

Questions 38–40

Complete the notes below.

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

Write your answers in boxes 38–40 on your answer sheet.

The origins of clog dancing

- Originated in the Netherlands and North America
- In England, probably invented by factory workers copying the noise made by the
38 in mills
- In Northumberland, was danced by 39
- Very popular in the early 20th century
- Lost popularity when clogs were thought to indicate 40

WRITING

TASK 1

You should spend about 20 minutes on this task.

You have been doing some voluntary work to help your local community. However, now you are unable to continue doing this work.

Write a letter to the manager of the organisation where you have been working. In your letter

- ***describe the work you have been doing***
- ***explain why you can no longer do this work***
- ***recommend another person who is interested in the work***

Write at least 150 words.

You do **NOT** need to write any addresses.

Begin your letter as follows:

Dear

TASK 2

You should spend about 40 minutes on this task.

Many people like to wear fashionable clothes.

Why do you think this is the case?

Is this a good thing or a bad thing?

Give reasons for your answer and include any relevant examples from your own knowledge or experience.

Write at least 250 words.

Recording scripts

Listening skills

1 Getting ready to listen

1 Understanding the context



- 1 You will hear a telephone conversation between a man and his daughter Susie about a birthday party they need to organise.
- 2 You will hear a woman speaking on the radio about buying presents for people of different ages.
- 3 You will hear two biology students explaining their research ideas to their university lecturer.
- 4 You will hear an ecology student giving a presentation about a recent field trip to Canada.

2 Using the correct spelling



- 1 I'm not sure, but I think it starts with an F.
- 2 No, I'm pretty sure it's double L.
- 3 Is that M for Mary?
- 4 Sorry, was that last letter a T or a C?
- 5 Do you know if it's spelt with a C-H or S-H?



- 1
A: And can I have your name, please?
B: Yes, it's Andrew Browne.
A: Is that spelt the same as the colour?
B: Yes, but with an E at the end.

- 2
A: And what's your address, in case we need to post any information out to you?
B: Oh, OK, I live at 63, Beeton Road. That's B-double E-T-O-N.
A: Sorry, was that last letter N or M?
B: N for November.

- 3
A: Do you have a website I can go to?
B: Yes, just go to www.kickers.com
A: Is that K-I-C-K-E-R-S?
B: That's right, all one word and all lower case.

- 4
A: Where shall we meet then? Somewhere in the city?
B: That's a good idea. What about at that hotel on the corner of Queen Street and Mary Street? What's it called?
A: Oh, it's the Rose Hotel, like the flower.
B: Yes, that's the one, I'll see you there at seven.
A: Uhuh.

5

- A: Right, and can I get your car registration number?
Have you got a normal one or is it one of those specially made ones that's a word or a name?
- B: No, I haven't got the money for a personalised plate. It's just three letters and three numbers. It's H-L-P 528.

3 Writing numbers



- | | | | | | |
|---|---------|---|------|---|------|
| a | 3rd | e | 19 | i | 31st |
| b | \$10.50 | f | 15 | j | 27th |
| c | 6th | g | 62 | | |
| d | 70 | h | £110 | | |



1

- A: I hope you've enjoyed your stay with us.
- B: Yes, it was lovely, but I had to pay £95, which seems a bit expensive. Last time I stayed here, I only paid £80.
- A: Yes, I'm sorry, madam. We had to increase our prices considerably this year. But that is actually a discounted price as you're a regular guest. It would normally be £105.
- B: Oh!

2

Now, on Thursday, there will be a special class, which will be given by a wonderful local artist. As this isn't included in your fees, you will need to pay for this on the day. We've kept the costs low. It's only \$10 for our regular students here. If you want to bring along anyone else who hasn't studied with us before, the cost for them is \$15. We charge them an extra \$5 for the use of equipment, which old students have already paid for.

3

- A: Can you tell me how big the garage is? I just want to make sure our cars will fit.
- B: Let me have a look. How big are your cars?
- A: Mine's about 1.5 metres wide and my wife's is almost the same.
- B: Hmm, I don't think it's wide enough, I'm afraid. It says here that it's 3.5 metres across, and you need at least a metre between the cars to be able to open the doors.
- A: You're right. What about the height? Mine's a van I use for work and I carry a lot of equipment on top.
- B: Let me see. It's two and a half metres. Would that be tall enough?
- A: Oh, not for my big ladders, no. I'd like three metres at least.

