries which are land-locked. Are any of the countries in North, South or Central America land-locked?

Railway transport

In many countries people and goods travel long distances on the railways. Trains run on railway track, which is laid along flat terrain as far as possible. Railway engines cannot pull trains up steep gradients, so railway lines often go under hills and mountains in a tunnel, or through cuttings with high banks on each side.



- ★ You learned in Year 5 that Caymanians were involved in building an important railway in the United States. Do you remember which one?

Heavy, bulky goods can be transported in containers from a port to a place inland where they will be sold. Many people prefer to travel on a railway than by air. There are extensive railway networks in Europe, including one from the west to the east of Russia, across Siberia. Many parts of the world which were once European colonies also have railways. For example, railways (called railroads in North America) cross the United States and Canada, East Africa and southern Africa, and India.

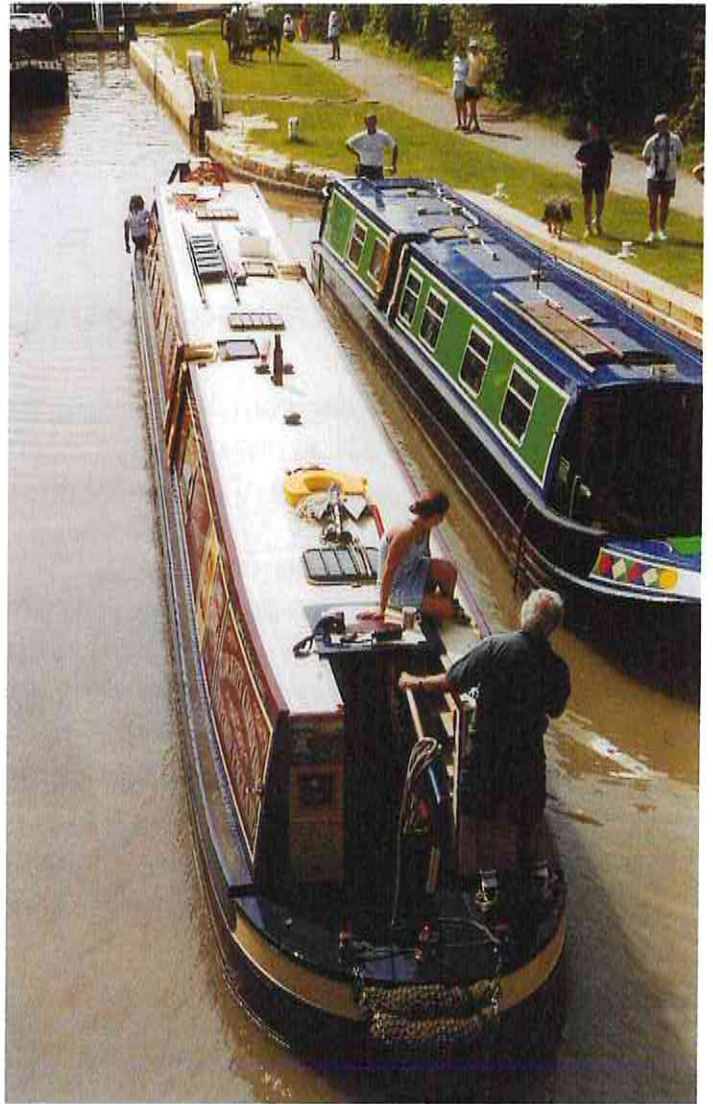
The first engines used steam power. Steam engines continued to be used until the 1950s and 1960s, and are still in use in some places today. However, most of them have been replaced by engines powered by electricity or diesel oil.

Transport on waterways

Some countries have **navigable** rivers. This means that the rivers are large and slow-moving enough to allow ships to travel on them. Some of these rivers are only navigable for some of their length, usually towards the mouth of the river, where it meets the sea or ocean. In some countries there are man-made waterways, called canals.

★ What is the name of the famous canal in Central America which links the Pacific Ocean with the Atlantic Ocean?

Canals can be used for leisure purposes as well as for carrying goods. In the UK, an extensive network of canals was built in the early 19th century to carry heavy goods such as coal and iron from the mines and industrial areas to the towns where the goods were processed or sold. When the railways were built, later in the 19th century, the canals were no longer used for this purpose. Many of them fell into decay. In the late 20th century the canals were restored for leisure. People fish there using a rod and line, and tourists travel along the canals in modern narrowboats for a peaceful vacation.



A narrowboat on a canal in England

Activity



Atlas work

- 1 Open your atlas at a map of North America.
 - a) Look at the key and find out what symbol has been used to show the railway line.
 - b) Trace the railway routes across the continent, and write down the names of the main towns through which the railways pass.
 - 2 Explore the atlas, looking at maps of other Caribbean islands. Which Caribbean islands have a railway line or a canal?
- E** Find out more about either railway or waterway transport in another country. Research the history of how and when the railway or canal was built, or the history of water transport on a navigable river. Draw maps to show the route of the railway or waterway and say how it is used today.

Migration

You learned something about migration in Year 5. Let's revise what it means. Look carefully at these three words:

migration
emigration
immigration

The second and third words are based on the first one, migration. Let's look at what they all mean.

- **Migration** means moving from one place to another.
- **Emigration** means leaving one country to live in another.
- **Immigration** means coming to a new country to live.

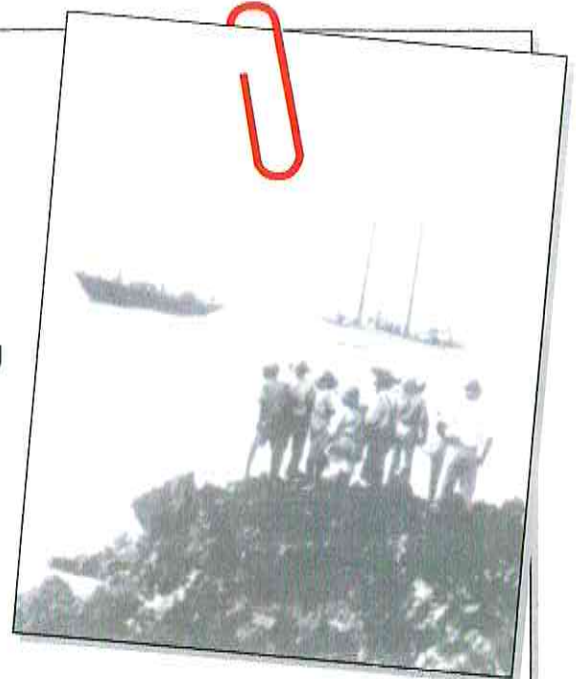
Emigration and immigration

You can see that the words *emigration* and *immigration* mean similar things, but from different points of view. When you leave a country, you *emigrate*; you are an *emigrant*. When you come to the new country where you are going to live from now on, you *immigrate*; you are an *immigrant*.

Let's look at some case studies of emigration and immigration. The first tells how people had to emigrate in the early 20th century from the Cayman Islands. The second looks at what happened in the later part of that same century, when people started to immigrate to our country in large numbers.

CASE STUDY – EMIGRATION IN THE EARLY 20TH CENTURY

In the early 20th century, earning a living in the Cayman Islands was extremely difficult. Jobs were scarce, money was limited and farming the land was not easy. Children were not able to get a good education. Some Caymanians used their seafaring skills and took jobs with National Bulk Carriers or other shipping firms. Others emigrated to different parts of the region to find jobs, in order to provide for their families. Some emigrated to Nicaragua or Honduras, some to Cuba or Jamaica, some to the United States. They worked in shipyards or in railway construction, or joined business firms. Some of them started their own businesses. As soon as they had earned enough money, they sent for their families to join them. Many descendants of these Caymanians are still living in the places to which they emigrated. Some of them kept in contact with their friends and relatives in the Cayman Islands. They returned to the islands for special family celebrations such as weddings.



CASE STUDY – IMMIGRATION IN THE LATE 20TH CENTURY

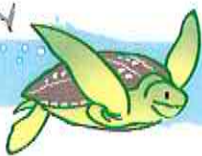
In the late 20th century, the Cayman Islands became a prosperous offshore banking centre and tourist destination. This created a need for more workers, and there were not enough Caymanians to fill all the jobs. This prosperity attracted many immigrants from other countries. Some of these were descendants of Caymanians who had emigrated in the early years of the century. Others were from the United States, the United Kingdom, Canada, the Caribbean region and many other parts of the world. They came to teach in our schools, to work in our banking centres, and to set up or run hotels and other tourist businesses. Some of them have stayed on and taken up Caymanian citizenship.

Immigration control

In each country, there is an Immigration Department which controls the movement of people into that country. In order to travel to the Cayman Islands from another country, for example, you must have a valid passport. Visitors from the United States are allowed to enter the Cayman Islands without a passport if they have a voter's registration card or a naturalisation document (green card). If a non-Caymanian wishes to live and work here he or she must have a work permit. Caymanians travelling on business or on vacation to another country must check what documents they need to take with them.



Activity



- 1** Draw a sketch map of North, South and Central America and the Caribbean region. Mark on it the following places: the Cayman Islands, Cuba, Jamaica, Honduras, Nicaragua and Florida. Draw arrows from the Cayman Islands to the places where Caymanians emigrated in the early 20th century.
 - 2** Visit the Immigration Department and the airport or docks and learn more about the work of immigration officers.
- E** Find out more about the origins of Caymanian immigrants from the last quarter of the 20th century onwards. Draw another sketch map to show the areas where immigrants to the Cayman Islands have come from.

Round up

In this unit you have learned about our changing community, about citizenship and the multicultural background of many of our people today. You have also learned about different kinds of transport and communication, past and present, and about our experience of both emigration from and immigration to the Cayman Islands.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

- 1 Another word for *rights* is
 - A responsibilities
 - B duties
 - C privileges
 - D laws.

- 2 You are a Caymanian citizen if
 - A you were born in the Cayman Islands after 15 October 1977
 - B you have a work or entry permit
 - C you obey the laws of the Cayman Islands
 - D you were born in the Cayman Islands before 27 March 1977.

- 3 The Cayman Islands is a multicultural society. This means that
 - A people from many cultures and nations live here
 - B some of our ancestors were pirates
 - C we have seafaring skills
 - D many Caymanians emigrated in the early 20th century.

- 4 One of these statements is false. The false statement is:
 - A You can direct-dial telephone numbers in 175 other countries from the Cayman Islands.
 - B A submarine cable links the Cayman Islands with Florida.
 - C There are over 25,000 telephone lines in use in the islands.
 - D In March 1998 there were over 4000 cellular phone customers here.

- 5 The single-masted boats used by most Caymanian families long ago were called
 - A schooners
 - B motor launches
 - C cat boats
 - D dinghies.

- 6 There was large-scale immigration in the Cayman Islands in the later part of the 20th century because
 - A it was difficult to earn a living in the Cayman Islands
 - B there were many jobs in the Cayman Islands but not enough Caymanians to fill them
 - C steam ships replaced sailing ships
 - D Caymanians were famous for their seafaring and shipbuilding skills.

Ordering

Rank this list of important communications developments in the order in which they were invented.

- A typewriters
- B mainframe computers
- C the Internet
- D telegraph
- E radio
- F movies with soundtrack
- G television



In this unit we shall come across a number of difficult words and phrases. It is important to understand and remember what they mean. In the Fact File you will find some definitions which you will find useful in the course of this unit. Write them down and look at them from time to time to refresh your memory.

● FACT FILE – SOME DEFINITIONS

- GOVERNMENT – This word can mean the way we are ruled, or the kind of government we have, for example when we talk about democratic government. It may also mean the group of people who are doing the ruling.
- OVERSEAS TERRITORY – This describes the relationship the Cayman Islands has with the United Kingdom. In an Overseas Territory the sovereign of the UK (at present Her Majesty Queen Elizabeth II) is our sovereign or Head of State. She is represented by the Governor. The government of an Overseas Territory is responsible for all internal affairs, but the UK is responsible for external affairs and defence.
- DEPENDENCY – A country which is ruled from or by another country.
- DEMOCRACY – A system of government in which the people are involved either directly by voting for or against various issues, or indirectly through their representatives (in our case the Members of the Legislative Assembly). In most democracies the people elect their government directly through a general election, which is held at regular intervals. There is freedom of speech and human rights are recognised.
- COMMUNISM – A system of government in which there is no private enterprise. All businesses are owned centrally and run by the government. Human rights and free speech are not considered as important as the welfare of the country as a whole. The main economic aim of the government is to destroy personal wealth and bring about economic equality. The government consists of leading members of the Communist Party. Elections are held, but people may only vote for Communist candidates.

The Cayman Islands and Jamaica

A quarrel between England and Spain

You may remember from Unit 1 that when Columbus was trying to find a **sponsor** for his voyage westwards in search of India, the Spanish king and queen came to his help. In return, they asked him to claim for them any land he might find on the way. As a result, Spain claimed all of the Caribbean region and most of North and Central America including the Cayman Islands and Jamaica.

The British soon began sending explorers of their own westwards across the Atlantic. (Look back at page 7 to see their names and the routes they took.) In the early 17th century English settlers landed on the North American mainland in what is now called New England. Many 17th-century Caribbean pirates were English. For more than a century there was a long-running quarrel between England and Spain over who owned the lands of the New World. Other European countries were also involved, particularly France and the Netherlands.

In 1655 Oliver Cromwell, who was ruler of England at the time, sent an army to capture the island of Hispaniola.

