

Tapescripts

TEST 1

SECTION 1

- NINA: Hi, George! Glad you're back. *Loads* of people have phoned you.
- GEORGE: Really?
- NINA: I felt just like your secretary!
- GEORGE: Sorry! I went into the library this afternoon to have a look at a newspaper and I came across something really interesting.
- NINA: What? A book?
- GEORGE: No, a brochure from a summer festival – mainly Spanish music. Look, I've got it here. *Example*
- NINA: Spanish music? I really love the guitar. Let's have a look. So what's this group 'Guitarrini'?
- GEORGE: They're really good. They had a video with all the highlights of the festival at a stand in the lobby to the library, so I heard them. They play fantastic instruments – drums and flutes and old kinds of guitars. I've never heard anything like it before. *Q1*
- NINA: Sounds great.
- GEORGE: Okay. Shall we go then? Spoil ourselves?
- NINA: Yes, let's.
- GEORGE: The only problem is there aren't any cheap seats . . . it's all one price.
- NINA: Well, in that case we could sit right at the front – we'd have a really good view.
- GEORGE: Yeah, though I think that if you sit at the back you can actually hear the whole thing better. *Q2*
- NINA: Yes. Anyway we can decide when we get there.
-
- NINA: So will you fill in the form or shall I?
- GEORGE: I'll do it. Name: George O'Neill. Address: 48 North Avenue, Westsea. Do you remember our new postcode? Still can't remember it. *Q3*
- NINA: Just a minute – I've got it written down here. WS6 2YH. Do you need the phone too? *Q4*
- GEORGE: Please. I'm really bad at numbers.
- NINA: 01674 553242. So, let's book two tickets for Guitarrini. *Q5*
- GEORGE: Okay. If you're sure £7.50 each is all right. How do you feel about the singer?
- NINA: I haven't quite decided. But I've noticed something on the booking form that might just persuade me!
- GEORGE: What's that then?
- NINA: Free refreshments!
- GEORGE: Really?

- NINA: Yes, look here. Sunday 17th of June. Singer, ticket £6.00 includes drinks in the garden. Q6
- GEORGE: Sounds like a bargain to me!
- NINA: Yes, let's book two tickets for that. So, what else? I'm feeling quite keen now! How about the pianist on the 22nd of June? Q7
- GEORGE: Anna Ventura? I've just remembered that's my evening class night.
- NINA: That's okay. I'll just have to go on my own – but we can go to the Spanish dance and guitar concert together, can't we?
- GEORGE: Yes – I'm sure Tom and Kieran would enjoy that too. Good heavens – £10.50 a ticket! I can see we're going to have to go without food for the rest of the week – we'll need to book four! Q8
Q9
- NINA: Wish we were students – look! Children, Students and Senior Citizens get a 50% discount on everything. Q10
- GEORGE: If only!

SECTION 2

Hello, and thank you for asking me to your teachers' meeting to talk about the Dinosaur Museum and to tell you a bit about what you can do with your students there.

Well, let me give you some of the basic information first. In regard to opening hours, we're open every day of the week from 9.00 am to 8.00 pm except on Mondays when we close at 1.30 pm. And, in fact the only day in the year when we're closed is on the 25th of December. You can book a guided tour for your school group any time that we're open. Q11 & 12

If you bring a school group to the museum, when you arrive we ask you to remain with your group in the car park. One or more of the tour guides will welcome you there and brief you about what the tour will be about. We do this there because our entrance is quite small and we really haven't got much room for briefing groups in the exhibition area. Q13

As far as the amount of time you'll need goes, if you bring a school group you should plan on allowing a minimum of 90 minutes for the visit. This allows 15 minutes to get on and off the coach, 45 minutes for the guided tour and 30 minutes for after-tour activities. Q14

If you're going to have lunch at the museum you will, of course, have to allow more time. There are two cafés in the museum, with seating for 80 people. If you want to eat there you'll need to reserve some seating, as they can get quite crowded at lunch time. Then outside the museum at the back there are tables, and students can bring their own lunch and eat it there in the open air. Q15

When the students come into the museum foyer we ask them to check in their backpacks with their books, lunch boxes, etc, at the cloakroom before they enter the museum proper. I'm afraid in the past we have had a few things gone missing after school visits so this is a strict rule. Also, some of the exhibits are fragile and we don't want them to be accidentally knocked. But we do provide school students with handouts with questions and quizzes on them. There's so much that students can learn in the museum and it's fun for them to have something to do. Of course they'll need to bring something to write with for these. We do allow students to take photographs. For students who are doing projects it's useful to make some kind of visual record of what they see that they can add to their reports. And finally, they should not bring anything to eat into the museum, or drinks of any kind. Q16–18
Q16–18

There are also a few things the students can do after the tour. In the theatrette on the ground floor there are continuous screenings of short documentaries about dinosaurs which they can see at any time. We used to have an activity room with more interactive things like making models of dinosaurs and drawing and painting pictures, even hunting for dinosaur eggs, but unfortunately the room was damaged in a bad storm recently when water came in the roof, so that's closed at the moment. But we do have an IT centre where students have access to CD ROMs with a range of dinosaur games. These games are a lot of fun, but they also teach the students about the lives of dinosaurs, how they found food, protected their habitat, survived threats, that kind of thing. Q19 & 20

And . . . I think that's all I have to tell you. Please feel free to ask any questions if you would like to know anything else . . . Q19 & 20

SECTION 3

TUTOR: Right, Sandra. You wanted to see me to get some feedback on your group's proposal. The one you're submitting for the Geography Society field trip competition. I've had a look through your proposal and I think it's a really good choice. In fact, I only have a few things to say about it, but even in an outline document like this you really have to be careful to avoid typos and problems with layout in the proposal, and even in the contents page. So read it through carefully before submitting it, okay?

SANDRA: Will do.

TUTOR: And I've made a few notes on the proposal about things which could have been better sequenced. Q21

SANDRA: Okay.

TUTOR: As for the writing itself, I've annotated the proposal as and where I thought it could be improved. Generally speaking, I feel you've often used complex structures and long sentences for the sake of it and as a consequence . . . although your paragraphing and inclusion of sub-headings help . . . it's quite hard to follow your train of thought at times. So cut them down a bit, can you? Q22

SANDRA: Really?

TUTOR: Yes. And don't forget simple formatting like numbering.

SANDRA: Didn't I use page numbers?

