HUMAN NEEDS AND ENVIRONMENTS

SOCIAL SCIENCE YEAR 8

HUMAN NEEDS AND ENVIRONMENTS

Student's Book
Year 8

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Revised by Leisara Obed, following recommendations from the Social Science workshop held at Matevulu College in April 1995

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Contents

SECTION 1

MAN'S BASIC NEEDS

NEEDS AND WANTS

We all need certain things in order to live. Without them, we will die! These are called our **basic physical needs**, or our basic needs for **survival**.

There are many other things that we like to have in order to make our lives better, or more pleasant. Sometimes these are called our **wants** or **desires**.

ACTIVITIES

1. Group work: Our needs and wants

Study the pictures A to L on page 7. The class should then divide into small groups, with 4 to 5 students in each group. The group must then carry out the following tasks:

*a) Decide on a suitable name for each picture, and say what kind of need it represents. For example, picture A shows a plate of fish, yam and island cabbage. It represents man's need for food (or **nutrition**).*

b) Sort out the pictures into two groups:

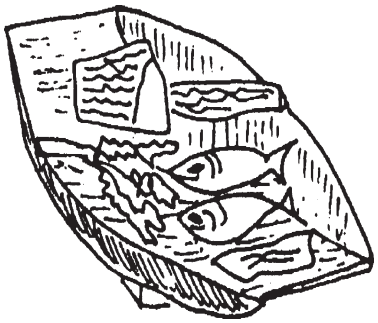
I Those that show needs that are essential for survival

II Those that show things which help to make our lives better or more pleasant

c) Decide on what you think are man's five basic needs for survival, and place them in order of importance.

d) Discuss how basic needs for survival will vary in different parts of the world. Give examples to support you opinions.

A



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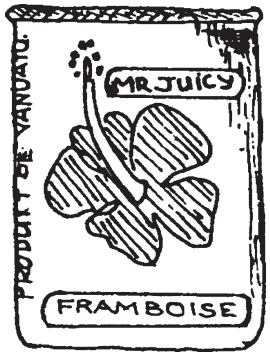

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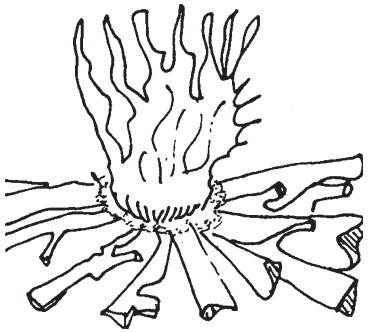

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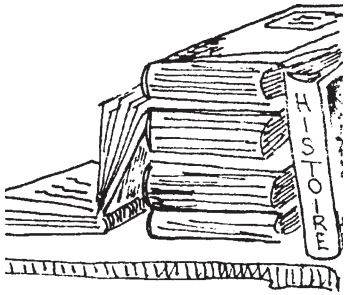

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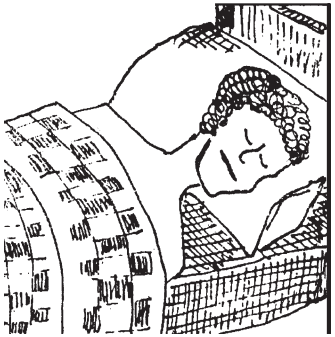

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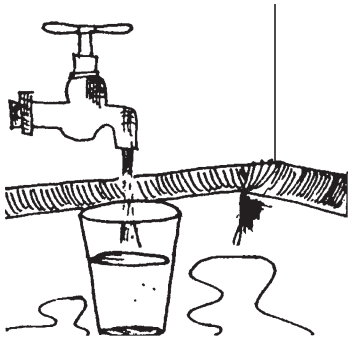

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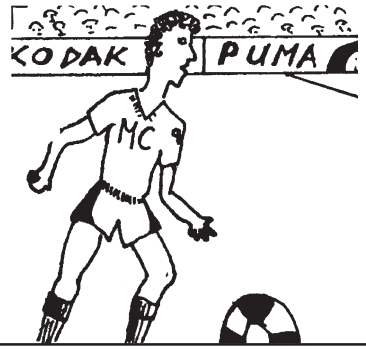

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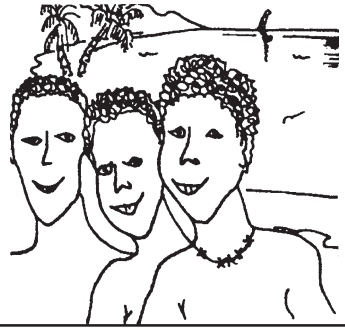

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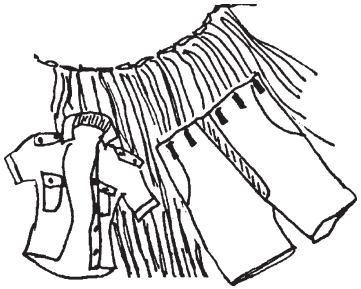


Each group should report its findings to the rest of the class. A summary of the results can then be done.

2. *Draw a picture of yourself at home, with all your favourite belongings around you. If there was a sudden cyclone, and you could save any <u>three</u> things, which would you choose? Explain why!*

3 *"Ordeal in the jungle"*

Read the extract provided on the right, and then answer these questions:

*a) How did the father and son **satisfy** their basic needs?*

b) Why did they move around in circles?

c) Why did they cover themselves with leaves at night?

d) Why did they eat two birds raw?

*e) Imagine you are the son, Poe. Write a short statement for the newspaper describing your **ordeal** and the things you thought about most.*

4. *For discussion*

*What is meant by man's **social needs**, and his **spiritual needs**? Do you think that these are as important for living as man's physical needs?*

Father, son survive ordeal in jungle

APIA. - An elderly man and his 10-year-old son have stumbled into a Western Samoan village after a 2½ day jungle ordeal.

The Samoa Times says Mr George Tyrrell and his son, Poe, lost their way during a hunting trip with relatives.

They suffered from extreme,cold, thirst and hunger and, at times were moving around in circles.

Because they were lightly dressed, they covered themselves with leaves at night.

After finishing the little food they had, they ate two birds raw.

But their biggest problem was thirst. The boy cried constantly for water and his father squeezed some from vines and bamboo.

At one stage, father and son had to drink water from a dirty creek to satisfy their thirst.

Police were beginnning a search for them on the day they arrived at the village.

THE FIJI TIMES - MONDAY 4 SEPTEMBER, 1972

FIVE STORIES OF SURVIVAL

There are many true stories of individual people or groups who have found themselves lost or in difficulties. They have to learn to satisfy their basic needs for nutrition, water, shelter, clothing and sleep, or else they die!

Here are five such stories. As you read them, look for the ways in which the people were able to survive.

Castaway

Alexander Selkirk
(1676 - 1723)

Alexander Selkirk was a sailor. He was born in the small town of Largo in the Country of Fife in Scotland in the year 1676.

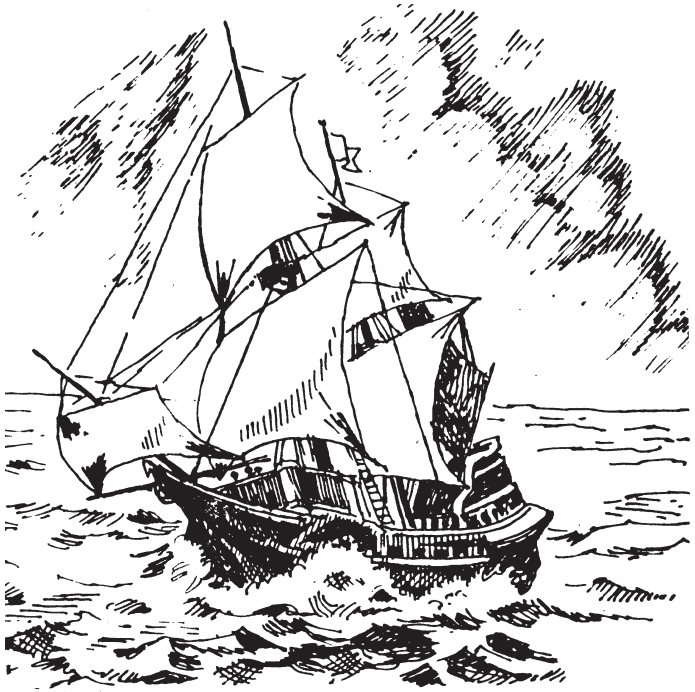
How many years is it since Alexander Selkirk was born?

How far is Scotland from where you are now?

Sailing across the Atlantic

In 1704 he sailed from London on a small ship - called a galley - which was named *Cinque Porte*. The ship sailed across the Atlantic Ocean round Cape Horn into the Pacific Ocean.

Find Cape Horn in your atlas.



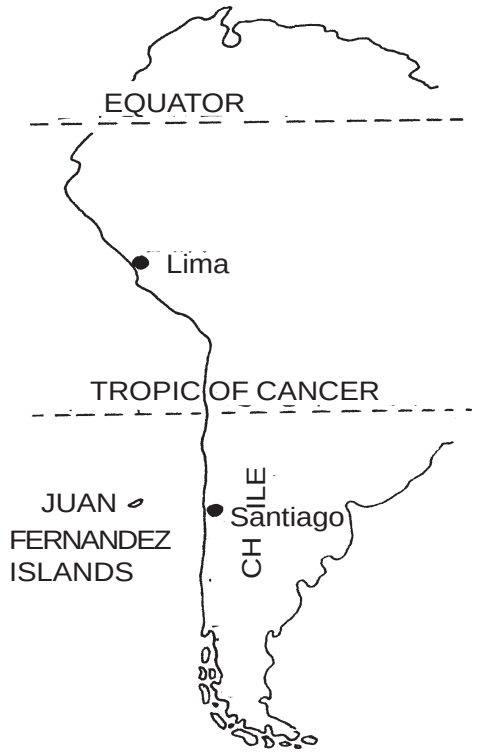
Alexander was a good seaman. He could climb the rigging easily, he worked on the ropes skilfully and he knew how to navigate carefully.

But he had a bad temper, and often found himself quarrelling with other members of the crew.

Quarrel

One day he had a quarrel with the Captain, Thomas Stradling. The Captain was very angry and wanted to punish Alexander severely. He wanted to have him flogged.

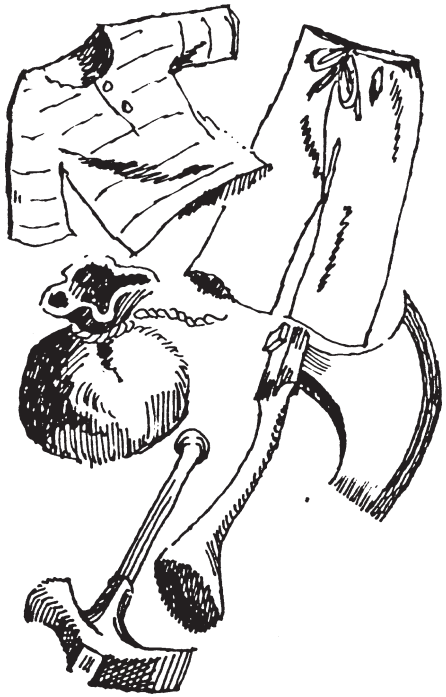
Then the galley came to an island, the island of Juan Fernandez. It was about 960 kilometres from the coast of Chile. No-one lived on it. It was completely desented.



Marooned

Captain Thomas Stradling decided not to flog Alexander but to put him ashore and leave him all alone on the island, and then sail away. Alexander had no choice. He was put in the longboat with a few tools and rowed ashore.

The Captain had given Alexander an axe, a hammer, some tinder and a flint for making a fire, and some spare clothes.



Alexander was left on the shore. The longboat was rowed back to the ship, and he watched it sail away. Alexander was a castaway.

He was completely alone - he did not see another person for four years and four months.

How many days was this?

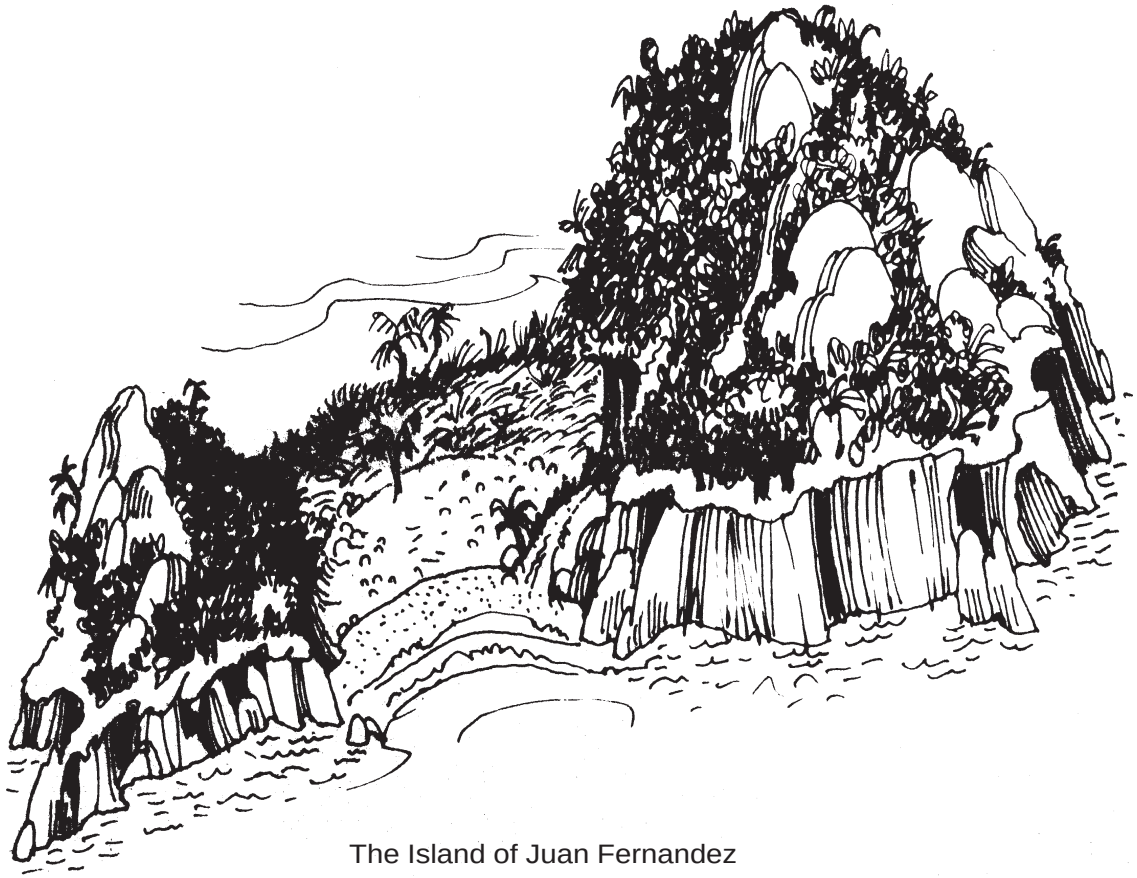
ACTIVITIES

1. *If you were Aleander Selkirk, alone on the island of Juan Fernandez in September 1704, what would you do?*
2. *How would you keep yourself alive?*
3. *What things would you need straight away:*
   a) that you had with you?
   b) that you did not have with you?
4. *What other things would you lack that were very important?*

Exploration

Alexander Selkirk first explored his island. He found that it had two hills and was part of the rim of an old volcano. It was covered in bushes and trees. There was some flat land.

He climbed the hills and could see no other land from the top of either of them. All he could see was the Pacific Ocean. Then came the night. He could see many stars.



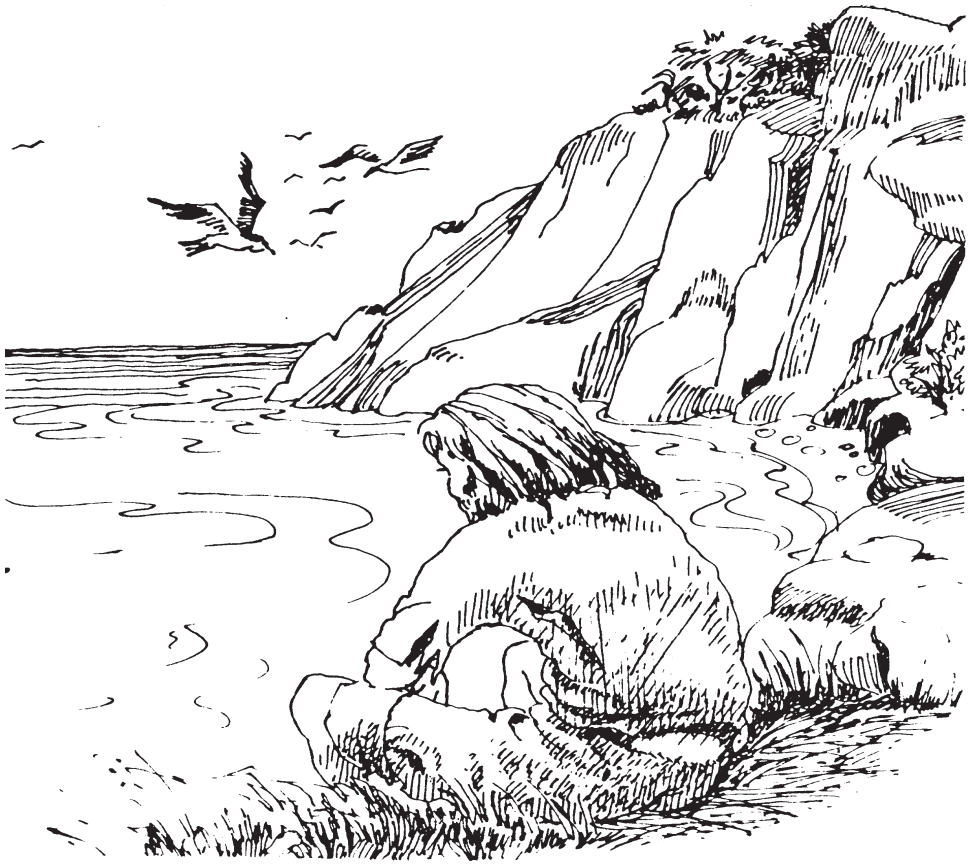
The Island of Juan Fernandez

At first Alexander Selkirk spent much time thinking. He worked out what he needed, then what he would like to have (we call these his **desires**) and then planned how he would meet his basic needs and his desires.

He kept himself alive.

ACTIVITIES

1. *Make a list of the most important things Alexander Selkirk needed to stay alive.*
2. *Write down the things you think he would have missed very much.*
3. *Suggest things he would have liked with him at first.*
4. *Draw a life-space diagram to show how he spent his first full day on the island.*



Telling time

Alexander did not have a watch with him, but he was able to tell the time. How do you think he did this? How many other ways can you think of?

An Extra Activity

Using a stick and the shadows cast by the sun, make a simple 'sun clock'.

Rescued

One day - the last day of January 1709 - he was in his “lookout” when he saw a ship on the horizon. It came straight to his island: he was overjoyed.