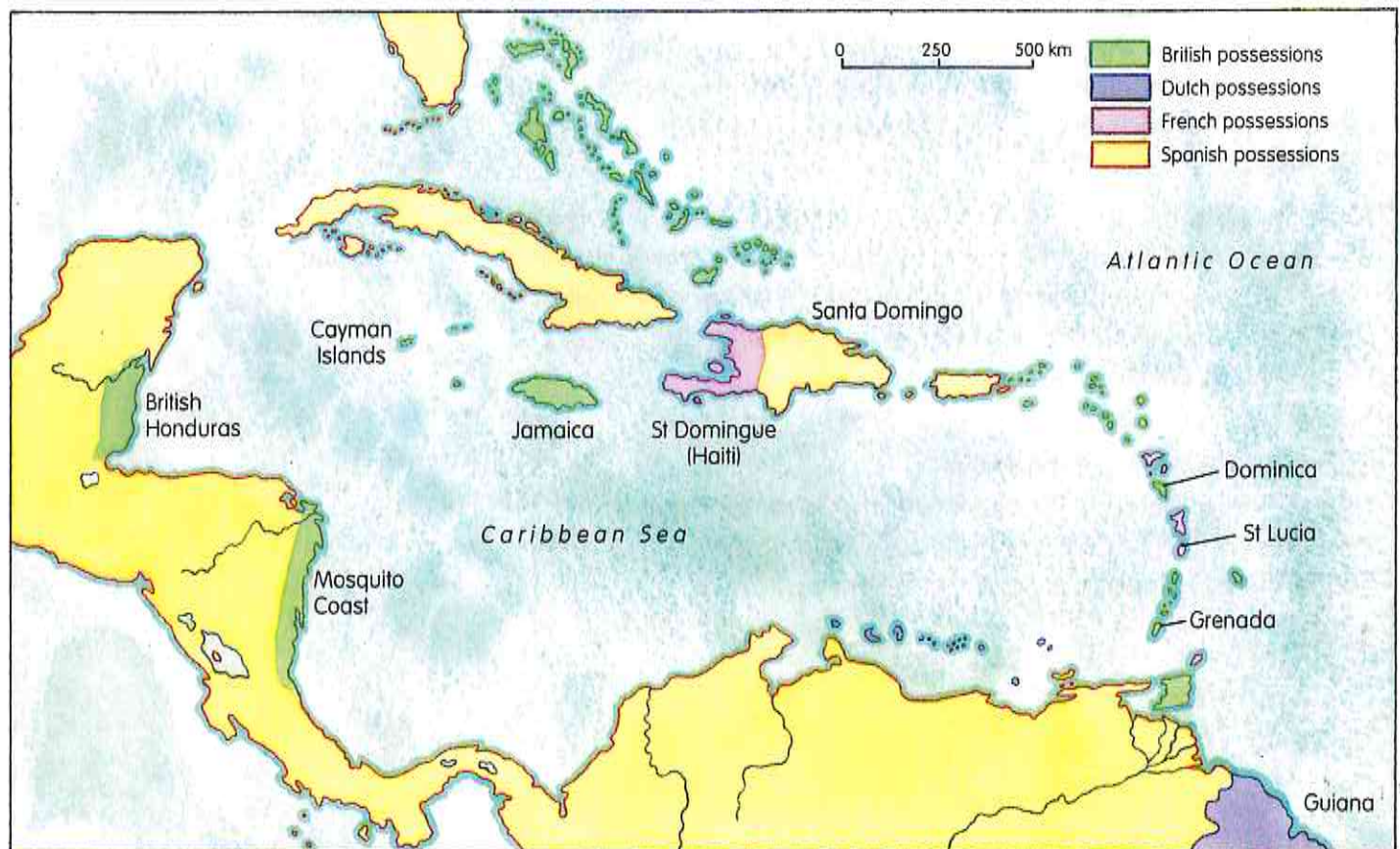
★ Where is the island of Hispaniola? Which two countries are located there today?

The army failed to take the island, so they sailed to Jamaica and captured that instead. In 1670 Spain and Britain came to an agreement, called the Treaty of Madrid. In this treaty Spain gave up its claim to Jamaica and some of the other islands, including the Cayman Islands. From this time onwards, the Cayman Islands belonged to Britain.

Disputes between European countries about ownership of the other islands continued, however. The map shows the situation in 1800.



Oliver Cromwell



Three hundred years of British rule

The British government appointed a Governor to Jamaica, who was also responsible for the Cayman Islands. Jamaica had other dependent territories as well. The Turks and Caicos Islands were also ruled from Jamaica.

The first settlers in the Cayman Islands had very little direct contact with the government in Jamaica. Jamaica was too far away and the settlers found it difficult to follow Jamaican law. It was not until 1863 that the islands were officially attached to Jamaica.

In 1798 the Governor of Jamaica appointed three Caymanians to be Justices of the Peace. They followed Jamaican laws as best they could, and invented other rules for the Cayman Islands when necessary. In 1831 the first elections for government were held. The men who were elected made laws for the Cayman Islands. They became known as 'vestrymen'. Later a Commissioner was appointed, who was assisted by the eight Justices and the vestrymen.

In 1959 a new constitution was introduced under which the Cayman Islands ceased to be a dependency of Jamaica, although the Governor of Jamaica was still the Governor of the Cayman Islands. At the same time the Commissioner was renamed 'Administrator'. The Cayman Islands Legislative Assembly in 1959 consisted of 12 elected members. There were also two or three members nominated by the Administrator and about the same number of official members. The Executive Council consisted of two elected members, one nominated member and two official members. The Administrator consulted with the Executive Council over important decisions but did not have to take their advice.

When Jamaica became independent in 1962 Caymanians had a choice. They could remain a Jamaican dependency or remain with Britain. They chose to become a British Crown Colony (later called an Overseas Territory) of the United Kingdom. The Turks and Caicos Islands made a similar decision.

After Jamaican independence

When Jamaica became independent, the Governor of Jamaica's role was taken by the Administrator of the Cayman Islands. In 1971 the Administrator gained the title of Governor.

Activity



- 1 Write down *in your own words* the meaning of the following words:
 - a) government
 - b) dependency
 - c) Overseas Territory
 - d) democracy.
- 2 Discuss in class the difference between an independent country and a dependency. Suggest some reasons why the Cayman Islands chose to remain with Britain in 1962.
- 3 **Group research**
 In groups, find out more about the relationship between Jamaica and the Cayman Islands between 1670 and 1962. When you have finished, present the results of your research to the rest of the class. It may help to try to answer some of these questions:
 - a) How did contacts between the two territories develop in that period, for example communications and trade?
 - b) To what extent was Caymanian government always mainly separate from the government in Jamaica?
 - c) How did the two countries co-operate to keep law and order, for example when piracy was a major problem in the 17th and 18th centuries?

Table 4 European ownership of Caribbean islands 1763–1814

Country	Change	Date
Jamaica	Slave revolt	1795–6
Dominica	Spain to Britain	1763
St Kitts	France to Britain	1713
Trinidad	France to Britain	1797
Tobago	Spain to Britain	1763
	Britain to France	1783
	France to Britain	1814
Grenada	Spain to Britain	1763
St Domingue (Haiti)	Revolution	1791–1804
Santo Domingo	Spain to France	1795
	France to Spain	1814

E Table 4 shows who owned the Caribbean islands during the 18th century and the first few years of the 19th century. Use the map on page 89 and Table 4 to draw maps showing who owned the various Caribbean islands at the following dates:

1763

1783

1795

1814

New rules for governing

In 1972, and again in 1992–3, new rules were introduced for governing the Cayman Islands. These governing rules are called a **constitution**. The new constitution under discussion in 1992 and 1993 was not finally introduced until 1994. The box below shows how the constitution developed.

How the constitution developed

1972

Legislative Assembly

- 12 elected members
- 3 official members appointed by the Governor

Executive Council

- 4 elected members
- 3 official members

Three ministers (official members):

- Chief Secretary, assisted by a Deputy Chief Secretary
- Financial Secretary, assisted by a Deputy Financial Secretary
- Attorney General, assisted by the Solicitor General

1992

Legislative Assembly

- 15 elected members
- 3 official members appointed by the Governor

Executive Council

- 5 elected members, or ministers, each with a different set of responsibilities
- 3 official members: the Chief Secretary, the Attorney General and the Financial Secretary

2002

The constitution is under review, and important changes are expected, including a Bill of Rights. Three Constitutional Commissioners have held public meetings with the Caymanian people to discuss a new draft constitution.

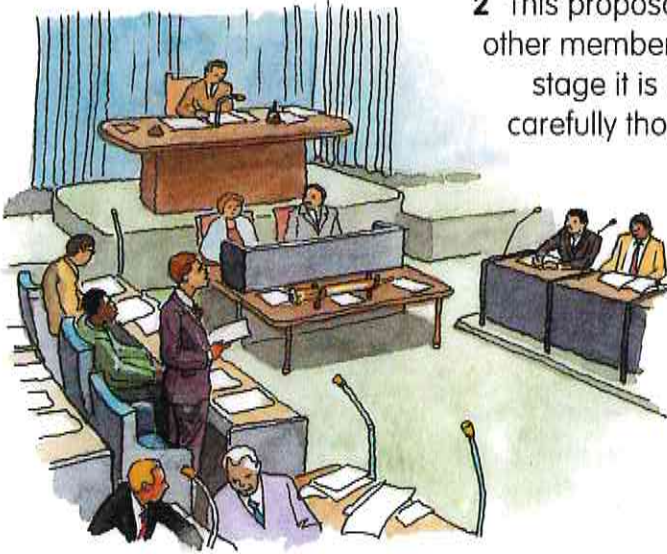
Making new laws

The diagram shows how the process of making new laws works.

1 A suggestion (called a proposal) for a new law is made by an MLA.



2 This proposal is brought before the other members of the legislature. At this stage it is called a Bill. It must be carefully thought out and presented.



3 The Bill is discussed by the legislature and then the members are asked to vote. All MLAs can vote on Bills brought before the legislature. Official members do not vote on some of the Bills.



4 If enough members vote for the Bill it is passed and becomes law.

Activity



Look carefully at the two constitutions, for 1972 and 1992, given in the box on page 92. Write down the similarities and differences. Compare these constitutions with the constitution we have today.

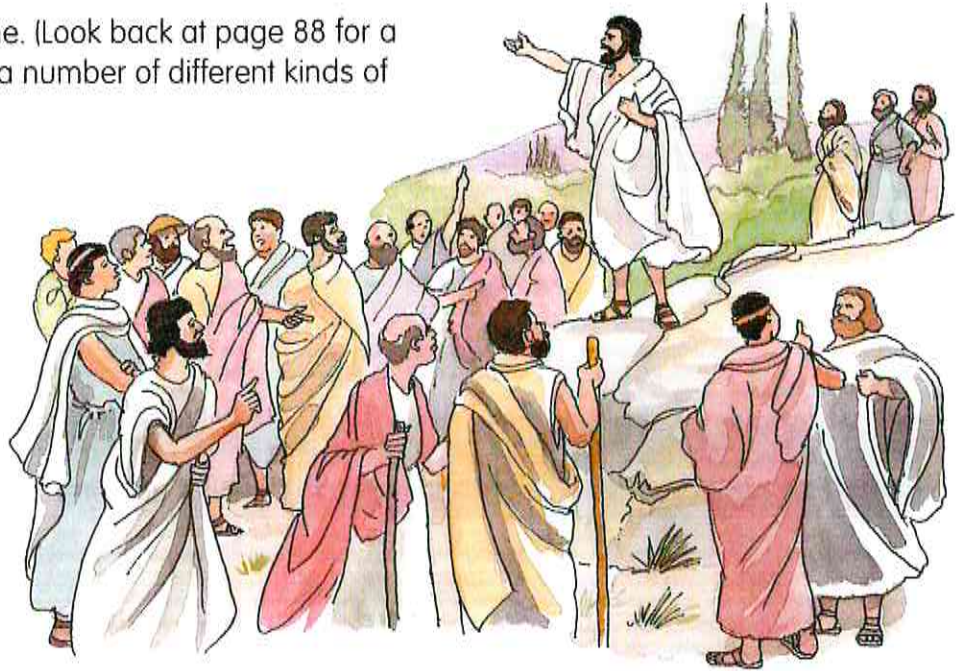
E Prepare an explanation of the way new laws are passed. Be ready to answer questions, if you are asked to present your explanation to the class.

Electing the government

Our government is a democratic one. (Look back at page 88 for a definition of democracy.) There are a number of different kinds of democracy.

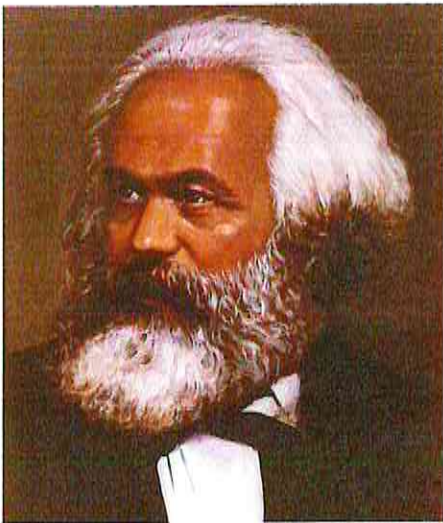
Direct democracy

The earliest form of democracy was practised in ancient Greece. The citizens of Athens, then a small city-state, gathered to discuss important matters. Together they made decisions about them. This is known as direct democracy, because the people rule themselves directly rather than through representatives.



Representative democracy

Most democracies today are representative democracies. People choose representatives to form a government and lead the country on their behalf. The democracy of the Cayman Islands is a representative democracy.



Karl Marx

Democracy and communism

Most Caribbean countries are democracies. However, one of our near neighbours, Cuba, does not have a democratic government. Cuba is a communist state, headed by a **dictator**. You learned about Cuban communism in Year 5.