4

- A: I'm thinking of taking my children to the Gold Coast in the holidays. Can you tell me how much it would cost on the bus? I don't want to drive all that way.
- B: Right, you'd qualify for a family ticket, which is the cheapest way to do it. It'll be \$55 altogether, normally a child's fare is \$25 and an adult is \$45.
- A: Oh, that's a good deal!

5

- A:** I'm trying to organise a party and I wondered if your hotel had a room we could use?
- B:** We do have several function rooms, what date did you have in mind for the party? I'll just warn you we're already fully booked for most of June, the first available date I have is 14th July.
- A:** Oh, that's not a problem. It's for my dad's birthday, which isn't until 1st August.
- B:** That's a Tuesday.
- A:** Yes, so I'd like to hold it at the end of July, on the Saturday before.
- B:** So, that's the 29th?
- A:** Yes, that's right.

7

- 1 We had a good response to our survey and we found that, while 80% of our students drink coffee, only 15% drink tea, with the rest preferring water.
- 2 Over 800,000 people in the US are estimated to have tried skiing. This may seem a large number but it represents just over 0.26% of the total population of 300 million. So, per capita, it is surprisingly small.
- 3 It's estimated that India is home to between 38,000 and 53,000 wild elephants, while Africa has between 470,000 and 690,000. Exact figures are difficult to determine.
- 4 An elephant can weigh between 2.5 and 5 tonnes. This is comparable to the tongue of the blue whale, which alone can weigh 2.7 tonnes. In fact, a blue whale can weigh 15 times more than an elephant, and can grow to about 10 times the size of a standard bus.

2 Following a conversation

1 Identifying the speakers

8

- 1**
- A:** Good morning, Harrisons Travel Agency, how can I help you?
- B:** Oh, good morning, I'm thinking of going on a skiing trip. Can you tell me about any good offers on at the moment?
- 2**
- A:** Welcome to the York Hotel, are you checking in?
- B:** Yes, that's right. My name's Bob Clarke. I've got a booking.
- A:** Great. I'll just get a few personal details from you.
- 3**
- A:** Well, I don't think I have any more questions. Is there anything you'd like to ask me about the job?
- B:** Yes, I was wondering if it involves a lot of travel, and what the working hours are.

9

1

- A:** This one's a good deal. It costs £150 and airfares are included in that price. Once you land, you still need to get to the ski slopes. It's a two-hour journey.
- B:** Yes, I know, I have a friend there who's going to meet me and we'll travel together.
- A:** Oh, that's fine, I usually organise a coach ticket for my customers, because a taxi is far too expensive. But a lift from a local is even better. What about skiing equipment?
- B:** I've already got all of that, but I would like to arrange insurance if that's possible.
- A:** Yes, of course. And it's a very good idea for a holiday like that.

2

- A:** And it says here you'll be staying with us for two nights, is that right?
- B:** Actually, my plans have changed since I made the booking and I was hoping I'd be able to stay for one extra night, if it's possible.
- A:** I'll just have a look and try to make sure you don't have to change rooms on the third night. Yes, that's fine, and in fact you'll get a 25% discount as well.
- B:** Oh, great. Do you have a gym or a sports centre in the hotel? And I need access to your business centre as well.
- A:** Yes, we have all of those. Now, your room is up on the tenth floor, and the elevators are right behind you. You'll actually be on the same floor as the business centre, and it's clearly signposted. The gym is down on this level and so is the restaurant. You need to go there in the morning for breakfast.

3

- A:** Now, according to your CV, you've lived and worked in a few different countries, haven't you?
- B:** That's right. I was born here in England and my family emigrated to Australia when I was very young.
- A:** But your longest employment so far was in America, if I'm not mistaken?
- B:** That's right. I moved there once I'd graduated and worked for five years before coming back to England in January.
- A:** Right. And you've worked briefly in accounts but in sales, mostly ... Is that the area you are still interested in working in? We have a very strong sales department.
- B:** Actually, I'm hoping to move into the area of marketing. I've always been interested in it, and it was my major at university.
- A:** I see. Well, with your references I'm sure we can discuss it.