TUTOR: I didn't mean that. Look, you've remembered to include headers and footers, which is good, but listing ideas clearly is important. Number them or use bullet points, which is even clearer. Then you'll focus the reader on your main points. I thought your suggestion to go to the Navajo Tribal Park was a very good idea. Q23

SANDRA: I've always wanted to go there. My father was a great fan of cowboy films and the Wild West so I was subjected to seeing all the epics, many of which were shot there. As a consequence, it feels very familiar to me and it's awesome both geographically and visually, so it's somewhere I've always wanted to visit. The subsequent research I did and the online photographs made me even keener. Q24

TUTOR: Interesting. Right, let's look at the content of your proposal now.

SANDRA: Did you find it comprehensive enough?

- TUTOR: Well, yes and no. You've listed several different topics on your contents page, but I'm not sure they're all relevant.
- SANDRA: No? Well, I thought that from the perspective of a field trip, one thing I needed to focus on was the sandstone plateaux and cliffs themselves. Q25-27
The way they tower up from the flat landscape is just amazing. The fact that the surrounding softer rocks were eroded by wind and rain, leaving these huge outcrops high above the plain. It's hardly surprising that tourists flock to see the area.
- TUTOR: Well, yes, I'd agree with including those points . . .
- SANDRA: And then the fact that it's been home to native American Navajos and all the social history that goes with that. The hardships they endured trying to save their territory from the invading settlers. Their culture is so rich – all those wonderful stories.
- TUTOR: Well, I agree it's interesting, but it's not immediately relevant to your proposal, Sandra, so at this stage, I suggest you focus on other considerations. I think an indication of what the students on the trip could actually do when they get there should be far more central, so that Q25-27
certainly needs to be included and to be expanded upon. And I'd like to see something about the local wildlife, and vegetation too, not that I Q25-27
imagine there's much to see. Presumably the tourist invasion hasn't helped.
- SANDRA: Okay, I'll do some work on those two areas as well. But you're right, there's not much apart from some very shallow-rooted species. Although it's cold and snowy there in the winter, the earth is baked so hard in the summer sun that rainwater can't penetrate. So it's a case of flood or drought, really.
- TUTOR: So, I understand. Now, before we look at everything in more detail, I've got a few factual questions for you. It would be a good idea to include the answers in your finished proposal, because they're missing from your draft.
- SANDRA: Fine.
- TUTOR: So, you mentioned the monoliths and the spires, which was good, but what area does the tribal park cover? Do you know?
- SANDRA: 12,000 hectares, and the plain is at about 5,850 metres above sea level. Q28
- TUTOR: Larger than I expected. Okay. Where's the nearest accommodation? That's a practical detail that you haven't included. Have you done any research on that?
- SANDRA: Yes. There's nowhere to stay in the park itself, but there's an old trading post called Goulding quite near. All kinds of tours start from Goulding, too.
- TUTOR: What kind of tours?
- SANDRA: Well, the most popular are in four-wheel drive jeeps – but I wouldn't recommend hiring those. I think the best way to appreciate the area would be to hire horses instead and trek around on those. Biking is not allowed Q29
and it's impossible to drive around the area in private vehicles. The tracks are too rough.
- TUTOR: Okay, lastly, what else is worth visiting there?
- SANDRA: There are several caves, but I haven't looked into any details. I'll find out Q30
about them.
- TUTOR: Okay, good. Now what I'd like to know is . . .

SECTION 4

So, welcome to your introductory geography lecture. We'll begin with some basics. Firstly, what do we learn by studying geography?

Well, we learn a great deal about all the processes that have affected and that continue to affect the earth's surface. But we learn far more than that, because studying geography also informs us about the different kinds of relationships that develop between a particular environment and the people that live there. Q31 Q32

Okay. We like to think of geography as having two main branches. There's the study of the nature of our planet – its physical features, what it actually looks like – and then there's the study of the ways in which we choose to live and of the impact of those on our planet. Our current use of carbon fuels is a good example of that. Q33

But there are more specific study areas to consider too, and we'll be looking at each of these in turn throughout this semester. These include bio-physical geography, by which I mean the study of the natural environment and all its living things. Then there's topography – that looks at the shapes of the land and oceans. There's the study of political geography and social geography too, of course, which is the study of communities of people. We have economic geography – in which we examine all kinds of resources and their use – agriculture, for example. Next comes historical geography – the understanding of how people and their environments and the ways they interact have changed over a period of time – and urban geography, an aspect I'm particularly interested in, which takes as its focus the location of cities, the services that those cities provide, and migration of people to and from such cities. And lastly, we have cartography. That's the art and science of map-making. You'll be doing a lot of that! Q34

So, to summarise before we continue, we now have our key answer . . . studying this subject is important because without geographical knowledge, we would know very little about our surroundings and we wouldn't be able to identify all the problems that relate to them. So, by definition, we wouldn't be in an informed position to work out how to solve any of them. Q35

Okay, now for some practicalities. What do geographers actually do? Well, we collect data to begin with! You'll be doing a lot of that on your first field trip! How do we do this? There are several means. We might, for example, conduct a census – count a population in a given area perhaps. We also need images of the earth's surface which we can produce by means of computer-generation technology or with the help of satellite relays. We've come a very long way from the early exploration of the world by sailing ships when geographers only had pens and paper at their disposal. Q36

After we've gathered our information, we must analyse it! We need to look for patterns, most commonly those of causes and consequences. This kind of information helps us to predict and resolve problems that could affect the world we live in. Q37

But we don't keep all this information confidential. We then need to publish our findings so that other people can access it and be informed by it. And one way in which this information can be published is in the form of maps. You'll all have used one at some stage of your life already. Let's consider the benefits of maps from a geographer's perspective.

Maps can be folded and put in a pocket and can provide a great store of reference when they're collected into an atlas. They can depict the physical features of the entire planet if necessary, or, just a small part of it in much greater detail. But there is a drawback. You can't exactly replicate something that is three-dimensional, like our planet, on a flat piece of paper, because paper has only two dimensions, and that means there'll always be a certain degree of distortion on a map. It can't be avoided.

Q38

We can also use aerial photographs . . . pictures taken by cameras at high altitude above the earth. These are great for showing all kinds of geographical features that are not easy to see from the ground. You can easily illustrate areas of diseased trees or how much traffic is on the roads at a given time or information about deep sea beds, for example.

Q39

Then there are Landsats. These are satellites that circle the earth and transmit visual information to computers at receiving stations. They circle the earth several times a day and can provide a mass of information – you'll all be familiar with the information they give us about the weather, for example.

Q40

So, what we're going to do now is look at a short presentation in which you'll see all these tools . . .

TEST 2

SECTION 1

JUDY: Good morning. Total Insurance. Judy speaking, how may I help you?

