

READING

PASSAGE 1

You should spend about 20 minutes on Questions 1-13, which are based on Reading Passage 1 below.

Ahead of its time

A chance discovery in New Zealand has challenged the country's recorded history

One October afternoon, a young New Zealander, Sam Tobin, called his dogs and went for a walk down to the nearby Ruamahanga River. Having been very high for days, the river had at last fallen, and Tobin was eager to see what changes the floods had brought. The family farm borders the river and a four-metre-high flood bank testifies to its natural tendency to flood.

Tobin stepped out onto a broad shoulder of river sand, where he noticed what he initially took to be a whitish rock, lit by the sun. Then, getting closer, he realised it was a bone. Such a thing was not uncommon in these parts he had often come across bone fragments, or even whole skeletons, of cows and sheep. But as he scraped aside the stones he realised it was a human bone, something quite new in his experience. As he picked it up, he saw it was a skull, discoloured with age.

Tobin replaced the skull and hurried home to tell his mother what the river had delivered to their doorstep. It would prove to be a spectacular find, setting in motion an investigation by some of the country's most respected specialists, and ultimately challenging our most firmly held assertions about the human settlement of New Zealand.

The police were immediately called, but despite a thorough search could find nothing that might shed light on the identity of the Ruamahanga skull, or the circumstances of its sudden appearance. The skull was then taken north to be examined by forensic pathologist Dr Ferris, at Auckland Hospital. Despite being hampered by its damaged and incomplete condition -the jawbone and lower left portion of the cranium were missing - Dr Ferris determined that the skull was that of a female. He then consulted with a colleague, Dr Koelmeyer, who believed that the deterioration of the bone placed the time of death before living memory' and, most significantly as it would turn out, the skull appeared to be European in origin.

Wellington-based forensic anthropologist Dr Watt also examined the skull, and suggested it belonged to a 40-45 year-old. He believed that it could be the remains of an old farm burial, but was not certain, and proposed the use of radiocarbon dating to make sure it wasn't a recent death. As a result, the Institute of Geological and Nuclear Sciences (GNS) in Lower Hutt was contacted, and provided with a sample of bone that had originated in the top of the skull. In a little over three weeks the seemingly astonishing results from the GNS laboratory came back. Cutting through the

bewildering complexity of the scientific analysis was a single line reading: conventional radiocarbon age approximately 296 years. This was staggering, for the skull was about 200 years older than Dr Koelmeyer had believed.

Of course, a skull of this age wasn't particularly unusual in New Zealand. The Maori people have been living in the country for at least 800 years and scientists frequently come across human remains of considerable age. The fascinating question, however, was how a skull of this race, let alone this gender, had reached these remote islands in the South Pacific at such a time, long before the arrival of the explorer Captain Cook in 1769, and perhaps even before the very first European landfall the fleeting visit of the Dutch explorer Tasman in 1642 neither of whom had women among their crews.

The first known European women in the Pacific came with a doomed colonising venture which sailed from Peru in 1595 under the command of Spanish captain Mendana. However, it is unlikely the Ruamahanga skull originated from this expedition because no evidence of Mendana's ships has ever been found in New Zealand, while a team of archaeologists working in the Solomon Islands in 1970 did discover the remains of European vessels dating from the 16th century.

Two centuries were to pass before the first recorded European females arrived in New Zealand, both having escaped from prison in Australia. Kathleen Hagerty and Charlotte Edgar are known to have reached the country in 1806. How then do we account for the Ruamahanga skull, which appears to be about 100 years older than that? It is impossible to say with certainty, but the most likely explanation is that a Spanish or Portuguese trading-hip was washed onto these wild shores as a result of a shipwreck and a woman got ashore. Implausible, perhaps, but the Ruamahanga skull, today resting in the Wellington Museum, could be the kind of concrete evidence that demands such a drastic re-evaluation of history.

Questions 1-4

Do the following statements agree with the information given in Reading Passage 1?