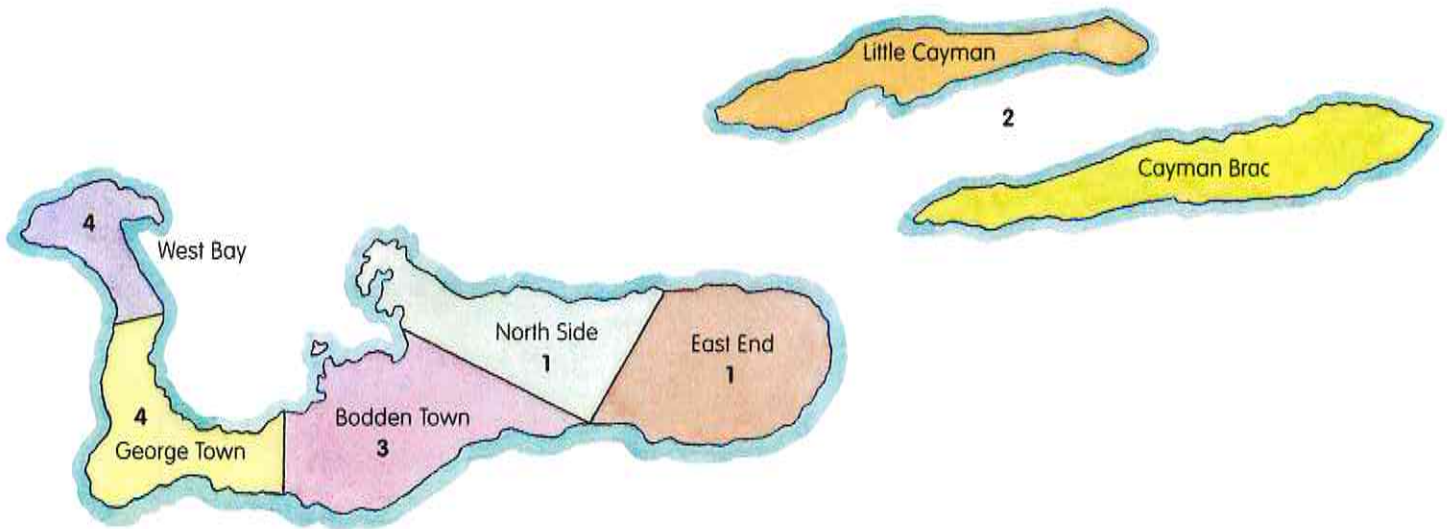
Communism arose from the work of Karl Marx and Frederick Engels, two 19th-century political philosophers. They were appalled at the working and living conditions of the poor in England and Germany. They wrote about these, and Marx developed a theory connecting the economic and social relationships between the different classes in Europe. Marxist theories influenced a Russian revolutionary named Lenin. After the revolution which he led, in 1917, Russia became the first communist country.

General elections

Every four years, we hold general elections. Every citizen over the age of 18 may vote. There are six electoral districts. Table 5 shows the number of representatives each district elects to the Legislative Assembly. The case study on pages 96–7 gives the results of the general election held in the year 2000.

Table 5 Electoral districts, representatives and registered voters, 2000

District	No. of representatives	No. of voters
George Town	4	4509
West Bay	4	2962
Bodden Town	3	2133
Cayman Brac and Little Cayman	2	882
East End	1	604
North Side	1	514
<i>Total</i>	<i>15</i>	<i>11,604</i>



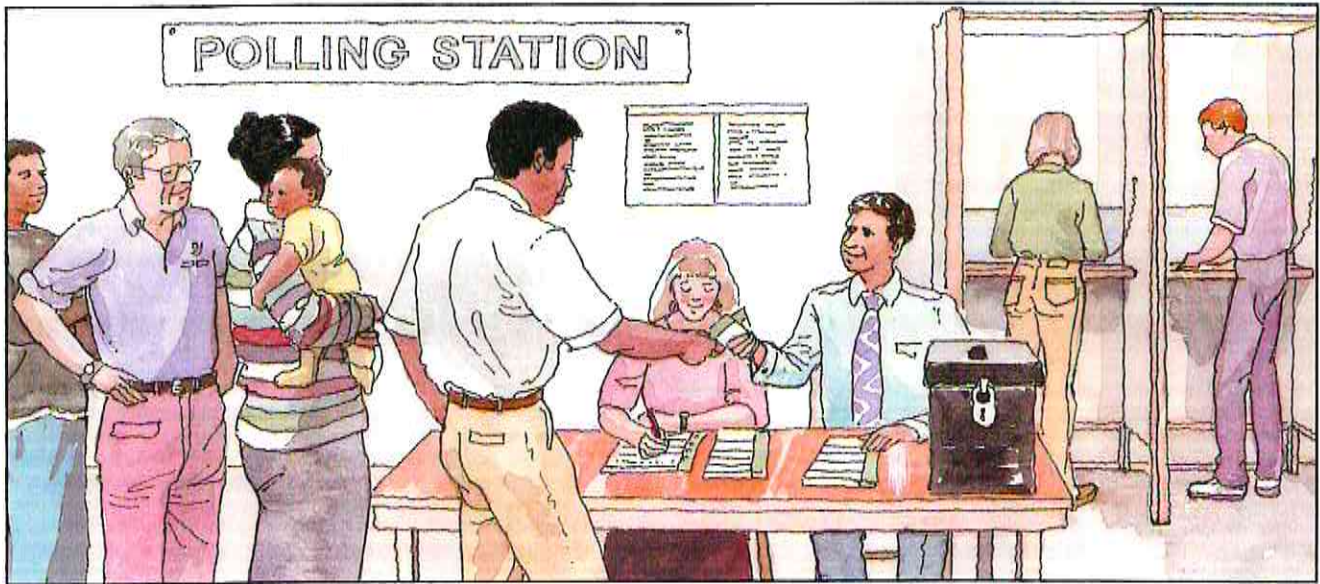
- 1
 - a) *In your own words*, write a definition of democracy and a definition of communism.
 - b) Research the constitution of (i) one other country in the world which has a democratic system of government; (ii) one other country (apart from Cuba) which has a communist system of government.
 - c) Compare and contrast the two systems of government, democracy and communism. Draw a table giving the advantages and disadvantages of both.

- 2 Read the case study on pages 96 and 97 carefully.
 - a) Draw a table giving the results of the election. The table should have a column giving the name of the successful candidate and the number of votes he or she gained.
 - b) Find out more about the MLA who represents your district. Write a profile of him or her, giving as much information as possible.

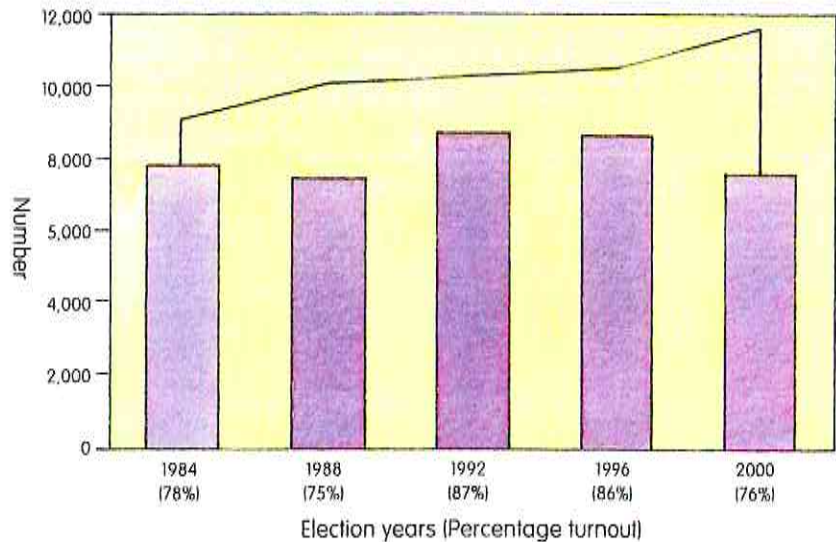
- E** Find out more about the democracy of ancient Greece. What other types of government existed at that time?

CASE STUDY – THE ELECTION OF 2000

The general election was held on 9 November 2000. Polling booths opened at 7.00 a.m. and closed at 6.00 p.m.



A total of 11,604 people were registered to vote. Of these 76 per cent actually did vote. We call this a *turnout* of 76 per cent. The graph shows how this turnout compared with earlier elections.



The results were declared on 10 November. The following people were elected.

For George Town:

Kurt Tibbetts (2753 votes)
 Alden McNee-McLaughlin (2057 votes)
 Dr Frank McField (1690 votes)
 Linford Pierson (1506 votes)

For West Bay:

McKeeva Bush (1462 votes),
 Rolston Anglin (1030 votes)
 Captain Eugene Ebanks (929 votes)
 Cline Glidden Jr (789 votes)

For Bodden Town:

Roy Bodden (1008 votes)
Anthony Eden (759 votes)
Gilbert McLean (788 votes)

For Cayman Brac and Little Cayman:

Julianna O'Connor Connolly (590 votes)
Lyndon Martin (324 votes)

For East End:

Arden McClean (200 votes)

For North Side:

Edna Moyle (249 votes)



The MLAs elected in November 2000

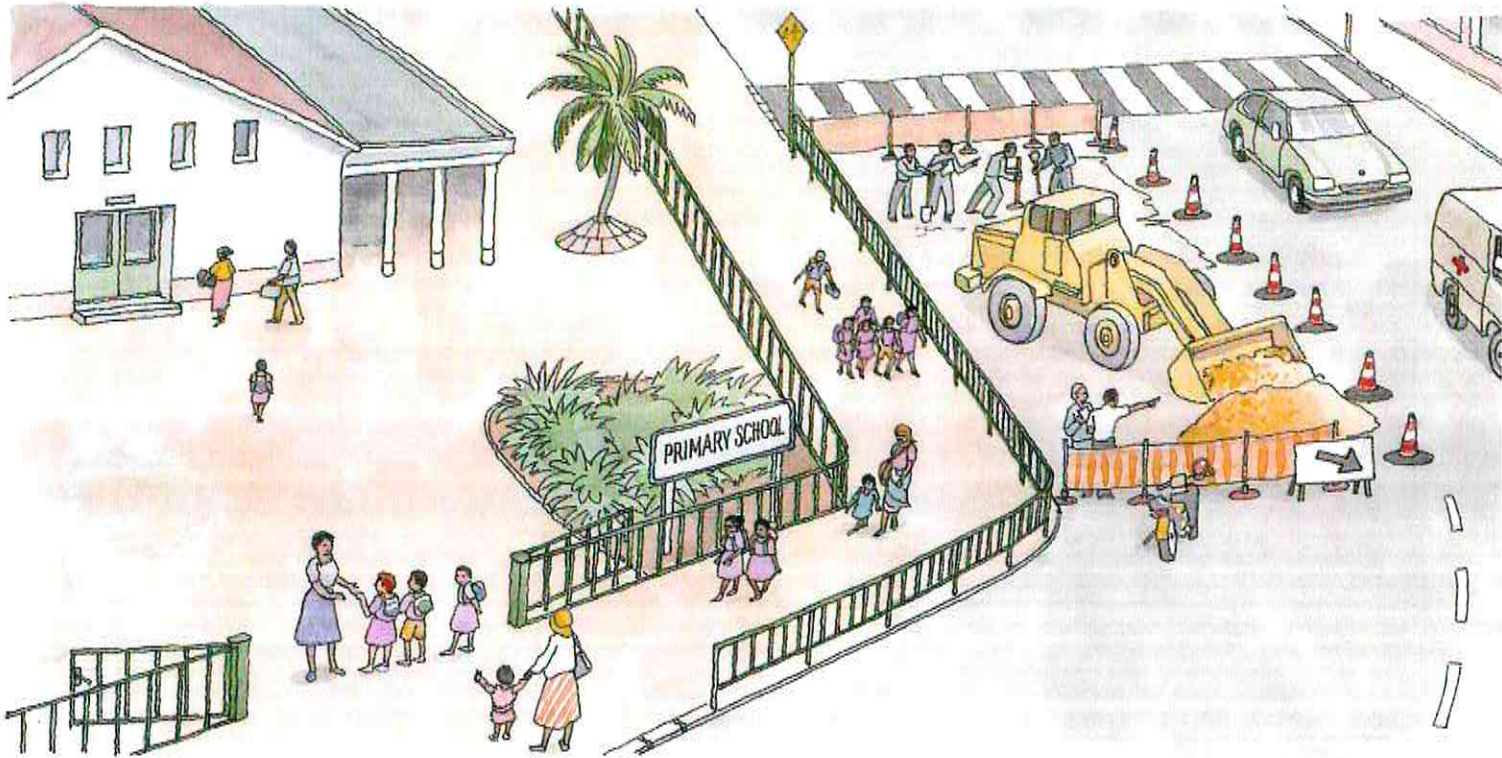
Five of these MLAs were elected to ExCo (the Executive Council) and became ministers. Each of the ministers was given a portfolio.

Activity



Find out the names and portfolios assigned to each minister. Report your findings to the class.

Government services



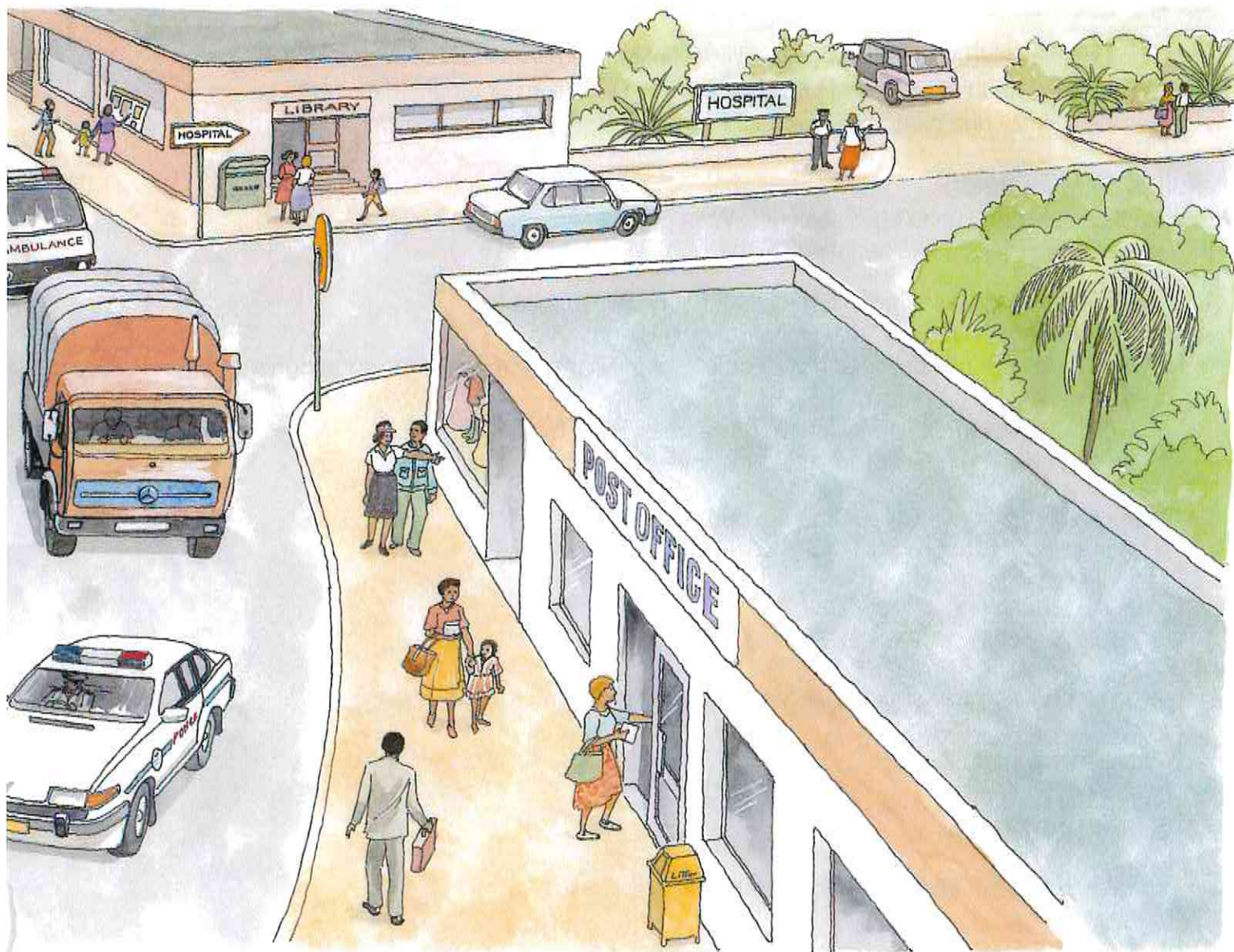
The most important function of government is to make laws. However, most governments also provide some services for their citizens. In Unit 4 we learned about service industries. Government services are the services for which the government pays. People who work for the government are called civil servants. These include police officers, teachers and school staff, nurses and other hospital staff, immigration officers and post office workers. The government maintains roads, the docks, airport buildings and runways and the museums. Most government offices are in George Town, the centre of government.