MICHAEL: I recently shipped my belongings from overseas back here to Australia and I took out insurance with your company. Some items were damaged during the move so I need to make a claim. What do I have to do?

JUDY: Okay, well first I need to get a few details about this. Can you give me your name please?

MICHAEL: Yes. It's Michael Alexander.

Example

JUDY: Okay. And your address please?

MICHAEL: My old address or my current one?

JUDY: Your current one.

MICHAEL: It's 24 Manly Street, Milperra near Sydney.

JUDY: What was the suburb, sorry?

MICHAEL: Milperra. M-I-L-P-E-R-R-A.

Q1

JUDY: Right. Now, who was the shipping agent Mr Alexander?

MICHAEL: You mean the company we used?

JUDY: Yes, the company who packed everything up at the point of origin.

MICHAEL: Oh, it was . . . er . . . First Class Movers.

Q2

JUDY: Okay . . . where were the goods shipped from?

MICHAEL: China, but the ship came via Singapore and was there for about a week.

JUDY: Don't worry, all of that information will be in the documentation. Now, the dates. Do you know when the ship arrived?

MICHAEL: It left on the 11th of October and got to Sydney on the 28th of November.

Q3

JUDY: Okay. I need one more thing. There's a reference number. It should be in the top right-hand corner of the pink form they gave you.

Tapescripts

MICHAEL: Let me have a look. I have so many papers. Yes, here it is. It's 601 ACK.
JUDY: Thanks.

JUDY: I need to take down a few details of the actual damage over the phone before you put in a full report. Can you tell me how many items were damaged and what the damage was?
MICHAEL: Yes, well four things actually. I'll start with the big things. My TV first of all. It's a large one . . . very expensive.
JUDY: Our insurance doesn't cover electrical problems.
MICHAEL: It isn't an electrical problem. The screen has a huge crack in it so it's unusable. Q4
JUDY: I see. Any idea of the price to repair it?
MICHAEL: No. Well, I don't think it can be repaired. It will need a new one. Q4
JUDY: Okay. I'll make a note of that and we'll see what we can do. Now, what was the second item?
MICHAEL: The cabinet from the bathroom was damaged as well. It's a lovely cabinet, we use it to keep our towels in. Q5
JUDY: And what is the extent of the damage?
MICHAEL: Well, the back and the sides seem okay but the door has a huge hole in it. Q6
It can't be repaired. I'm really not very happy about it.
JUDY: And how much do you think it will cost to replace it?
MICHAEL: Well, when I bought it last year I paid \$125 for it. But the one I've seen here in Sydney is a bit more expensive, it's \$140. Q7
JUDY: Right, and what was the third item?
MICHAEL: My dining room table. It's a lovely table from Indonesia. It must have been very hot inside the container because one leg has completely split down the middle. The top and the other three look okay thank goodness. Q8
JUDY: Any idea of the price to repair it?
MICHAEL: Well, I had an estimate done on this actually because it is a very special table to us. They quoted us \$200, which is really pricey so I hope the insurance will cover the total cost.
JUDY: I'm sure that will be fine. What was the last item, Mr Alexander?
MICHAEL: Well, we have a lovely set of china plates and dishes, you know, with matching cups, saucers, the lot. They were all in the one box which must have got dropped because some plates were broken – six actually. Q9
JUDY: And can you tell me the replacement value of these?
MICHAEL: Well, it's hard to say because they were part of a set but they can be up to \$10 each as it's such a good set.
JUDY: Okay, so that would be around \$60 altogether? Q10
MICHAEL: Yes, that's right.
JUDY: And is that all of the items?
MICHAEL: Yes. So what do I have to do now?

SECTION 2

Welcome to Green Vale Agricultural Park. As you know, we have only been open a week so you are amongst our first visitors. We have lots of fascinating indoor and outdoor exhibits on our huge complex, spreading hundreds of hectares. Our remit is to give Q11

educational opportunities to the wider public as well as to offer research sites for a wide variety of agriculturists and other scientists.

Let's start by seeing what there is to do. As you can see here on our giant wall plan, we are now situated in the Reception block . . . here. As you walk out of the main door into the park there is a path you can follow. If you follow this route you will immediately come into the Rare Breeds section, where we keep a wide variety of animals which I shall be telling you a little more about later. Next to this . . . moving east . . . is the large grazing area for the rare breeds. Then further east . . . in the largest section of our Park is the Forest Area. Q12
South of the grazing area and in fact just next to the Reception block is our Experimental Crop Area. In the middle of the Park . . . this circular area is our lake . . . These two small rectangular shapes here . . . are the Fish Farms where we rear fish for sale. To the east of Q13
those is the marsh area which attracts a great many migrant birds. In the south-eastern corner, beyond the marsh, is our Market Garden area, growing vegetables and flowers. Q14

All these areas can be visited by the general public for almost all the year . . . although . . . please take note of the large signs at the entrance to each area which tell . . . which tell you when certain areas are being used for particular controlled experiments and are therefore temporarily out of bounds to the public. Q15

You can see for yourself what a huge area the park covers and a key question is always, how can we move around? Well you have a choice of means . . . all environmentally friendly . . . cars are banned in the park. We have bicycles which you can hire behind the Reception block . . . here . . . the healthy ones of you can go on foot and finally there's our electric tram, powered from solar cells. You find more information about this at the front entrance. Q16

A good place to start on your tour is the Rare Breeds section. We keep goats, sheep and hens and other kinds of poultry. We are also thinking of bringing in cows and horses but we do not, as yet, have facilities for these bigger animals. The animals are fed in public twice a day and a short lecture given on their feeding habits and nutritional needs. These are very popular with the public but of course we mustn't lose sight of the main purpose of having this section, not as such to preserve rare animals but to maintain the diversity of breeds to broaden the gene pool for agricultural development. Green Vale changes with the seasons with different events happening at different times of the year. May will be perhaps our most spectacular month with the arrival of the Canada geese and when our fruit trees will be in full blossom, but there are interesting events on all year round . . . for example John Havers, our expert fly fisherman, is currently giving displays on the lake. Each of the sections has its own seasonal calendar . . . please consult the summary board at the main entrance. And the final section, as we return to the Reception blocks, is the orchard. Q17
Q18
Q19

Do take time to browse round our shop . . . there is a wide selection of books on wildlife, some of them written by local authors, and the history of farming, including organic farming, something which the park will be diversifying into in the coming months. Q20

SECTION 3

PROFESSOR: Good morning everyone. In today's seminar, Grant Freeman, a biologist who specialises in identifying insects, and who works for the Australian