In boxes 1-4 on your answer sheet, write

- TRUE** *if the statement agrees with the information*
FALSE *if the statement contradicts the information*
NOT GIVEN *if there is no information on this*

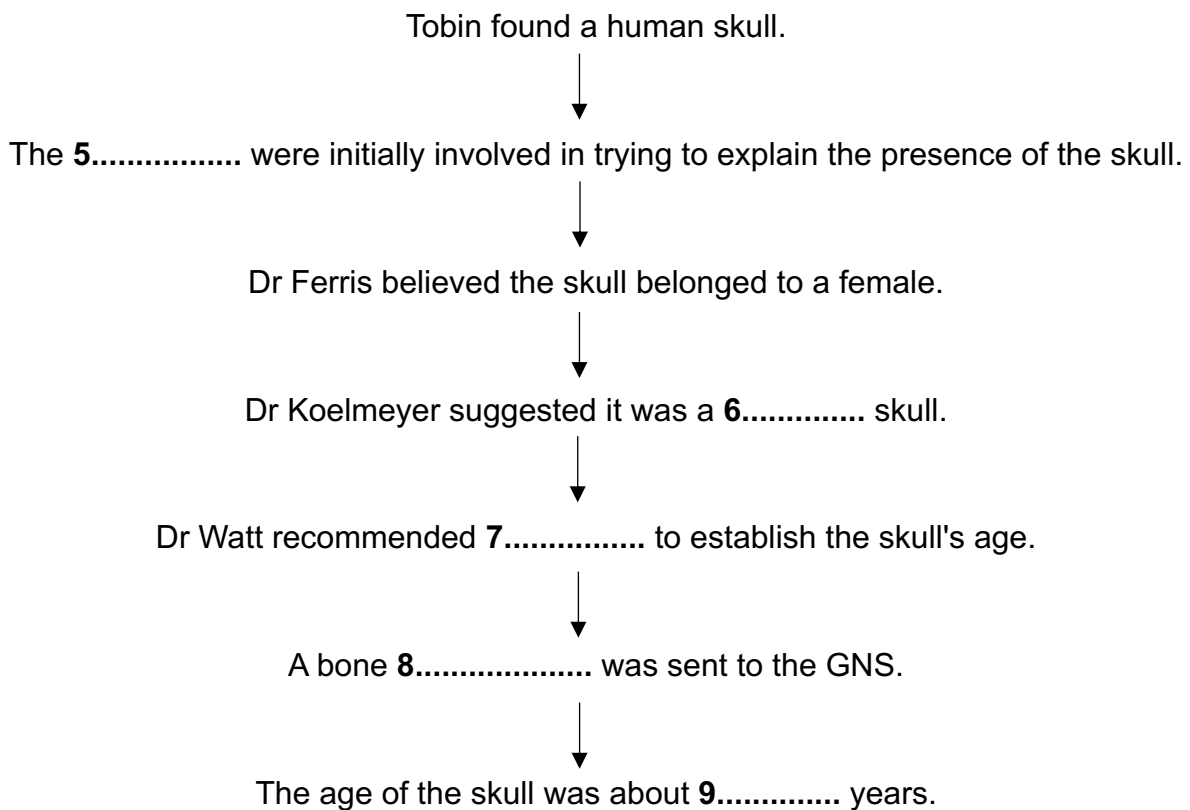
- 1 The Ruamahanga River often floods
- 2 When Tobin first found the object in the river, he mistook it for something else
- 3 Tobin could not decide what part of the body the bone came from
- 4 Tobin's mother was surprised that the skull caused debate among specialists

Questions 5-9.

Complete the flow-chart below.

Choose **NO MORE THAN TWO WORDS AND/OR A NUMBER** from the passage for each answer. Write your answers in boxes 5-9 on your answer sheet.

The events after the river flooded



Questions 10-13.

Complete the notes below.

Choose **ONE WORD ONLY** from the passage for each answer.

Write your answers in boxes 10-13 on your answer sheet.

Problem of the skull's origins

- old bones common in NZ
- Maori living there for 800 years
- Ruamahanga skull surprising because of its
 - age
 - **10**.....
 - gender

Mendana expedition

- possible source of skull
- but probably did not visit NZ
- evidence of this expedition found elsewhere by **11**.....