2 Identifying function

10

- 1 What about getting her a new bike?
- 2 That's right. We arrive on 22nd July.
- 3 That sounds great. Let's do that.
- 4 I don't think I'd enjoy that one.
- 5 You said you'd prefer to have the party outside, is that right?

- 6 Actually, it's just gone up to \$250.
 7 Now, what about accommodation? Where would you like to stay?



Section 1

- A: Hi Sam, we'd better start planning the party, it's in less than two weeks, isn't it?
 B: Yeah, I guess it is. There isn't much to do, is there?
 A: Well, we need to sort out food, for a start.
 B: Why don't we just order some pizzas?
 A: But we always do that. Let's do something a bit different. Besides, it's pretty expensive.
 B: What about a barbecue then, or we could just do hot dogs.
 A: Hmm, too much preparation involved. There are a lot coming, you know.
 B: Sandwiches then? That's easy enough.
 A: Sandwiches? That's a good idea. Hmm, hang on, that would be even more preparation than the barbecue! Better go back to the original idea, I suppose.
 B: Pizzas it is, then!
 A: Now, we also need to think about music, and invitations.
 B: Well, we don't need to buy invitations, I think we should just do them on the computer and keep costs down.
 A: Good idea. And what about music?
 B: We can just use the same stuff we had last time. It's fine.
 A: OK, well, if we don't let people know soon there won't be anyone there. So let's make that our priority. Have you got your laptop?
 B: Yeah, told you there wasn't much to do.

Section 3

- A: Hi Julie, have you got time to plan our project?
 B: Sure, I've got a few minutes. We need to choose a topic based on the theme of pollution, don't we?
 A: That's right. Have you got any preferences?
 B: Well, I did a huge assignment on water pollution last year so we could just do that?
 A: Actually, the tutor did make a point of saying not to use last year's materials. So we'd better not.
 B: It's probably a bit out of date now anyway. Also, it focused specifically on industry and I think we're supposed to take a broad view.
 A: That's right. We could look at something totally different, like the effects of fumes on air quality.
 B: Hmm, good idea. And we could make sure we include all of the sources, like traffic and factories.
 A: So, what else do we need to do? Shall we go to the library and look for resources?
 B: Actually, I think we'd be better off looking online. The good resources in the library are often all out at this time of the year. Anyway, before we notify the tutor which topic we've chosen, I think we need to ask the others what they're doing.
 A: You're right. We need to make sure we're not all doing the same thing. Let's ask them this afternoon in the tutorial.
 B: Great idea.

3 Understanding categories



- A: Hi, I'm interested in buying a ticket for the small business expo next week, but I'm not sure it will be useful for me.
 B: Well, this year we wanted to focus on computer skills. So, as well as representatives from 400 small businesses, we've invited over 250 specialists in that area.
 A: Oh, that should be interesting.

3 Recognising paraphrase

1 Identifying distractors



- 1
 A: Right, so, you need to book some flights, is that right?
 B: Yes, for me and my family. We're going to Scotland for my sister's wedding.
 A: Oh, lovely! When's the wedding?
 B: It's on 21st July.
 A: That should be wonderful, but I assume you'll want to fly in earlier? What about the 20th or even the 19th?
 B: It will have to be the 18th, I've actually got to attend a special dinner on the 19th.

2

Welcome aboard, everyone! I hope you'll enjoy your stay with us and get a lovely glimpse of country life. We're going to a wonderful market on Tuesday morning. I'm sure you'll love that with all the local farm produce on sale. Then on the Wednesday you'll get to see where all that lovely produce comes from as John Smith, a local farmer, has invited us to see him at work. On Thursday, you'll have a day to relax before we leave on Friday.

3

- A: So, what topic are we going to choose for our project? It's due in three weeks.
 B: I know, it's not a lot of time. I was going to suggest we do one on the environment.
 A: But that's so broad a topic. We should try to narrow it down. What about recycling?
 B: That's a good idea, there's a lot of information and I think the other groups are concentrating on pollution. So this would be nice and different.