Tapescripts

- Quarantine Service, has come to talk to us about his current research work. Right, well, over to you, Grant.
- GRANT: Good morning, everyone. I'm sure that you know that the quarantine service regulates all food brought into Australia. Well, obviously they want to protect Australia from diseases that might come in with imported goods, but they also want to prevent insect pests from being introduced into the country, and that's where I have a part to play. Anyway, my current research involves trying to find a particular type of bee, the Asian Honey Bee, and finding out whether there are any of them around in various states of Australia. We discovered a few of them in Queensland once and eradicated them. Now, we're pretty keen to make sure that there aren't any more getting in, particularly to New South Wales and other states. Q21
- STUDENT 1: What's wrong with Asian Honey Bees? Are they so different from Australian bees?
- GRANT: Well, in fact, they look almost the same, but they are infested with mites – microscopic creatures which live on them, and which can seriously damage our own home-grown bees, or could even wipe them out. Q22
- PROFESSOR: Well, what would happen if Australian bees died out?
- GRANT: Well, the honey from Australian bees is of excellent quality, much better than the stuff the Asian bees produce. In fact, Australia exports native Queen bees to a large number of countries because of this. When the European Honey Bee was first discovered out in the bush, we found they made really unpleasant honey and they were also too big to pollinate many of our native flowers here in Australia. Q23
- STUDENT 2: That must have had a devastating effect on the natural flora. Did you lose any species?
- GRANT: No, we managed to get them under control before that happened but if Asian bees got in there could be other consequences. We could lose a lot of money because you might not be aware, but it's estimated that native bees' pollination of flower and vegetable crops is worth 1.2 billion dollars a year. So in a way they're the farmers' friend. Oh, and another thing is, if you're stung by an Asian Honey Bee, it can produce an allergic reaction in some people; so they're much more dangerous than native bees. Q24
-
- PROFESSOR: How will you know if Asian bees have entered Australia?
- GRANT: We're looking at the diet of the bird called the Rainbow Bee Eater. The Bee Eater doesn't care what it eats, as long as they're insects. But the interesting thing about this bird is that we are able to analyse exactly what it eats and that's really helpful if we're looking for introduced insects. Q25
- PROFESSOR: How come?
- GRANT: Because insects have their skeletons outside their bodies, so the Bee Eaters digest the meat from the inside. Then they bring up all the indigestible bits of skeleton and, of course, the wings in a pellet – a small ball of waste material which they cough up.
- PROFESSOR: That sounds a bit unpleasant. So, how do you go about it?
- GRANT: In the field we track down the Bee Eaters and find their favourite feeding spots, you know, the places where the birds usually feed. It's here that we can find the pellets. We collect them up and take them back to the laboratory to examine the contents. Q26
- Q27

- PROFESSOR: How do you do that?
- GRANT: The pellets are really hard, especially if they have been out in the sun for a few days so, first of all, we treat them by adding water to moisten them and make them softer. Then we pull them apart under the microscope. Everything's all scrunched up but we're looking for wings so we just pull them all out and straighten them. Then we identify them to see if we can find any Asian bee wings. Q28
- PROFESSOR: And how many have you found? Q29
- GRANT: So far our research shows that Asian bees have not entered Australia in any number – it's a good result and much more reliable than trying to find live ones as evidence of introduced insects. Q30
- PROFESSOR: Well, that's fascinating! Thank you, Grant, for those insights. I hope that you might inspire some of our students here to conduct some similar experiments.

SECTION 4

I've been doing some research into what people in Britain think of doctors, the ones who work in general practice – the first call for medical care – and comparing this with the situation in a couple of other countries. I want to talk about the rationale behind what I decided to do.

Now I had to set up my programme of research in three different countries so I approached postgraduates in my field in overseas departments, contacting them by email, to organise things for me at their end. I thought I would have trouble recruiting help but in fact everyone was very willing and sometimes their tutors got involved too. Q31

I had to give my helpers clear instructions about what kind of sample population I wanted them to use. I decided that people under 18 should be excluded because most of them are students or looking for their first job, and also I decided at this stage just to focus on men who were in employment, and set up something for people who didn't have jobs and for employed women later on as a separate investigation. Q32

I specifically wanted to do a questionnaire, and interviews with a focus group. With the questionnaire, rather than limiting it to one specific point, I wanted to include as much variety as possible. I know questionnaires are a very controlled way to do things but I thought I could do taped interviews later on to counteract the effects of this. And the focus group may also prove useful in future, by targeting subjects I can easily return to, as the participants tend to be more involved. Q33

So I'm just collating the results now. At the moment it looks as if, in the UK, despite the fact that newspapers continually report that people are unhappy with medical care, in fact it is mainly the third level of care, which takes place in hospitals, that they are worried about. Government reforms have been proposed at all levels and although their success is not guaranteed, long-term hospital care is in fact probably less of an issue than the media would have us believe. However, I've still got quite a bit of data to look at. Q34

Certainly I will need to do more far-reaching research than I had anticipated in order to establish if people want extra medical staff invested in the community, or if they want care to revert to fewer, but larger, key medical units. The solution may well be something that Q35

can be easily implemented by those responsible in local government, with central government support of course.

This first stage has proved very valuable though. I was surprised by how willing most of the subjects were to get involved in the project – I had expected some unwillingness to answer questions honestly. But I was taken aback and rather concerned that something I thought I'd set up very well didn't necessarily seem that way to everyone in my own department. Q36

I thought you might also be interested in some of the problems I encountered in collecting my data. There were odd cases that threw me – one of the subjects who I had approached while he was out shopping in town, decided to pull out when it came to the second round. It was a shame as it was someone who I would like to have interviewed more closely. Q37

And one of the first-year students I interviewed wanted reassurance that no names would be traceable from the answers. I was so surprised, because they think nothing of telling you about themselves and their opinions in seminar groups! Q38

Then, one of the people that I work with got a bit funny. The questions were quite personal and one minute he said he'd do it, then the next day he wouldn't, and in the end he did do it. It's hard not to get angry in that situation but I tried to keep focused on the overall picture in order to stay calm. Q39

The most bizarre case was a telephone interview I did with a teacher at a university in France. He answered all my questions in great detail – but then when I asked how much access he had to dangerous substances he wouldn't tell me exactly what his work involved. It's a real eye-opener . . . Q40

TEST 3

SECTION 1

- WOMAN: Good morning. How can I help you?
- MAN: Hello. I'm interested in renting a house somewhere in the town.
- WOMAN: Right. Could I have your name please?
- MAN: Yes, it's Steven Godfrey.
- WOMAN: And tell me how many bedrooms you're looking for.
- MAN: Well, we'd need four, because I'm going to share the house with three friends. *Example*
- WOMAN: Okay, there are several of that size on our books. They mostly belong to families who are working abroad at the moment. What about the location?
- MAN: It'd be nice to be central. Q1
- WOMAN: That might be difficult, as most houses of that size are in the suburbs. Still, there are a few. What's your upper limit for the rent?
- MAN: We'd like something around £500 a month, but we could go up to £600 if we have to. But we can't go beyond that. Q2
- WOMAN: Do you know how long you want to rent the house for? The minimum let is six months, as you probably realise.