New Zealand

- first European explorer arrived in 1642
- Hagerty and Edgar arrived in 1806 from **12**..... imprisoned where they had been

Possible solution

- Ruamahanga skull may have reached NZ in 17th century after a **13**.....

READING PASSAGE 2

Coral Reefs

Coral reefs are underwater structures made from calcium carbonate secreted by corals. Coral reefs are colonies of tiny living animals found in marine waters that contain few nutrients. Most coral reefs are built from stony corals, which in turn consist of polyps that cluster in groups.

A Coral reefs are estimated to cover 284,300 km² just under 0.1% of the oceans' surface area, about half the area of France. The Indo-Pacific region accounts for 91.9% of this total area. Southeast Asia accounts for 32.3% of that figure, while the Pacific including Australia accounts for 40.8%. Atlantic and Caribbean coral reefs account for 7.6%. Yet often called -rainforests of the seall, coral reefs form some of the most diverse ecosystems on Earth. They provide a home for 25% of all marine species, including fish, mollusks worms, crustaceans, echinoderms, sponges, tunicates and other cnidarians. Paradoxically, coral reefs flourish even though they are surrounded by ocean waters that provide few nutrients. They are most commonly found at shallow depths in tropical waters, but deep water and cold water corals also exist on smaller scales in other areas. Although corals exist both in temperate and tropical waters, shallowwater reefs form only in a zone extending from 30°N to 30°S of the equator. Deepwater coral can exist at greater depths and colder temperatures at much higher latitudes, as far north as Norway. Coral reefs are rare along the American and African west coasts. This is due primarily to upwelling and strong cold coastal currents that reduce water temperatures in these areas (respectively the Peru, Benguela and Canary streams). Corals are seldom found along the coastline of South Asia from the eastern tip of India (Madras) to the Bangladesh and Myanmar borders. They are also rare along the coast around northeastern South America and Bangladesh due to the freshwater released from the Amazon and Ganges Rivers, respectively.

B Coral reefs deliver ecosystem services to tourism, fisheries and coastline protection. The global economic value of coral reefs has been estimated at as much as \$US375 billion per year. Coral reefs protect shorelines by absorbing wave energy, and many small islands would not exist without their reef to protect them.

C The value of reefs in biodiverse regions can be even higher. In parts of Indonesia and the Caribbean where tourism is the main use, reefs are estimated to be worth US\$1 million per square kilometer, based on the cost of maintaining sandy beaches and the value of attracting snorkelers and scuba divers. Meanwhile, a recent study of the Great Barrier Reef in Australia found that the reef is worth more to the country as an intact ecosystem than an extractive reserve for fishing. Each year more than 1.8 million tourists visit the reef, spending an estimated AU\$4.3 billion (Australian dollars) on reef-related industries from diving to boat rental to posh island resort stays. In the Caribbean, says UNEP, the net annual benefits from diver tourism were US\$2 billion in 2000 with US\$625 million spent directly on diving on reefs. Further, reef tourism is

an important source of employment, especially for some of the world's poorest people. UNEP says that of the estimated 30 million small-scale fishers in the developing world, most are dependent to a greater or lesser extent on coral reefs. In the Philippines, for example, more than one million small-scale fishers depend directly on coral reefs for their livelihoods. The report estimates that reef fisheries were worth between \$15,000 and \$150,000 per square kilometer a year, while fish caught for aquariums were worth \$500 a kilogram against \$6 for fish caught as food. The aquarium fish export industry supports around 50,000 people and generates some US\$5.5 million a year in Sri Lanka alone.

D Unfortunately, coral reefs are dying around the world. In particular, coral mining, agricultural and urban runoff, pollution (organic and inorganic), disease, and the digging of canals and access into islands and bays are localized threats to coral ecosystems. Broader threats are sea temperature rise, sea-level rise and pH changes from ocean acidification, all associated with greenhouse gas emissions. Some current fishing practices are destructive and unsustainable. These include cyanide fishing, overfishing and blast fishing. Although cyanide fishing supplies live reef fish for the tropical aquarium market, most fish caught using this method are sold in restaurants, primarily in Asia, where live fish are prized for their freshness. To catch fish with cyanide, fishers dive down to the reef and squirt cyanide in coral crevices and on the fastmoving fish, to stun the fish making them easy to catch. Overfishing is another leading cause for coral reef degradation. Often, too many fish are taken from one reef to sustain a population in that area. Poor fishing practices, such as banging on the reef with sticks (muro-ami), destroy coral formations that normally function as fish habitat. In some instances, people fish with explosives (blast fishing), which blast apart the surrounding coral.