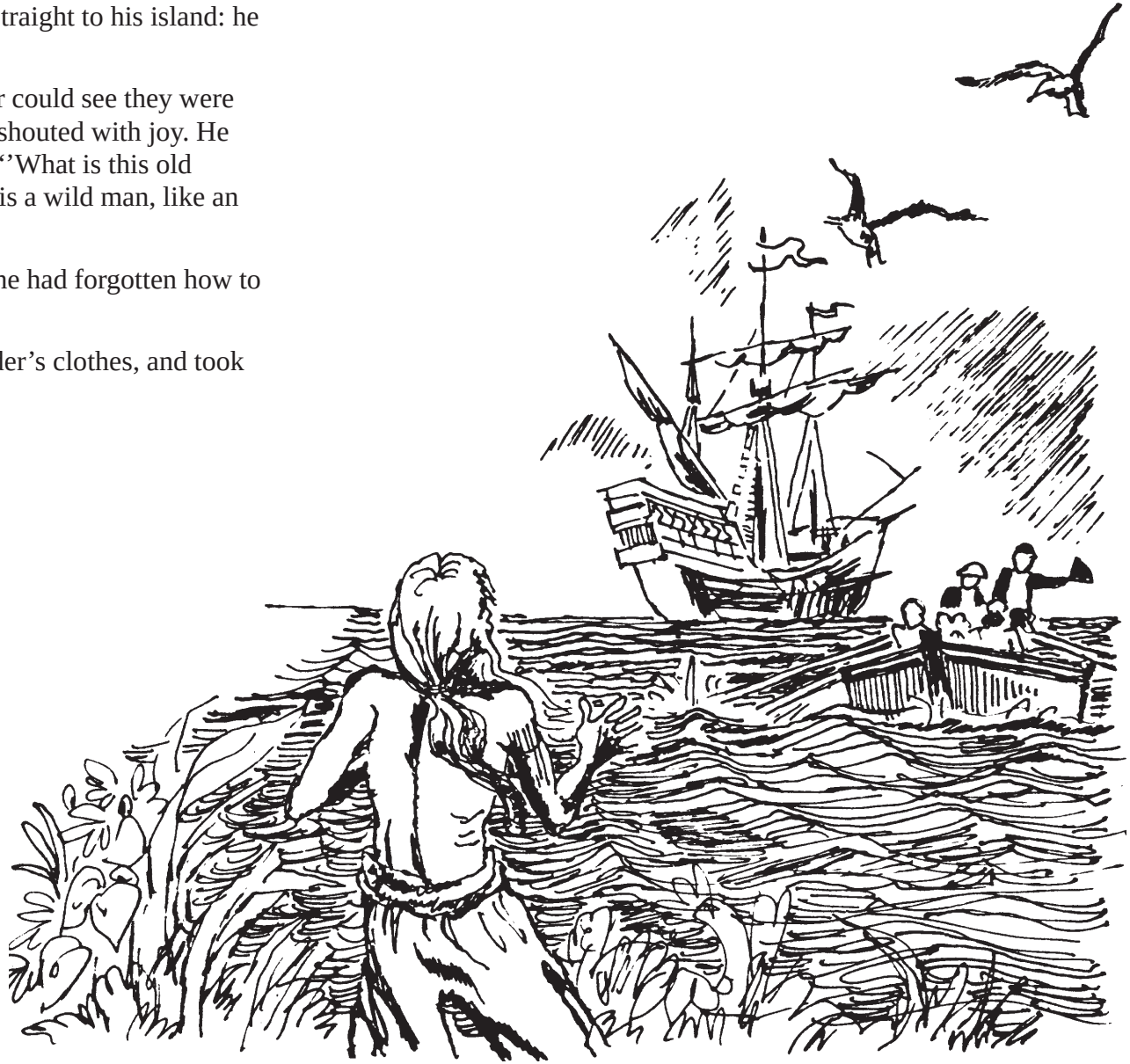
Sailors came ashore in a longboat. Alexander could see they were British sailors. He rushed towards them and shouted with joy. He spoke to them, but they only looked at him. “’What is this old fellow saying?” they said to each other. “He is a wild man, like an animal.”

Alexander had been by himself so long that he had forgotten how to speak English properly.

After a while, the sailors recognised Alexander’s clothes, and took him to their captain on the ship.

ACTIVITY

Enact a role-play to show this meeting.



Captain Woodes Rogers spoke slowly and carefully and Alexander did too. Eventually, Alexander learnt to speak English properly again and he was taken off his island on 12 February 1709 on the ship *Duke*.

They sailed back to London after many months at sea and Alexander reached Largo in 1712. He had been away eight years.

On Juan Fernandez Island, at a place called ‘Selkirk’s Lookout’ is a plaque with this written on it:

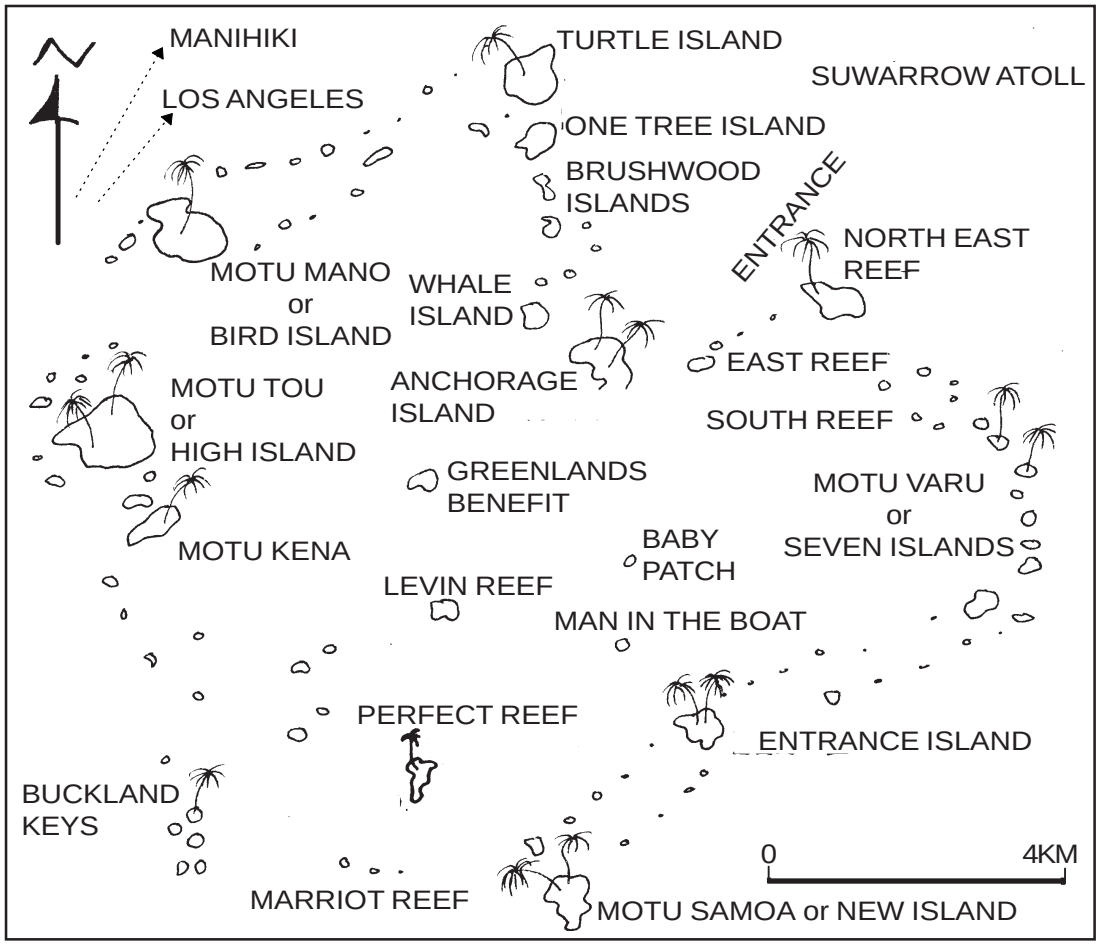
> *In Memory of Alexander Selkirk, Mariner,*
>
> A Native of Largo in the Country of Fife, Scotland, Who was on This Island in Complete Solitude for Four Years and Four Months. He was landed From the ‘Cinque Porte’ Galley, 96 Tons, 16 Guns, 1704 A.D., and was Taken off in the ‘Duke’ Privateer, 12 February 1709. He Died Lieutenant of the ‘Weymouth’ 1723 A.D. Aged Forty-Seven years. This Tablet is Erected near Selkirk’s Look-Out by Commodore Powell and Officers of H.M.S. ‘Topaze’ 1868 A.D.

Man Alone

Tom Neale spent six years alone on the coral atoll of Suwarrow in the northern Cook islands.

Tom was not marooned or shipwecked. He was not forced to stay on Suwarrow. After much thought about it he went there by choice. When he was taken off after more than two years he later chose to return to Suwarrow.

Tom lived on Anchorage island (shown on the map). It is about a kilometre long and 300 metres wide.



Why did he go?

Tom Neale had lived and worked in different Pacific islands for over thirty years. He liked people but he was a bachelor and was used to looking after himself. He was fifty years of age and in good health.

Tom thought for a long time about living alone before he decided to try it.

He knew of an island that he thought would suit him. He went to look at it. It had a hut, a good water supply and useful things left by previous occupants. There would be plenty of seafood and coconuts and he planned to grow a garden. It was now deserted and Tom wanted to try living alone to see what it would be like.

Tom spent a lot of time thinking about Suwarrow. He saved money so that he could buy things he would need. He had just under $100.

He wrote three headings and made lists under each:

1. Personal Effects
2. Tools
3. Eating and Cooking

Here are some of the things he took.

Personal Effects

A few clothes and six pairs of rubber soled tennis shoes
A first-aid set
A 'housewife' (a little packet with thread, needles and other mending material)
Sleeping gear (sheets, pillows, blankets and a mattress)
Toothpaste, soap and shaving gear
A pocket knife
Writing materials (Tom kept a diary which became the basis of his book)
Books (Tom was a keen reader)
A calendar (but not a clock)
Some tobacco (he smoked one cigarette a day)

Tools

A barometer (A friend gave him this Why would it be useful?)
A pick, a shovel and gardening tools
An axe and a tomahawk
Tin snips (a heavy cutting instrument)
A hammer and nails
Iron (for spear tips)
Three files
Fishing gear (a spear, hooks and lines)
Ten volcanic stones for a cooking oven (Why were coral stones no good?)
A bicycle pump. He could not think why he should take it, but later found it useful for spraying his vegetables.

Tom did not take a radio or a radio transmitter. Why?

He also took:
Seeds for a vegetable garden
Two cats to keep down the rats on Suwarrow.

He forgot to take:
Enough tinned meat (Tom worked very hard and needed a good diet)
Some material to caulk (fill the cracks) of the small dinghy left on Suwarrow.

Things Tom did first

What were the first things that Tom Neale did when he was alone?

1. He stored his gear safely.
2. He explored his small island and noted useful plants and objects.
3. He cleaned the hut and repaired the roof. (The hut was pegged down with wire and rock 'anchors' well before the hurricane season.)
4. He gathered plenty of firewood and make a store before the rainy season started.
5. He built a fowl run and tamed the wild fowls by feeding them regularly. He had plenty of eggs.
6. He planted bananas and other crops. But before the garden would grow well he had to spear five wild pigs which lived ot he island.
7. He placed a special 'survival kit' in a hole

dug inside the hut in case there was hurricane or other emergency. This kit contained matches, tools and some food.

Things Tom did later

He repaired the old dinghy using a mixture of rope strands and paint to seal the cracks.

He collected some topsoil from one part of the island and brought it back for his garden.

He collected hundreds of eggs from the terns which nested on the island.

He made friends with a wild duck which had flown on to Suwarrow. Although he killed and ate the rooster he could not bring himself to kill the duck.

Things Tom did each day

He speared or caught fish or crayfish for himself and his two cats. Any scraps of food left over were fed to the fowls or dug into the garden.

Some events

One night Tom knocked over a tin of his precious kerosene. Later he made candles so that he could continue reading at night.

A shark took a fish off the end of his spear one and knocked him over at the same time.

Some real problems

Tom spent six months carrying large blocks of coral to build a small jetty. A hurricane occurred and destroyed his work in less than six hours.

He got coral poisoning and lay ill in bed for several days.

Tom was a careful man. He did things slowly. Yet one day he did something that nearly cost him his life. While throwing out the anchor of his boat he hurt his back. He could hardly crawl back to his hut. He lay there and would probably have died had not two American yachtsmen come just at that time. They stayed until his health improved.

It was then that they persuaded Tom to return to Rarotonga for a medical check.

Return to Suwarrow

Later he returned to Suwarrow, this time to live there for another two and a half years. Visitors called, but Tom was always glad when he had his island to himself again.

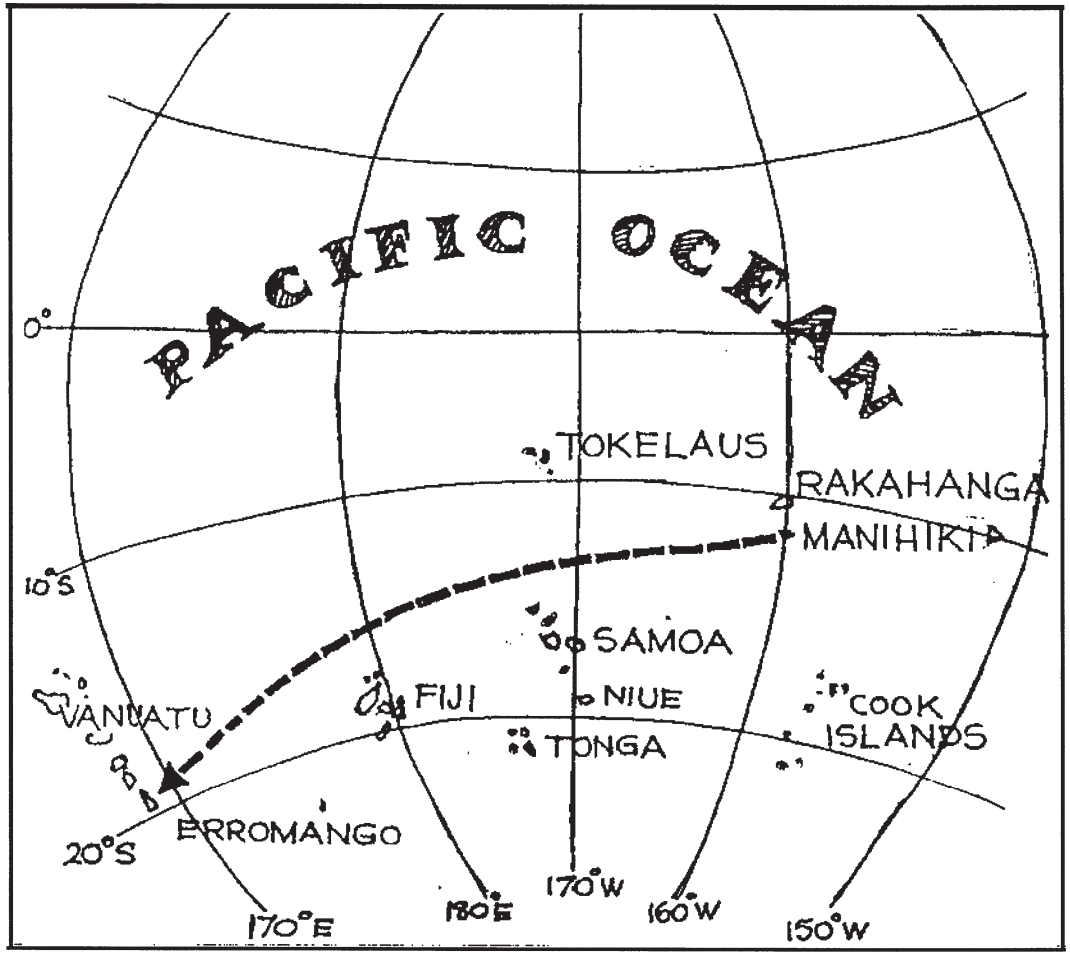
But eventually he decided that he would have to spend his old age with other people close by. On 27 December 1963, Tom Neale left Suwarrow for the last time.

He then wrote a book, ***An Island to Oneself*** (Fontana, Collins). Here you will find the whole story of this remarkable man - one in a million - who wanted to live by himself.

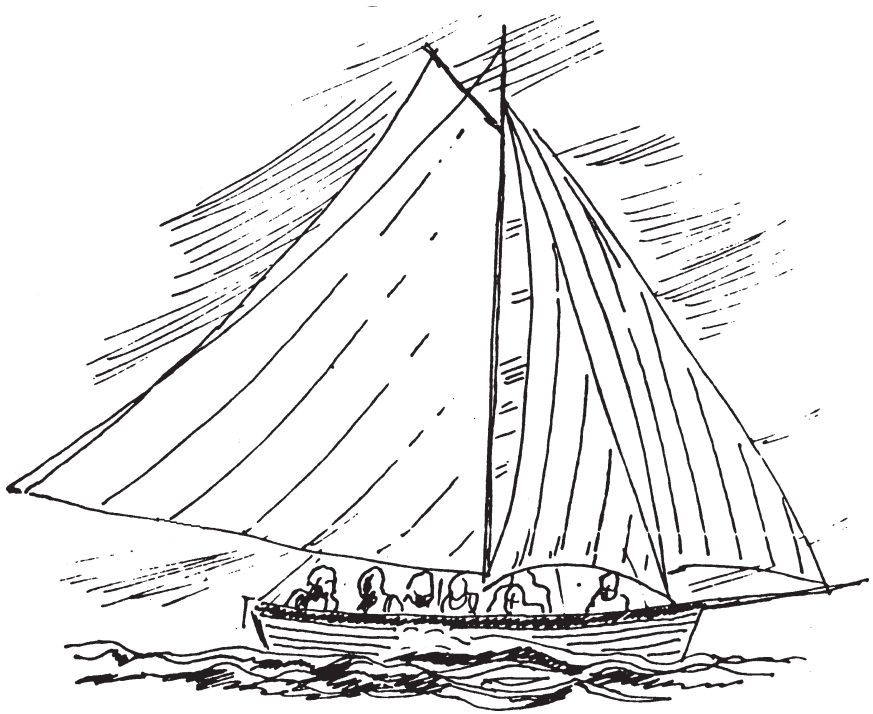
ACTIVITIES

1. *Enact a role-play to dramatise the incident when Tom Neale hurt his back throwing his anchor overboard, crawled to his hut and remained there, hardly able to move, until the two visitors came.*
2. *Write down a list of ten things you would miss most if you lived on an island by yourself like Tom Neale. Put your items in order of importance - with number 1 the item you would miss most and number 10 the item you would miss least.*

The Long Voyage of the 'Tearoha'



The *Tearoha*



On 12 August 1963 for small boats left Manihiki for Rakahanga in the northern Cook Islands. They went to get food because there was very little on Manihiki. One of the boats was a small cutter called the *Tearoha*.

It was five metres long and nearly two metres in beam.

Members of the crew

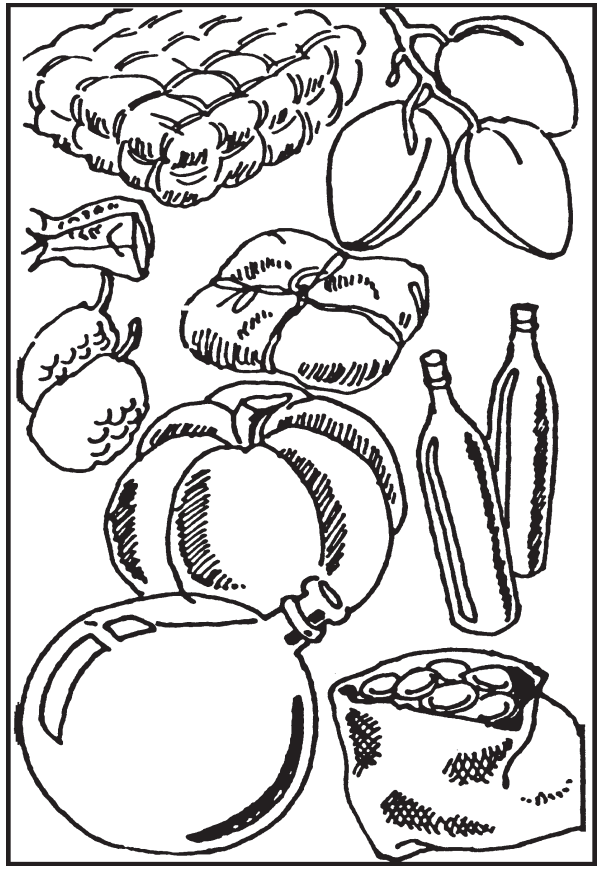
There were seven members of the crew.
Enoka Dean (Captain) aged 43
Teehu Makimare
Toke Tuhe
Tupou Papai
Kita Marsters
Tom Tangimetua
Taia

They were pearl divers who lived on Manihiki.