4

We encountered quite a few problems during our research. Firstly, the weather was horrendous and made our work conditions very difficult indeed. Luckily, we had the right equipment to deal with that, and could carry on regardless. Unfortunately though, in spite of having so many volunteers, we did run out of funds halfway through the project. So, we were forced to postpone the second half of our trip.

2 Recognising paraphrase

▶ 14

- 1**
- A:** We really need to organise our trip, you know.
B: I know, I was thinking the same. We need to arrange accommodation and flights.
A: And we'll need transport while we're there – we could hire a car?
B: My dad said we could borrow his.
A: Well, that's one less thing to worry about.
B: I'm a bit worried that hotels will all get booked up.
A: OK, let's sort that out straight away.
B: Yes, then I can contact the travel agent and book our flights in the morning.
A: Great.

2

I just wanted to tell you about some of the recent changes we've made to the garden at the back of the complex, which we all have access to. As you know, there are some attractive and well-established plants in there and we didn't want to take any of these out. But many of these are struggling in the harsh sun, which falls directly on that area. To solve this we're going to plant trees along the western edge of the garden, just near the pond. This should also become a very pleasant place to sit and watch the ducks in the water.

- 3**
- A:** It's nearly there. I think we've found plenty of information.
B: Yes, lots, in fact do you think we need to reduce any of it?
A: Not at all, in fact I was thinking we could try and include some of those nice graphics you found.
B: OK, it would certainly make it look a bit more interesting.

4

Studying ice cores in the South Pole can tell us a lot about the past climate, which, in turn, can help us understand how today's climate is changing. My particular area of study is snow. While we scientists understand the process of how snow is created, very little is known about how snow interacts with the atmosphere and influences our weather patterns. One of the things we're trying to do is to link what we already know about meteorology and clouds and determine the impact that snow has on that.

3 Selecting from a list

▶ 15

In today's show I'm going to be looking at what's new in technology this week. And I'd like to start by looking at the much-awaited OP56 mobile phone from technology giants Optiware. It has some amazing features. The first thing you notice is how much slimmer and lighter it is compared to the heavier older models. It's incredible considering that they have actually increased the screen size on this one, though it still fits neatly into your pocket. They've also improved the camera and you'll find you can take much better quality photos on this

model. This has an impact on the battery though, as it takes a lot of power and I found it didn't run for very long before needing to be recharged. Despite all its amazing features, it's extremely easy to use, but I do have to say that it is overpriced, and will be beyond the budget of most people shopping for a new phone.

4 Places and directions

1 Describing a place

▶ 16

- 1**
- A:** Excuse me, can you tell me where the gift shop is?
B: Yes, you need to go into the shopping centre, the entrance is over there on your left.
A: Yes, I see it.
B: Well, you go in there, then go straight ahead. The shop you want is opposite the toilets. Next to the lifts.
A: Thanks very much!

2

Welcome to the resort! I'll just tell you about some of our facilities. We've got a lovely little pond, where guests are welcome to sit and have a picnic. You'll see it as you come in the entrance. In the middle of the resort, you'll see a circular courtyard, it has some lovely cool places to sit as well. You can see our famous fig tree from there, it's enormous! To the right of the courtyard, you'll find a small shop where you can pick up things like postcards and stamps. It's just behind the tree.

- 3**
- A:** Hello, Professor Jones, would you be able to help me with my assignment?
B: Of course. Are you having problems with choosing a good location for the new bridge?
A: Yes. I was thinking of putting it right in the middle as the river is at its narrowest there.
B: Well, that would save costs.
A: Exactly, but I realised that it would create costs in other areas as it would mean some important buildings being knocked down. So I think it would be better if it's at the eastern end of the motorway.
B: That's a good idea, it would be a lot more useful than if it was at the western end.

4

The Traviston Frog is different to many other species of frog. It is very small and so, unlike other species, it is unable to live in the area of a pond, though it does need to live in fairly close proximity to water so that it can feed. Rather than choosing the safety of a tree, which would be too tall and may actually increase the threat from predators, it elects to live in a tiny burrow surrounded by bushes.