E Tourist resorts that empty their sewage directly into the water surrounding coral reefs contribute to coral reef degradation. Wastes kept in poorly maintained septic tanks can also leak into surrounding groundwater, eventually seeping out to the reefs. Careless boating, diving, snorkeling and fishing can also damage coral reefs. Whenever people grab, kick, and walk on, or stir up sediment in the reefs, they contribute to coral reef destruction. Corals are also harmed or killed when people drop anchors on them or when people collect coral.

F To find answers for these problems, scientists and researchers study the various factors that impact reefs. The list includes the ocean's role as a carbon dioxide sink, atmospheric changes, ultraviolet light, ocean acidification, viruses, impacts of dust storms carrying agents to far-flung reefs, pollutants, algal blooms and others. Reefs are threatened well beyond coastal areas.

General estimates show approximately 10% of the world's coral reefs are dead. About 60% of the world's reefs are at risk due to destructive, human-related activities. The threat to the health of reefs is particularly strong in Southeast Asia, where 80% of reefs are endangered.

G In Australia, the Great Barrier Reef is protected by the Great Barrier Reef Marine Park Authority and is the subject of much legislation, including a biodiversity action plan. Inhabitants of Ahus Island, Manus Province, Papua New Guinea, have followed a generations-old practice of restricting fishing in six areas of their reef lagoon. Their cultural traditions allow line fishing, but not net or spearfishing. The result is both the biomass and individual fish sizes are significantly larger in these areas than in places where fishing is unrestricted.

Questions 14-19

The reading Passage has seven paragraphs A-G.

Which paragraph contains the following information?

Write the correct letter **A-G**, in boxes 1-6 on your answer sheet.

NB You may use any letter more than once

14. Geographical Location of the world's coral reef
15. How does coral reef benefit economy locally
16. The statistics of coral reef's economic significance
17. The listed reasons for the declining number of coral reef
18. Physical approach to the coral reef by people
19. Unsustainable fishing methods are applied in regions of the world

Questions 20-26

Do the following statements agree with the information given in Reading Passage?

Write your answers in boxes 7-12 on your answer sheet.

TRUE *if the statement agrees with the information*

FALSE *if the statement contradicts the information*

NOT GIVEN *if there is no information on this*

20. Coral reefs provide habitat to a variety of marine life.
21. Coral reef distributes around the ocean disproportionately.
22. Coral reef is increasingly important for scientific purpose.
23. Coral reefs are greatly exchanged among and exported to other countries.
24. Reef tourism is of economic essence generally for some poor people.
25. As with other fishing business, coral fishery is not suitable to women and children.

Question 26

Choose the correct letter, **A**, **B**, **C** or **D**.

Write your answers in boxes 13 on your answer sheet.

What is the main purpose of this passage?

- A** Demonstrate how coral reef growth in the ocean
- B** To tell that coral reef is widely used as a scientific project
- C** Present the general benefits and an alarming situation of coral reef
- D** To show the vital efforts made to protect the coral reef in Australia

READING PASSAGE 3

Case study in flexible working: Frank Russell company

A. Two phrases that Frank Russell Company uses to identify itself also suggest why flexible work options are a perfect fit for this American financial services firm. The sun never sets in Russell' means this 24-hour, multicountry organizations' flexible work hours are essential to conducting its business. "Employees first, clients second" expresses the bottom line worth that management sees in employee satisfaction and creating an excellent work environment that includes opportunities to work from home. Telework, (i.e. working away from the traditional office) compressed workweeks and flexitime serve Russell both as strategic business tools and valued employee benefits. Of we have happy staff first, we will have happy client,' says Mike Phillips, the company's chief executive.