Provisions

At Rakahanga they loaded the boat with provisions:

20 sacks of puraka (dalo/babai)
10 sacks of breadfruit
4 pumpkins
4 mature coconuts
12 drinking nuts
15 kg of biscuits
Some cooked food for their journey home
One glass fishing float full of water
2 bottles of kerosene
They also had a Bible and a watch with them.

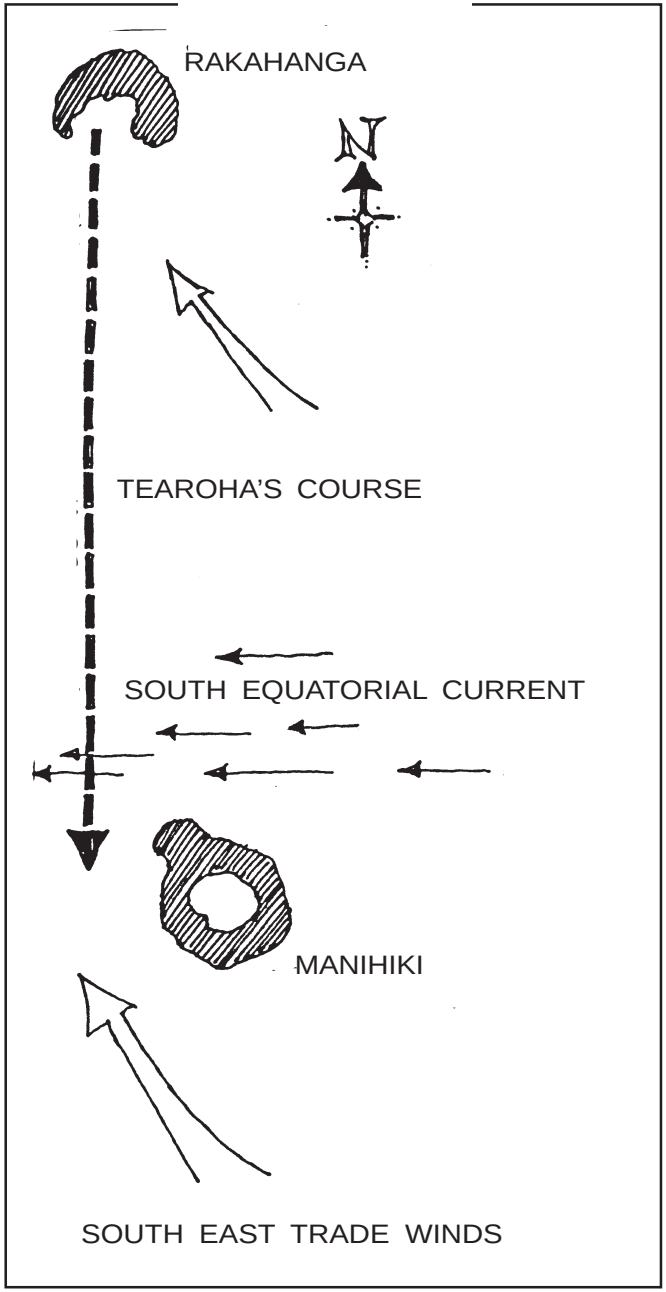


First Boat

Enoka set sail for Manihiki on 17 August 1963. His was the first boat to leave Rakahanga. Enoka was short-tempered. He set a course to the west of Manihiki. Teehu told him to change course, but Enoka would not; he was the Captain.

Storm

A storm blew up and the staysail jib broke. The crew hurriedly took down the mainsail and tried to stop the boat turning over. They could see Manihiki but could not reach the island.



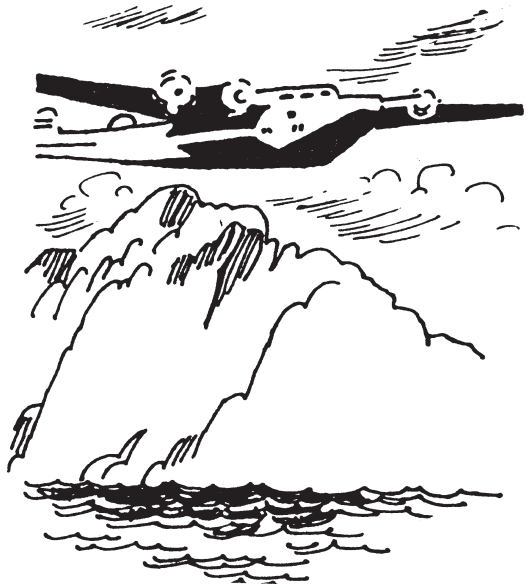
That night, in order to lighten the boat, the crew threw ten sacks of puraka over the side into the sea.

When dawn came they could see no land. They tried to repair the jib. The wind was strong so Enoka decided to sail before the wind to the island of Pukapuka which lay to the west.

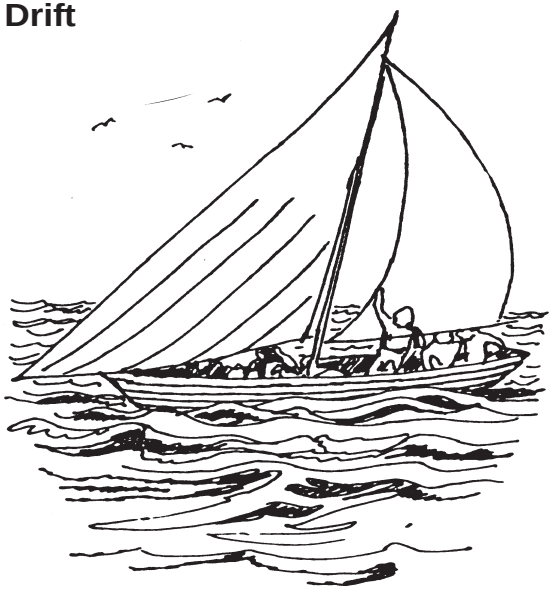
The Search

When the *Tearoha* did not arrive in Manihiki with the other boats, a flying boat from the Royal New Zealand Air Force base at Laucala Bay, in Fiji, was asked to search for it.

The men on the plane saw nothing.



Drift



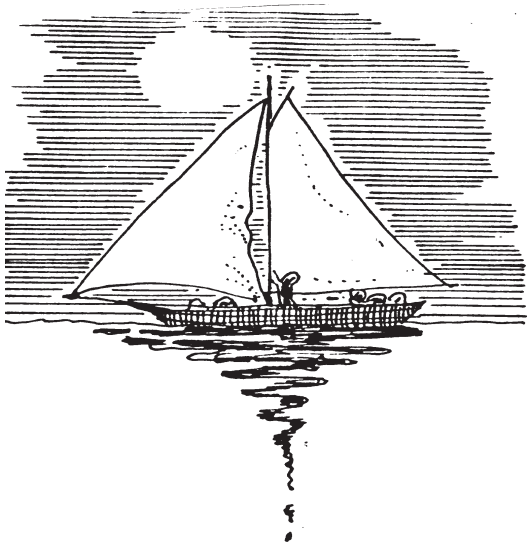
The crew of the *Tearoha* drifted on with the current and the wind and did not see the aeroplane.

The men in the boat were hungry and thirsty.

ACTIVITIES

1. *Make a list of what they could eat.*
2. *Name two basic needs apart from food which they required in the open boat.*

After seven days drifting westwards, they realised they had sailed past Pukapuka. The next land, Samoa, was about 800 kilometres further on.



Enoka was too weak to hold the tiller and Teehu Makimare took over. He made suggestions to the others.

ACTIVITIES (Cont.)

3. *What do you think they decided to do? Imagine you were in the boat on the wide sea, not sure where you were and unable to see land. What would you do?*
4. *Enact a role-play to show how the crew of the Tearoha planned the next part of their journey.*

They sailed on.
They caught no fish.
One day a waterspout rushed close by them. They were very frightened.

Food

They drifted on and on. Food became very short. Kita and Tom were very weak too and lay down in the bottom of the boat. Nobody spoke very much. They were now without water for there had been no rain.

They said prayers each night and each morning.

Hurricane

Then one day the sky became overcast. The wind blew strongly. There was a hurricane.

The boat was caught by a strong gust of wind and capsized into the raging sea.

Rescue

Fortunately five members of the crew could swim. Teehu noticed that Kita and Tom were trapped underneath the upturned boat. He dived down and rescued them.

Then he made a raft of the sails and spars and tied them to it.

He asked the others to hang on to the upturned boat.

The sea was rough, the wind blew strongly and the rain stung their faces.

Enoka wanted to die.

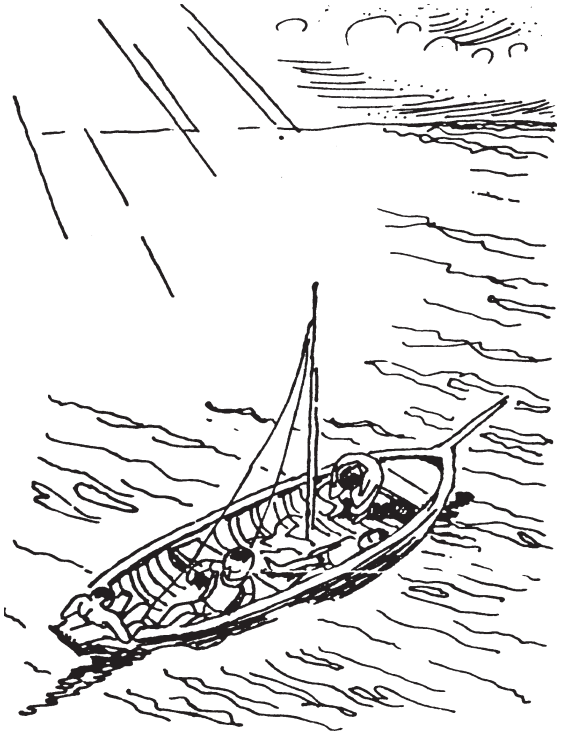
Teehu and Taia with Toke and Tupou tried to turn the boat upright. After a long time they succeeded. They all tried to get in, and it turned over again. After two more hours they righted the boat for the second time.

They got in and baled the water out. Then Teehu noticed that Kita and Tom were nowhere to be seen. They had drowned.

Enoka died in the boat during the night. He was buried at sea.

Four of them drifted on - Heehu, Taia, Toke and Tupou. They had all lost their things from the boat. They were now extremely weak.

How do you think they kept themselves alive?



Land

On 16 October, Teehu woke up and saw land - a large, high, forested island. He heard the waves crashing over a reef. He woke the others but they were too weak to look over the side of the boat. Teehu took their shirts off and made a sail of them, and very slowly the boat drifted into the island. They landed next day, sixty-four days after leaving Rakahanga.

Teehu made the others go in the shade of a coconut tree. He found a coconut, split it open on a stone, and gave them milk to drink and flesh to eat.

The next day a man and his two sons out hunting found them. They took them to a mission station, and after three days to a big hospital.

What do you think was the first question Teehu asked the hunters?

Why do you think they were taken to hospital?

They were all very weak from lack of food and water, and exhausted from exposure to the sun, wind and the sea.

They found they had landed on the island of Erromango in the New Hebrides (Vanuatu). In their small boat they had drifted about 3200 kilometres from Manihiki.

Taia was so weak that he died in the big hospital in Vila. Of the seven crew who started only three people survived: these were Teehu, Toke and Tupou.

There was both sorrow and great rejoicing when the news was sent by radio to Manihiki. When the three survivors were strong again they were flown back home, and a great welcome ceremony was held for them.

Teehu Makimare was awarded the Stanhope Medal for his brave life-saving deed.

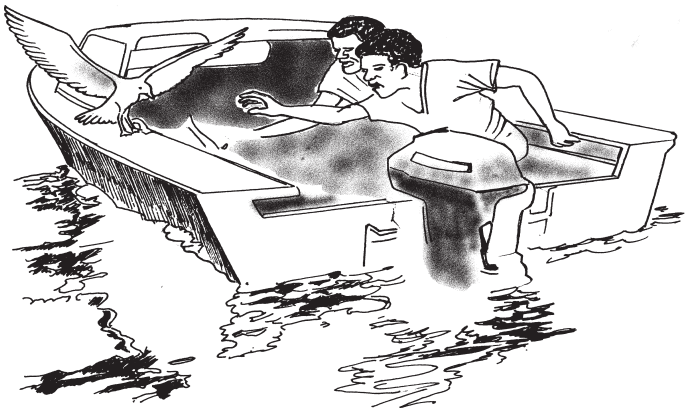
In December 1965 he went to London to receive the medal from the Queen of the United Kingdom.

He was glad and happy, but he was also sorry that four of his companions died on the long voyage of the *Tearoha*.

Day after day, the two men drifted in their small wooden boat. They knew they wouldn't last much longer. So they made a pact - and prayed.

ORDEAL IN THE CORAL SEA

BY CHRIS PRITCHARD



THE MORNING SUN climbed over the bright blue South Pacific as the 5.75-metre boat *Matupa Gafeso* ("Brothers' Boat") nosed its way out from Tanna, an island in the Republic of Vanuatu. Aboard were 34-year-old Meli Whitecross, manager of a co-operative store, and his 26-year-old cousin Peterson Ieri, a sailor. It was Good Friday, 1981. The two men had visited Tanna to arrange the return of a relative's body for burial. Now, they were going back to their home island of Aniwa, some 20 kilometres to the north-east.

For them, the two-hour trip was as routine as a bus ride. After 30 minutes, the 25-hp outboard began to sputter. Halfway across, it died. The wooden boat, with a small box-shaped cabin and bench seats along the sides, started to drift. Ieri checked the spark plugs, looked for loose leads and pulled the starter cord. Nothing happened. Then he checked the fuel tank. It was empty.

The *Matupa Gafeso* carried a compass, transistor radio and four oars. The two men started rowing, confident that one of the boats that travel daily between Aniwa and Tanna would soon rescue them. But a fresh south-easterly blew up, pushing them farther and farther from Aniwa.

Ieri rigged a makeshift sail from a pandanus sleeping mat and two oars, hoping the wind would take them north to Erromango, one of Vanuatu's 72 close-clustered islands.

The gusting wind drove them mercilesly north-west. Ieri knew that if they held course they would miss Erromango. He decided to take down the sail. To slow their drift, Whitecross tied a 20-kilo sack of sweet potatoes to a rope and dropped it over the stern. They still hoped that a passing boat would rescue them.

But no boat came. At dusk, the wind strengthened, whipping their boat across the choppy sea. By midnight the two men were exhausted and decided to take turns keeping a two-hour watch.

Daylight revealed the outlines of Tanna, to the south, and Erromango, tantalisingly close, to the north. They wondered if they dare swim for it, but concluded that the risk was too great. They weren't powerful swimmers and sharks abounded here. All day, they watched helplesly as the islands faded into the distance.

At first, Whitecross believed his wife Selvi would have reported him missing to Radio Vanuatu. The government and islanders would search, and the cousins would easily be found. Meanwhile, they had to endure another night at sea.

At daybreak on Easter Sunday there was no land in sight. Both men were deeply religious, and they fervently believed God was with them on on this of all days. "We must try to sail east, towards land," Ieri said. Once more, they rigged a sail and put out the sack of potatoes to give steerage. If they could not reach Eromanga, Ieri hoped they would make the island of Efate, farther north.

"Look! Look! A plane!" Whitecross yelled. Ieri seized a shiny plastic water bottle and flashed it in the sun. But the plane kept steadily on and finally vanished. Whitecross turned to Radio Vanuatu's news service, and they heard that an air-sea search was under way. "That plane was looking for us," Ieri said in dismay.

That evening, their sack of sweet potatoes broke loose and was lost. Ieri took down the sail and the cousins prepared to spend another night, cramped, cold and fearful, in their little boat.

Next morning, they sighted land, about 20 kilometres north east. "It must be Efate," said Ieri. They grabbed the oars and began to row. Suddenly, an oar broke. Tired and exasperated, they filled the empty fuel tank with water and lowered it over the side as an anchor. "Surely somebody will see us!" Whitecross said. But the hours dragged by and they saw no boats or planes. That night, the rope holding the anchor

snapped.

On, Tuesday, dawn broke to an angry sea. Two-metre waves tossed the boat like a toy. Whitecross looked for Efate's shoreline - the island had disappeared! He shook Ieri awake. "We've been swept to sea!" Whitecross shouted.

The wind had carried them north-west into the Coral Sea. Their knowledge of geography beyond their home islands was scant, but they knew that out here they could drift for weeks. They felt danger in their bones. Now Whitecross led their joint prayer: "Oh God, please let us be rescued. Don't let us die. We have families, Lord."

Whitecross thought of Selvi and his mischievous two-year-son, Scotch Dalesa. Briefly, he envied Ieri, a bachelor, who at least would not leave a young wife grieving.

In Vanuatu, the air-sea search had been under way since Saturday morning. Jo Joseph, jocular secretary of Tanna's local-government council, told authorities in Port Vila, the capital, that the men were missing. Government fishing vessels, a Britten-Norman Islander aircraft from Air Melanesiae and a French Navy Neptune maritime patrol plane from neighbouring New Caledonia searched from Tanna north-west to Efate. They found nothing.

On Tuesday evening, the government decided to end the search. Jo Joseph broke the news to Whitecross's wife. "I'm sorry, Selvi," he said, "but we can't search for ever." Selvi wept, but refused to give up hope. "I'll pray for a miracle," she said.

Whitecross and Ieri had already eaten three loaves of bread from their meagre supplies. They counted what was left: three yams, two taro roots, five sweet potatoes, a one-litre plastic bottle half-filled with water. "Each day, we'll cut a piece off the vegetables," Whitecross said, "That will be our ration: a slice of vegetable each with some water."

"Pity we lost the sack of sweet potatoes," said Ieri. By keeping their sail up, they hoped to strike land sooner, if any lay in their path. Now the wind whisked them across the water, and they spent hours scanning the horizon for land. The rest of the time, Whitecross and Ieri squatted in the boat's cabin, away from the sun's merciless glare.

By their ninth day at sea, the cousins had little water and their tiny ration of raw vegetable stuck in their dry throats, choking them. "We're in God's hands," Whitecross said. They tried not to think about food or drink, but their minds returned to visions of village feasts of roast pig and juicy mangoes.

Their parched tongues swelled almost to fill their mouths, their throats burned, and saltwater spray etched their dry, cracked lips. Unable to resist, they scooped seawater into their mouths, swilled it round and spat it out.

Next day, the sun disappeared, and for an hour heavy tropical rain beat down. They stood, mouths open, heads craned upwards, letting the cool downpour drench them. Using an old plastic shopping bag they found in the cabin, they caught as much of the rain as they could. By midday, the rain ceased. Though desperately hungry and racked by stomach cramps and nausea, they felt elated. Their plastic bag held almost a litre of water.

On April 28, the twelfth day, Whitecross picked up the plastic bottle. "We could use it to send a message," he said. The chances were slight of anybody finding the message, but they agreed to send one. On a scrap of paper, Whitecross wrote: "We are two drifting boys. We hope to live two weeks more before we have no strength. We are drifting to the north-west. If anyone finds this, please pass it to Radio Vanuatu - Meli Whitecross and Peterson Ieri."

He dropped the note into the bottle, tightened the screwcap and sent their message on its way. Filled with hope, the cousins stood together watching the bottle bobbing into the distance.