★ Why do you think the centre of government for the Cayman Islands is in George Town?

Revenue

In order to pay for these services, the government must have money. This government income is called revenue. In the Cayman Islands the main sources of revenue are:

- **customs duty**, which is paid on imported goods and services
- **stamp duty**, which is paid when you buy a property, or stamps for mailing items
- **bank and business licences**, including an annual licensing fee
- **port and departure taxes**, paid by passengers
- **work permits**, needed by non-Caymanians working in the Cayman Islands.



Activity



1 Picture study

Look at the picture carefully. How many government employees can you see at work? Which government services are being carried out?

Discuss in class or a group the work done by these workers.

- 2 Draw a diagram showing the different sources of revenue which the government has. The diagram may include both words and pictures.
- 3 Find out about other government services not shown in the picture. Write them down and discuss them in a group.

E Collect leaflets and search on the Internet for more information about the different types of taxes, duties and licences in the Cayman Islands. Which of these do you think brings the government the most revenue? Find out more about this type of revenue.

Round up

In this unit you have learned about the government of our country, how it is elected, how it makes new laws, and the services it provides. You have also considered the differences between democracy and communism, and the origins of these systems of government.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

- 1 The Cayman Islands is a British Overseas Territory. This means that
 - A the Governor is Head of State of the Cayman Islands
 - B the Queen (or King) of England is Head of State and the Governor is the sovereign's representative
 - C we are governed directly by the UK government in all matters
 - D we can elect members of the British parliament to represent us in London.

- 2 The political system we call communism was invented by
 - A Karl Marx
 - B Vladimir Lenin
 - C Queen Victoria
 - D Oliver Cromwell.

- 3 In ancient Greece, the political system invented by the Athenians was a type of
 - A representative democracy
 - B communism
 - C fascism
 - D direct democracy.

- 4 Jamaica was taken from the Spanish by Britain in the year
 - A 1503
 - B 1655
 - C 1670
 - D 1763.

- 5 In 1798 the Governor of Jamaica appointed
 - A a Governor for the Cayman Islands
 - B the first Legislative Assembly
 - C the first Justices of the Peace
 - D the first vestrymen.

- 6 The Speaker of the Legislative Assembly today is
 - A an Official Member of the Assembly appointed by the Governor
 - B an elected member of the Assembly chosen by the other MLAs
 - C an Official Member chosen by the MLAs
 - D chosen by parliament but not necessarily an MLA.

- 7 At general elections, the Cayman Islands have
- A six electoral districts electing 15 MLAs
 - B six electoral districts electing 12 MLAs
 - C five electoral districts electing 12 MLAs
 - D four electoral districts electing 15 MLAs.

Choose from the box

In the box you will see the names of many different kinds of service jobs. Write down all those which are government services. Choose four government services and write a short paragraph about each one.

teacher

nurse

taxi driver

post office worker

museum curator

immigration control officer

bank clerk

restaurateur

hotel manager

air traffic controller

airline baggage handler

dentist

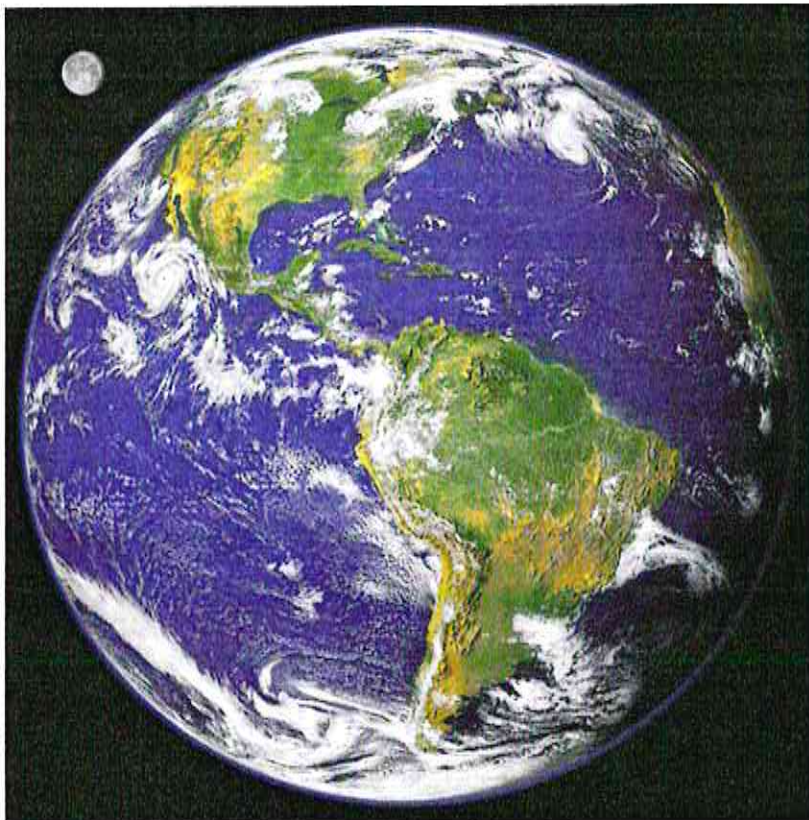
Unit 7 Our World



Planet Earth

Imagine that you are an astronaut looking down at our planet, Earth, from your spaceship. What does the world look like from so far away? One American astronaut, Neil Armstrong, said that from space the Earth looks like a 'tiny pea, pretty and blue'. Most of the world's mountains, deserts and other landforms look small and unimportant from space. The oceans and continents can be seen from space, but only a few of the very largest landforms on the continents are visible.

- ★ Do you remember from Book 5 this photo of the Earth taken from space? Look at it again. How many landforms can you see?



Using a globe

The Earth is shaped more or less like a **sphere** with flattened top and bottom (at the poles). From space you can only see one half of the planet at a time. The best way to see what the entire planet looks like is to look at a globe, a model of the Earth.



● FACT FILE – PLANET EARTH

- There are nine planets orbiting the sun; counting outwards, the Earth is the third planet. As far as we know, it is the only one that supports life.
- The Earth is 12,756 km (7926 miles) in diameter. It is 149.5 million km (92.8 million miles) from the sun.
- The Earth moves around the sun at a speed of 106,200 kph (67,000 mph).
- The longest river on Earth is the Nile, in Africa. It is 6695 km (4160 miles) long.
- The highest mountain peak is Mount Everest, in the Himalayas in Asia. It is 8848 metres (29,005 feet) above sea level.
- The South Pole is surrounded by an ice cap thousands of metres thick. If the ice cap melted, most of the world's coastal cities would be flooded.
- The Great Wall of China is the only man-made feature which can be seen from space.

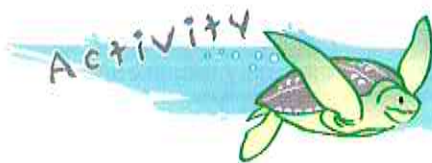
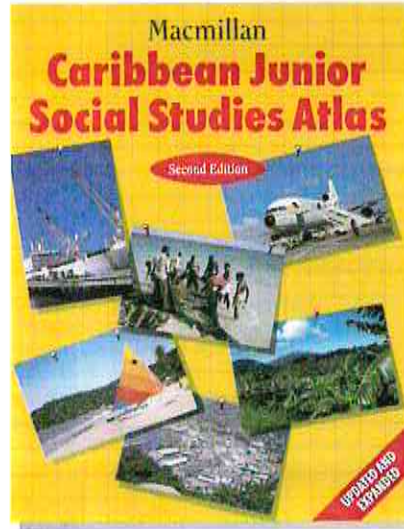
Activity



- 1 Look at the photograph of the Earth taken from space.
 - a) What are the blue areas?
 - b) What is the black area you can see around the Earth?
 - c) What do you think the white areas are?
 - 2 In pairs, use the classroom globe to examine how the Earth behaves in space.
 - a) Spin the globe slowly, to see how the Earth spins on its axis. Find the position where what you can see on the globe matches the photograph taken from space.
 - b) Imagine the sun at a distance from the Earth, or shine a lamp or torch towards the globe. As the Earth spins, what happens to the light from the sun shed on its surface?
 - 3 Compare the outlines of the continents and oceans shown on the globe with those shown on a map of the world. In what ways are the outlines on the globe different, and why?
 - 4 Read the Fact File on the Earth to find some fascinating facts about our planet. Look in an atlas and visit your local library to find out some more facts and figures about the Earth and make up your own fact file. There is some information on page 104 about using an atlas.
- E** Make a papier mâché model of the Earth and paint the oceans, seas and lakes blue. Use a map of the world to show you where the major mountain ranges such as the Himalayas and the Andes are and colour these purple or white. Paint the lower land areas green.

Using an atlas

Another way of studying the Earth is to use an atlas, which is a book of maps. A map is a drawing which shows the Earth, or part of the Earth, on a flat surface. Many atlases also give other information about various aspects of our planet. The activity below gives you the opportunity to explore your atlas.



- 1 Find maps of the following in your atlas:
 - a) the Cayman Islands
 - b) the Caribbean region
 - c) North America or the United States
 - d) the world.
- 2 How many of these Caribbean islands are shown on individual maps in your atlas? Write down the titles of the combined maps where you find the others. Write down the names of any other islands you find.

*Anguilla Antigua and Barbuda Bahamas Barbados
Bermuda Cuba Dominica Grenada Guadeloupe
Hispaniola Jamaica Martinique Montserrat
Puerto Rico St Kitts (St Christopher) and Nevis St Lucia
St Vincent and the Grenadines Trinidad and Tobago
the Virgin Islands*
- 3 Find one example of each of these in your atlas:
 - a) an environmental map
 - b) a historical map
 - c) a climate map
 - d) a map showing economic activity, e.g. land use, industry or trade.
- 4 Look carefully at the maps which have the title 'Physical and political map'. What do these maps show?
- 5 Study one page or double-page in your atlas carefully and write down what it contains, including information given in the key, other information, any diagrams or charts provided, any extra maps apart from the main one, and so on.
- 6 Find the index in your atlas. Look up some places in the Cayman Islands or other places in the Caribbean region and note down what the index tells you about them.

Continents and oceans

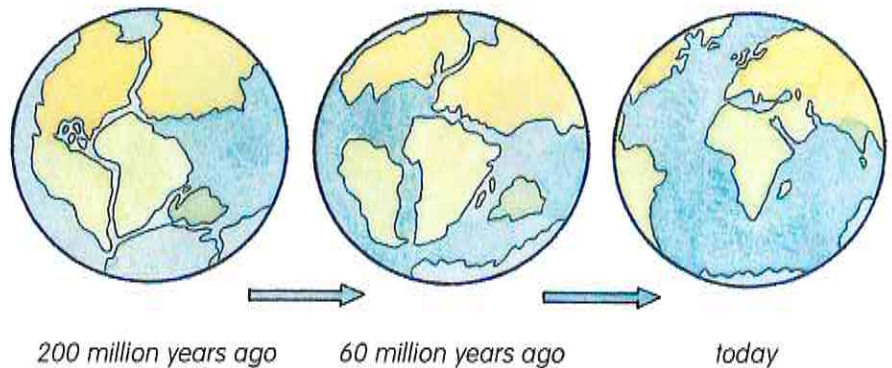
Although the landforms on the Earth look small and insignificant from space, on the earth they do much to shape the way we live. Because the Earth's landforms and climate differ from place to place, people must work in different ways to meet their needs. Oceans, mountains, deserts, forests, rivers and other natural features influence the way of life people have.

About two-thirds of the Earth's surface is covered by water, and about one-third by land. The main bodies of water are called oceans. Smaller water bodies are known as seas, gulfs and bays. These names are given to areas of water near the continents, such as the Caribbean Sea and the Gulf of Mexico near the coast of North and Central America. Within the continents there are also bodies of water called lakes. Some of these are as large as a small sea.

The Earth is divided into seven continents. Some of these are linked together, like North and South America. As well as the mainland areas of the continents, there are many islands. Some islands, such as those in the Pacific Ocean, are a long way from the mainland. Others are close to the mainland; for example, the Cayman Islands are close to North America.

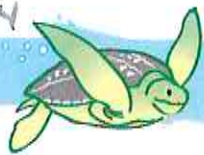
Pangea

The Earth's surface has not always looked as it does today. Many millions of years ago there was only one continent and only one ocean. The continent was called Pangea. When this continent broke up, it formed the plates which cause seismic activity.



★ Look at the map showing the continent of Pangea breaking up. Can you see the shapes of today's continents emerging?