MAN: We're at college here for two years, and we don't want to have to move during that time if we can avoid it. Q3

WOMAN: Right. And how soon do you want to move in? All our lets start on the first of the month.

MAN: Well, as soon as possible, really, so that means September 1st.

WOMAN: Okay, let me have a look at what we've got . . . We have photographs of all the houses on our books, so you can get an idea of what they're like. There's this one in Oakington Avenue, at £550 a month. Combined living room and dining room, with a separate kitchen. It doesn't have a garage, though you can park in the road. Q4

MAN: Ah, we'd prefer to have one, if possible.

WOMAN: Right. Then have a look at this house, in Mead Street. It's got a very large living room and kitchen, bathroom, cloakroom . . .

MAN: How much is it?

WOMAN: That one's 580. It's very well furnished and equipped. It also has plenty of space for parking, and it's available for a minimum of a year. Oh, and there's a big garden. Q5

MAN: I don't think we could cope with that, to be honest. We'll be too busy to look after it.

WOMAN: Okay. Then there's this older house in Hamilton Road: living room, kitchen-diner, and it has a study. 550 a month. Q6

MAN: That looks rather nice. But whereabouts in Hamilton Road?

WOMAN: Towards the western end.

MAN: Oh, that'll be very noisy. I know the area. Q7

WOMAN: Yes, it's pretty lively. Some people like it, though. Well, what about this house in Devon Close?

MAN: That looks lovely.

WOMAN: There's a big demand for houses in that area, so prices tend to be quite high. But this one hasn't been decorated for a few years, which has kept the rent down a bit. It's got a living room, dining room and small kitchen, and it's 595 a month. I think it would suit you, from what you've said. Q8

MAN: It sounds fine.

MAN: Why's that part of town so popular?

WOMAN: Well, there's a big scheme to improve the district, and it'll soon have the best facilities for miles around.

MAN: What sort of thing?

WOMAN: There's a big sports centre under construction, which will be very impressive when it's finished. In fact the swimming pool's already opened, ahead of schedule, and it's attracting a lot of people. Q9 & 10

MAN: What about cinemas: are there any in the area?

WOMAN: The only one closed down last year, and it's now in the process of being converted into a film museum. The local people are trying to get a new cinema added to the scheme.

MAN: I think I heard something about a plan to replace the existing concert hall with a larger one. Q9 & 10

Tapescripts

- WOMAN: Ah, that's due to start next year.
MAN: Well it sounds an interesting area to live in. Could I go and see the house, please?
WOMAN: Yes, of course.

SECTION 2

Hello, and welcome to *Focus on the Arts*. I'm your host – Dave Green – and this is your very own local radio programme. Every Friday evening we put the spotlight on different arts and culture facilities, and look at the shows and events that are on offer in the coming week.

And today the focus is on The National Arts Centre. Now, if you don't already know it yourself, I'm sure you've all heard of it. It's famous throughout the world as one of the major venues for classical music. Q11

But did you know that it is actually much more than just a place to hear concerts? The Centre itself is a huge complex that caters for a great range of arts. Under a single roof it houses concert rooms, theatres, cinemas, art galleries and a wonderful public library, as well as service facilities including three restaurants and a bookshop. So at any one time, the choice of entertainment there is simply enormous. Q12

So, how did they manage to build such a big arts complex right in the heart of the city? Well, the area was completely destroyed by bombs during the war in 1940. So the opportunity was taken to create a cultural centre that would be, what they called: 'the City's gift to the Nation'. Of course it took a while for such a big project to get started, but it was planned in the 60s, built in the 70s and eventually opened to the public in 1983. Ever since then it has proved to be a great success. It is not privately owned, like many arts centres, but is still in public hands – it's run by the City Council. Both our National Symphony Orchestra and National Theatre Company were involved in the planning of the project, and they are now based there – giving regular performances every week – and as the Centre is open 363 days of the year, there are plenty of performances to choose from. Q13 & 14
Q15
Q16

So, to give you some idea of what's on, and to help you choose from the many possibilities, we've made a selection of the star attractions.

If you're interested in classical music, then we recommend you go along to the National on either Monday or Tuesday evening at 7.30 for a spectacular production of 'The Magic Flute' – probably the most popular of all Mozart's operas. It's in the Garden Hall and tickets start at only £8.00, but you'll have to be early if you want to get them that cheap! And remember, it's only on for those two evenings. Q17

For those more interested in the cinema, you might like to see the new Canadian film which is showing on Wednesday evening at 8pm in Cinema 2. And that's called 'Three Lives.' It's had fantastic reviews and tickets cost just £4.50, which is a reduction on the usual price of £5.50. So, it's really good value, especially for such a great movie. Q18
Q19

But you can see the centre's *main* attraction at the weekend, because on Saturday and Sunday, 11 am to 10 pm, they're showing a wonderful new exhibition that hasn't been seen anywhere else in Europe yet. It's a collection of Chinese Art called 'Faces of China' – that's Q20

in Gallery 1 – and it has some really fascinating paintings and sculptures by leading artists from all over China – and the good news is that it is completely free, so don't miss it!

So why not go along to the National Arts Centre next week for one – or all – of these great events – and you can always pick up a programme and check out all the other performances and exhibitions on offer, or coming soon, on almost every day of the year.

Next week we'll be looking at the new Museum of Science . . .