Sharks sighted. By 2 p.m. on April 30, the sky was ominously dark with low hanging clouds. Suddenly, with a rumble of thunder, heavy rain pelted down. Again, they let it beat on their bodies and into their mouths. Ieri held the shopping bag in his outstretched hands, harvesting the heavensent water - enough for three more days.

An hour later, the rain gave way to gale-force winds. The boat rolled and pitched, battered by three-metre waves. The wind tore at their make-shift sail. "We have to save it!" shouted Whitecross. Both men ran from the cabin across the wildly heaving deck and slashed the ropes holding the pandanus mat taut.

By dusk, the sea had calmed and stars shone in a clear sky. In the moonlight, the pair kneeled and Whitecross's deep voice boomed into the emptiness: "Dear God, thank you for keeping us alive. Please spare us to survive this ordeal."

Three hour later, Ieri saw four or five yellow lights. "A ship! A ship!" He shouted wildly. Frantically, they waved and shouted. But the lights moved steadily, relentlessly, across the horizon and disappeared. Weak, hungry and more depressed than ever, they fell asleep.

No more rain came, and three days later their water ran out again. The sky remained cloudless and for the first time, as if

sensing the men's plight, sharks began following their boat. "Do you think we'll die?" Ieri whispered, uttering what both had been thinking for days. "Let's not lose faith," Whitecross replied.

On May 4, having eaten the last of their vegetables, the two men stared listlessly out to sea. Suddenly, Whitecross jumped up and pointed into the water. "Coconuts! Coconuts!' he screamed.

Ignoring the menace of sharks, he plunged overboard. Gabbing two coconuts, he struggled back, light-headed and dizzy from the sudden exertion.

Ieri pulled his cousin aboard. Eagerly, they smashed open a coconut, drank its milk and feasted on its flesh. Ieri stowed the other coconut in the cabin. Next morning, they ate it slowly, savouring it in small pieces.

On May 6, they were repairing the sail. They had no food or water, and knew they could not survive much longer. As they stared at the ocean, a seagull swooped into the water alongside their boat and, seconds later, flew skywards with a fish in its beak.

The two men sat mesmerised, watching the gull's every move. The bird dived five more times, soared upward and circled. Then, as the starving men stared in astonishment, it settled on the side of their boat. On impulse, Whitecross seized the bird. From its beak fell six small fish, some alive and wrigging, into the boat.

"Let's kill the bird for food," he said. But then he paused. "It was sent by God," he said finally. "It has given us fish. We must give it freedom." Gently, he plucked a feather from the bird's body - a good-luck charm. He relaxed his hold, and the seagull flew off.

Ieri and Whitecross squatted, ripping open the thin bony fish. The raw flesh tasted good and juicy, relieving their hunger and thirst. Next morning, both felt stronger, physically and mentally.

"We must make a pledge," Ieri said. "If we come through this, one of us will devote his life to serving God, the other to serving his country."

Whitecross agreed. Besides being devout in his faith, he was fiercely proud of Vanuatu. Formerly the New Hebrides, jointly ruled by Britain and France, the republic had become independent in 1980.

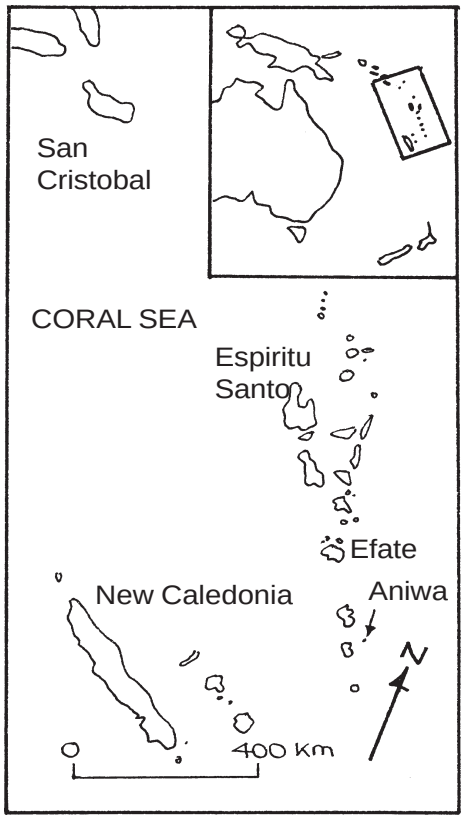
Early that afternoon, their twenty-first day at sea, a small black dot appeared on the horizon. '*A ship*'. Ieri's mind raced. "We must burn the sail as a distress signal!" he said excitedly. Striking a match, he lit the pandanus, and a thin column of smoke reached skywards. The staring men watched and prayed. The dot grew bigger. Now they shouted and waved. The vessel was racing for them!

Almost swamping their boat, the *Sam Song 17*, a South Korean fishing vessel, moved alongside. Dizzy and dazed, the pair struggled aboard to hugs and handshakes. The captain, Chang-Soo Park, listened in amazement when he heard the cousins were from Vanuatu. They were now about 100 kilometres from San Cristobal, in the Solomons Islands - over 1000 kilometres from home.

Captain Park told Whitecross and Ieri that a divine power had guided him to rescue them. Hearing that good catches were being made in the area, he had left his usual fishing grounds, and planned to spend five days in search of fish. He had made no big catch - but on the fifth day his crew spotted the drifting boat.

Crewmen brough tea, noodles and fresh clothes. Whitecross and Ieri watched as the *Matupa Gafeso* was hoisted aboard and lashed into place. Captain Park radioed a message to Port Vila and the men's relatives were told they were safe. "Now we're taking you home," he said.

Six days later, the *Sam Song 17* arrived in Vanuatu's capital to cheers from 400 people. "This is a miracle," declared Vanuatu's Home Affairs Minister Fred Timakata, who was at the quayside to welcome them.



"God saved us," said Whitecross. "Now we must keep our pledge." Two months later, Ieri enrolled at the Tangoa Bible College to train as a Presbyterian minister. Whitecross started a course in Port Vila to be come a local government official in the burgeoning young nation.

Reader's Digest, February 1983

ACTIVITIES

1. *How did Meli Whitecross and Peterson Ieri meet their basic needs for nutrition and water?*
2. *For how many days did they drift on the Matupa Gafeso?*
3. *Draw a simple sketch map to show the drift of the Matupa Gafeso.*

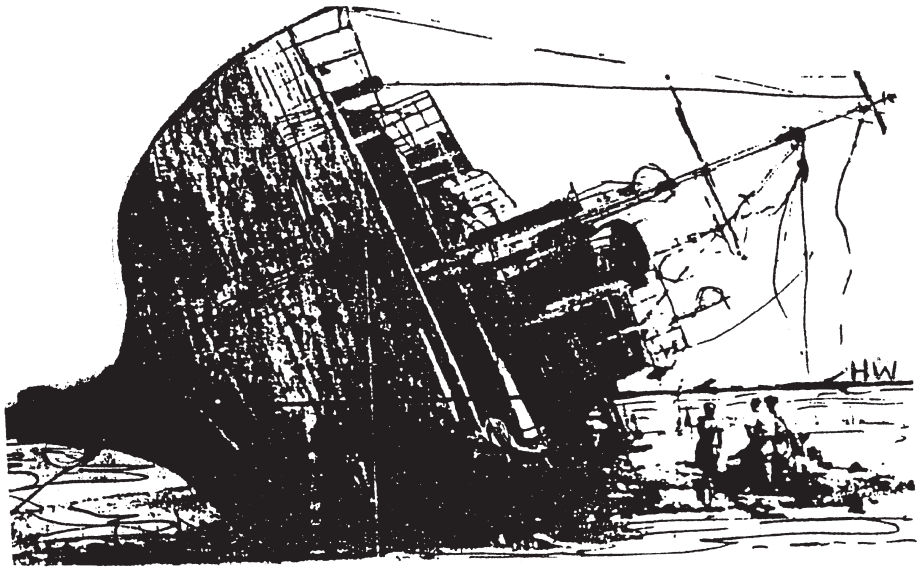
The *Tuaikaepau* wreck on Minerva Reef, July 6th, 1962.

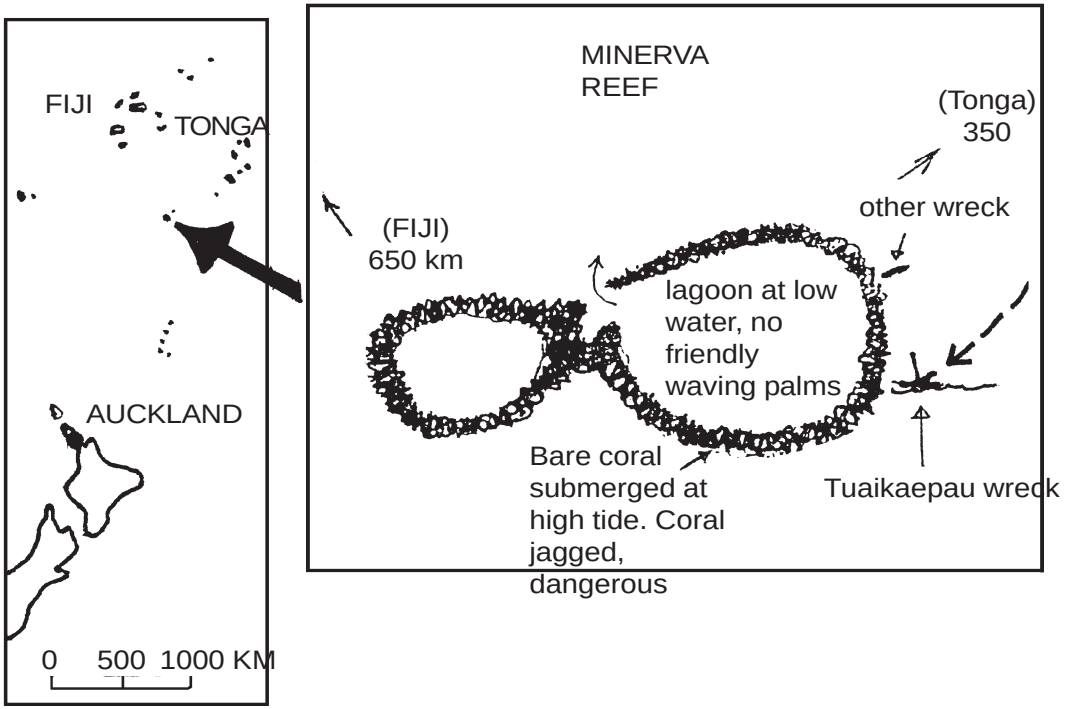
The cutter *Tuaikaepau*, with Captain Tevita Fifita and a *crew of six men and ten passengers* on board, was sailing from Tonga to Auckland in very heavy seas when it hit the South Minerva coral reef. The ship was a total loss; they were lucky to be alive.

All possessions were lost. They only had few clothes from their sleeping bunks. Only two of the group could swim, but they were lucky to arrive at low water. Later they explored the reef and located an old Japanese wreck, on its side, but habitable above the high water mark.

In the trawler in which they lived they fouind their survival kit: 1,000 litres fuel oil, fishing gear, pots and pans, putty, paint, a bottle of iodine, a bottle of merchurochrome, 30 kg rotten rice, one knife (blunt), a 15 cm nail, 15 matches, a bible, plastic sheeting, 5 bottles soy sauce and one packet of cigarettes.

All except two actually survived 102 days here. Their luck was unbelievable but they had to attend to many things in order to survive.



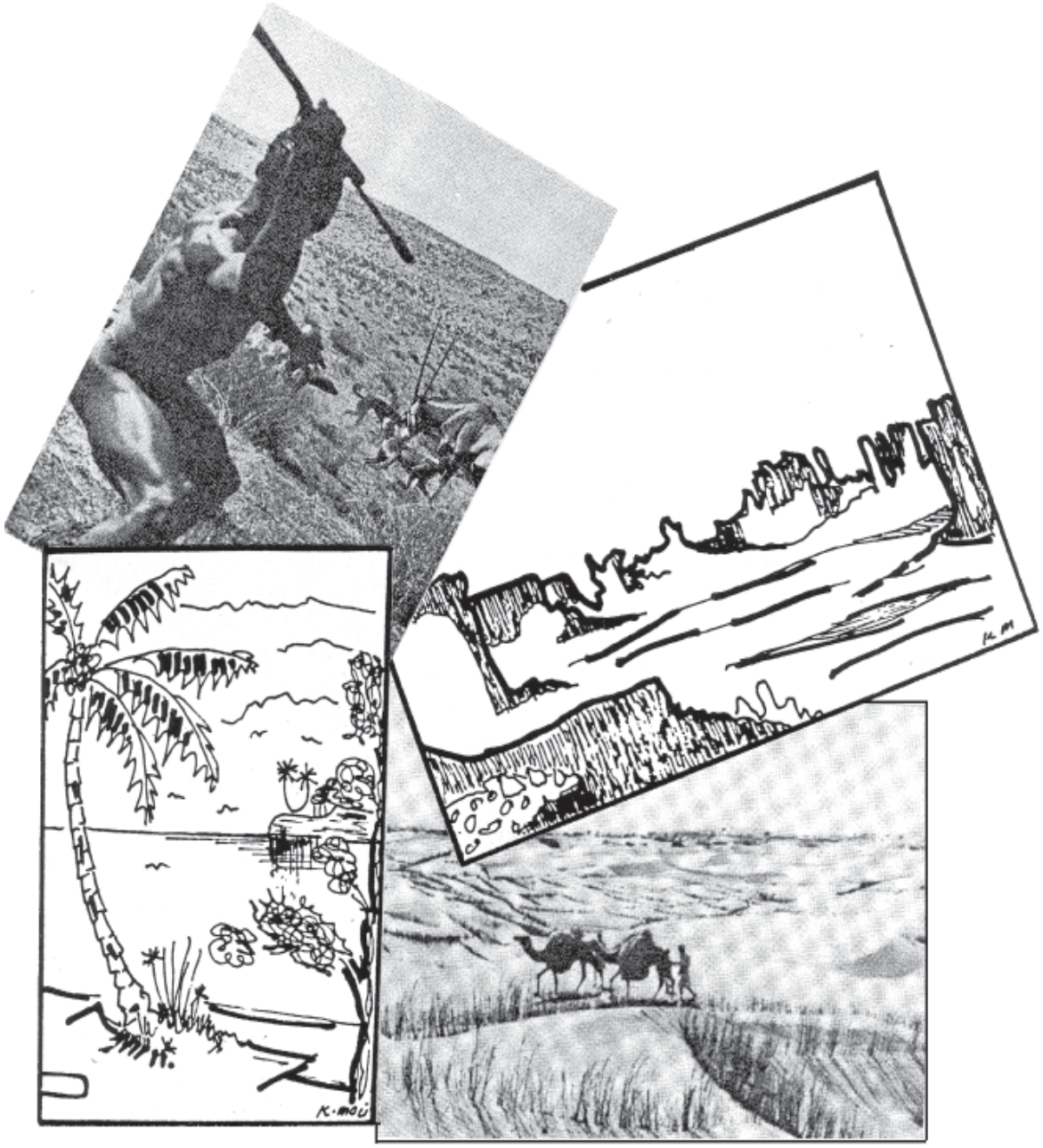


ACTIVITIES

1. *How do you think they met their basic need for water?*
2. *They had pots and pans, fishing gear, matches, rotten rice, but no cooking stove or firewood. How would they have cooked their meals?*
3. *How did they make use of the cigarettes?*

SECTION 2

SURVIVING IN DIFFERENT ENVIRONMENTS



SURVIVING IN DIFFERENT ENVIRONMENTS

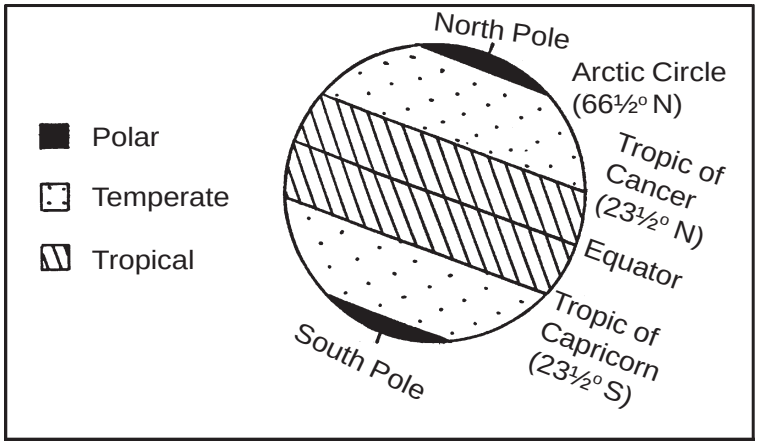
All the stories in Section I are about survival in the islands and waters of the Pacific. But there are many other kinds of **environment** in the world, and each of them affects the people who live there in a different way.

The world can be divided into three main areas, based on the temperature. These are the **tropical**, **temperate** and **polar zones**. In which of them do you think it is easiest for man to survive, and therefore most people live? In which of them is it the most difficult to live, and why?

The map on page 33 shows some of the different kinds of environment in the world. They have been named according to their **natural vegetation**, meaning the main kinds of plant that grow there naturally (in other words, they were not planted by man).

Look on the map for the **tropical rain forest**, the **hot desert** and the **cold desert**. We are going to study those man must overcome in order to live there.

Two other environments that we shall study are cities and the moon.



ACTIVITY

On an outline map of the world:

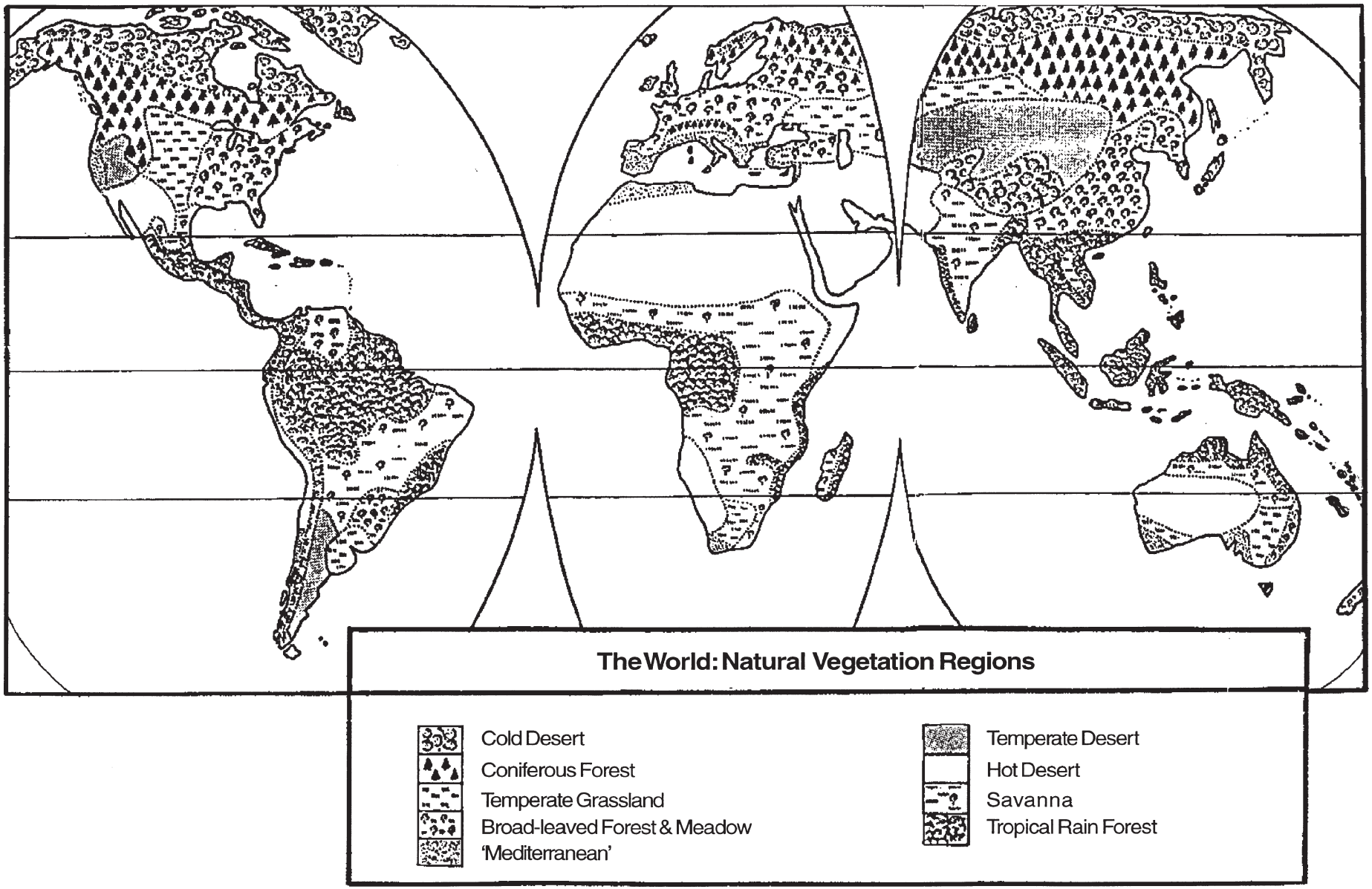
a) Carefully shade (using three different colours) the tropical rain forests, the hot deserts and the cold deserts.

b) Print these names in the correct places or else show them by code letters and add a key:

Tropical rain forest	***Hot deserts***	***Cold deserts***
South East Asia	*Mexican Desert*	*Alaska*
South Pacific islands	*Atacama Desert*	*Northern Canada*
Coast of West Africa	*Sahara Desert*	*Greenland*
Congo Basin	*Arabian Desert*	*Northern Russia*
Coast of East Africa	*Iran*	*Antarctica*
Coast of East Brazil	*Thar Desert*	*Tibet*
Amazon Basin	*Somalia*	*Andes*
Central America	*Kalahari/Namib Desert*	
	Great Australian Desert	

c) Mark and label clearly the Equator, the Tropics of Cancer and Capricorn, and the Arctic and Antarctic Circles.