Activity



- 1 Open your atlas at a map of the world showing the continents and oceans, or look at a wallmap of the world.
 - a) Find the seven continents (*clue*: North and South America count as separate continents). Write down their names. Which continent do you think has the largest land area? Which has the smallest land area? Check your estimate on a globe.
 - b) Find the five oceans (*clue*: if the map of the world in your atlas does not show all five oceans, look at a map of Australasia and find the ocean to the south of it). Write down their names. Which is the largest ocean? Which is the smallest ocean?

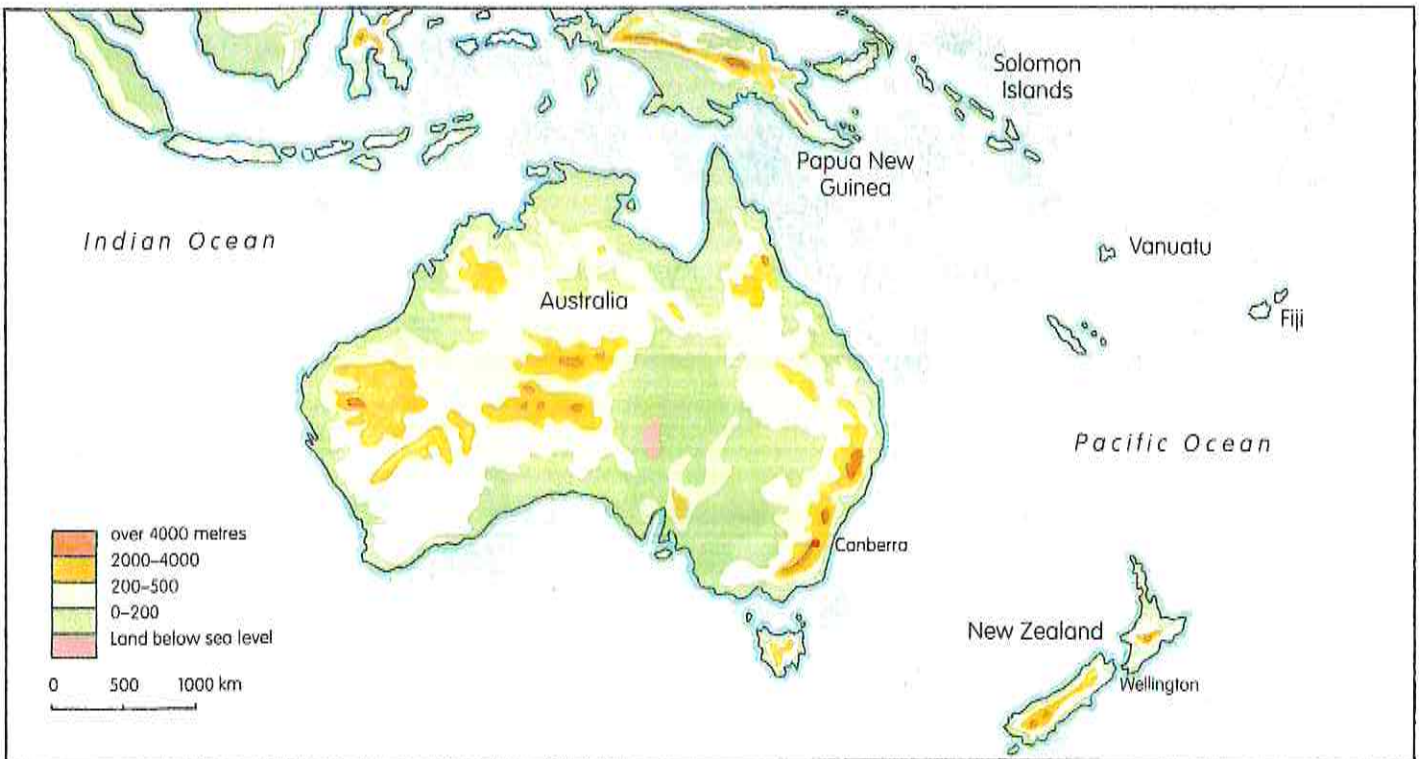
E Draw a map of the world and paste it on to cardboard. Cut it into pieces to make a jigsaw puzzle.

Continents and countries

There are 192 independent countries in the world. They are scattered across the continents. However, some countries are much bigger than others, and some continents are divided into more countries than others. Let us look at three continents in particular: Australasia, North America and Europe.

Australasia

Australasia is special in that its main landmass contains only one country – Australia. The rest of the continent consists of the island group which makes up New Zealand. Australasia and the South Pacific islands are sometimes grouped together and called by another name, Oceania.



North America

Much of the North American continent is divided into just two countries, the United States (USA) and Canada. The border between them runs across the continent from west to east. This means that they share many physical features such as lakes and mountain ranges.

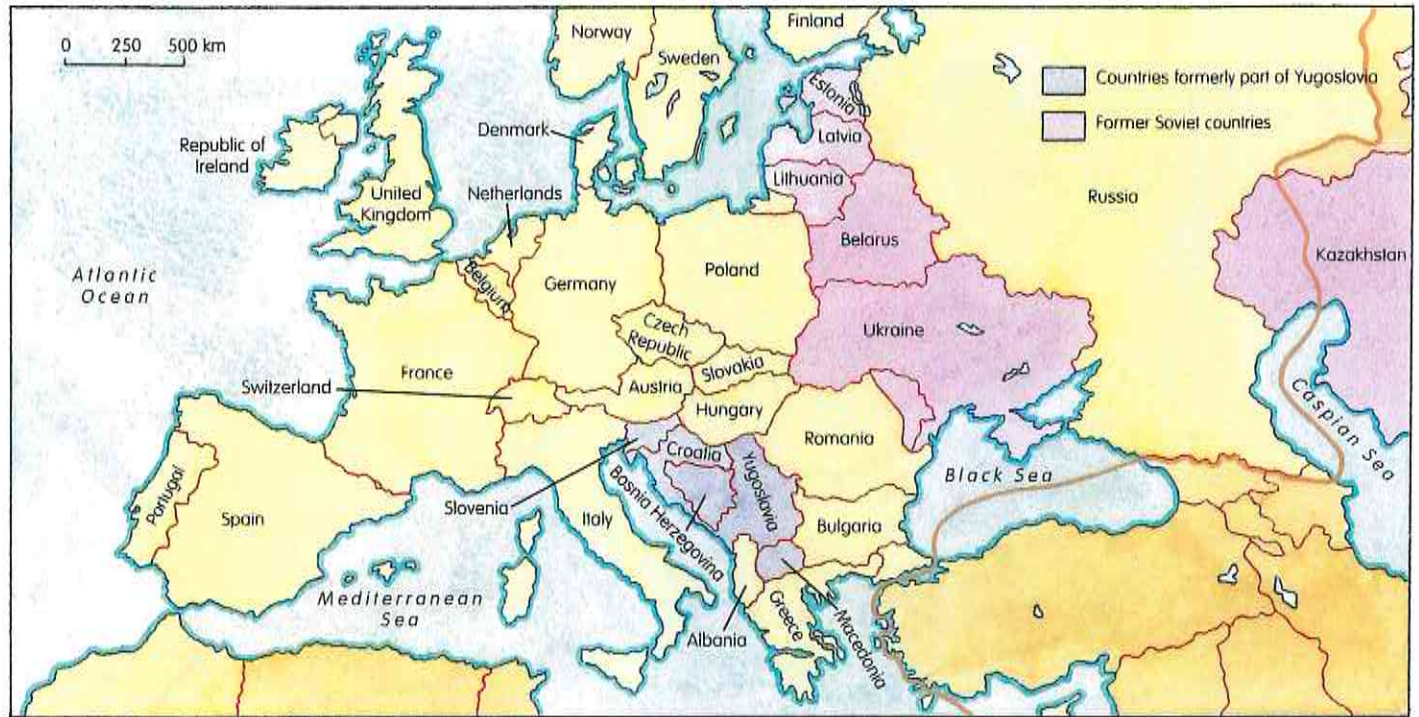
★ Look at a map of North America. Name at least three features which the USA and Canada share.

Although they share some physical features, there are also many differences between them. Canada is much less densely populated, for example. It contains more forests, whereas in the USA these have been cleared. Much of the country also has a colder climate, because it is further north.

★ Which US state is located to the west of Canada, in the far north?

Europe

Although Europe is one of the smaller continents, it contains many countries. One of these, Yugoslavia, has recently been divided into still more countries after a civil war. Some new European countries have been formed from the break-up of the Soviet Union, a group of communist countries dominated by Russia, since 1985. Part of Russia itself is in Europe, and part of it is in Asia. It is the only country in the world which has territory in two continents.



- 1 Look at the map of Europe above.
 - a) Write down the names of the newly independent countries which used to be part of the Soviet Union.
 - b) Write down the names of the countries which used to be part of Yugoslavia.

CHALLENGE: Find out whether the situation in the former Yugoslavia has changed since this map was drawn. There may be still more new countries being formed as this region settles down after the civil wars of the 1990s.

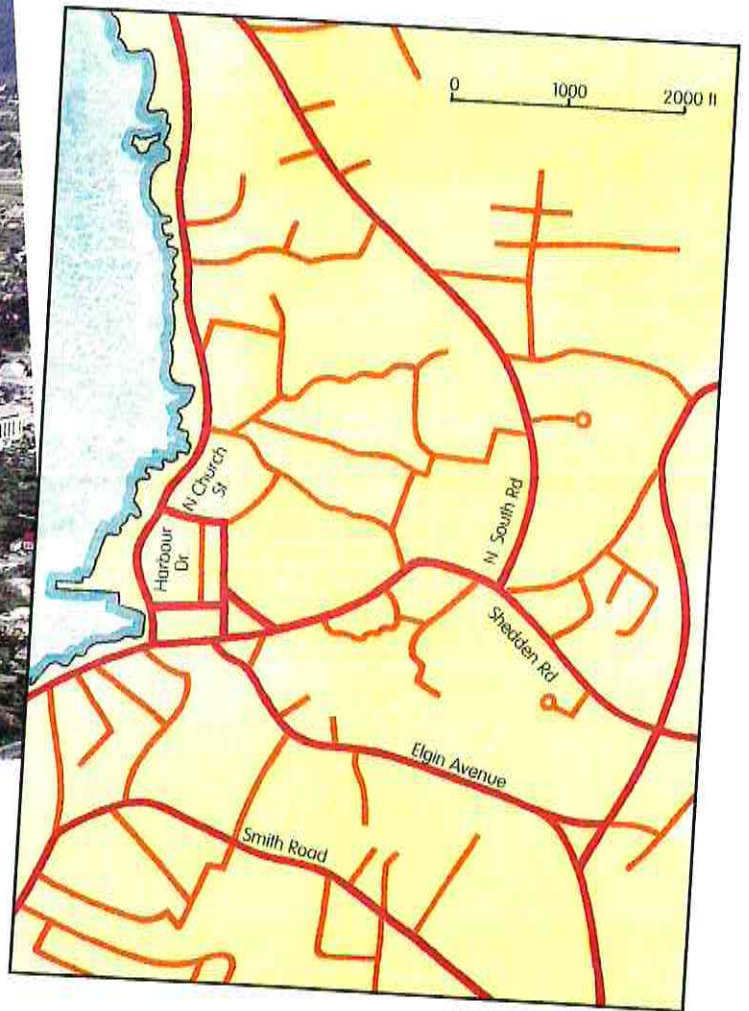
- 2 Open your atlas at a map which shows the islands of the southern Pacific Ocean. Identify the island groups which are included in the continent Oceania, and make a list of them.

E We have been looking at continents which are divided into countries. One continent, however, does not contain any countries. It is an international continent on which scientists from many countries work together in research teams. Look in your atlas and work out which continent it is.

Maps and photos

In some ways maps represent in a drawing what can be seen from an aerial photograph. For example, at the beginning of this unit we compared what could be seen on the photo of the Earth from space with a map of the world and a globe.

- ★ Compare the aerial photo of George Town with the street plan. Identify ways in which each might be useful if you were planning to explore the town.



Different kinds of maps

Many different people use maps in the course of their work or leisure activities.

We can use maps to find information about many things, for example:

- the distance between two places
- where one place is in relation to another, and the direction you need to take to reach the second place from the first
- the shape of countries, islands, seas, oceans and continents
- the position of particular towns and other locations within an area
- the relief of a region, including the height of hills and mountains
- transport systems
- boundaries between countries and districts.

Two types of map are particularly useful. One type is the *physical map*, which shows the natural or physical features, the highlands and lowlands, oceans, rivers and lakes of a country or region, usually with different colours to show different altitudes. The other type is the *political map*, which shows the divisions into countries or districts, capital cities and other major towns, and often the major transport routes such as the road network.

Often special information can be shown better on one kind of map than another. Maps exist for special purposes, such as contour maps, demographic maps and climate maps. It is worth knowing which kind of map will give you the information you need.

Sketch maps

A sketch map is a rough drawing of an area. It is not as accurate as a real map, but it gives the general idea of the shape and location of places. For example, you might draw a sketch map to show a friend how to find your house.

What we find on a map

Some things are almost always included on a map. The two most important ones are the scale line, which allows us to measure distances between places, and the key, which tells us what symbols and colours have been used on the map and what they mean. There may also be a direction diagram (if not, we assume that the top of the map is the north).



- 1** Choose a physical and political map in your atlas which shows a Caribbean island country, such as Jamaica, Cuba, St Lucia, Grenada or Barbados. Find the following on the map:
 - a)** The symbols for the main roads, the international airport(s), capital city, other important towns, mountain peaks, international boundaries.
 - b)** The colours used for land at different altitudes. How high above sea level do the colours go? What does this tell you about the relief of the island you have chosen?
 - c)** The scale line. Use this to measure the distance between two of the major towns. Can you work out the approximate land area of the island?

- E** Carry out the same activity for another island country. Compare the symbols, the colours and the scale. How does this help you to compare the actual features of the two countries?