SECTION 3

- WOMAN: I've been reading your personal statement, Paul. First, let's talk about your work experience in South America. What took you there? Was it to gain more fluency in Spanish?
- PAUL: Well, as I'm combining Spanish with Latin American studies, my main idea was to find out more about the way people lived there. My spoken Spanish was already pretty good in fact. Q21
- WOMAN: So you weren't too worried about language barriers?
- PAUL: No. In fact, I ended up teaching English there, although that wasn't my original choice of work.
- WOMAN: I see. How did you find out about all this?
- PAUL: I found an agency that runs all kinds of voluntary projects in South America.
- WOMAN: What kind of work?
- PAUL: Well, there were several possibilities.
- WOMAN: You mean construction? Engineering work?
- PAUL: Yes, getting involved in building projects was an option. Then there was tourism – taking tourists for walks around the volcanoes – which I actually chose to do, and then there was work with local farmers. Q22
- WOMAN: But you didn't continue with that project. Why not?
- PAUL: Because I never really knew whether I'd be needed or not. I'd thought it might be difficult physically, but I was certainly fit enough . . . no, I wanted to do something that had more of a proper structure to it, I suppose. I get de-motivated otherwise. Q23
- WOMAN: What do you think you learned from your experience? It must have been a great opportunity to examine community life.
- PAUL: Yes, but it was difficult at first to be accepted by the locals. It was a very remote village and some of them were reluctant to speak to me – although they were always interested in my clothes and how much I'd had to pay for them.
- WOMAN: Well, that's understandable.
- PAUL: Yes, but things soon improved. What struck me was that when people became more comfortable with me and less suspicious, we really connected with each other in a meaningful way. Q24
- WOMAN: You made good friends?
- PAUL: Yes, with two of the families in particular.
- WOMAN: Good. What about management. Did you have a project manager?
- PAUL: Yes and he gave me lots of advice and guidance. Q25
- WOMAN: And was he good at managing too?

Tapescripts

- PAUL: That wasn't his strong point! I think he was often more interested in the academic side of things than filing reports. He was a bit of a dreamer.
- WOMAN: And did you have a contract?
- PAUL: I had to stay for a minimum of three months. My parents were surprised when I asked to stay longer – six months in the end. I was so happy there.
- WOMAN: And did anything on the administration side of things surprise you? What was the food and lodging like?
- PAUL: Simple . . . but there was plenty to eat and I only paid seven dollars a day for that which was amazing really. And they gave me all the equipment I needed . . . even a laptop. Q26
- WOMAN: You didn't expect that then?
- PAUL: No.
- WOMAN: Well, I'll look forward to hearing more.
-
- WOMAN: But now let's look at these modules. You'll need to start thinking about which ones you'll definitely want to study. The first one here is Gender Studies in Latin America.
- PAUL: Mmm . . .
- WOMAN: It looks at how gender analysis is reconfiguring civil society in Latin America. Women are increasingly occupying positions in government and in other elected leadership positions in Latin America. I think you'd find it interesting.
- PAUL: If it was to do with people in the villages rather than those in the public sphere, I would. Q27
- WOMAN: Okay. What about Second Language Acquisition?
- PAUL: Do you think I'd find that useful?
- WOMAN: Well, you've had some practical experience in the field, I think it would be.
- PAUL: I hadn't thought about that. I'll put that down as a definite, then. Q28
- WOMAN: Okay. What about Indigenous Women's Lives. That sounds appropriate.
- PAUL: I thought so too, but I looked at last year's exam questions and that changed my mind.
- WOMAN: Don't judge the value of the course on that. Maybe, talk to some other students first and we can talk about it again later. Q29
- PAUL: Okay.
- WOMAN: Yes. And lastly, will you sign up for Portuguese lessons?
- PAUL: My Spanish is good, so would I find that module easy?
- WOMAN: Not necessarily. Some people find that Spanish interferes with learning Portuguese . . . getting the accent right too. It's quite different in a lot of ways.
- PAUL: Well, I'd much sooner do something else, then. Q30
- WOMAN: Alright. Now, what we need to do is . . .

SECTION 4

Good morning, everyone. In the last few lectures I've been dealing with business finance, but now I'm going to move on to business systems. And in today's lecture I'm going to talk about what can go wrong when businesses try to copy their own best practices.

Once a business has successfully introduced a new process – managing a branch bank, say, or selling a new product – the parent organisation naturally wants to repeat that success, and capture it if possible on a bigger scale. The goal, then, is to utilise existing knowledge and not to generate new knowledge. It's a less glamorous activity than pure innovation, but it actually happens more often, as a matter of fact. However, surprisingly, getting things right the second time is not necessarily any simpler than it was the first time. Q31

Now, there's been a lot of research into how companies can repeat their previous successes, and it certainly hasn't been confined to the United States. It seems that most large industries are trying to repeat their own successes, and manage the knowledge they've acquired – but even so it has been shown that the overwhelming majority of attempts fail. A host of studies confirm this, covering a wide range of business settings: branch banks, retail stores, real estate agencies, factories, call centres . . . to name but a few. Q32

So why do so few managers get things right the second or third time? Let's consider one reason for failure – placing too much trust in the people who are running the successful operation, the 'experts' shall we say. Managers who want to apply existing knowledge typically start off by going to an expert – such as the person who designed and is running a successful department store – and picking their brains. Now, this approach can be used if you want to gain a rough understanding of a particular system, or understand smaller, isolated problems. The trouble is, even the expert doesn't fully grasp the whole thing because when it comes to complex systems, the individual components of the process are interwoven with one another. The expert never has complete access to the necessary information. And the situation's complicated even further by the fact that experts are usually not aware of their own ignorance. The ignorance can take various forms. For instance, a lot of details of the system are invisible to managers. Some may be difficult to describe – learned on the job and well known by workers perhaps, but impossible to describe in a way that's helpful. And there are some things that people know or do that they're not even aware of. Q33

Q34

Now, let's consider two types of mistake that can occur when a manager actually starts to set up a duplicate system to replicate a successful process. Firstly, perhaps he forgets that he was just trying to copy another process, and starts trying to improve on it. Another mistake is trying to use the best parts of various different systems, in the hope of creating the perfect combination. Q35

Unfortunately, attempts like these usually turn out to be misguided and lead to problems. Why? Well, for various reasons. Perhaps there weren't really any advantages after all, because the information wasn't accurate. Or perhaps the business settings weren't really comparable. More typically, the advantages are real enough, but there are also disadvantages that have been overlooked. For example, the modifications might compromise safety in some way. Q36

So, what's the solution? Well, I don't intend to suggest that it's easy to get things right the second time . . . it's not. But the underlying problem has more to do with attitudes than the actual difficulty of the task, and there are ways of getting it right. These involve adjusting attitudes, first of all . . . being more realistic and cautious really. Secondly, they involve exerting strict controls on the organisational and operational systems. And this in turn means copying the original as closely as possible. Not merely duplicating the physical Q37
Q38

characteristics of the factory, but also duplicating the skills that the original employees had. Q39 & 40
 Reliance on a template like this offers the huge advantage of built-in consistency.