B. Flexible work options are offered in all departments, but the level and type of use vary widely among the 970 employees based at the company's headquarters in Tacoma, Washington State. In the early 1990s, several work groups pioneered various forms of flexible working, including telework. As the programs spread, management discovered one size does not fit all. Rather than attempt to cover every possibility, Russell now provides general guidelines under which departments customize plans to accommodate individuals' personal circumstances.

C. Implementing telework becomes less of a leap when a company's staff and clients are already scattered around the world. Pam Johnson, Manager of International Assignments, works in Tacoma but reports to a supervisor based in London. She is responsible for transfers of staff from one country to another, including negotiating the terms, shipping belongings and obtaining work permits. She works from home several times a month. Johnson says, 'I take homework that involves reading, writing, creating spreadsheets and answer emails.' Johnson says she is a more loyal employee because of the combination of benefits, flexibility and trust her employer offers. 'I've been here 11 years. Once in a while I wonder if I should look elsewhere, but the opportunity to flex my hours and work at home are part of the formula that always ends up on the Russell side.'

D. Email and technology such as remote network access not only transformed the office environment and the communication abilities between branch offices, they supported the growth of telework. Mike Phillips is as reliant on email and remote access as anyone, regardless of whether he is working in Singapore, Tacoma or from home. 'Email is our primary means of communication,' Phillips says. 'I can get up two hours early Singapore and respond to 20 emails from associates around the world or send a companywide memo from home.'

E. The ability to vary start times or work the longer days of a compressed workweek are a way of doing business at Russell. An earlier start or a longer day increases telephone communication with international staff. In addition, since the New York

Exchange opens at 9 a.m, traders on the West Coast need to start by 6 a.m local time. Another group, which provides desktop computer support, finds four 10-hour days make it easier to accomplish some tasks before or after employees need to use their computers.

F. The larger consulting department offers compressed workweeks to administrative staff. Administrative Assistant Jean Boelk works different proportions of alternate weeks in order to receive one extra day off every other week. She is part of team of four administrative staff who jointly support a work group of four executives. People are more willing to help each other because we're dependent on each other on our days off, Boelk says. Increasing the hours of coverage, plus the idea of cross-training and shared work, results in less overtime. So long as coverage is adequate, staff can change days off from one pay period to the next

G. What motivates teleworkers is usually a combination of work and personal needs. Senior Technical Analyst Scott Boyd, who is in the Computer Operation section, works at home twice a month. Boyd's job involves responding to telephone requests, and in the office it's hard to work longer than 10 minutes without getting interrupted by the phone. It's an incredible relief to be so productive for one day at home,' he says.

H. A number of managers also find that working at home improves their overall performance. Sales and Marketing Services Manager Tricia O'Connell works at home approximately two days a month. She gives staff her home telephone number and advance notice of her plans, then checks voice mail every half hour and email every hour from home. In addition, she schedules weekly meetings in her office with each of eight members of her team to discuss challenges and encourage top performance. This means I am more able to focus on staff when it counts,' she says.

I. In the end, management asks two questions when making decisions about work option requests: 1) Will it improve overall employee satisfaction or job performance? and 2) Will it hurt performance of duties in some way that it not acceptable or is not offset by other improvements? For Frank Russell Company, the answers these questions show that flexible working is highly satisfactory for business.

QUESTION 27-34

Choose the correct heading for paragraphs A-D and F-I from the list of headings below.

Write the correct number i-xi in boxes 27-34 on your answer sheet.

List of Headings

- i** Flexible working meets differing business needs
- ii** The disadvantages of flexible working
- iii** The process of organising flexible working has changed
- iv** Involving clients in deciding how best to serve them
- v** Technical developments have facilitated flexible working
- vi** The cost/benefit analysis of flexible working
- vii** Flexible working increases co-operation among staff
- viii** Flexible working encourages commitment to the company
- ix** The workforce is the company's top priority
- x** It's easier to get on with the work at home

Example Answer

Paragraph E i

27. Paragraph A

28. Paragraph B

29. Paragraph C

30. Paragraph D

31. Paragraph F

32. Paragraph G

33. Paragraph H

34. Paragraph I

QUESTION 35-37

Match each description with the correct person, **A-E**.