Note on Climatic graphs
Several climatic graphs are included in this section of the book. To understand how to read them, look first at Appendix A: Climatic Graphs, page 60.


The World: Natural Vegetation Regions
Cold Desert
Coniferous Forest
Temperate Grassland
Broad-leaved Forest & Meadow
'Mediterranean'
Temperate Desert
Hot Desert
Savanna
Tropical Rain Forest

TROPICAL RAIN FORESTS

All these areas lie close to the Equator. They have a hot and wet climate. Temperatures are always around 27°C, and it usually rains every day. In these conditions, the natural vegetation consists of tall trees which grow quickly and are close together. The tops of the trees form a dense **canopy** which shuts out most of the light. There are many different species of trees and plants. In the forests lives a large variety of wild life - monkeys, snakes, parrots, mosquitoes, alligators, wild pigs, etc. Near the rivers the ground is marshy, and flooding may occur. The soils of these areas are not very fertile, because the heavy rain washes plant nutrients downwards into the ground: this is called **leaching**.

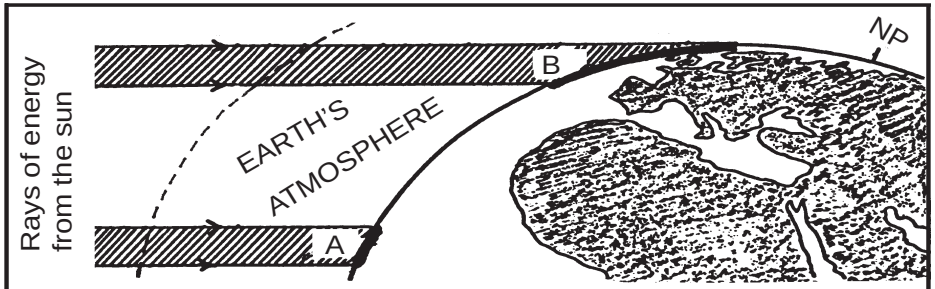


Diagram to show why places near the Equator are much hotter than places near the Poles

At A, the sun's rays are concentrated.
At B, the sun's rays are spread out.

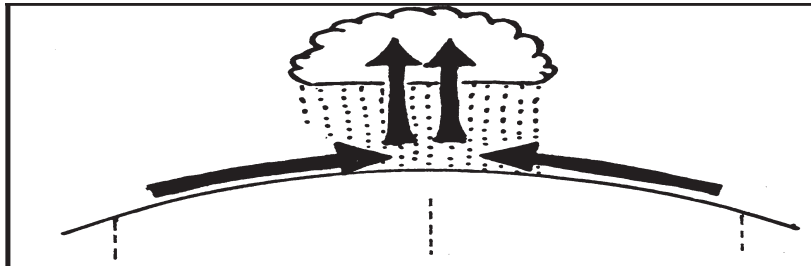


Diagram to show how the Trade Winds meet in the **Intertropical Convergence Zone** along the Equator

As the Trade Winds meet, the air rises up and cools down. This produces clouds and rainfall.

Climatic graph for Akassa, Nigeria

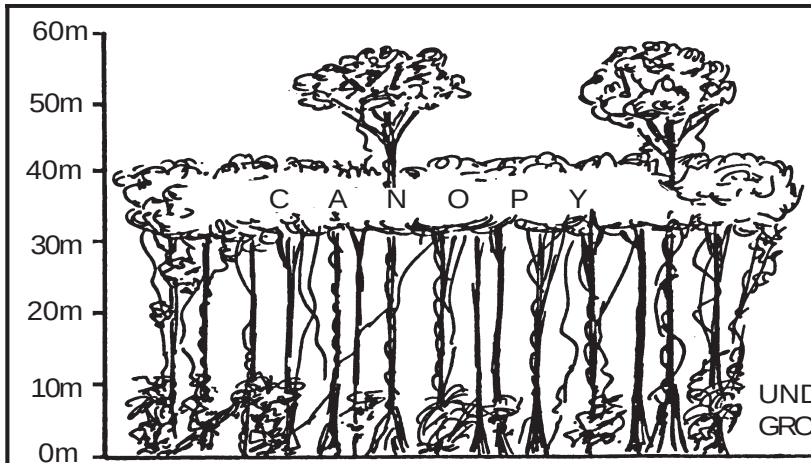
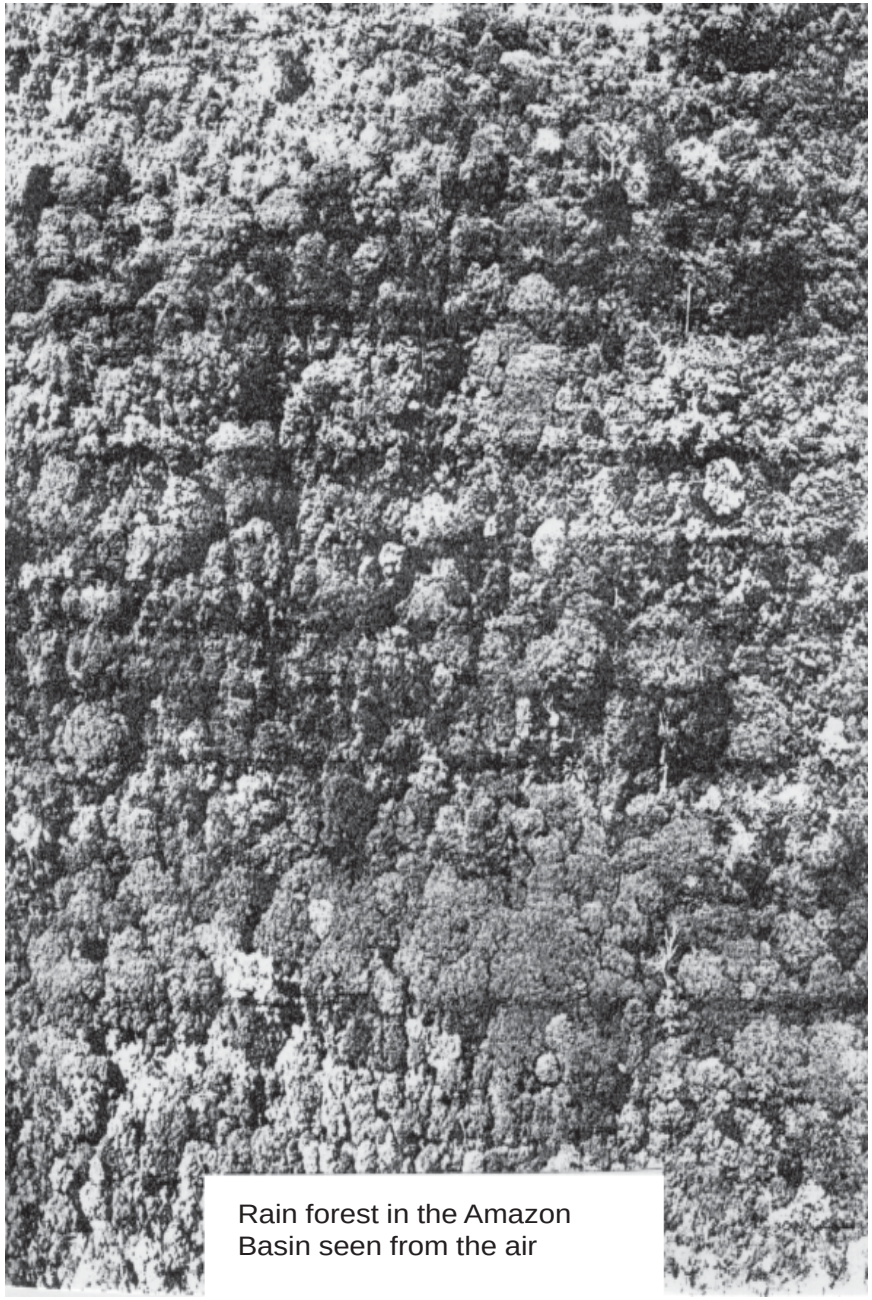


Diagram of tropical rain forest



Rain forest in the Amazon Basin seen from the air

Survival in the forest

Tropical rain forests can be dangerous and difficult places for people to live in. Poisonous snakes, scorpions, crocodiles and alligators live in the swamps and rivers. There are also leeches in the trees and in the water, that can suck human blood. Mosquitoes which carry deadly diseases such as malaria and yellow fever also breed in swamps and marshes. Many plants too are poisonous, but the natives survive well because they know what is poisonous, and which plants can cure their illnesses or heal their wounds.

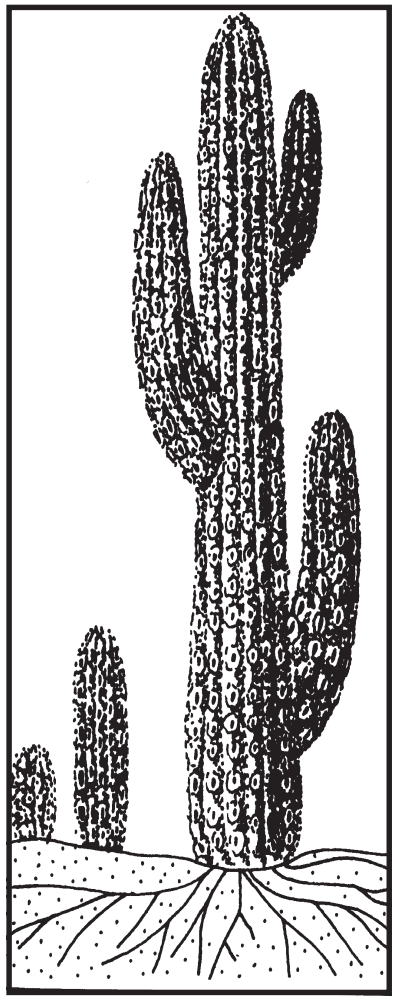
ACTIVITIES

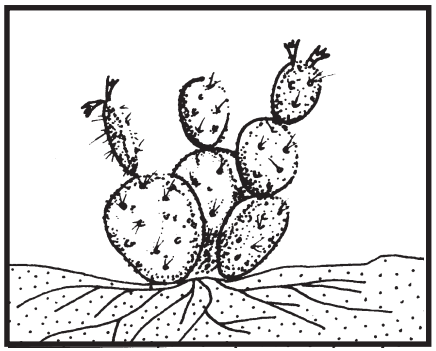
1. *Which parts of the world have this kind of forest?*
2. *Why is the natural vegetation in tropical rain forests so tall and thick?*
3. *Describe what tropical rain forest is like. Use the photo on this page and the diagram on page 33 to help you.*
4. *Why is it always hot and wet near the Equator?*
5. *Describe four kinds of difficulties that man has in living in tropical rain forests.*
6. *How can man meet his basic needs in tropical rain forest areas?*
7. *Why do you think that the tropical rain forests of the world are disappearing very rapidly at th moment?*
8. *Explain how forests are important to human and animal life.*
9. *Group activity*

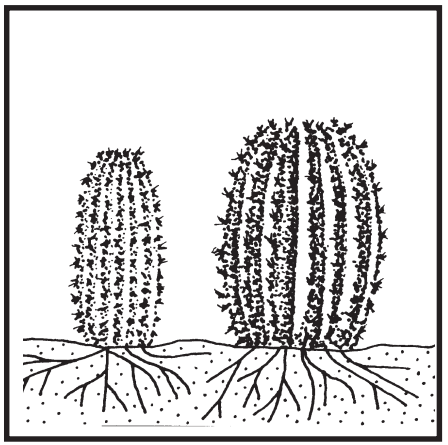
   Choose one animal which lives in one of the tropical rain forests. Find out all you can about it. How is it able to survive in the forest? Collect as many pictures as you can of your chosen animal.

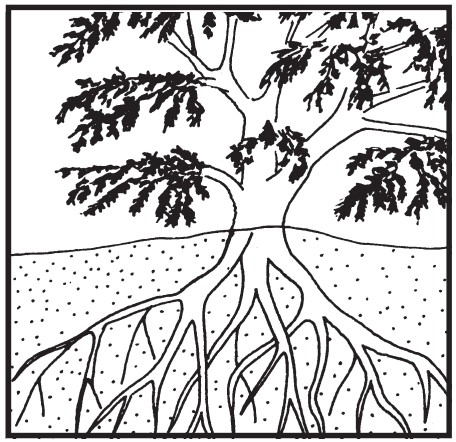
HOT DESERTS

A desert is a place where little or nothing can grow, because there is not enough water. In the hot desert, the air is clear and dry, and the total rainfall each year is less than 250 mm. There are hardly any clouds to block the heat of the sun. During the day, the sun's rays beat down, and both the ground and the air become very hot. At night-time, all the heat escapes back into the atmosphere, and places get very cold. In deserts, the ground is covered in sand, stones or bare rock. The ony plants that can survive are those like the **cactus**, which stores water in its thick stem. Only a few insects and animals can live in a hot desert. Camels can survive because they store water and fat in their bodies and can live for several weeks without eating or drinking. Sometimes, the winds in the deserts pick up the loose sand and cause sandstorms.

