

Recording script E7: Climate Control

- Tutor: Hello, Jo. Come in and take a seat. I wanted to talk to you about your essay on weather control.
- Student: Right. What did you think?
- Tutor: Well, let's start by looking at your introduction. You say that global warming is causing extreme weather conditions around the world.
- Student: That's right, isn't it?
- Tutor: Well, you need to be careful here. Yes, there is a lot of evidence that this is the case, but the issue is still controversial. You need to specify that many experts believe this is the case, rather than saying, "This is how it is."
- Student: OK
- Tutor: Then you look at the issues surrounding extreme weather, er, and how it has a negative effect in some countries.
- Student: I was worried that that section was a bit disorganized.
- Tutor: No, not at all. It's very good, but I was slightly surprised when, in the same paragraph, you mentioned an advantaged of extreme weather.
- Student: Not the right place for it?
- Tutor: Not really, no. In fact, I would question the need to put it there at all. At one point you're talking about droughts, hurricanes, floods, etc., and then suddenly you're talking about people being able to sunbathe on the beach in January.
- Student: Ah, I see what you mean. I think I was going to elaborate on that, add more information, but I guess I forgot to do so.
- Tutor: OK, then there's the section on weather-control programmes. This made interesting reading, but your ideas didn't really lead on from each other. Did you write a plan before you did this?
- Student: Er, no.

- Tutor: Well, you really ought to. Here's an example. You talk about experiments to control hurricanes, then you write about rain-making experiments, and then for no apparent reason, you go back to talking about hurricane control.
- Student: So, a bit messy?
- Tutor: A bit, yes. Next, you go on to talk about something called 'cloud seeding'. Great, you gave a good, clear explanation about what cloud seeding is, that it's a way of using science and chemistry to make clouds produce rain, and you give some examples of where it's been used.
- Student: So, that section's all right?
- Tutor: Ah, well, listen to this. "The chemical silver nitrate is introduced into clouds to encourage them to produce rain." Silver nitrate?
- Student: Oh, that was careless. I meant silver iodide.
- Tutor: Exactly, I would hate to think what might happen if you started firing silver nitrate into clouds. OK, finally, the conclusion.
- Student: I always have problems with the conclusion. I never really know what to say.
- Tutor: Well, you summarize your main points and give a few opinions, which is great, but you then start talking about environmental systems. This was not only in the wrong place, but I couldn't see where it fitted in with the rest of the essay generally.
- Student: Right. So, there's a bit of room for improvement, then.

Tutor: All right, let's go. back to the section in your essay on cloud seeding. Apart from your silver nitrate / silver iodide mistake, you've missed a few bits out.

Student: Have I?

Tutor: I'm afraid so. What I'd like you to do is talk me through the process of cloud seeding, what it involves and so on, and I'll stop you if you've forgotten something. OK?

- Student: Fine. Well, first of all silver nitr, er, iodide is fired into the cloud from the ground using a rocket.
- Tutor: Good, and you could mention that sometimes it's dropped from above by aircraft.
- Student: Right, and this is the first stage, the primary stage, which is called static seeding. The silver iodide causes a chemical reaction with the tiny water drops in the cloud, and they freeze.
- Tutor: OK, so you've got millions of tiny ice particles because the water droplets in the cloud freeze. What happens next?
- Student: Next, er, there's a process called riming. R-I-M-I-N-G. That's when the ice particles, well, they join up to form bigger pieces of ice, and when they're heavy enough, they fall from the sky.
- Tutor: Good, and then?
- Student: Well, as they fall, they turn to rain or snow. And, er, well, that's it, isn't it?
- Tutor: Well, usually, yes, but you've mentioned that there's a first stage, a primary stage, so surely you should have mentioned...?
- Student: Oh, the secondary stage.
- Tutor: Which is known as?
- Student: Dynamic seeding, of course, how could I have left that bit out? Let me think. OK, so the water droplets turn to ice, and, er...
- Tutor: What happens when water freezes? When anything freezes, for that matter. Something that may seem surprising.
- Student: Oh, of course, it releases heat.
- Tutor: Exactly, it releases heat. And what can happen to a cloud when freezing water inside it does this?
- Student: The cloud gets bigger, and contains even more moisture.
- Tutor: Exactly, and not only do they become bigger, but they also...?
- Student: They, er, produce storms. No, hang on, that's not right. They last longer, that's it.

Tutor: Right. They last longer, which means they can be seeded again to produce even more rain.