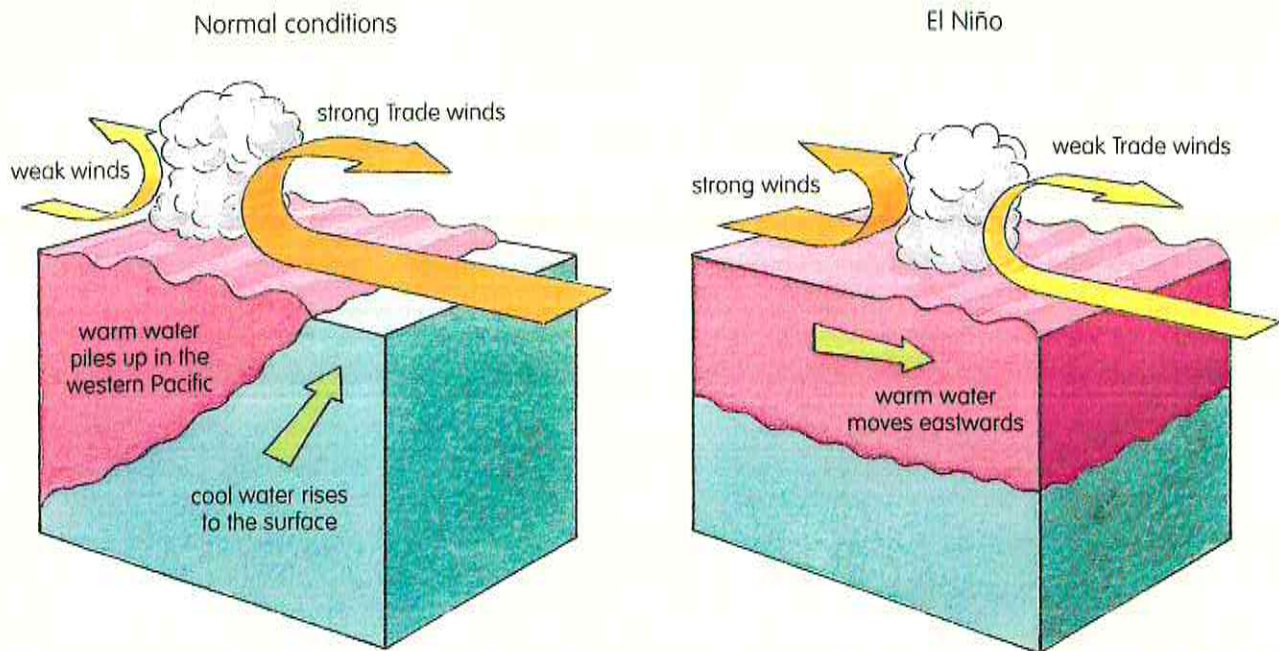
Weather and climate

The weather systems which affect our islands are part of a much larger system which governs the patterns of climate across the world. Many local factors affect climate, such as latitude, altitude, distance from the ocean and so on.

There are also weather events which happen every few years but which can affect the climate over a large area. El Niño events are an example of this (see the Fact File below).

● FACT FILE – EL NIÑO

El Niño usually occurs around Christmas (its name means 'the Child' in Spanish). During El Niño there is a sharp change in the prevailing winds and ocean currents across the Pacific. This causes heavy rain and floods in the normally dry areas of the western coasts of North and South America, and drought in the tropical islands of the western Pacific.



Compiling a weather report

Every day on CITN there is a weather report on the Evening News. The weather report tells us what the meteorologists think will happen to the weather the next day. The weather report covers such items as the temperature, whether or not there will be rain, the wind speed and direction, and the amount of sunshine we can expect.

Have you ever wondered how meteorologists work out what the weather will be like tomorrow? It is a very complicated and scientific task. Much of it is now done using computer models. The meteorologist supplies information about

temperature, barometric pressure, wind direction and so on in a variety of locations both within and outside the region. A special computer program analyses the information and provides a number of different weather models for the following day. It is then the meteorologist's job to choose between these models, using his or her judgement and experience. Clearly in some areas of the world, where the climate gives settled conditions for much of the year, it is much easier to compile an accurate weather forecast than in other areas, where the weather is changeable.



John Foster, CITN's meteorologist

Activity



- 1 Find climate maps in your atlas which show world temperature zones and rainfall.
 - a) Give three examples of countries where the mean annual rainfall is more than 2000 mm (79 inches), one in South America, one in Africa, and one in Asia.
 - b) Give three examples of countries where the mean annual temperature at sea level is over 30°C (86°F), again one each in South America, Africa and Asia. Where are all the cold lands in the world, and why?
 - c) Which country in South America is within the tropics, but has a mean temperature between 10° and 20°C (50°–68°F)? Why is the temperature in this country lower than in other countries at this latitude?
 - 2 Revise your Year 5 work by writing definitions of the following types of climate: **a)** tropical marine **b)** temperate **c)** polar. Give some examples of countries which experience these different climates.
 - 3 Explain how each of the following factors affect the climate:
 - a) distance from the ocean
 - b) amount of vegetation
 - c) direction of the prevailing winds.
 - 4 Visit the Weather Bureau to find out more about the work of meteorologists.
- E** Watch the weather reports on CITN for several nights, and then compile your own imaginary weather report.

Climate change

As well as local factors that influence weather patterns from day to day, there are global factors which influence the climate worldwide. Over centuries and millennia, and even more dramatically over millions of years, the climate changes. Sometimes it grows warmer, sometimes cooler. Occasionally the climate changes very quickly. These changes have important results for the flora and fauna of the planet, including ourselves.

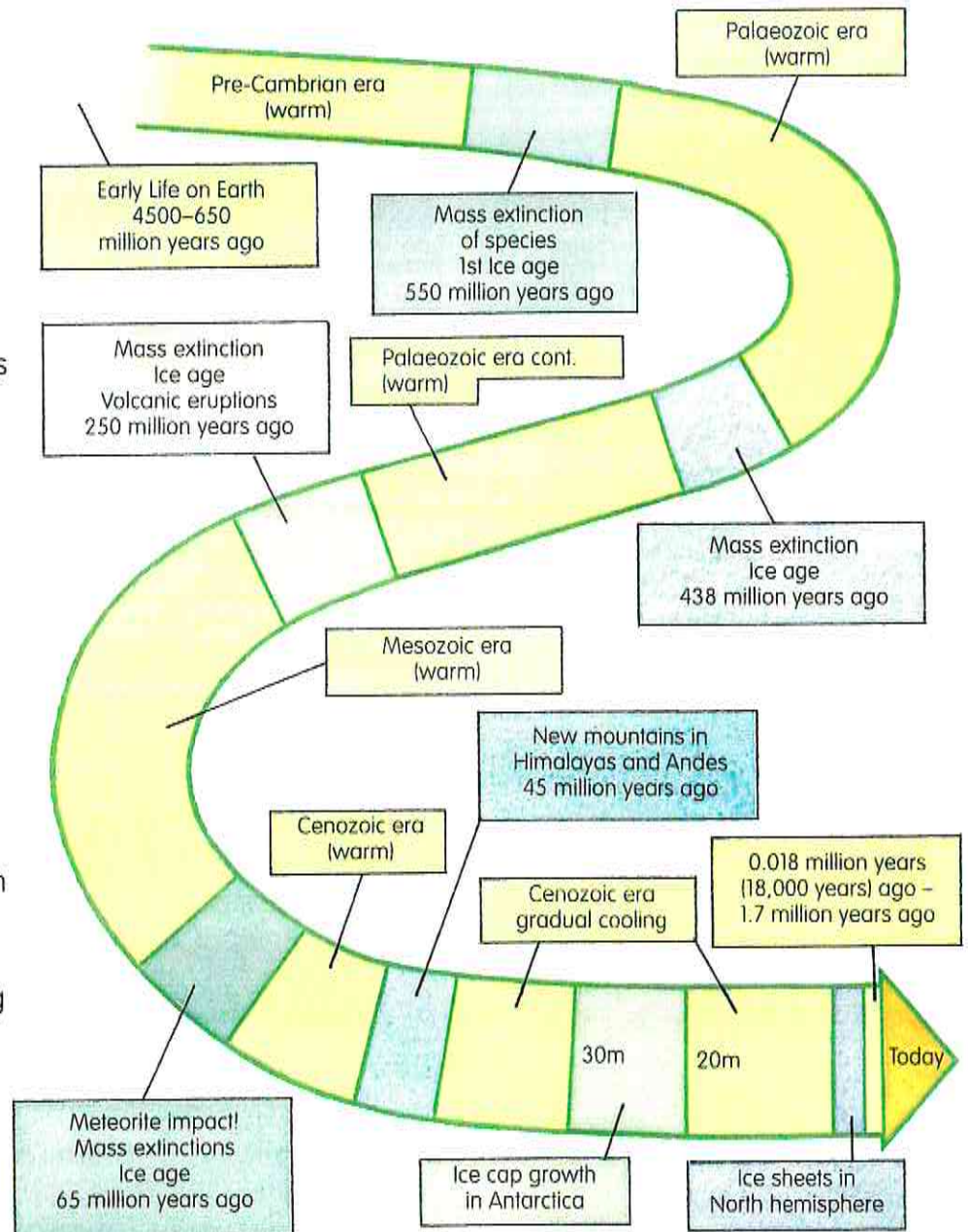
Climate change in the past

Over the Earth's long history, the climate has overall become cooler. When dinosaurs walked the Earth, in the Jurassic and Cretaceous periods of history about 150 million years ago, the climate was very warm. The atmosphere contained a lot of carbon dioxide and sea levels were high. There were forests near the North Pole. The continent of Pangea was just beginning to break up at this time.

Catastrophe!

Suddenly, about 65 million years ago, a massive **catastrophe** occurred. A meteorite about 10 km (6 miles) across crashed on to the Earth in the Yucatan peninsula in Mexico. The impact left a crater 180 km (111 miles) across and shattered the Earth's crust to a depth of 30 km (19 miles). Dust particles were scattered all over the world, cutting out the sunlight and causing a sudden drop in temperatures world-wide. Acid rain turned even the seas acidic. Within a million years, all land animals weighing more than 25 kg (55 lb), including the dinosaurs, and many marine animals had become extinct.

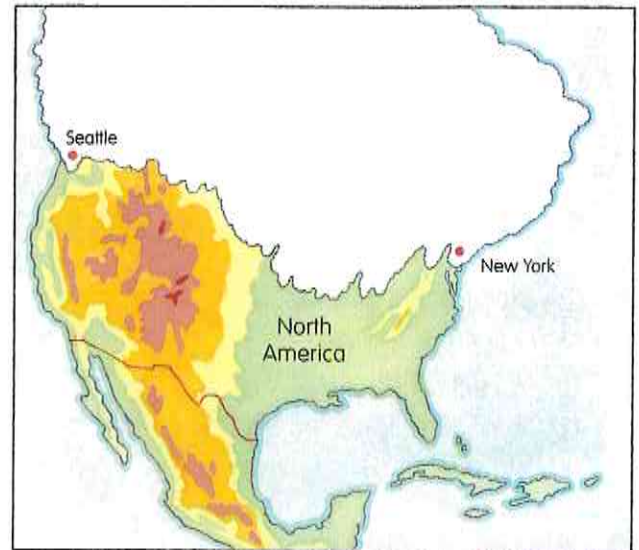
This was not the only time during the Earth's long history that sudden climate change occurred. There have been several mass extinctions (times when many creatures became extinct quickly). Often these have been in response to a period of intense seismic activity, during which volcanoes flung vast quantities of chemicals and dust into



the highest part of the atmosphere, called the **stratosphere**. Even in recent years, small changes in climate have occurred after major volcanic eruptions. Two good examples are eruptions at Mount St Helen's, USA, in 1980 and at Mount Pinatubo, the Philippines, in 1991 and 1992. Many countries in the world, even those far from the eruptions, experienced cooler weather during the years immediately after these eruptions.

The Ice Ages

At certain times during the Earth's history, often after a major catastrophe, the climate has cooled quickly to give an Ice Age. During Ice Ages great ice sheets cover large areas of the Earth's surface, and the far northern and far southern latitudes in particular become very much colder. There are periods within Ice Ages, called inter-glacial periods, when the climate warms again for a while. Geologists believe that the Earth is experiencing an inter-glacial period at present. The last really cold period of this Ice Age occurred about 18,000 years ago. Ice sheets covered much of the northern hemisphere, as far south as France and Germany in Europe and New York and Seattle in North America.



Global warming

Over the last two centuries, the climate has been getting warmer. On average the temperature is now several degrees higher than it was in 1800. Some of the ice sheets in the Arctic and Antarctic which were left over from the last cold period of the Ice Age have begun to melt. It is possible, though it cannot be proved, that human beings have influenced the climate through using fossil fuels such as oil and coal for fuel. These fuels release carbon dioxide into the atmosphere, and the greater levels of this and other 'greenhouse gases' help to prevent the sun's warmth escaping from the atmosphere. This is called the Greenhouse Effect.

★ Why do you think carbon dioxide is called a 'greenhouse gas'?

The rise in temperature may also be causing other climate changes, for example bringing drought in some places, and heavier rainfall in others. There is also some evidence that El Niño events are becoming more severe.

Activity



- 1 Look at the time line on page 112 carefully.
 - a) Work out the number of years between the periods when there were mass extinctions.
 - b) Work out the number of years between the start of each major Ice Age. When did the present Ice Age period begin?
- 2 Find out more about global warming and the Greenhouse Effect. What efforts are being made to limit the amounts of carbon dioxide being released in the atmosphere?