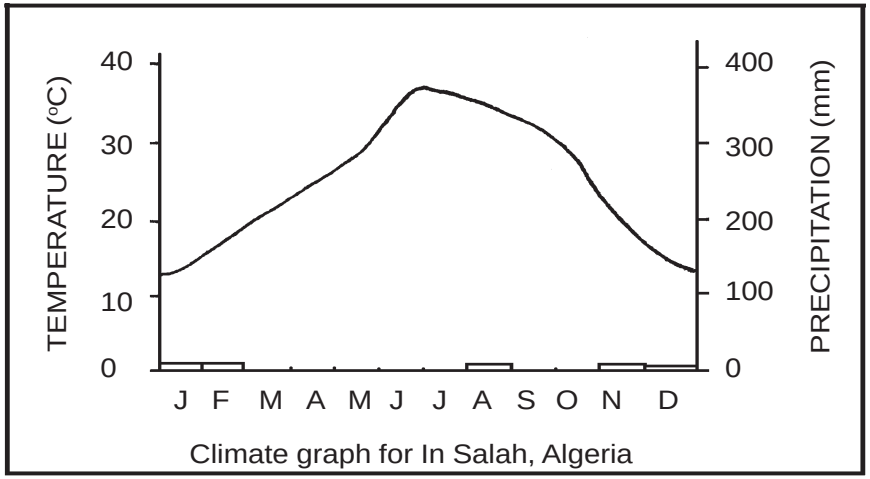




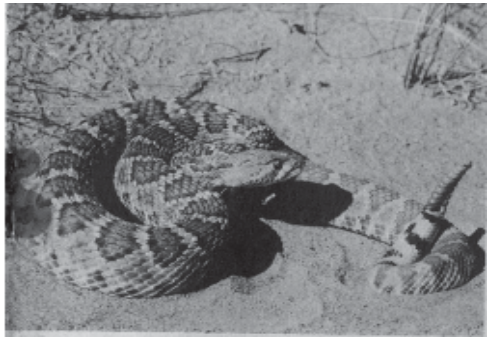


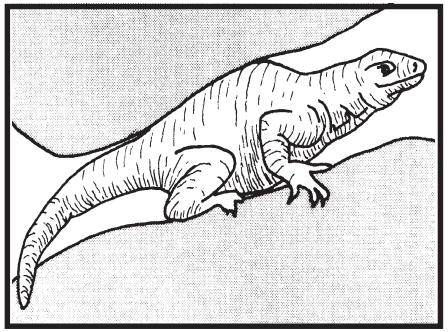


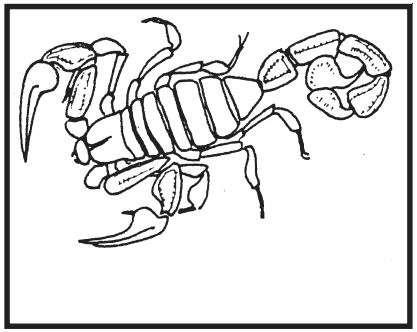
Desert Plants

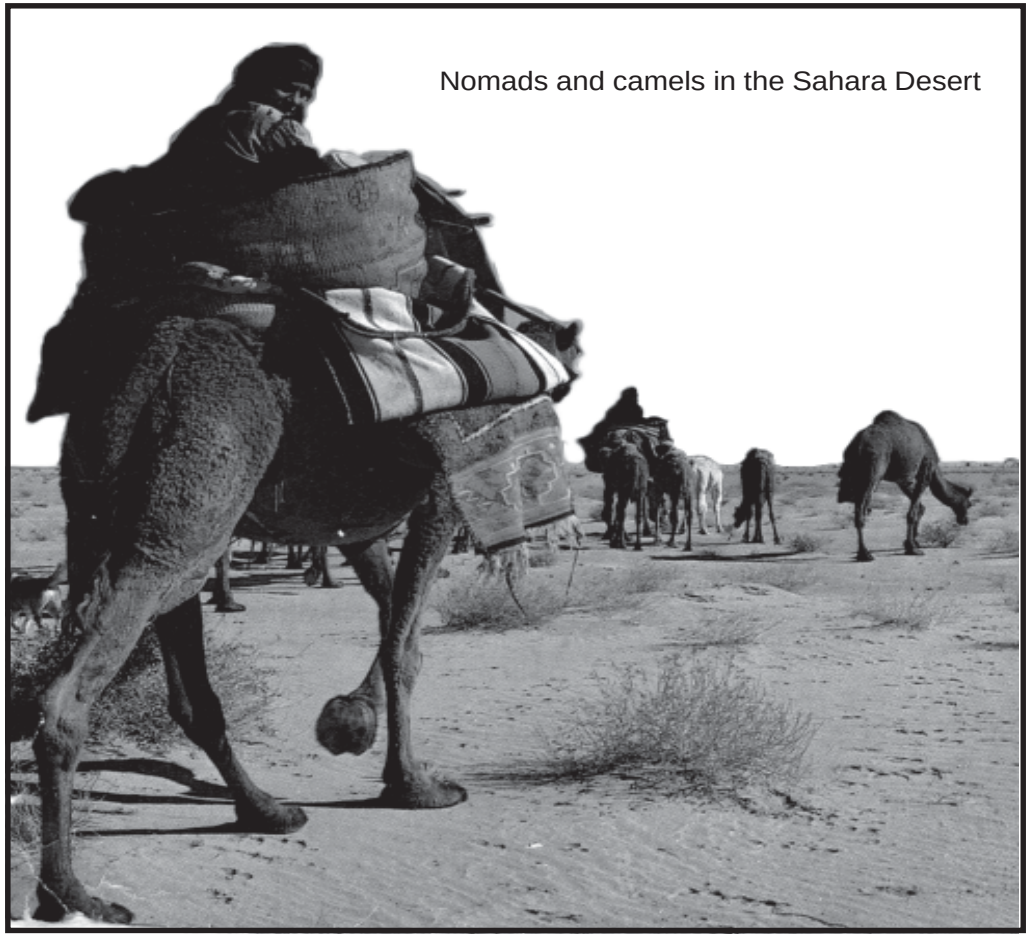


Climate graph for In Salah, Algeria



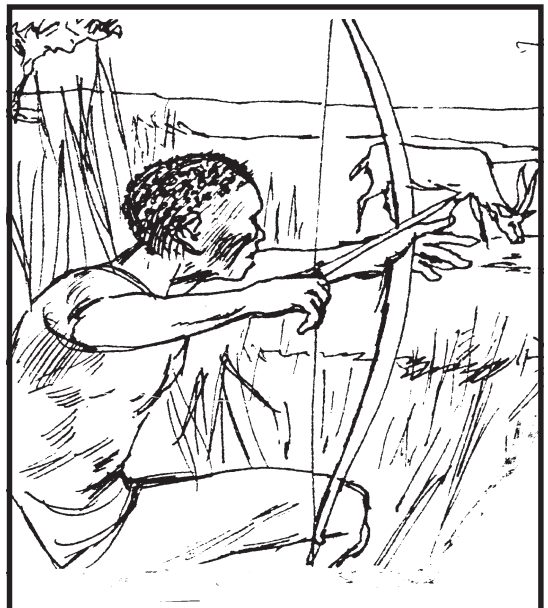




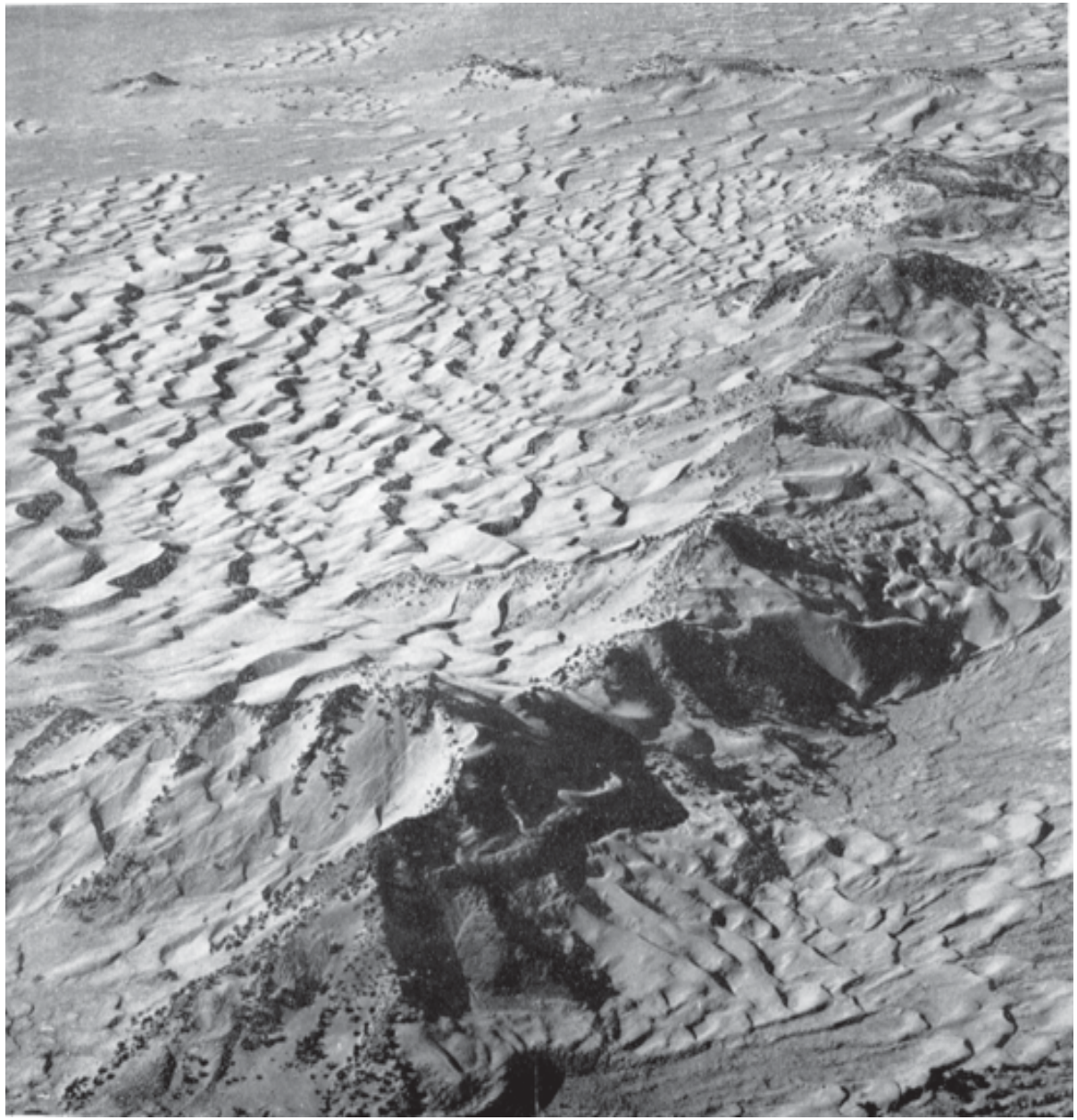


Nomads and camels in the Sahara Desert

Desert Wildlife



A bushman of the Kalahari desert



A hot desert view

ACTIVITIES

1. *Name the hot deserts of the world.*
2. *Describe the scene shown in the picture of the Sahara. Write about the ground surface and the vegetation. Describe the animals and the objects they are carrying. Why do the people wear so much clothing? What are they doing?*
3. *What are the main difficulties of survival in hot deserts? Put them in order of importance, with the most difficult problem first.*
4. *Explain why deserts are so hot by day and so cold by night.*
5. *Draw and describe a cactus.*
6. *How does man satisfy his basic needs in hot deserts?*
7. *Compare the two climatic graphs for Akassa and In Salah. State two ways in which they are different.*
8. *Can you think of any reasons why some people want to go and live in hot deserts? Give some actual examples to support your answer.*

COLD DESERTS

The cold deserts really include two kinds of environment - the **tundra** areas and the **ice sheets**.

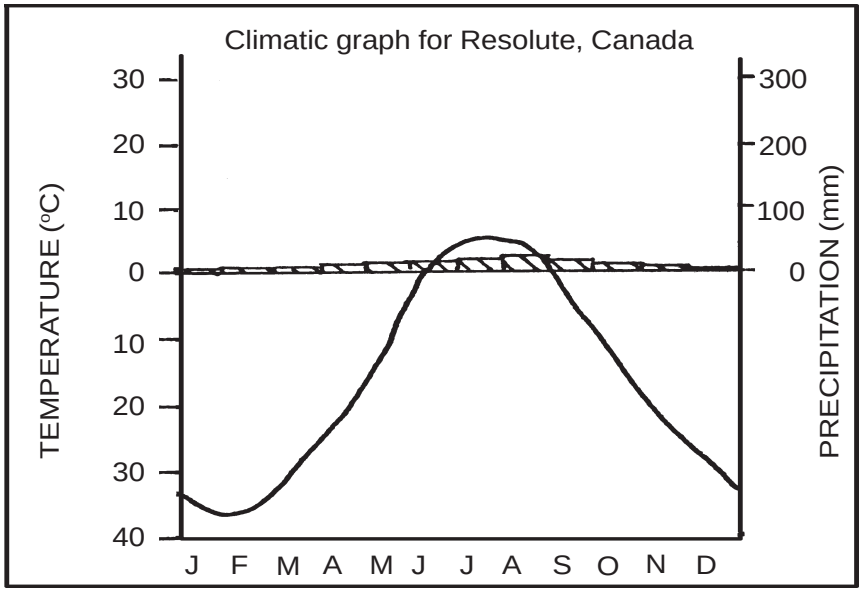
Tundra areas are found in the far north of Europe, Asia and America, close to the North Pole. For most of the time, temperatures are below 0°C, the ground is covered in snow, and the soil is frozen solid; the sun is low in the sky, and for several months it cannot be seen at all. Only in the very short summers does the snow melt, and conditions become warm enough for a few low bushes and flowers to grow. The word 'tundra' means 'treeless plains'.

Eskimo family moving over the Tundra during summer

Ice sheets are found in Greenland and Antarctica. Here the snow never melts, but forms a thick layer of solid ice which may be up to 3,000 metres deep. Here and there the mountains stick up through the ice as patches of bare rock. There is no soil, and hardly any plant life.

Surprisingly, the seas surrounding the tundra and ice cap areas are rich in food and can support large numbers of fish, birds, seals and whales. Two groups of people who live in this environment are the Inuit (Eskimos) of northern Canada and Alaska, and the Lapps of northern Norway and Finland.

Inuit hunters had travelled many kilometres on ice searching for this prey.



A cold desert view

ACTIVITIES

1. *What is the difference between tundra and ice cap?*
2. *List some of the things that people must do in order to survive in this kind of environment.*
3. *Describe the climate of these areas. Use the climatic graph for Resolute to help you.*
4. *Explain why it is so cold in cold desert areas. Use the diagram on page 40 to help you.*
5. *Group activity*
   - *i) Collect pictures of different types of clothes people wear in very cold countries. Write a description about each type of clothing.*
     or
   - *ii) Find out about one polar explorer, e.g. Peary, Scott, Amundsen, etc...*

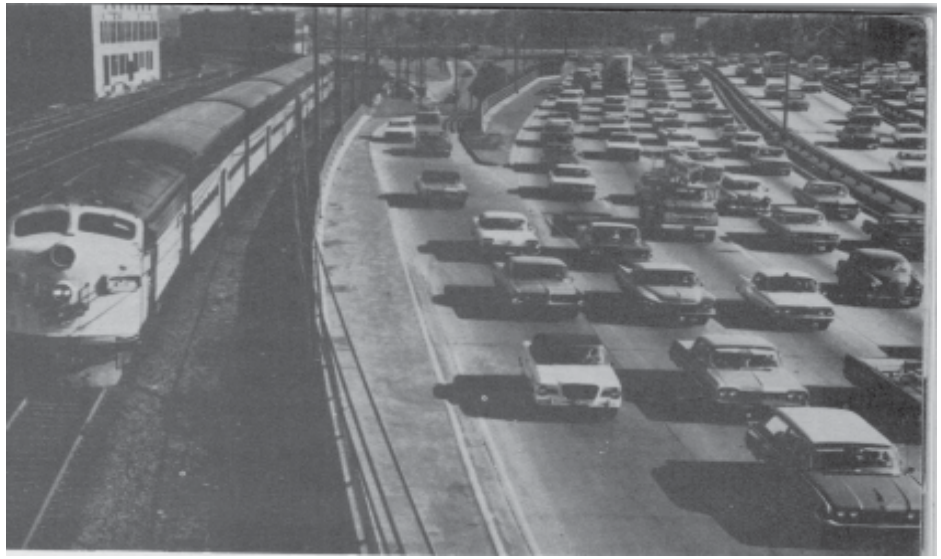
CITIES

More and more of the world's population are coming to live in cities. But how do they meet their basic needs? You will quickly realize that, unlike the other environments, a city is not a place where you can hunt wild animals or fish, or collect fruit or wood. Neither is there enough land to cultivate and grow crops. The large number of people there also means that supplies of fresh water have to be brought in from elsewhere.

A city view

People try to make cities better places to live. But cities also have problems. Can you identify some of these problems from Photo A and Photo B?

A



B

ACTIVITIES

1. *Describe the scene shown in the photo on page 41.*
2. *How do people in a city meet their basic needs for food, clothing, water and shelter?*
3. *Name 7 kinds of employment in a city. Why is employment so important for a city dweller?*
4. *At what time(s) of the day was photo A taken? Give a reason for your answer.*
5. *What is one possible solution to the situation in photo B?*

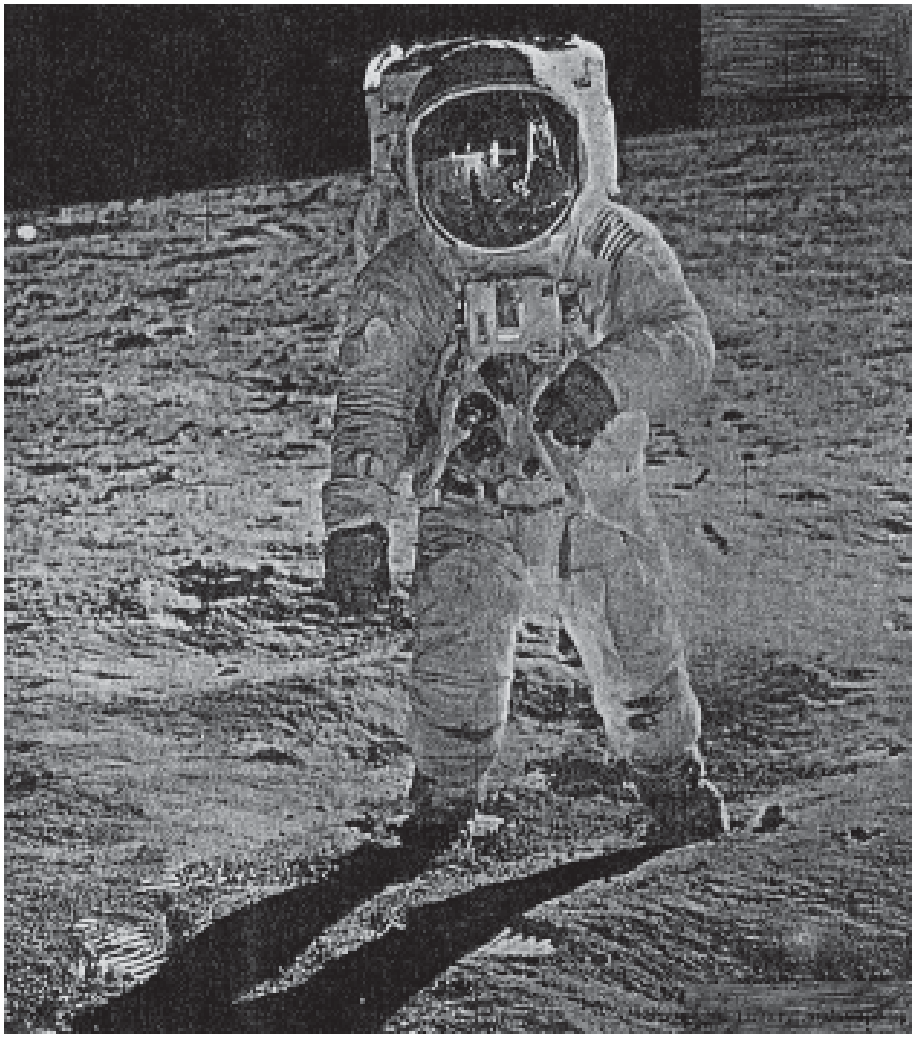
THE MOON

The moon is the earth's nearest neighbour in space, with a surface area of 14,650,000 square metres. The moon has hostile temperatures ranging from 120 C to -180 C. Day temperatures are so high that if one drops an egg outside, it would cook in seconds. At night the temperatures are so low that any exposed skin would freeze and actually crack.

Back on earth, the moon looks bright and beautiful, and it is fascinating to watch at night as it changes its shape. Despite its brightness, the moon has no light of its own. It shines just because it is reflecting the sun's light.

The moon is a silent, lonely place, with no water, air, wind, weather and no life at all. Because its gravity is much weaker, one would weigh only one-sixth of what one weighs on earth. One step is like a bounce. One good long bounce and you've travelled two metres.

Space is a hostile environment outside a spacecraft. Human beings need pressurized space suits with an oxygen supply. Safety lines attached to the suit can be used to drag an astronaut back in an emergency.



An astronaut on the moon

ACTIVITIES

1. *Describe the scene shown in the photograph on page 43.*
2. *Who was the first man to walk on the moon, and when did this happen?*
3. *If you were to go and live on the moon, how would you meet your basic needs for survival?*
4. *Some countries are spending a lot of money on the exploration of space, including the sending of rockets to the moon and to other planets. Do you think that this is a good or a bad thing? Give reasons.*
5. *Group activity*

   Collect information about one moon explorer. Present your findings in the form of a talk to the class.

AN EXTRA ACTIVITY: RESEARCH WORK ON PEOPLE IN DIFFERENT ENVIRONMENTS

1. Divide into small groups and carry out a research project as follows:

2. Choose ONE group of people who follow a traditonal way of life in either a tropical rain forest, or a hot desert, or a cold desert:

a) Name the group that you have chosen, eg. the Inuit, the Tuareg, the Indians of the Amazon Basin, etc.

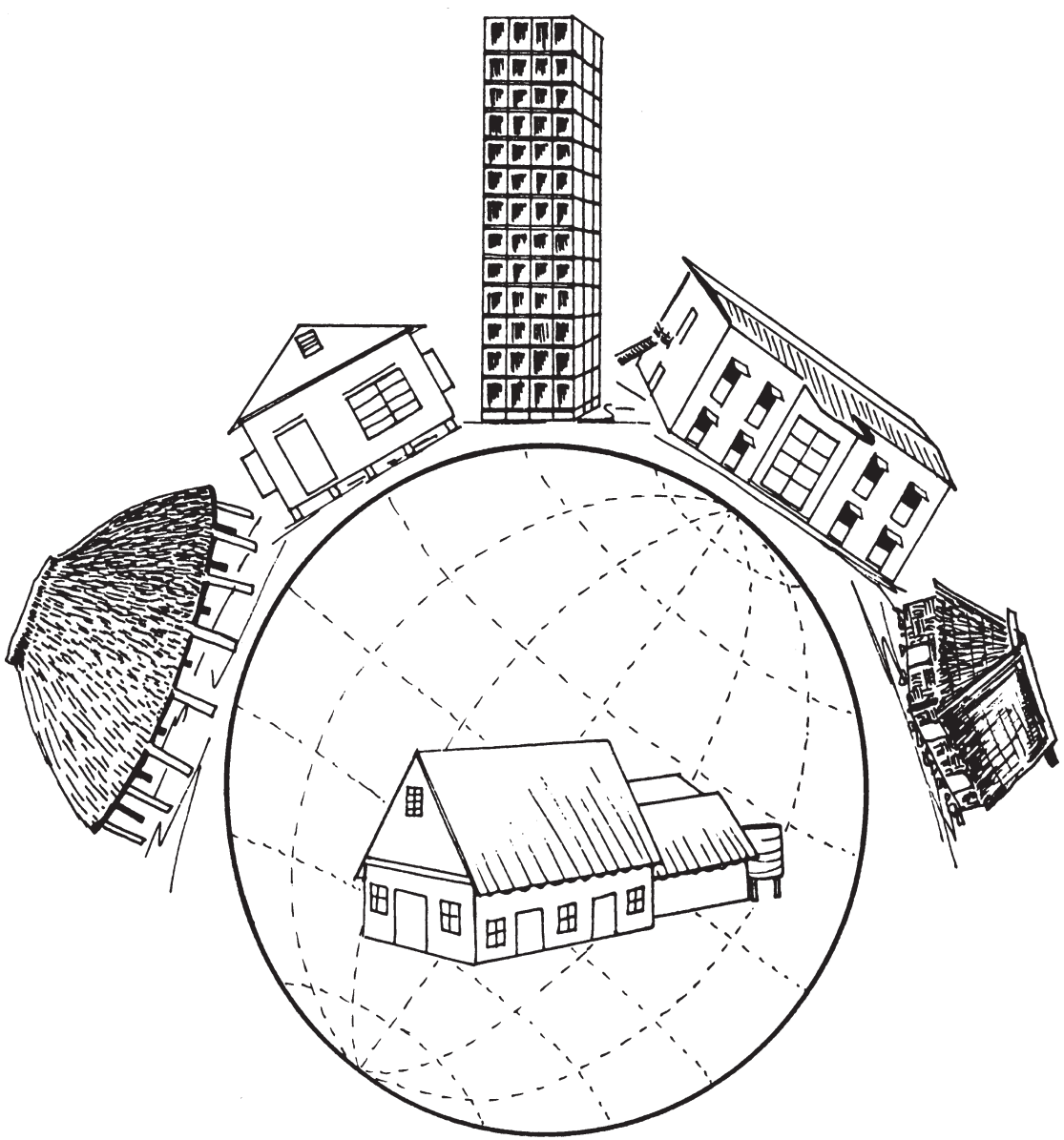
b) Draw a map to show where they live.

c) Explain how they satisfy their basic needs.

d) Describe how their traditional way of life is changing in modern times.

