

Learning by Ear – Climate Change

Episode 04

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CHARACTERS:

Scene 1:

- JOSHUA (15)
- CAROL (14)
- ALEX (15)
- LORNA (16)

Scene 2:

- DR FENTON (45)
- JOSHUA (15)
- CAROL (14)
- ALEX (15)
- LORNA (16)

Scene 3:

- DR FENTON (45)
- JOSHUA (15)
- CAROL (14)
- ALEX (15)
- LORNA (16)

Scene 4:

- CAROL (14)
- PASSER-BY (MALE ADULT)
- HEAVY (MALE ADULT)

Intro:

Welcome to Learning by Ear and Episode Four of our radio drama about climate change.

The climate change task force have a lot of work on their hands if they want to stop the power plant going ahead in Dhowville. They need hard, solid facts to back up their case. In this episode, the four school children meet up with an environmental scientist who opens their eyes to how climate change is linked to industrialisation. And Carol is the first to experience the scare tactics of supporters of the power plant.

Find out more now as we listen to Episode Four.

Scene One: On the Train to the city

SFX: **DOORS SLAMMING, TRAIN BELL, TRAIN
PULLING OUT OF STATION**

SFX ATMO: **INSIDE TRAIN**

1. LORNA: Off we go up into the Big Smoke then. Hope everyone bought their gas masks with them!

2. JOSHUA: What, Lorna? Gas masks?

3. LORNA: Well, it was a bit of a joke. People often talk about going to the "Big Smoke" meaning the big city – a reference to all the pollution there.

4. CAROL: Oh, I get it. Yeah, from all the buses, the cars, the factories...

5. LORNA: Big urban centres like cities always have large populations and all the people consume so much energy.

6. ALEX: So, there's more greenhouse gas emissions and more climate change. It's a vicious circle!

7. JOSHUA: Well, it's my first time in the city or the "Big Smoke" as you call it. I wonder what this environmental scientist will be like. And anyway, what exactly does an environmental scientist do?

8. LORNA: I wasn't quite sure, so I did a Google search on my mum's computer.

9. CAROL: Good thinking, Lorna.

- 10. LORNA:** I wrote it down (**opening notebook and reading**) "Environmental scientists measure and record features of the environment, study, assess and develop methods of controlling or minimising the harmful effects of human activity on the environment, and develop conservation plans."
- 11. ALEX:** What kind of a job is that? Anyone could measure and record features of the environment.
- 12. CAROL:** Yeah. It does seem a bit vague. I expected it to be someone doing something a bit more proactive, a bit like us, but with more qualifications!
- 13. JOSHUA:** Hey, I think we're here. The train's stopped.

14. LORNA: Let's see what he has to say. Quick, let's get off.

(running to get off train)

SFX: DOORS SLAMMING

Scene Two: City Streets

SFX ATMO: CITY STREET NOISE

15. CAROL: So, where to now, Lorna?

16. LORNA: Well, he said to wait outside the station by the taxi rank, which is here.

17. DR FENTON: Hello. You must be Lorna. And I'm guessing these are the other members of your task force?

18. LORNA: Hi, you're Dr Fenton? Yes, this is Carol, Joshua and Alex.

19. ALL: Hi there.

20. DR FENTON: Right, here's my car. Are we all ready? I haven't got much time, but I want to show you all something? We're just going to drive 10 minutes outside the city centre.

SFX: **CAR DOORS OPENING, CLOSING, CAR DRIVING OFF**

Scene Three: Outside a Cement Production Factory

SFX: **CAR PULLING UP, ENGINE OFF, CAR DOORS OPENING**

SFX ATMOS: **CEMENT FACTORY**

21. DR FENTON: Right, so you said you wanted to know about the major causes of climate change. Well, this cement factory is a serious one.

22. ALEX: What, a factory producing cement?

23. DR FENTON: There are several stages to making cement. And each and every stage has a very negative impact on the environment.

24. CAROL: It's a pretty massive factory – it doesn't even look environmentally friendly!

25. DR FENTON: Well, firstly, there are airborne emissions in the form of dust. Then, there's noise and vibration pollution when all this machinery you can see, gets going – and that's not to mention the noise when they blast the quarries.

26. JOSHUA: So, noise can be an environmental pollutant as well?

27. DR FENTON: Absolutely. We as environmental scientists measure all types of pollution. But the kind we're especially worried about from cement factories are greenhouse gas emissions.