Round up

In this unit we have learned about our planet, its continents and oceans, changes in its climate, and how we can learn about it using maps, globes and aerial photographs.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

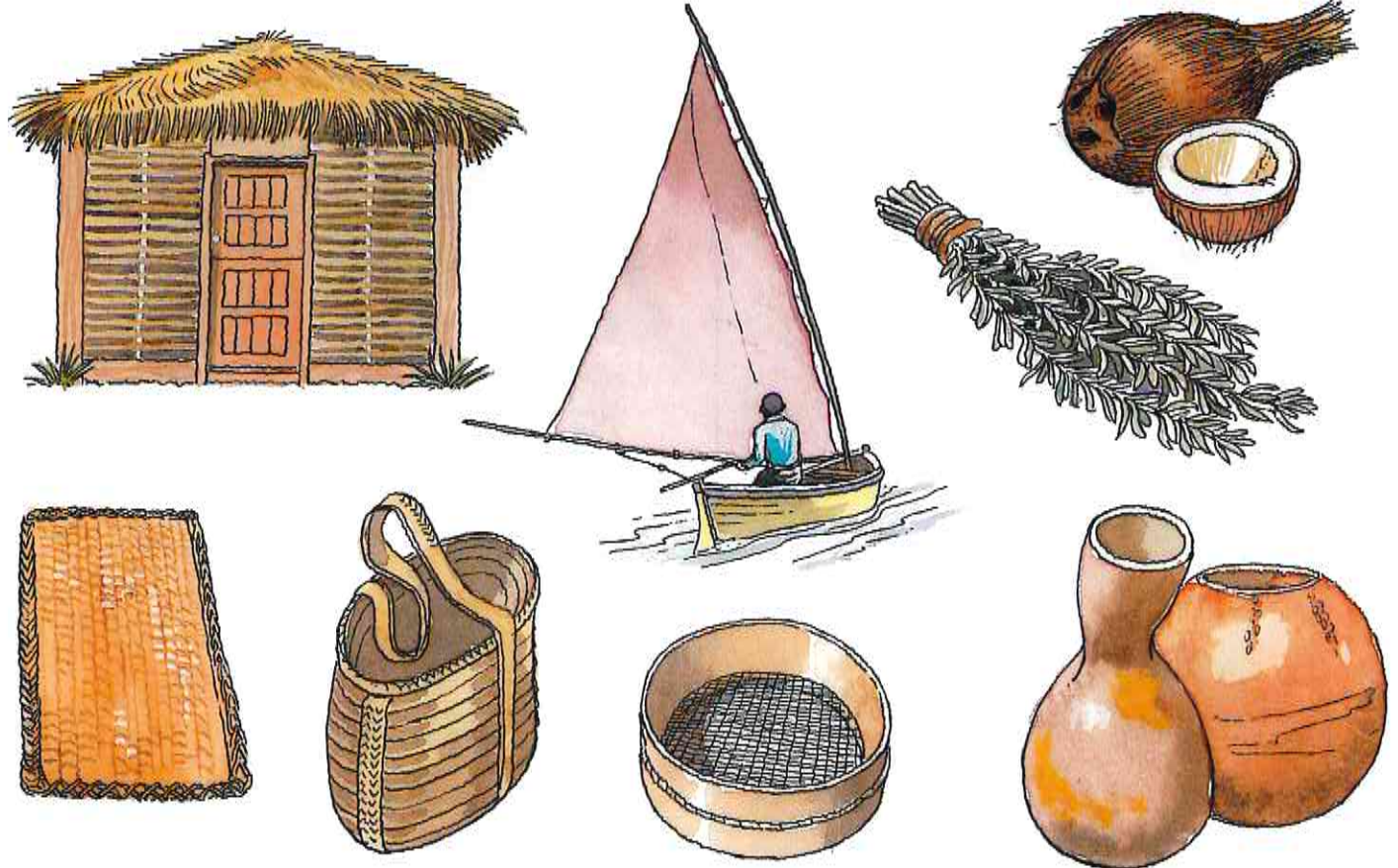
- From space the main colours that can be seen on the Earth are
A red and brown B blue and purple
C green and yellow D blue and green.
- The shape of the Earth is
A a perfect sphere
B a rectangle
C a sphere flattened slightly at both ends
D an oval.
- We call a book of maps
A an atlas B an index
C an encyclopaedia D a dictionary.
- The proportion of land and ocean on the Earth's surface is approximately
A half land and half ocean
B two-thirds land and one-third ocean
C one-third land and two-thirds ocean
D one-tenth (10 per cent) land and nine-tenths (90 per cent) ocean.
- The continent of Antarctica is divided into
A two countries, Australia and New Zealand
B three countries, Canada, Greenland and Iceland
C many countries, including the newly independent countries of the Soviet Union
D no countries – it is an international continent for research.
- Global warming is caused by a build-up of 'greenhouse gases' in the atmosphere. The main greenhouse gas is
A carbon monoxide
B carbon dioxide
C oxygen
D chlorofluorocarbon (CFC).

Draw a map

Draw a sketch map of the world, showing the five oceans and seven continents and their names.



We learned in Unit 7 how people all over the world use the environment in which they live to meet their needs. In the Cayman Islands, as well as catching fish and other marine creatures for food, people used the natural resources available to make the things they needed. They used tree trunks, thatch palms, pan-shore and cabbage wood to make their houses. They used plants they found growing wild to make 'bush medicine'. They used gourds (locally called 'nuts') as containers, sea feathers to make kitchen sieves and rosemary branches for yard brooms.



★ How did Caymanians use natural resources in their industries?

Activity



Visit one of the National Museums, either as a class or with your family. Find out as many ways as you can in which Caymanians have used the local natural resources available to make everything they need.

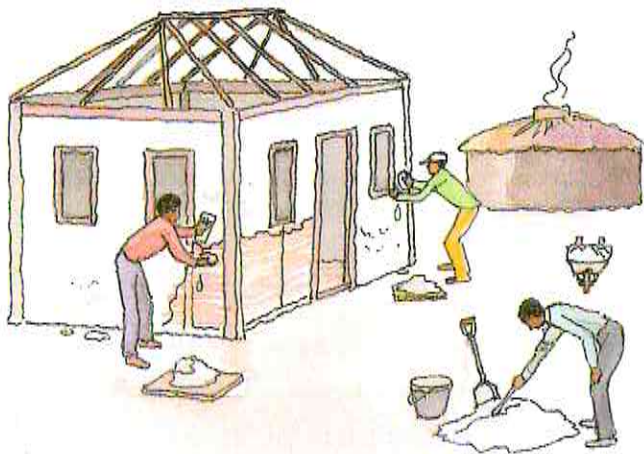
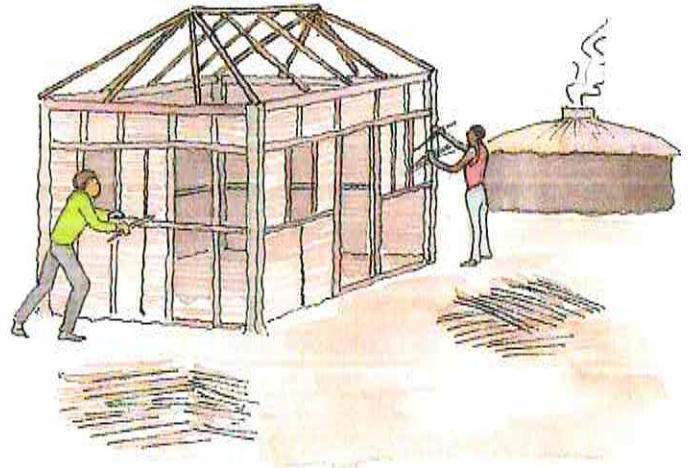
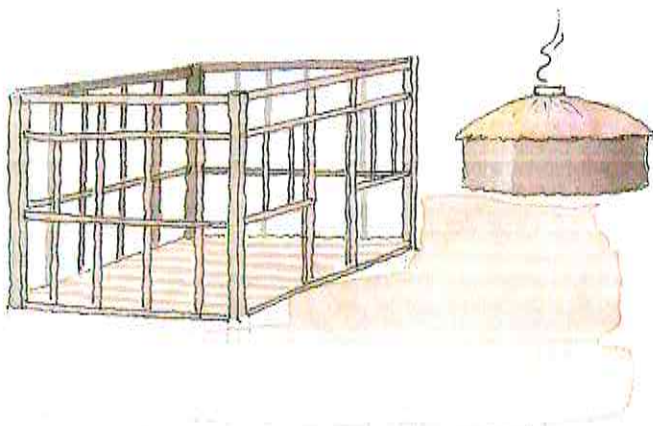
Wattle-and-daub houses

You learned in Year 4 that early Caymanian houses were made of wattle-and-daub, using an ironwood frame for the structure. The houses were thatched with silver thatch palm leaves.

How a wattle-and-daub house was made

The framework

First of all, the wooden framework of the house was constructed. The ironwood is a strong **durable** wood, very suitable for a framework which needed to stand for a long time. Ironwood trunks were trimmed to make posts about 20 cm (8 or 9 inches) square. These posts were set deep into the ground, about 1.5 metres (4 to 6 feet) apart.



The walls

The walls of the house were made of strips of flexible wood, such as cabbage wood, plaited together. Each wattle section was called a wall-plate. The wall-plates were fastened onto the ironwood posts and openings were left for windows and doors.

The whole structure was waterproofed and glued by painting it with daub. Daub was a kind of plaster made from loose rocks and coral. The fragments of rock were burnt in a lime kiln to make what the settlers called 'white lime'.

The lime kiln was built of layers of coral rocks and green grape tree wood. The fire was lit from the top and the process of burning the daub mixture lasted for several weeks. The burnt remains settled at the bottom of the kiln in the form of a white powder. It was this 'white lime' which was mixed with sand and water to make the daub.

The roof

The roof of the house was made of wood and thatch. Wooden timbers shaped the roof and held up the thatch. Broad, wide-open thatch palm leaves were tied carefully onto the roof timbers so that they overlapped. The thatch roof protected the house from rain. It kept the house cool by reflecting the sun's heat away from the roof, but at the same time letting in the cool breezes.

Inside

The floor of these early houses was sometimes made of wood. Often, however, it was made of white sand from the beach. The inside of the walls was plastered in the same way as the outside. The ceilings were made of masonite. The walls of some houses owned by wealthier people were lined with masonite instead of being plastered.

Activity



- 1** Invite a National Trust Officer or an officer from the Queen Elizabeth II Botanic Park to speak to your class about the different types of tree used in traditional house construction.
- 2** Visit an old Caymanian house and study its construction. Draw pictures and diagrams of the frame, the roof and the wall-plates.
- 3** In groups, make a model house in the school yard or nearby using different types of wood. Find flexible twigs to weave together for wattle. Make a small lime kiln and experiment with crushed rock fragments to make daub. Use leaves of a suitable size as thatching material.

Bush medicine

'Bush medicine' gets its name from the variety of plants or bushes which were used to make it. Many of these plants can be seen growing in the Heritage Garden at the Queen Elizabeth II Botanic Park.

Here are four of the most common medicine plants and their uses.

- **ALOE VERA** (also known as 'semper vivie')
This was a very useful plant. The jelly inside the green skin was good for treating burns and cuts. Pills were made from the juice and used as a laxative. The juice was also used to discourage children from sucking their fingers or thumbs, because it was bitter. Today this plant is used by modern pharmacists in lotions, shampoos and soap, among other products.
- **CASTOR OIL PLANT** The oil of the castor oil bean plant was used as a laxative, as hair oil, to treat boils and as an ointment. The oil was extracted from the seeds, produced by the plant inside a green berry which grew darker as it ripened. The extract from a story by Ms Nester Ebanks from West Bay on page 119 tells you more about the process of extracting the seeds and processing them.
- **COCONUT** The coconut tree is a familiar sight. You have probably climbed a coconut tree and had rice and beans made with coconut milk, or coconut tarts or coconut candy, or a drink of coconut water on a hot day. But coconut is also a medicine. The early Caymanians found that coconut water is good for upset stomach, kidney problems and high blood pressure. We now know that this is because it is rich in important minerals, particularly calcium and phosphorus.
- **FEVER GRASS** This is also known as lemon grass, and it was used to make tea. The tea was a very effective treatment for colds and fever. It acts by making the sick person sweat, which lowers their temperature. Fever grass has a very pleasant smell. The leaves or blades are very sharp at the edge, and you need to be careful not to cut your finger when picking or using it.



Aloe vera



Castor oil plant



Coconut



Fever grass

- **BIRCH TREES** The trunks of birch trees are red, with a shaggy bark which peels off in paper-thin strips. The bark was soaked in water and the lotion was used on insect bites, to ease the discomfort. It was also used for sunburns, rashes, skin sores and measles. The sap was used as glue. Young people used it in making kites, boat sails and other items.



Birch trees

Children were taught not to destroy or damage the plants which were used for bush medicine, because they were very important.

Extracting the castor oil

The time to pick [them] is when they start to get dark. All of the seeds didn't get dark at one time, but when you would see a couple of the seeds dark, you would pick the whole bunch. Some bunches used to be about pretty near eight inches long. They were good big bunches. You would put that bunch in a bag and keep it outside so that the sun could finish developing the rest of the seeds. You would put it in a paper bag, or a cloth bag or pan. When the seeds got dry, we used to take a piece of stick or a piece of board and knock it. Most of the seeds would pop out and fall into the bag or pan. Some you would have to pop out with your finger. Seeds were black and shiny. Those days you used to use mortars for everything.

Once you got a quart of seeds, the seeds would be put in the oven first. In those days we used to have iron pots and what we called an oven had a flat bottom, and that sat on the caboose and we would heat the seeds with just a mild heat, then put them in the mortar and pound them until they were all crushed. We started early in the morning, because we had to boil the seeds after they were pounded. In the process of boiling, the oil would lie flat on the top of the water. You had to put plenty of water because it took a lot of boiling before the oil started to come up and you could start to skim it off ... we boiled until no oil was coming up. Then we took the oil and put it back on the fire. We'd boil it and boil it until it got free from water and we couldn't hear it cracking ... If the seeds were very oily sometimes we would get a pint of castor oil. We would put the castor oil in a bottle.

Nester Banks – West Bay (National Archive, used by permission)



- 1 Collect some samples of bush medicine plants such as aloe vera, castor oil, fever grass or birch bark and make a display in the corner of your classroom. Write labels for each sample explaining what the plant was used for.
 - 2 Use coconut to make candy and share it around the class. Ask your parents or grandparents for other food recipes which use coconut as an ingredient.
 - 3 Find the words and music for 'Under the Coconut Tree' and learn to sing it.
- E** Interview an older person in your community and find out how aloe vera pills were made. Make a tape recording and transcript of your conversation and write it up.

Other natural resources

Caymanians were very resourceful. They discovered many ways of meeting their needs using their natural environment and the resources it provided. Here are some examples.