2 Following directions

▶ 17

- A:** Can you tell me how to get to the supermarket?
B: Sure, let me have a think. We're in Bridge Street now and it's in Queens Road.

A: Oh, the only street I know is Riverside Street, I know my hotel's on the corner there.

B: That's right. You need to go up Bridge Street as far as the traffic lights, then turn right. That's Riverside Street.

A: I see.

B: Then you walk along there to the next set of traffic lights and you'll be at Queens Road. You turn left there and it's the second shop on your left.

A: Thanks very much!

3 Labelling a map



Morning everyone, thanks for coming. Now, from next week there'll be a rota for all of you to help out at the information stand here at Brookside Market. So, I just wanted to give you a briefing about what you can find where. The information booth is to the right of the entrance and I've given you all a plan to mark important places on. One of the most common enquiries is where can I pay for my parking? People are amazed when we tell them that it's free now. We used to charge for it and there was a ticket booth to the left of the entrance, but now that it's been turned into a small stage, we hold cookery demonstrations there. Local chefs come in and show people how to prepare dishes. It's really popular and you get a nice view of the fountain there. We have over 50 stalls at the markets, selling everything from fresh fruit and vegetables to locally made crafts. Which unfortunately means people won't find things like books or anything second-hand. We have a famous baker at the market and many people get here really early just to buy his produce. His stall is located at the back of the markets next to the barbecue. We sell burgers and sausages there but a lot of people like to bring their own lunch to eat and they're welcome to go to the special area near the tree in the middle of the markets where they can do just that. It's handy for the toilets too. The markets are located next to a circus school that holds classes for children at the weekend, so we often get a lot of family groups in. There's a playground on the right-hand side that's popular with them, and just in front of that is where the farmers bring along chickens, rabbits and lambs for the children to pet. That's always a very popular feature so you'll definitely be asked about that. Just let people know there is a small fee if the children want to feed them. Well, that's everything for now ...

5 Listening for actions and processes

1 Understanding mechanical parts



A
At the bottom of the system, there is a storage tank, which can hold up to 500 litres of rainwater. The water stored in the tank can be used for general gardening and cleaning.

B
A small spring in the centre causes the toy inside to bounce out with a twisting movement. The spring coils back down easily enough so that the toy can fit back into the box.

C
The water passes through the pipe and, as it travels along, it carries the weeds with it.

D
The water in the pool was becoming quite polluted so a pump was used to pump the water out of the pool and force it through a filter.

E
There is a very fine grille at different points along the pipe. These filter out any large rocks or stones. So the water is very finely strained by the time it reaches the dam.

F
There is a wheel on the side, which is attached to a small motor that turns the wheel. As it spins, a long chain passes around the outside of it and ...



Hello, I've come along to tell you about an invention of mine called the Party Popper Machine. Here is a diagram of the machine and I'll just explain how it works. It's basically a set of interconnected cogs and wheels that rotate in turn and cause a party popper to pop! The process begins with what I like to call the party starter! It's located on the top of the base at the front. I was very fond of wind-up toys when I was young, but sadly I couldn't find a way to attach a winder to this contraption, but I think this big round button looks nice and dramatic and my children fight over getting to push it! The button activates a small motor that's housed directly under the box at the front. It generates enough power to get everything going but not so much that it overheats and needs a cooling fan! The legs elevate the base and help with that. The base also has another use as it can also hold up to 10 spare party poppers! So you never need to worry about running out. Once the motor is running, it turns the spiky wheel that is attached to the loaded party popper. I call this the detonator! As it turns, the string of the party popper slowly wraps around it and is pulled tighter and tighter until it explodes! So much fun!

2 Describing an action or process



- A** The thermometer on the end of the device allows us to measure changes in temperature.
- B** I had to use my calculator to work out the final figure and calculate how much profit we'd made.
- C** We put the animals on to the scales to weigh them, and recorded their weight at the beginning and end of the experiment.
- D** We attached a speedometer so that we could measure our speed and adjust it if necessary.