28. CAROL: Ah, another greenhouse gas culprit.

29. DR FENTON: Yup, that's right, Carol. The factory burns huge quantities of coal to heat up the kilns you can see over there, to very high temperatures. Masses of carbon dioxide are then released. And that's before additional carbon dioxide is produced from other raw materials involved in the process. We think cement production generates more carbon emissions than any other industrial process.

- 30. ALEX:** Doesn't sound very good news.
- 31. DR FENTON:** No, it's not. Especially when you remember that concrete is possibly the second most used product on the planet, after water.
- 32. LORNA:** I suppose there must be huge demand for cement for building schools, hospitals, sewers...
- 33. CAROL:** ...and power plants!
- 34. DR FENTON:** And so the list goes on.
- 35. JOSHUA:** But if you can't stop people wanting cement, how do you lessen the environmental damage which inevitably speeds up the climate change?

36. DR FENTON: Well, two measures for starters. Firstly, cement plants must become more efficient to reduce their emissions of greenhouse gases.

37. JOSHUA: How on earth would that work, Dr Fenton?

40. DR FENTON: Joshua, in theory the cement factory would capture the carbon dioxide. Then it would be stored in order to prevent it from being released into the atmosphere. We call it carbon storage, but it's not at a very advanced stage yet. The carbon dioxide could be stored in old oil or gas fields. But you need a lot of energy to absorb the carbon dioxide and you have to make sure to store the gas safely for hundreds of years in these reservoirs.

41. LORNA: But for the time being that would mean fewer greenhouse gas emissions, slowing down climate change. It makes sense.

42. DR FENTON: Secondly, we've got to make a speedier transition to renewable energy sources to power these factories. For example this cement factory could look to biomass to heat its kiln instead of using coal.

43. CAROL: Renewable energy sources? I've read a bit about those in the newspaper I sell. Biofuels, biomass...mmmm.

44. DR FENTON: That's right. But that's a topic that you should investigate separately. Renewable energy is the new buzz word – especially with oil running out and the need to halt climate change.

45. LORNA: Who can we speak to about these renewable energies? Surely that's the solution to the proposed power plant?

46. DR FENTON: I think I know just the person, but I've got to get back to work now. As you can see there's a lot for us to do. Jump in and I'll give you a lift back to the station.

SFX: CAR DOOR CLOSING, CAR DRIVING OFF

Scene Four: Outside in the street

SFX ATMO: STREET MARKET

47. CAROL: Read all about! Bad weather on the way!
Cyclone warning! Read all about it!

48. PASSER-BY: Cyclone? Can I have a copy, please.

49. CAROL: Here you go, fifty cents. Thanks! (**taking money, handing over newspaper**). Can I also get you to sign this petition? It's against this new power plant. You know, it's very environmentally unfriendly and will contribute to global warming

50. PASSER-BY: Sure, you got a pen? Just what this town doesn't need is some huge power station belching out smoke and greenhouse gases. Hand me some of those flyers and I'll pass them around to my friends too!

51. CAROL: That would be great. Thanks Sir, spread the word..."Green power plant or no power plant!"

SFX: **FOOTSTEPS, OVERTURNING OF TABLE**

52. CAROL: Stop! What are you doing? Those are all my papers! You can't do that!

- 53. HEAVY:** Stop spreading false information.
- 54. CAROL:** I don't know what you're talking about?
- 55. HEAVY:** That power plant is going ahead and no group of school kids is going to stop it. You got that? Don't mess with the big boys, or you'll be losing more than newspapers.
- SFX:** **STRIKING OF MATCH – FLAMES**
- 56. CAROL:** STOOOOP! That's my day's earnings **(crying)**. They are all going up in flames.
- 57. PASSER-BY:** Get out the way, before you go up in flames. Who was that guy?
- 58. CAROL:** **(sobbing)** I don't know but I think he wants to scare me and my friends.

59. PASSER-BY He's a nasty piece of work. However, I'm not sure I want to be seen with these flyers of yours if it means people like him are gonna come after me. Sorry, love.

60. CAROL: **(sobbing)** What are we going to do now?

END OF EPISODE 4

Outro:

And that's all from Learning by Ear for today.

This series about climate change was written by Victoria Averill.

Join us next time to find out what Carol will do. Will she give up because she is scared after the attack or will she forge ahead with the campaign?

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Goodbye for now and thanks for listening!