SECTION 3

HOUSING AROUND THE WORLD



OUR NEED FOR SHELTER

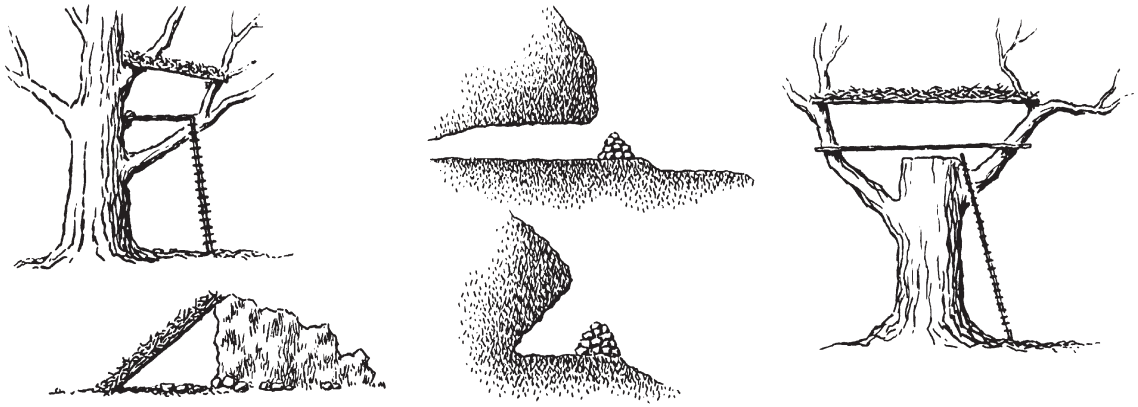
Like air (oxygen), water and nutrition, shelter is one of man's basic needs. Our main reason for building a house is to shelter us from the sun, the rain and the wind, and to protect us from such things as wild animals and insects. In a dwelling, a family can be together and feel **secure**.

Early man needed to have shelter to enable him to satisfy his basic need for sleep. Very often these early dwellings were caves, or simple tree shelters.

Gradually, a shelter became a dwelling for a complete nuclear family, and the idea developed of dividing up a dwelling into different rooms, for different purposes - such as eating, sleeping, storage. People also began to decorate their shelters.

Changes in housing have been slow to take place. For a long time, one-storey dwellings with a rectangular or circular floor plan were built. It is only in the last 100 years or so that people have used steel and concrete and had the **technology** to build tall **multi-storey** buildings.

Early kinds of dwelling



ACTIVITIES

1. *Explain in your own words:*
   - a) *Why do people have a basic need for shelter?*
   - b) *Why were very few multi-storey houses built before the present century?*
2. *Describe the early kinds of dwellings shown in the picture above. For each, state its advantages and disadvantages.*
3. *<u>Building survey</u>: The class should divide into small groups of two or three students. Each group should visit a private house near the school, and complete the questionnaire shown on page 41.*

   After the survey, the class should try to find out the <u>common features</u> of the houses that have been visited, in terms of:
   a) design b) building materials.

   The students can then discuss <u>reasons</u> why these common features are found.

LOCAL BUILDING SURVEY

NAME OF OBSERVERS: ..... DATE: ..... NAME OF BUILDING OR OF OCCUPANT:

....

....

1. Describe the slope of the land on which the building is situated (i.e. flat, gently sloping, steeply sloping, etc.)

   .....

2. How many stories does the building have?

   .....

3. Is the building for <u>one</u> or for <u>several</u> households?

   .....

4. Is the building raised above the ground on posts or blocks?

   .....

5. State the building materials used for each of the following, and say whether these materials are local or imported from overseas:

<u>Materials</u>	<u>Local/imported</u>
Floor	.....
Walls	.....
Roof	.....

6. What is the purpose of the building?.....

7. Does the building have any features that are related to the climate of the area (eg. sloping roofs to allow rain water to drain away, etc.)?

   .....

   .....

8. Draw a rough sketch (picture) of the building:

9. Draw a rough floor plan of the building. Show how the rooms are used. Indicate an approximate scale:

BUILDING MATERIALS AND HOUSE DESIGN

The drawings on the right show some of the different kinds of building materials and house designs found in various parts of the world.

Answer these questions:

a) *Which house type is suitable for **nomads**?*

b) *Which house types are made using the local natural vegetation?*

c) *Which house types are mostly made out of local **mineral** materials?*

d) *Suggest reasons why the house shown in E might be built up on piles (poles) or stilts?*

e) *Suggest one disadvantage of each of the following house types:*

i) *A* *ii)* *B*

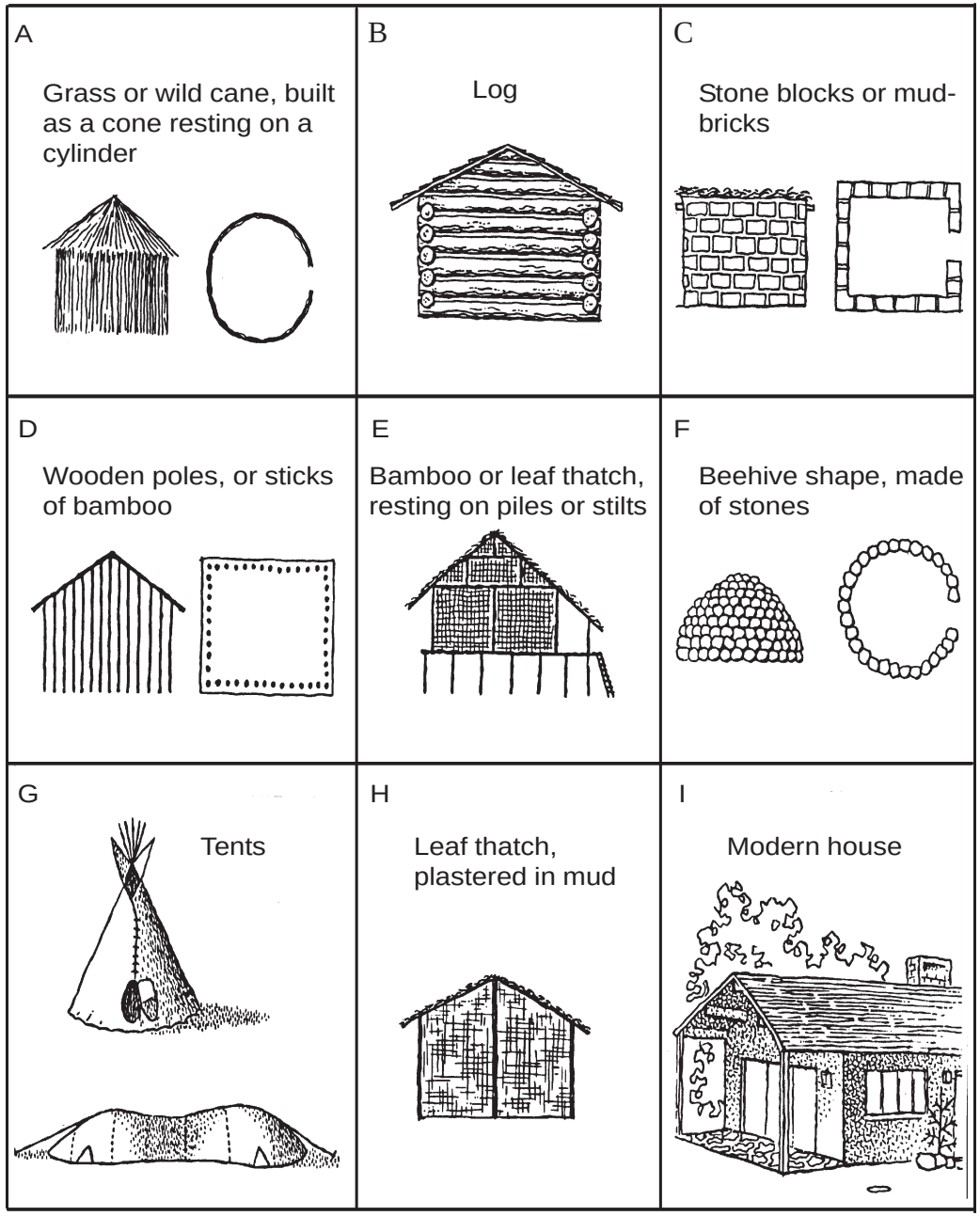
f) *Which house types are probably traditional?*

g) *Which house types might be found in a desert area?*

h) *Which do you think is the largest-sized house shown? Which is the smallest-sized?*

i) *Inuit (Eskimos) build houses like F out of blocks of ice when they go on hunting expeditons. These houses are called **igloos**. Suggest why the houses are made of ice and not stones.*

j) *Why do some people live in house like I while others in the same area or country live in houses like A, C or H?*



EXAMPLES OF HOUSING AROUND THE WORLD

ACTIVITY

The class should again divide into small groups, with about 4 students in each.

In your groups:

a) Study pictures A to P on pages 51 to 54. Then copy and complete the form below.

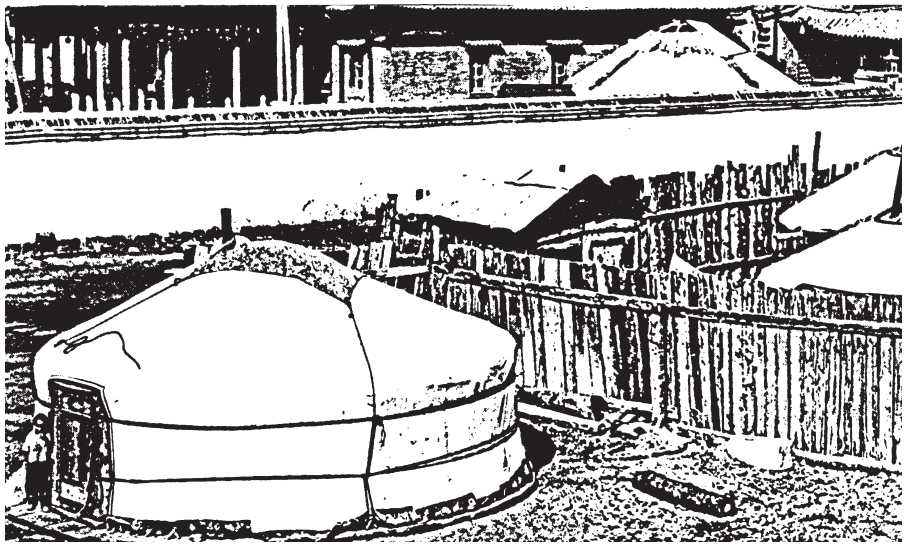
b) Choose any two pictures from the set. Then try to work out why the houses shown are different from each other in building materials, design and size.

*Now re*port your findings to the rest of the class.

Picture cold	Materials Used In Building	Purpose of Building	Country or Place	Climate (eg. hot & dry, or hot & wet, or and dry, etc.)
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				
K				