TEST 4

SECTION 1

- WOMAN: Hello, West Bay Hotel. Can I help you?
- MAN: Oh, good morning. I'm ringing about your advertisement in the Evening Gazette.
- WOMAN: Is that the one for temporary staff? *Example*
- MAN: That's right.
- WOMAN: Yes. I'm afraid the person who's dealing with that isn't in today, but I can give you the main details if you like.
- MAN: Yes please. Could you tell me what kind of staff you are looking for?
- WOMAN: We're looking for waiters at the moment. There was one post for a cook, Q1
 but that's already been taken.
- MAN: Oh right. Erm, what are the hours of work?
- WOMAN: There are two different shifts – there's a day shift from 7 to 2 and a late shift from 4 till 11.
- MAN: And can people choose which one they want to do?
- WOMAN: Not normally, because everyone would choose the day shift I suppose. You alternate from one week to another.
- MAN: Okay. I'm just writing all this down. What about time off?
- WOMAN: You get one day off and I think you can negotiate which one you want, it's Q2
 more or less up to you. But it has to be the same one every week.
- MAN: Do you know what the rates of pay are?
- WOMAN: Yes, I've got them here. You get £5.50 an hour, and that includes a break. Q3
- MAN: Do I have to go home to eat or . . .
- WOMAN: You don't have to. You can get a meal in the hotel if you want to, and Q4
 there's no charge for it so you might as well.
- MAN: Oh good. Yes, so let's see. I'd get er, two hundred and twenty one, no, two hundred and thirty one pounds a week?
- WOMAN: You'd also get tips – our guests tend to be quite generous.
-
- MAN: Erm, is there a uniform? What about clothes?
- WOMAN: Yes, I forgot to mention that. You need to wear a white shirt, just a plain one, and dark trousers. You know, not green or anything like that. And we Q5
 don't supply those.
- MAN: That's okay, I've got trousers, I'd just have to buy a couple of shirts. What about anything else? Do I need a waistcoat or anything?
- WOMAN: You have to wear a jacket, but the hotel lends you that. Q6
- MAN: I see. Er, one last thing – I don't know what the starting date is.
- WOMAN: Just a minute, I think it's some time around the end of June. Yes, the 28th, Q7
 in time for the summer.
- MAN: That's great. I'm available from the 10th.

- WOMAN: Oh good. Well, if you can call again you need to speak to the Service Manager. Her name's Jane Urwin, that's U-R-W-I-N, and she'll probably arrange to meet you. Q8
- MAN: Okay. And when's the best time to ring?
- WOMAN: Could you call tomorrow? Um, she usually starts checking the rooms at midday, so before then if you can, so she'll have more time to chat. I'll just give you her number because she's got a direct line. Q9
- MAN: Thanks.
- WOMAN: It's 832 double-0 9.
- MAN: 823 double-0 9?
- WOMAN: 832.
- MAN: Oh, okay. Yes, I'll do that.
- WOMAN: And by the way, she will ask you for a reference, so you might like to be thinking about that. You know, just someone who knows you and can vouch for you. Q10
- MAN: Yes, no problem. Well, thanks very much for your help.
- WOMAN: You're welcome. Bye.
- MAN: Bye.

SECTION 2

- CAROL: Good morning and welcome again to *Your City Today*. With me today is Graham Campbell, a councillor from the city council. He will be telling us about the plan to improve the fast-growing suburb of Red Hill. Good morning Graham and welcome to the show.
- GRAHAM: Good morning, Carol.
- CAROL: Now, Graham, I understand that there has been a lot of community consultation for the new plan?
- GRAHAM: Yes, we've tried to address some of the concerns that local groups told us about. People we've heard from are mainly worried about traffic in the area, and, in particular, the increasing speed of cars near schools. They feel that it is only a matter of time before there is an accident as a lot of the children walk to the school. So we're trying to do something about that. Another area of concern is the overhead power lines. These are very old and a lot of people we spoke to asked if something could be done about them. Well, I'm happy to report that the power company have agreed to move the power lines underground at a cost of \$800,000. I think that will really improve the look of the area, as well as being safer. Q11
- CAROL: That's good to know, but will that mean an increase in rates for the local businesses in that area? Q12
- GRAHAM: Well, the power company have agreed to bear the cost of this themselves after a lot of discussion with the council. This is wonderful news as the council now has some extra funds for us to put into other things like tree planting and art work. Q13
-
- GRAHAM: Now, we've also put together a map which we've sent out to all the residents in the area. And on the map we've marked the proposed changes. Firstly, we'll plant mature pine trees to provide shelter and shade just to the right of the supermarket in Days Road. In order to address the traffic Q14

problems, the pavements on the corner of Carberry and Thomas Street will be widened. This will help to reduce the speed of vehicles entering Thomas Street. We think it's very important to separate the local residential streets from the main road. So the roadway at the entry to Thomas Street from Days Road will be painted red. This should mark it more clearly and act as a signal for traffic to slow down. One way of making sure that the pedestrians are safe is to increase signage at the intersections. A 'keep clear' sign will be erected at the junction of Evelyn Street and Hill Street, to enable traffic to exit at all times. Something we're planning to do to help control the flow of traffic in the area is to install traffic lights half way down Hill Street where it crosses Days Road. Now, we haven't only thought about the cars and traffic, of course, there's also something for the children. We're going to get school children in the area to research a local story, the life of a local sports hero perhaps, and an artist will incorporate that story into paintings on the wall of a building on the other side of Hill Street from the supermarket. And finally, we've agreed to build a new children's playground which will be at the other end of Hill Street close to the intersection with Carberry Street. Q15
Q16
Q17
Q18
Q19
Q20

CAROL: Wonderful, now, what's the next stage?

GRAHAM: Well, the final plan . . .

SECTION 3

DAN: Hi Jeannie. How's it going?

JEANNIE: Oh, hello Dan. Pretty well, thanks. Have you managed to get the money for the course yet?

DAN: Yes, that's all sorted out now, thanks. It took long enough, though. It was practically a year ago that I applied to my local council for a grant, and it took them six months to turn me down.

JEANNIE: That's really slow.

DAN: And I thought I was eligible for government funding, but it seems I was mistaken. So then I asked the boss of the company I used to work for if they would sponsor me, and much to my surprise, he said they'd make a contribution. Q21 & 22

JEANNIE: But what about college grants and scholarships? There must be some you could apply for.

DAN: Yes, there are, but they're all so small that I decided to leave them until I was desperate.

JEANNIE: Uhuh.

DAN: And in fact I didn't need to apply. My parents had been saying that as I already had a job, I ought to support myself through college. But in the end they took pity on me, so now I've just about got enough. Q21 & 22

JEANNIE: That's good.