3 Describing a process



Here's how to wrap a present. First, gather together all of the things you need: wrapping paper, sticky tape, scissors, some ribbon and, of course, a present. Then, place your present on the opened wrapping paper and cut a suitable amount using the scissors. Next, wrap the paper around the present and stick it down with sticky tape. Then, neatly fold up each of the ends of the paper and stick them down. Finally, tie the ribbon around your present. It's now ready to present!

6 Attitude and opinion

1 Identifying attitudes and opinions

▶ 23

- 1 Well, I agree up to a point.
- 2 I think that's a really valid point.
- 3 Well, I'm not so sure about that.
- 4 I think you're absolutely right.
- 5 Hmm, that's a bit hard to believe.
- 6 I think that's highly unlikely.
- 7 That seems doubtful to me.
- 8 I have to admit I don't like the sound of that at all.

▶ 24

- A:** So what did you think about the research?
- B:** I thought it was well thought out, although it did take three years to produce any results.
- A:** Yes, but that's to be expected given the age of the participants. I mean, they had to chart their progress over several years.
- B:** I suppose so.
- A:** But didn't you think the results were astonishing?
- B:** Yeah, me too. It's amazing to think that watching TV can have such a clearly demonstrated effect on children's obesity problems. It's quite alarming really.
- A:** I agree.
- B:** People were generally unimpressed by the findings though, which is typical when there's a suggestion that we change our behaviour.

2 Persuading and suggesting

▶ 25

- A:** Right, let's organise our presentation on the new science equipment, shall we?
- B:** Yes, I'm a bit worried it's overly long – we only have 10 minutes.
- A:** Why don't we go through each section then.
- B:** OK, what about the introduction? I think that's OK.
- A:** Hmm. It's not very exciting.
- B:** I don't think we should cut any of it though.
- A:** Of course, and we can still do it the same way, but maybe we should bring along some actual equipment?
- B:** Great idea, that would help grab their attention. Now, next we look at the benefits of this technology. We've got plenty about that.
- A:** I agree. In fact, some of the ones we've chosen are pretty obvious, I think, perhaps we could leave some out?
- B:** Agreed. And that would save some time.
- A:** Yes, now, when it comes to the negatives, I'd like to propose something a little different.
- B:** I like that section, it's always enjoyable hearing about technology going wrong!
- A:** Well, we've got a few thought-provoking quotes from people who've encountered specific problems. And we were planning on just reading them out but I think we should video them and play the recording instead.

- B:** Oh, that would be better. And if we use a variety of media, I think we'll get a higher mark.
- A:** Yes. That's what I was thinking.
- B:** OK, let's give it a try. Now, what about the conclusion? Should we include something else? It's pretty short at the moment.
- A:** Yes, but I think that's OK. There's not much more to say, really. We've already verified all our sources, so I don't think there's anything else left to do.
- B:** Well, I think I'll do an Internet search anyway, just to be sure we haven't missed anything.
- A:** OK, it would be good to be able to state that we have included all the very latest information.
- B:** Absolutely.

3 Reaching a decision

▶ 26

Section 1

- A:** How are we going to get to the airport on Monday? Shall we get a taxi?
- B:** It would be nice and convenient but the fare is so expensive.
- A:** That's true. Well, if you want to save money, we could always take the bus.
- B:** It might be cheaper but the bus doesn't start running until 7 o'clock and we need to be at the airport by 6. I'll ask my sister if she can give us a lift.
- A:** That would be great if she could drive us.
- B:** Yes. I'm sure she won't mind.

Section 3

- A:** So, what else have we got to do?
- B:** Well, we've gathered enough information. I don't think we need to find out any more.
- A:** You're right. Should we go and see Professor Smith, then? We could ask his advice.
- B:** Well, he could check it for us and make sure we've done enough. But I'd rather do that after we've put it all together. At the moment, we only have a lot of handwritten notes. I don't want to show him that.
- A:** OK. Let's divide the material up and each put it on to a disc so that we can print off a nicely presented copy.