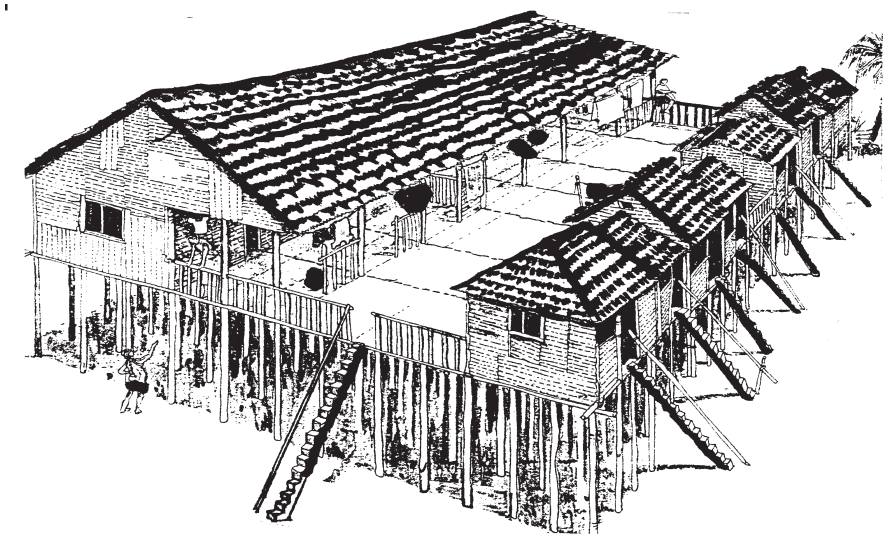
A

Traditional **yurt** in Mongolia



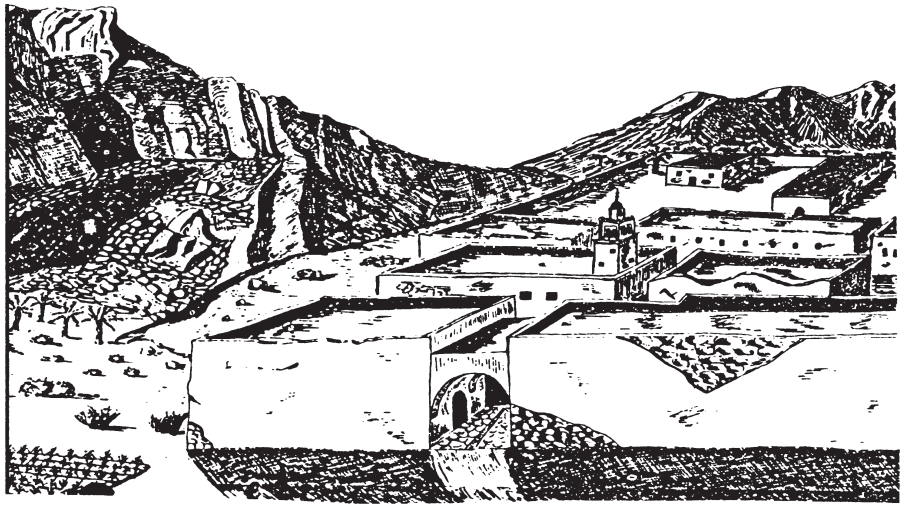
B

Dayak dwellings in Borneo, Indonesia



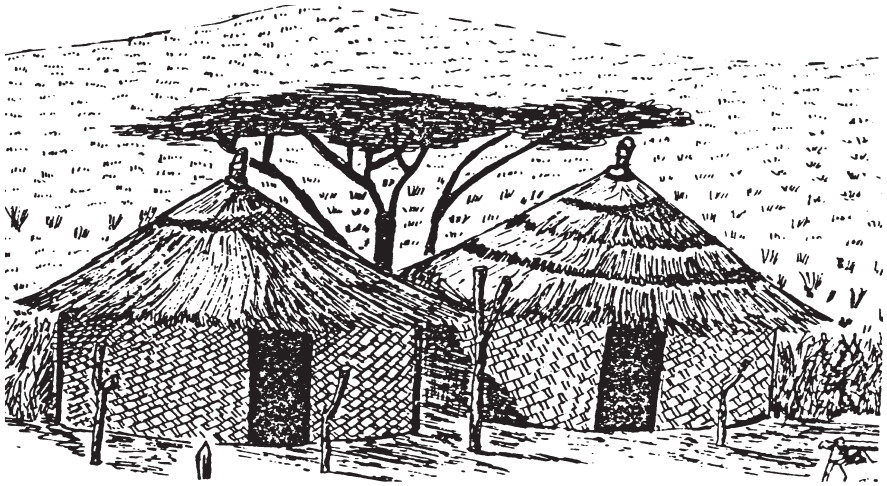
C

Houses at an **oasis** in Algeria



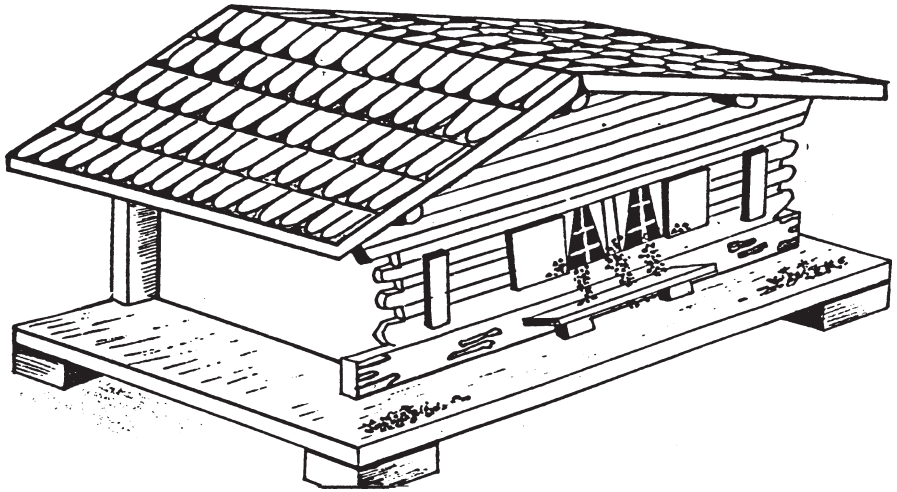
D

A village in the **savanna** environment, Burkina Faso



E

A chalet in Switzerland

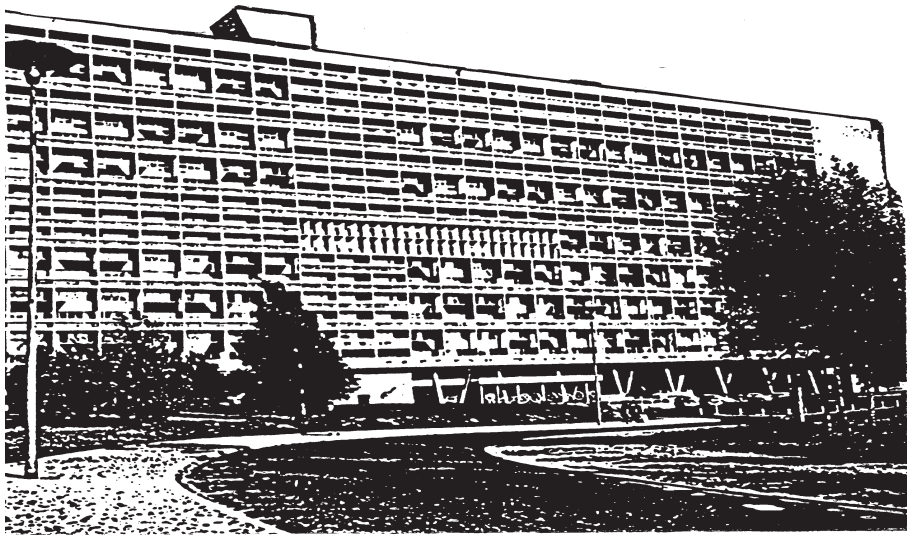


F

Houses in Malaysia

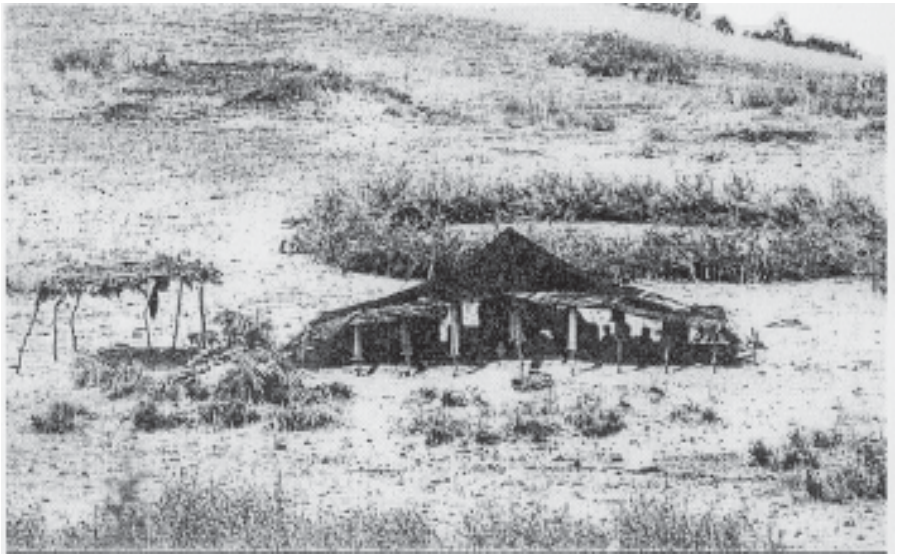
E

Modern apartment block in Germany



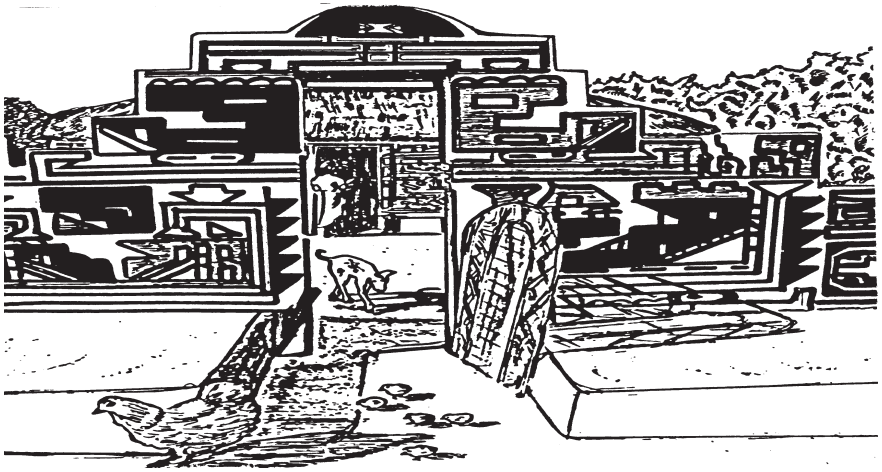
H

Waterproof tents: nomad (Bedouin) dwellings of Arabia



I

Decorated house in Kwandebele, South Africa



J

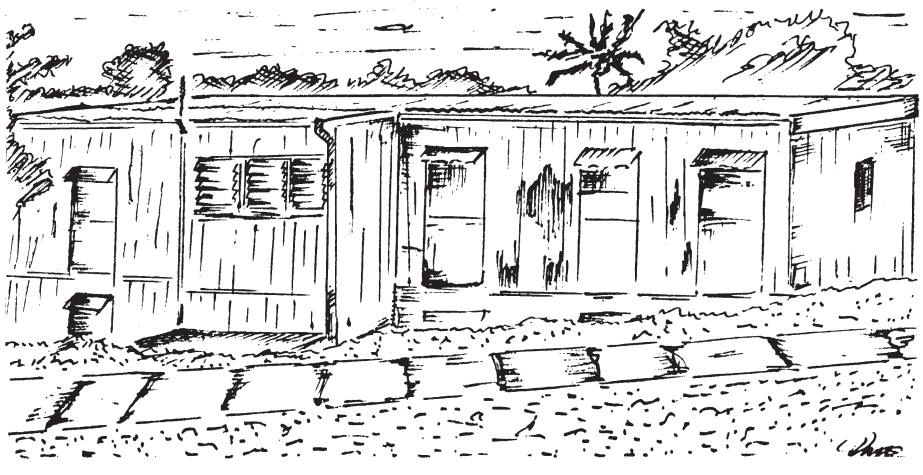
Lowland village in the Trobriand islands of Papua New Guinea

K

Dwellings and storehouses for grain, Syria

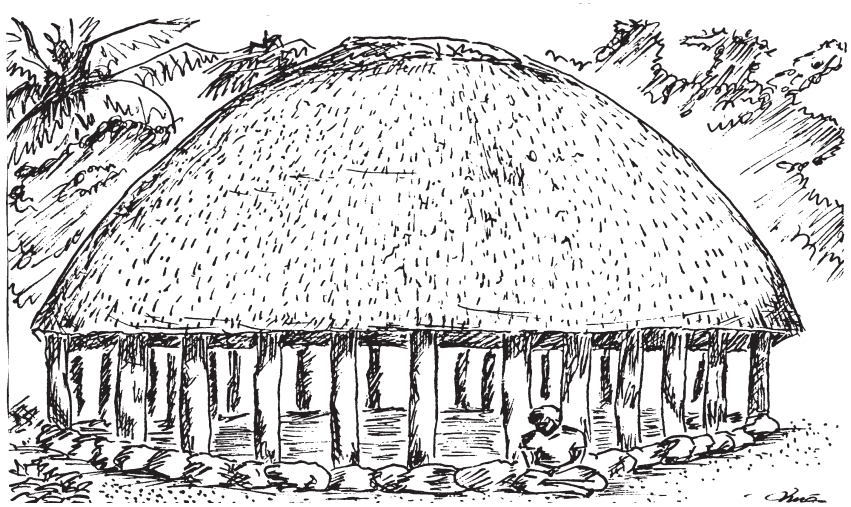
L

Housing in Suva, Fiji



M

A Samoan fale



N

Zulu kraal or round huts in Northern Natal, South East Africa

O

Permanent Pygmy huts in Central Africa

P

A village in the Albert Ranges of Papua New Guinea

REASONS WHY WE HAVE DIFFERENT KINDS OF HOUSING

Your study of different kinds of housing will have shown you that the design, shape and size of a house, and the materials it is made of, depend on the following things:

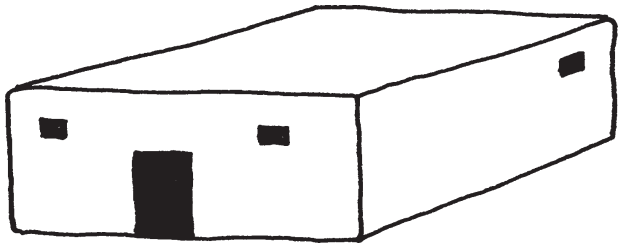
- The building materials available in the environment
- The climate of the area
- The local customs and traditions
- The amount of space available for building houses
- The technical skill of the builders
- The amount of money available
- The purpose of the building
- The length of time for which the building is needed

These are called the **factors** affecting the type of housing

ACTIVITY

Give an actual example of each of the above factors

For example: *CLIMATE* *People living near an oasis in the Sahara Desert have mud-brick houses with small windows and flat roofs. The houses are often painted white. This is because there is a hot desert climate, with high temperatures, sandstorms and very little rainfall.*



EXTRA ACTIVITIES

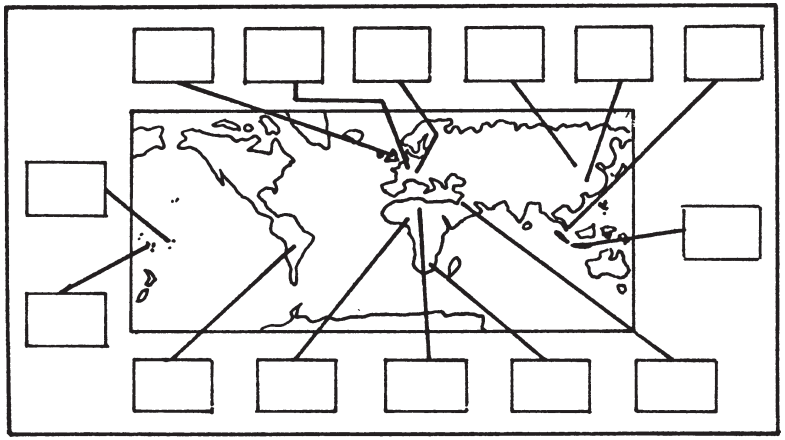
1. *Make a model of one of the types of housing you have read about in this booklet. This can be done as an individual project or as a group activity.*

2. *Group activity: Wall display of different types of housing*

   In small groups, make a large wall-chart to show each of the kinds of house given on pages 51 to 54. In the middle of each chart, mark the location of each house type on an outline map of the world, as shown in the diagram on the right.

3. *Collect magazine pictures of 10 different kinds of housing. For each picture, describe the features of the building, and state where in the world it can be found.*

4. *Draw a picture of your favourite kind of house. Label the building materials.*



SECTION 4

WANTING AND WORKING

Long ago, most people satisfied their needs for nutrition and shelter by collecting things from their local environment, or by hunting wild animals and fish. As time passed, they learnt to cultivate the ground and grow their own crops. They learnt to use tools to make their shelters from local materials.

There are still large numbers of people in the world who grow their own food and make their own houses themselves. Such people are known as **subsistence farmers**.

To satisfy our needs and wants, we **consume**, or use, **goods** and **services**. **Goods** are articles that grow or are made, for example a loaf of bread, a table, a fish, a bushknife. **Services** are things which are provided to help us or entertain us, like transport, medical care in a hospital, a video-cassette, or local government.

Working in order to obtain goods and services to supply our needs and wants is called **economic activity**. It is also known as "**making a living**".

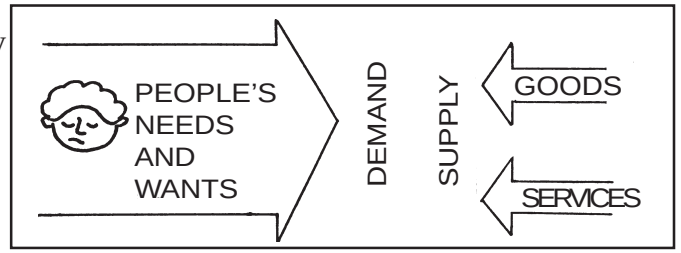
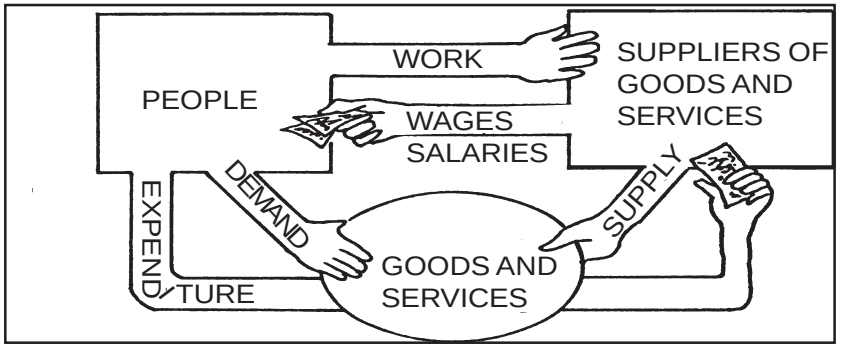


Diagram to show supply and demand



A simple diagram to show economic activity

ACTIVITIES

1. *Copy the diagram of "economic activity" into your exercise books, and answer the following questions:*
   - *a) When people are employed by the "suppliers of goods and services", what do they get in return?*
   - *b) How do people obtain what they want from the "suppliers of good and services"?*
   - *c) Name any 10 "suppliers of goods and services" in Vanuatu.*
2. *Study again the pictures on page 5 of this booklet. Which of them are goods, and which are services?*
3. *Why do you think most people in the world today have to work for cash in order to satisfy their basic needs?*

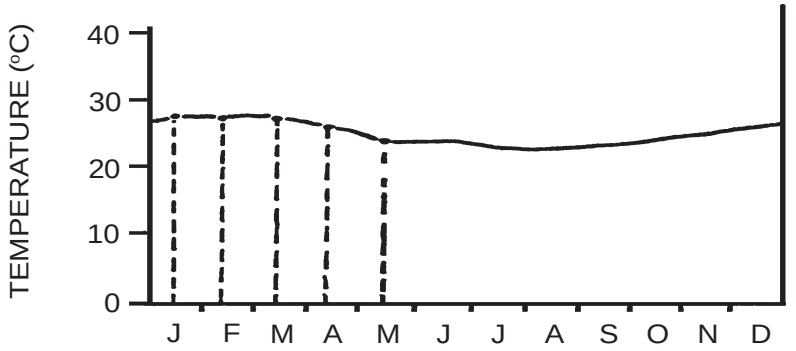
APPENDICES

APPENDIX A: CLIMATIC GRAPHS

Climatic graphs show statistics for air temperature and for precipitation (the amount of rain or snow that falls).

Temperature is shown by a **line graph**. The average temperature for each month is plotted in the middle of each column, using the vertical scale on the left-hand side of the graph.

The example on the right shows the temperature graph for Port Vila.

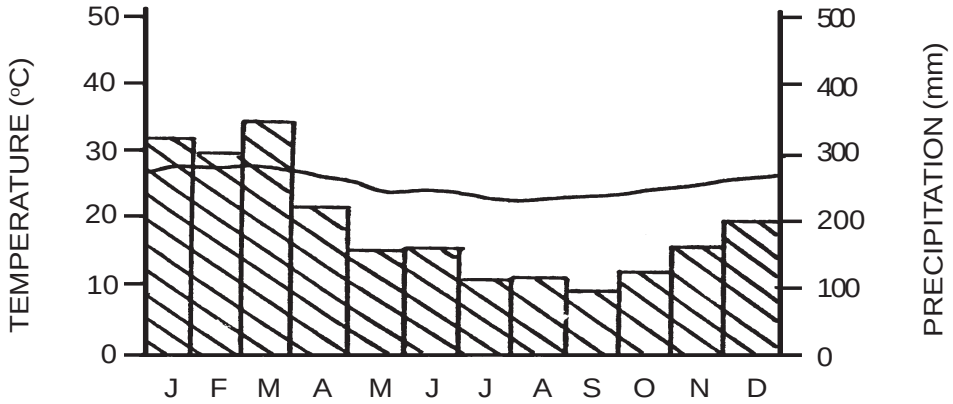


Precipitation is shown by a **bar chart**. The total rainfall or snowfall for each month is plotted, using the vertical scale on the right-hand side of the graph.

The example on the right shows the precipitation graph for Port Vila.

The complete **climatic graph** contains both temperature and precipitation statistics.

The example on the right shows the complete climatic graph for Port Vila.



APPENDIX B: REVISION TEST: HUMAN NEEDS AND ENVIRONMENTS Time: 40 minutes

1. Give a name for each of the following: (MARKS)
   a) The island where Alexander Selkirk lived along for 4 years and 4 months
   b) A place where water is found in a desert
   c) The people who live in the tundra areas of northern Europe
   d) A type of house made from tree trunks
   e) The boat that drifted for three weeks in the Coral Sea (5)
2. List <u>five</u> basic needs for survival. (5)
3. On an outline map of the world, mark clearly and name:
   a) The temperate zones
   b) One hot desert
   c) One area of tropical rain forest
   d) One large ice sheet
   e) The route followed by the *Tearoha* on its long voyage (5)
4. State three difficulties of living in hot deserts. (3)
5. State whether each of the following statements is **true** or **not true**:
   a) Early dwellings consisted of caves or leaf shelters because people had only simple technology.
   b) Leaching of soils is a big problem of living in tropical rain forests.
   c) Cactus plants and camels are found in cold deserts.
   d) "Economic activity" means working in order to be able to satisfy our needs and wants.
   e) Subsistence farmers consume more goods and services than do people who work for cash. (5)
6. Explain why it is hotter at the Equator than at the South Pole. (2)
7. Draw a diagram of any traditional house in Africa and label thebuilding materials. Give three reasons for the design and type of house shown. (5)

(/30)

APPENDIX C: GLOSSARY

(Note: the meanings given below are for the words as they are used in this book. You may also find other meanings in your dictionary.)

basic needs	things that we need in order to live; without them we will die
cactus	special kind of plant which has tiny leaves and stores water in its thick stem
canopy	thick covering of leaves and branches
cold desert	area with very low temperatures and only a small precipitation
consume	take in, use or eat
demand	people's needs and wants
desires	things that we like to have in order to make our lives better, more pleasant
economic activity	working in order to obtain goods and services to supply our needs and wants
employment	job or work in which a person can earn money
environment	our surroundings, or the things that are all around us
factor	element of a situation
goods	articles that grow, are collected or are made
hot desert	area with high temperatures and very little rainfall
ice sheet	thick layer of solid ice that covers a wide area; found in Greenland and Antarctica
igloo	temporary house built of ice blocks and made by Inuit when they go on hunting expeditions
I.T.C.Z. Inter-Tropical Convergence Zone	belt of rising air and heavy rainfall near the Equator
leaching	downward movement of plant nutrients into the soil, leaving the topsoil poor in fertility
military base	place where weapons and missiles are stored, or soldiers are camped
multi-storey	more than two floors or levels

natural vegetation	kinds of plant that grow naturally in an area
nomad	person who wanders around, never staying in one place for a long time
nutrition	the kind of food we eat
oasis	hollow or valley where water is found in a desert
occupant	person who lives inside a building
option	choice
ordeal	time of difficulty or severe testing
physical needs	the same as **basic needs**
polar zone	areas around the North Pole and the South Pole; they lie north of the Arctic Circle and south of the Antarctic Circle
precipitation	water that falls to earth from clouds, either as rain or snow
satisfy	provide for, or meet
savanna	environment in which the natural vegetation consists of tall grass and a few trees; found in the tropical zone
secure	safe or protected
services	things provided to help us or to entertain us
social needs	needs relating to other people, eg. friendship, learning from others, etc.
spiritual needs	the needs of our soul, or spirit, to come closer to God
subsistence farmer	person who grows his own food and is self-supporting
survival	remaining alive
supply	provide goods and services that people need
technology	use of machinery and tools
temperate zone	area between the Arctic Circle and the Tropic of Cancer, and between the Antarctic Circle and the Tropic of Capricorn
temperature	how hot or cold something is; temperatures are measured in degrees Celsius; water boils at 100^{o}C and freezes at 0^{o}C.
tropical rain forest	area of tall, thick forest, with high temperatures and plenty of rain

tropical zone	area between the Tropic of cancer and the Tropic of Capricorn
tundra	low flat area with no trees, covered in ice and snow for most of the year
wants	same as **desires**
yurt	type of tent used by nomads in Central Asia.