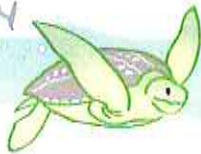
- Sea-fans or sea feathers and the mesh from the trunk of coconut trees were used to strain grated coconut to make coconut oil, coconut candies, stews and heavy cakes. The sea fans and mesh were also used to scrub pots and pans.
- Gourds or nuts (the hard outside case of the fruit from the calabash tree): the top was cut off, the fruit scooped out and the gourd washed and dried. A calabash gourd made a very convenient face basin.
- Rosemary and thatch branches were used for brooms. Generally the thatch broom was used to sweep the wooden house floor, and the rosemary broom was used to sweep the yards.



Our plants

Protect all plants
Wherever they may be
In the yard or in the sea
For if you do this
You will see
Plants are good for the ecology!

Activity



- 1 Collect samples of gourds, sea-fans and coconut mesh and display them in class.
 - 2 Make a thatch broom or a rosemary broom and learn to use it. How does it compare with a modern broom?
 - 3 Learn the verse 'Our plants' and write a tune for it. Share your tune with the rest of the class.
 - 4 Make a model sailing boat from a coconut husk. Use two coconut limb ribs for the mast and boom, and a grape tree leaf for a sail.
- E** Think up new practical ways of using some of the natural resources in our environment. Try these out and share the best ones with the rest of the class.

Round up

In this unit you have learned how early Caymanians used the natural resources found in their environment to meet their needs. You have learned how a wattle-and-daub house was made and which plants were used for bush medicine. You have experimented with various other practical uses of resources.

Multiple-choice test

Choose the correct ending to each sentence. Write down the number of the question, then the letter of the correct ending. Write out the whole sentence beside it.

- 1 Daub was made of
 - A woven cabbage-wood sticks
 - B thatch palm leaves
 - C crushed and burnt rocks mixed with water
 - D layers of coral rocks and grape tree wood.

- 2 Lemon grass was used as a treatment for
 - A stomach upsets and kidney trouble
 - B high blood pressure
 - C rashes
 - D colds and fever.

- 3 Another name for aloe vera was
 - A semper vivie
 - B fever grass
 - C nuts
 - D birch bark.

- 4 Castor oil was extracted from which part of the castor oil bean plant?
 - A the roots
 - B the seeds
 - C the leaves
 - D the stem.

- 5 Early Caymanians swept the sand yard with a broom made from
 - A thatch palm branches
 - B sea feathers
 - C cabbage-wood twigs
 - D rosemary branches.

A Social Studies Test



This test is designed as practice for the Social Studies end of year test. It tests the work you have done throughout Years 1-6, not just the work done in Year 6. All the questions are from examination papers set between 1995 and 2000 by the Education Department of the Cayman Islands government, and are reproduced with permission.

Answer all questions. Fill in the circle on the answer sheet which corresponds to the best answer. Do not write on this question paper.

Part 1

- 1 A government in which everyone shares in the decision-making process is a
 - A Commune
 - B Democracy
 - C Anarchy
 - D Dictatorship[2000]
- 2 Which of these Caribbean Islands has a communist government?
 - A Cayman Islands
 - B Haiti
 - C Cuba
 - D Jamaica[1997]
- 3 Which country does the pineapple in the coat of arms of the Cayman Islands represent?
 - A Bahamas
 - B Jamaica
 - C St Lucia
 - D Barbados[1999]
- 4 How many members are elected to serve in the Legislative Assembly of the Cayman Islands?
 - A 5
 - B 8
 - C 12
 - D 15[2000]
- 5 The Cayman Islands National Flower is
 - A The hibiscus
 - B The banana orchid
 - C The red rose
 - D The zinia[1999]
- 6 The motto of the Cayman Islands is
 - A Out of many, one people
 - B He hath founded it upon the seas
 - C In God we trust
 - D He hath guided us through the years[1997]
- 7 Marine Parks were introduced in the Cayman Islands to
 - A Control mosquitoes
 - B Control the number of tourist ships which come here
 - C Keep stray dogs and cats off the street
 - D Preserve conchs, lobsters and turtles[1996]

Part 2

- 8 Which of the following best describes who is a 'tourist'?
 - A A person who is an American
 - B A person who lives in hotels
 - C A person who goes scuba diving
 - D A person who is visiting from another country[1995]

9 What is the name of the body of water which surrounds the Cayman Islands?
 A The Pacific Ocean
 B The Ocean
 C The Caribbean Sea
 D The Cayman Trench
 [1997]

10 In which continent is England located?
 A South America
 B Asia
 C North America
 D Europe
 [1999]

11 The counting of the population is called
 A Immigration
 B A numeration
 C A census
 D A constitution
 [1999]

12 To export means to
 A Sell goods to another country
 B Buy goods from another country
 C Borrow goods from another country
 D Lend goods and services to another country
 [1997]

13 In order to operate in the Cayman Islands, a foreign bank must have a
 A Business licence
 B Caymanian manager
 C Caymanian partner
 D Branch of the same bank in Cayman Brac
 [1995]

Part 3

Use the map to answer questions 14–18.
 [1996]



- 14** Which of Cayman's Caribbean neighbours is the most northerly?
A Cuba
B The Bahamas
C Jamaica
D Martinique
- 15** Which direction is Trinidad from Cayman?
A North East
B North West
C South East
D South West
- 16** Which of the following Caribbean territories is to be found in South America?
A Guyana
B St Vincent
C Trinidad
D Turks and Caicos Islands
- 17** The North American state which is nearest to the Cayman Islands is
A Miami
B Florida
C Atlanta
D Tampa
- 18** Tegucigalpa is the capital of which Central American country?
A Mexico
B Belize
C Guatemala
D Honduras
- 19** Which one of the following is a Dutch-speaking Caribbean country?
A Bonaire
B Puerto Rico
C Trinidad
D Anguilla
[1997]
- 20** The Commonwealth Caribbean consists of
A Jamaica, Barbados and Cuba
B All countries in the Caribbean
C All the independent countries in the Caribbean
D All the countries in the Caribbean region which were once ruled by Britain
[1997]

- 21** One Caribbean country that has a thriving bauxite industry is
A Barbados
B Cayman Islands
C Jamaica
D Grenada
[1996]

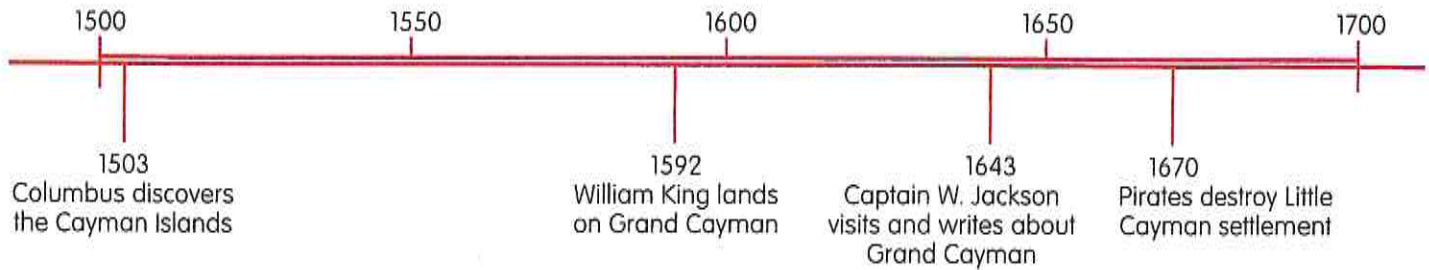
Part 4

- 22** Much of South America lies in a tropical region. The climate of this part of the world is most likely to be
A Hot all the time
B Hot in summer and cold in winter
C Cool all the time
D Cold in summer and hot in winter
[2000]
- 23** This hurricane caused much damage in Honduras and Nicaragua.
A Georges
B Mitch
C Allen
D Gilbert
[1999]
- 24** Flora refers to all the plants of a region. What does fauna refer to?
A Animals
B Flowers
C Plants
D Fruits
[1997]
- 25** The presence of harmful substances in the environment is called
A Conservation
B Pollution
C Consumption
D Preservation
[1999]

Part 5

- 26** Originally, George Town was called
- A King George's Town
 - B Hog Sty Bay
 - C Bloody Bay
 - D Old Isaac's Town
- [1996]

The time line below shows events which took place in our history from 1500 to 1700. Use this information to complete questions 27–30 [2000]



- 27** How many years are represented on this time line?
- A 100 years
 - B 200 years
 - C 1500 years
 - D 1700 years
- 28** In what year did William King land on Grand Cayman?
- A 1503
 - B 1550
 - C 1592
 - D 1670
- 29** When was the Little Cayman settlement destroyed?
- A After William Jackson's visit
 - B Before William Jackson's visit
 - C During William Jackson's visit
 - D None of the above
- 30** In what year and by whom were the Cayman Islands discovered?
- A 1592 William King
 - B 1643 Captain W. Jackson
 - C 1670 Blackbeard the Pirate
 - D 1503 Christopher Columbus

List of words and meanings

Abolition putting an end to slavery

aggregate pieces of crushed stone

aerial roots roots which grow above ground

algae simple water plant related to seaweed, which grows on stones and the trunks of trees

apprentices a name used between 1834 and 1838 for slaves who were free in some ways but not others

approximate nearly, almost, but not exactly

archipelago a group of islands, e.g. the Bahamas

brackish slightly salty

case study a detailed study of one area or organisation, which tells us something about other similar ones

catastrophe large-scale disaster

census an official count of all the people in a country

chronometer accurate clock

collaborate join with someone in a project

colonise take control of an area which previously belonged to someone else

commercial enterprise business in which you make a profit by buying and/or selling goods and services

communication collecting and distributing information

communications network a system of air and rail routes and roads linking places in a country

conservation looking after and preserving the natural environment

constitution rules for governing a country

debris bits and pieces broken off or discarded

definition a sentence or phrase which describes something accurately

demographer someone who studies population changes

deserter a soldier who leaves the army without permission

deterrent a threat of punishment which discourages people from choosing a wrong course of action

dictator ruler who is in sole charge of a country

durable long-lasting and hard-wearing

economy activities concerned with producing goods and providing services

ecosystem a group of wild land or marine animals or birds, and their environment

elevation height above something

emigration leaving one country to live in another

Emancipation the process of freeing slaves

environment our surroundings

equivalent of equal value, or standing for the same thing

estimate a guess based on good evidence

exoskeleton bony structure found on the outside of an animal or fish, rather than on the inside

expatriate someone living abroad rather than in their own country

export product something made, caught or harvested in order to sell it abroad

fertility rate the number of children each woman has, on average

flora and fauna the wildlife of an area, including both plants and living creatures

fore-and-aft a type of rigging used in schooners, sloops and yawls, contrasted with the square rigging used in medieval ships such as Columbus's *Santa Maria*

foreign exchange money earned from abroad which makes it possible for us to buy goods and services from other countries

geology the study of rocks and the Earth

habitat where something lives or grows

higher education education at the end of school, e.g. university

hunter-gatherer someone who hunts animals and collects wild plants and fruits for food

hydrological cycle another name for the water cycle, whereby moisture is heated by the sun, evaporates into the atmosphere from ponds, wetlands and other areas of water, becomes clouds and finally falls as rain

igneous rock rocks made from cooled lava from a volcano

immigration coming to a new country to live.

infrastructure basic services and needs in our society, e.g. roads, education, medical and social services, the police force

interior the part of a continent away from the coast

inundation flooding

landfall arrival in a country

land-locked surrounded by land on all sides

land reclamation creating land for building and cultivation by draining or filling in wetlands

linguistics the study of language

literacy rate the percentage of people who can read and write

magma hot molten rock under the Earth's surface

malnutrition an absence of necessary nutrients in the diet

migration moving from one place to another

moderate avoid extremes in something

multicultural society a society where people come from many different cultures and usually from many different races as well

natural environment things in our surroundings which were not made by human beings

navigable a waterway on which a boat can be used

over-population situation where there are too many people in a country

pardon an official document forgiving someone for a crime

polyp simple creature, usually living in the sea, which stings its food with its tentacles; e.g. sea anemone and coral

predator an animal which feeds on other animals

privateer a buccaneer who attacks ships on behalf of the government during war time but for himself during peace time

proclamation an official message

promote advertise and market

pulses crops such as beans and peas

reclaimed land land which used to be covered by water or swamp

recruit find new employees for a company, or workers for a project

regulate make rules for

replenish fill up again

responsibilities the duties we owe to our country or to a group of people, in return for belonging

restaurateur person who runs a restaurant or eating-place

rights things we are allowed to do and ways we must be protected, as citizens

salvage rescue or make use of things which have been lost, e.g. in a shipwreck

sedimentary rocks rocks made up of many layers of debris carried by rivers

seismic activity volcanic eruptions and earthquakes

shallow draught small depth of keel to allow ships to sail in shallow waters

shanty a song usually associated with the sea and sailors

sovereign monarch (king or queen)

sphere a three-dimensional shape which is circular in every direction, like a ball

sponsor someone who pays for a project carried out by someone else

stratosphere the highest levels of the Earth's atmosphere

subsidy payment (usually made by the government) to help someone give their services cheaply or free to those who cannot afford to pay the full fee

tally system a system of counting without using numbers

telecommunications types of communication related to telephone, radio or television, usually using satellites or long-distance cables

terrain land

transpiration process by which plants release water into the atmosphere through their leaves

unique the only one of its kind

vessel ship or boat

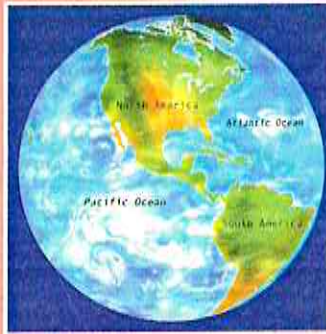
volcanic eruption what happens when magma from beneath the Earth's crust bursts out of the top of a volcano as lava

CAYMAN

CAYMAN

Primary Social Studies

THE WORLD AT A GLANCE



Cayman Primary Social Studies Books 1–6 were written to complement the Social Studies Curriculum and the general teaching of Social Studies in the Cayman Islands. The varied activities have been designed specifically to be appropriate for each age group. There are two accompanying Teacher's Books covering levels 1-3 and 4-6.

The sixteen authors, who are teachers from throughout the education system, were brought together to write the booklets in a series of workshops held from 1996 to 1999. The workshops were sponsored by the Cayman Islands Government Education Department. However, much of the funding came from the United Nations Development Project Funding for Curriculum Development (UNDP).

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