7 Following a lecture or talk

1 Identifying main ideas

▶ 27

Good morning, everyone. My name is Paul and I'm a palaeontologist. Now, when most people hear that, they immediately get an image of an old professor studying dried-up dinosaur bones or else they think of a great adventurer from the movies! Well, I'm neither. But I would like to talk to you today about how I came to be a palaeontologist and the reason I believe it is an important job. All my life, my main interest has been the environment. So, I actually started out as an ecology student. As a part of my degree course, I had to do a compulsory unit on extinction and a lecturer visiting from another university gave us a talk on Australia's extinct animals. One of the animals

he talked about was called the Diprotodon. It's an ancestor of the modern Australian wombat. He described this enormous animal crossing ancient lakes, getting stuck in the mud and becoming part of the fossil record, which is what we call the preserved remains of animals and plants that we find. And I was fascinated. So fascinated that I immediately changed courses.

But palaeontology isn't all easy going. The very first field trip I went on was pretty awful and we didn't find anything! We went to an outback fossil site and we were digging in extreme conditions. I've learned since then that that's pretty standard for work like this. But to make matters worse, after five days, I'd found nothing. I was getting really disheartened and I was starting to regret my decision, when on the last day of the trip, I was digging into the bank of an ancient dried-up riverbed and I found a funny-looking piece of rock. Inside it was a tooth from a giant kangaroo. Finding that one fossil made me realise that this was a field I really wanted to continue working in.

2 Understanding how ideas are connected

▶ 28

1

- A: I don't really understand why you contacted Professor Higgins. He has nothing to do with our faculty.
B: Well, we wanted to understand what impact an invention like this would have on the environment. And that's his area of expertise.

2

- A: First of all we put video cameras in the animals' cages ...
B: Yes, and then we put various tools inside the cages and let the animals back in.
A: We video-recorded them over seven days and nights to see what they would do with the tools.

3

After gathering all of our data, we looked at the results. We realised that the number of frogs in this area had actually increased over the last 10 years rather than declined.

4

- A: So, what does that all show?
B: Well, I think we can deduce from this that any development in this area should be halted until the animals have all been safely removed.

▶ 29

What I appreciate most about my work is the fact that I can turn the fossils I find into information we can actually use. So, how do we extract that information? Well, first we need to run the fossil through a special machine. That gives me a date for the fossil. From then on, I begin to work out what type of animal it was, what it ate and how it interacted with the landscape.

Earlier this year, I was lucky enough to be awarded a grant from a government-funding body. Palaeontology isn't only about the past. It can help with current issues too. For example, I plan to

use these funds to excavate new areas and try to find out how ancient creatures evolved during their own period of climate change, just as animals today have to.

In another project, I'm going to study fossil collections that are housed in museums around Australia. I'm doing that to try to find out when Australia's mega-fauna became extinct – that is, all the giant mammals, lizards and birds. That will help us to finally find out what caused these extinctions. Was it nature or was it humans?

3 Understanding an explanation

▶ 30

1

We've recently been doing some research involving mice. We were trying to find out what causes the cells in our body to age. Is it linked to diet or exercise? What we found was that if we allowed the mice no exercise, their cells deteriorated fairly rapidly, giving them a prematurely old body. The mice that did exercise, showed less change in their cell structure and so seemed younger.

2

We've known for decades that pigeons can navigate using the Earth's magnetic field as a sort of compass. What we don't know is how this works. In our research, we discovered that the pigeon's brain receives a signal from its middle ear that the brain then processes to determine both their direction and the strength of the magnetic field. Previously, it had been thought that it was the bird's beak that held the answer. But this has since been proven false.

8 Contrasting ideas

1 Signposting words

▶ 31

- OK, let's move on to the late 19th century, when a great deal of changes were taking place.
- Now, first of all, I wanted to give you some background information.
- So, let's have a look at some possible reasons for this.
- And finally, I'd like to talk about some future projects.
- So, what conclusions did we reach?
- I'll begin by explaining what this machine can do.

2 Comparing and contrasting ideas

▶ 32

In my talk today, I'm going to be looking at plants that have had an impact on our world and our history. Let's start with the potato. It was originally one of the staple foods of Central and South America and when Spanish explorers travelled to the Americas some time in the 16th century the potato found its way into Europe. This had several important consequences. In particular, it almost totally altered people's diet in many European countries. The potato is also believed to have been responsible for the start of a new trend – that of migrating to

America. So you could say that the humble potato actually allowed many people to change their lives.