DAN: So now I can put a bit of effort into meeting people – I haven't had time so far. Any suggestions?

JEANNIE: What about joining some college clubs?

DAN: Oh right. You joined several didn't you?

- JEANNIE: Yes, I'm in the drama club. It's our first performance next week, so we're rehearsing frantically, and I've got behind with my work, but it's worth it. I'm hoping to be in the spring production, too.
- DAN: I've never liked acting. Are you doing anything else?
- JEANNIE: I enjoyed singing when I was at school, so I joined a group when I came to college. I don't think the conductor stretches us enough, though so I'll give up after the next concert. And I also joined the debating society. It's fun, but with all the rehearsing I'm doing, something has to go, and I'm afraid that's the one. Q23 & 24
- DAN: Do you do any sports?
- JEANNIE: Yes, I'm in one of the hockey teams. I'm not very good, but I'd really miss it if I stopped. I decided to try tennis when I came to college, and I'm finding it pretty tough going. I'm simply not fit enough. Q23 & 24
- DAN: Nor me. I think I'll give that a miss!
- JEANNIE: I'm hoping it'll help me to build up my stamina, but it'll probably be a long haul.
- DAN: Good luck.
- JEANNIE: Thanks.
- DAN: How are you finding the course?
- JEANNIE: I wish we had more seminars.
- DAN: What? I'd have thought we had more than enough already. All those people saying clever things that I could never think of – it's quite interesting, but I wonder if I'm clever enough to be doing this course. Q25
- JEANNIE: I find it helpful to listen to the other people. I like the way we're exploring the subject, and working towards getting insight into it.
- DAN: How do you get on with your tutor? I don't think I'm on the same wavelength as mine, so I feel I'm not getting anything out of the tutorials. It would be more productive to read a book instead.
- JEANNIE: Oh, mine's very demanding. She gives me lots of feedback and advice, so I've got much better at writing essays. And she's helping me plan my revision for the end-of-year exams. Q26
- DAN: Do tell me, I always struggle with revision.
-
- JEANNIE: Well, the first thing is to find out exactly what's required in the exams.
- DAN: Mm. Would it help to get hold of some past papers?
- JEANNIE: Yes. They'll help to make it clear.
- DAN: Right, I'll do that. Then what?
- JEANNIE: Then you can sort out your revision priorities, based on what's most likely to come up. I put these on a card, and read them through regularly. Q27
- DAN: Uhuh.
- JEANNIE: But that isn't enough in itself. You also need a timetable, to see how you can fit everything in, in the time available. Then keep it in front of you while you're studying. Q28
- DAN: I've done that before, but it hasn't helped me!
- JEANNIE: Maybe you need to do something different every day, so if you break down your revision into small tasks, and allocate them to specific days, there's more incentive to tackle them. With big topics you're more likely to put off starting. Q29

Tapescripts

- DAN: Good idea.
- JEANNIE: And as I revise each topic I write a single paragraph about it – then later I can read it through quickly, and it helps fix things in my mind. Q30
- DAN: That's brilliant.
- JEANNIE: I also write answers to questions for the exam practice. It's hard to make myself do it, though!
- DAN: Well, I'll try. Thanks a lot, Jeannie. That's a great help.
- JEANNIE: No problem.
- DAN: See you around.
- JEANNIE: Bye.

SECTION 4

Good morning, everyone. I've been invited to talk about my research project into Australian Aboriginal rock paintings. The Australian Aborigines have recorded both real and symbolic images of their time on rock walls for many thousands of years. Throughout the long history of this tradition, new images have appeared and new painting styles have developed. And these characteristics can be used to categorise the different artistic styles. Among these are what we call the Dynamic, Yam and Modern styles of painting.

One of the most significant characteristics of the different styles is the way that humans are depicted in the paintings. The more recent paintings show people in static poses. But the first human images to dominate rock art paintings, over 8,000 years ago, were full of movement. These paintings showed people hunting and cooking food and so they were given the name 'Dynamic' to reflect this energy. It's quite amazing considering they were painted in such a simple stick-like form. In the Yam period, there was a movement away from stick figures to a more naturalistic shape. However, they didn't go as far as the Modern style, which is known as 'x-ray' because it actually makes a feature of the internal skeleton as well as the organs of animals and humans. The Yam style of painting got its name from the fact that it featured much curvier figures that actually resemble the vegetable called a yam, which is similar to a sweet potato. The Modern paintings are interesting because they include paintings at the time of the first contact with European settlers. Aborigines managed to convey the idea of the settlers' clothing by simply painting the Europeans without any hands, indicating the habit of standing with their hands in their pockets! Size is another characteristic. The more recent images tend to be life size or even larger, but the Dynamic figures are painted in miniature. Q31 Q32 Q33 Q34

Aboriginal rock art also records the environmental changes that occurred over thousands of years. For example, we know from the Dynamic paintings that over 8,000 years ago, Aborigines would have rarely eaten fish and sea levels were much lower at this time. In fact, fish didn't start to appear in paintings until the Yam period along with shells and other marine images. The paintings of the Yam tradition also suggest that, during this time, the Aborigines moved away from animals as their main food source and began including vegetables in their diet, as these feature prominently. Freshwater creatures didn't appear in the paintings until the Modern period from 4,000 years ago. Q35 Q36

So, these paintings have already taught us a lot. But one image that has always intrigued us is known as the 'Rainbow Serpent'. The Rainbow Serpent, which is the focus of my

most recent project, gets its name from its snake or serpent-like body and it first appeared in the Yam period 4 to 6,000 years ago. Many believe it is a curious mixture of kangaroo, snake and crocodile. But we decided to study the Rainbow Serpent paintings to see if we could locate the animal that the very first painters based their image on.

Q37

The Yam period coincided with the end of the last ice age. This brought about tremendous change in the environment, with the sea levels rising and creeping steadily inland. This flooded many familiar land features and also caused a great deal of disruption to traditional patterns of life, hunting in particular. New shores were formed and totally different creatures would have washed up onto the shores. We studied 107 paintings of the Rainbow Serpent and found that the one creature that matches it most closely was the Ribboned Pipefish, which is a type of sea horse. This sea creature would have been a totally unfamiliar sight in the inland regions where the image is found and may have been the inspiration behind the early paintings.

Q38

Q39

So, at the end of the ice age there would have been enormous changes in animal and plant life. It's not surprising then, that the Aborigines linked this abundance to the new creatures they witnessed. Even today, Aborigines see the Rainbow Serpent as a symbol of creation, which is understandable given the increase in vegetation and the new life forms that featured when the image first appeared.

Q40