Write the correct letter. **A-E** in boxes 35-37 on your answer sheet.

List of Staff

- A. Mike Phillips
- B. Pam Johnson
- C. Jean Boelk
- D. Scott Boyd
- E. Tricia O'Connell

- 35. provides contact details when working out of the office
- 36. is convinced that staff feelings have an impact on company
- 37. performance has responsibilities which are shared with certain colleagues

QUESTION 38-40

Complete the sentence below.

Choose **ONE WORD ONLY** from the passage for each answer. Write your answer in boxes 38-40 on your answer sheet.

- 38. The Frank Russell Company aims to ensure that staff gain a sense of _____ from their work.
- 39. Mike Phillip mostly uses _____ to contact staff.
- 40. In the consulting department flexible working reduces the amount of _____ done by staff.

ANSWER KEY
Passage 1. Ahead of its time.

1	TRUE	The family farm borders the river and a four-metre-high flood bank testifies to its natural tendency to flood
2	TRUE	Tobin stepped out onto a broad shoulder of river sand where he noticed what he initially took to be a whitish rock lit by the sun.
3	FALSE	As he scraped aside the stones he realised it was a human bone something quite new in his experience. As he picked it up he saw it was a skull discoloured with age.
4	NOT GIVEN	There is no information about Tobin's mothers reaction to the debate among specialists.
5	police	The police were immediately called but despite a thorough search could find nothing that might shed light on the identity of the Ruamahanga skull or the circumstances of its sudden appearance.
6	European	The skull appeared to be European in origin
7	radiocarbon dating	Dr WatL...proposed the use of radiocarbon dating to make sure it wasn't a recent death.
8	sample	Provided with a sample of bone that had originated in the top of the Skull
9	296	Conventional radiocarbon age approximately 296 years.
10	Race	The fascinating question however ever was was how how a a skull skull of of this this race race let let alone alone this this gender had reached these remote islands.
11	Archaeologists	A team of archaeologists working in the Solomon Island 1970 did discover the remains of European vessels dating from the 16h century.
12	Australia	Two centuries were to pass before the first recorded European females arrivedl in New Zealand both having escaped from prison in Australia
13	Shipwreck	The most likely explanation is that a Spanish or Portuguese trading- ship was washed onto these wild shores as a result of a shipwreck and a woman got ashore.

Passage 2.CORAL REEFS

14	C	Reefs often give rise to islands that provide habitats for people, and lenses of fresh water for drinking and wave action.
15	A	A It has been estimated that over half a billion people live within 100km of coral reef, with over 200 million living near reefs in Southeast Asia and nearly 100 million living near reefs in the Indian Ocean (Bryant et al, 1998).
16	F	Oneofthe principal factors responsible for declining reef benefits is reef degradation: coral reef ecosystems are

		extremely sensitive to change and easily suffer from disturbance,
17	A	A Coral reefs are found in shallow waters throughout the tropical world, and dominate the coastlines of many countries in the South Pacific, Southeast Asia, and the Indian Ocean
18	C	Rawmaterials include seasonally stable supplies of food, building materials, and medicines.
19	E	Shallow coral-reef resources are often their principal source of subsistence and income...because reef products can be collected on foot
20	TRUE	National and international interest in coral reefs are growing, for example as a focus for research studies by marine biologists
21	TRUE	For these groups, coral reefs provide a complex range of benefits
22	NOT GIVEN	
23	FALSE	The structural- and species diversity of the reef prohibits large-scale, industrial production, and favours small-scale production.
24	TRUE	As with many fisheries, work on coral reefs is unsuitable for some sections of the population
25	FALSE	However, in many cases coastal tourism developments, external markets, and well- meaning efforts to halt reef decline have excluded them from access to reef benefits too.
26	C	The passage discusses the various economic benefits of coral reefs and the impact of reef deterioration on local populations and economies

Passage 3. CASE STUDY IN FLEXIBLE WORKING

27	x
28	iii
29	ix
30	v
31	vii
32	xi
33	viii
34	vi
35	E
36	D
37	C
38	satisfaction
39	email
40	overtime