However, there were also problems associated with this crop. Largely in Ireland, where the poor were very much reliant on the success of the crops. Sadly, a disease in the crop spread rapidly across the country and led to widespread potato crop failures in the mid-1800s. This meant that millions died from starvation as a result.

Let's move on to look at another plant from the same part of the world, the tobacco plant. This originated in the Americas and had an enormous influence on the way North America developed in the 1800s. It's famed for being the original cash crop there and for funding a great deal of the development that occurred during this time.

On the downside, the success of this crop resulted in a greater demand for slaves to work the crops and this eventually led to war breaking out between the Northern States and those in the South.

Now, the next plant I'd like to mention is one known and used all around the world. Tea. It originated in China and in terms of its historical significance, it played a large part in the US independence from Great Britain. This came about because the British government declared that the colonies had to pay a tax on the produce brought into America. It was because of the protest against these taxes that the American Revolution came about.

The final plant I'll look at today is the White Mulberry. Again it originated in China and had an enormous influence on development in this part of the world, in particular in establishing trade between the East and the West. Sadly, the increase in trade brought with it the spread of disease and weapons.

3 Using notes to follow a talk

▶ 33

In today's lecture, I'm going to talk about the part that plants have played in our history, something most of us probably never give any thought to. Flowers began changing the way the world looked almost as soon as they appeared on Earth about 130 million years ago. That's relatively recent in geologic time – if all Earth's history were compressed into an hour, flowering plants would exist for only the last 90 seconds. Without those flowering plants, it's likely we wouldn't be here. They are fundamental to our existence, forming a vital part of our food supplies.

If we look further on in time, to the year 2737 BC, we arrive at the discovery of tea by a Chinese emperor, when a leaf fell into a cup of hot water. This discovery eventually played a very important part in the history of China, the USA and the UK. For Britain, where demand for tea was high, there were financial implications when a Chinese emperor declared that it could only be bought with silver, which they were then forced to find overseas.

A second influential plant emerged around 202 BC in the form of the White Mulberry. It became extremely sought after and it remained so until 220 AD because white mulberries provide

food for the worm that creates silk. This luxurious material was responsible for establishing extremely valuable trade routes. And it was along these same routes that different religions made their way around the world. But, unfortunately, they also caused the spread of previously unknown diseases, as well as weapons of war such as gunpowder.

Finally, moving into more recent history, we come to the 16th century and the potato. It originated in Central America but it was the Spanish who introduced it to the European diet. There, it quickly became popular because not only did it cost little to grow, but it was also a food source that was rich in vitamins. So much so that its arrival has been credited with ridding Britain of a disease known as scurvy. However, it is perhaps more famous now for the potato famines of the mid-1800s in Ireland. The Irish people were so dependent on the crop that its widespread failure over this period caused the deaths of over a million people and the emigration of a further million to mainland Britain, Canada and the US.

Speaking skills

▶ 34

1 it 2 look 3 fool 4 bad 5 workman 6 far 7 bird 8 sport 9 uncle
10 stars 11 heart 12 near 13 chased 14 cruel 15 coin 16 could
17 fair 18 bike 19 can't 20 day 21 breeze 22 defend 23 bland
24 sort 25 close 26 shave 27 air 28 vet

▶ 35

1 it / eat	15 con / coin
2 look / luck	16 could / code
3 full / fool	17 fur / fair
4 bad / bed	18 back / bike
5 workmen / workman	19 can't / count
6 fur / far	20 day / they
7 board / bird	21 breathe / breeze
8 spot / sport	22 depend / defend
9 ankle / uncle	23 bland / brand
10 stairs / stars	24 sort / thought
11 heart / hot	25 close (adj) / close (v)
12 knee / near	26 save / shave
13 chest / chased	27 hair / air
14 crawl / cruel	28 bet / vet

▶ 36

based	arrived	hoped
played	acted	wanted
laughed	chased	poured
changed	increased	decided
waited	learned	washed

▶ 37

contact	depend	expert
respect	develop	difficult
equal	environment	expensive
practice	technique	