# School C Group 1 - 17 Jan 2017

B-: And just put this here ...

So my name's B-, I'm from Lancaster University. I'm doing research into the Computing curriculum, so people learning, kids learning about Computing, okay?

I don't know if A–'s told you anything about ...

A–: I haven't told them anything about ...

B-: I came in last year, if any of you did Micro-bit Day ...

A–: No none of these kid were with ... You know when we did the robots? The robots with the micro-bits? So, [inaudible 00:00:33].

B-: Yeah, making robots.

So, I've got a bunch of questions about you guys learning about computing. What you think about learning about computing ... Mostly I've been interviewing year 9's, I know you guys are in year 10.

Just making sure that's on.

So, some of it you may want to think back to when you were in year 9 and the questions are here on my computer so I'll read them off, but it's more of a discussion than anything else. Okay? Do you guys have any questions for me before I get right to them? That's the really, really brief introduction to that way ... And thank you very much for giving giving up your lunch time to do this.

Hopefully, [crosstalk 00:01:21].

Kid 1: Can we log in it already?

Kid 2: Oh, oh yeah you can.

Kid 1: Yeah? It was over there, you beat me.

Kid 2: Uhm, I'm gonna take a piss.

B-: So, I've split this into two parts. The first part I've kind of thought of as more of a group discussion so I'll [inaudible 00:01:36] the questions and then you guys just discuss them amongst yourself and say whether you disagree. The second part is more of a group interview so I'll ask follow-up questions but actually you won't notice much of a difference.

So, the first thing just to get us started is, can you guys name three computer scientists or people who have influenced the field of computing?

Kid 3: Tim Berners-Lee

B-: Okay, very good one. Any other ones?

Kid 1: What did you say?

Kid 3: Tim Berners-Lee

Kid 1: Uhh, Mr. Boole.

B-: Mr. Who?

Kid 1: Boole.

B-: Yes, okay, yeah. I don't think it's Bool-e but I know who you mean.

Kid 1: John Boole I think ...

B-: Yes, that's the one! Any others?

Kid 4: Alan Turing

B-: Classic, very good. Anyone else? Anybody else?

A–: [crosstalk 00:02:30]

B-: When you think computer scientists, or computer famous person ...

Kid 4: Von Neumann!

Kid 3: Von Neumann!

B-: Very good, okay. You guys are getting the fundamentals, this is great. Anyone else?

Kid 3: Steve Jobs

B-: Steve Jobs, okay. Now we're getting into more contemporary people but ...

Kid 3: Bill Gates

B-: Bill Gates, okay. Don't want to leave them out, Bill Gates apparently is the richest person in the world at the moment so, worth mentioning I guess. What sort of person do you think is good at computing?

Kid 3: If you think logically.

Kid 1: Logically yeah.

B-: Smart person ...

Kid 1: Quite patient, so like if they get it wrong they can have the patience to go back and do it again.

B-: Any other characteristics of someone good at computing?

Kid 2: Observant, so they can spot the sentence errors.

B-: How would you complete the following sentence? Computers are for ...

Kid 3: Everyone.

B-: Everyone, okay. Any other ...

Kid 3: Computational sentence.

B-: Computational sentence, awesome, we'll get to that later actually. Okay, we'll move on, any other answers to that: computers are for ... Haven't heard from you two as much. No? Okay, I'm going to read three statements and I want you to say whether you agree or disagree with the statements, and I want you to think about them for yourself. So, I know you'll probably have responses that are for everyone, but for yourself personally, how do you respond?

So, the first statement is, "I'm the same person online, as I am offline.". Would you agree, or disagree?

Kid 3: Disagree.

Kid 1: Disagree.

B-: Why?

Kid 3: Uhh, because you'd say something online that you wouldn't say to someone's face.

B-: "I say things online that I wouldn't say offline.". Agree or disagree?

Kid 3: Agreed.

Kid 1: Agreed.

B-: "How much a person knows about computers changes how they interact with other people online."

Kid 1: Disagree.

Kid 3: Disagree.

Kid 2: Disagree.

Kid 3: Well, personally I know more about computers than a lot of my friends and I still talk the same as I would.

Kid 1: I don't, I find it easier to communicate with my friends with [crosstalk 00:04:57].

Kid 3: What?

Kid 1: I find it easier to communicate with my friends than to communicate with my grandma because she's [inaudible 00:05:05].

Kid 3: Yeah cause she's ...

Kid 1: I'm not emo on there ...

B-: Anybody else have any thoughts on that one?

Kid 1: My grandma's [inaudible 00:05:11] years old, so ...

B-: How many of your grandmas use email now?

Kid 1: Mine.

B-: How many of your grandmas use email?

Kid 1: Just about.

B-: Just about, yeah? Just curious.

So, in the next ten years, so thinking ten years in the future, what do you think the digital world will look?

Kid 1: Everything's going to be [inaudible 00:05:37] like.

B-: Everything what?

Kid 1: Everything's going to be like [crosstalk 00:05:39] like traffic systems.

B-: Do you think it'll be programmable or programmed?

Kid 1: Uh, I think it's going to have like adverts attached to it so even things like transport, buses, even houses are going to go to that ...

Kid 3: What was the thing we did last year? The internet of the world?

Kid 1: Yeah.

Kid 4: Yeah.

Kid 3: [inaudible 00:06:01]

Kid 1: I feel like there will be more stuff to do on the internet, like the TV now, less and less people will be using like TV and view more on the internet like YouTube or something like that.

B-: Do you think there's anything specifically that'll be possible in computing terms that isn't possible now?

Kid 3: Like things that people thought in the 1990's weren't going to be possible now like ...

Kid 1: Copy and paste.

B-: What was that?

Kid 1: [inaudible 00:06:34] copy and paste, you can do it on the computer but you can't do it ...

B-: In real life, So you think you'll be able to do it.

Kid 1: Well, it's like ...

B-: How much of your time when you're an adult do you think you'll spend using computers and digital devices?

Kid 1: A lot.

Kid 3: A lot. Considering how much I ...

Kid 1: [crosstalk 00:06:52]

B-: So you think it'll be similar or more than that?

Kid 3: Maybe a little more.

Kid 1: Yeah, 'cause most jobs these days when you do it, they use a computer and stuff like that in [inaudible 00:07:02].

Kid 3: Some kind of log in yeah ...

B-: So just to log in to get to your job?

Kid 1: Yeah.

Kid 3: Yeah.

B-: Do you think that your computer lessons require you to change how you think or behave at all?

Kid 1: Yeah.

B-: Yeah?

Kid 1: Because they're all like straightforward, there's no ambiguity with what you mean with the types it's got to be, and the right syntax ...

Kid 3: I'd say a bit more of a logical [inaudible 00:07:32]

B-: You have to be ...

Kid 3: A bit logical yeah.

Kid 1: A bit abstract.

Kid 3: Yeah.

B-: What do you think is the main purpose of learning computing and about computers in school?

Kid 3: Helps your brain develop.

B-: Okay, any other thoughts on that one?

Kid 1: In a kind of developer [inaudible 00:07:52], it'd be useful to understand what's going on, [inaudible 00:07:58].

Kid 3: Get ready for the [inaudible 00:08:01] changing.

B-: Yeah, and to what extent do you think what you've learned in computing classes relates to how you use computers or [inaudible 00:08:11]?

Kid 1: Uh, well, I don't get frustrated with buffering anymore.

B-: Because you know it's ...

Kid 1: I used to just keep on refreshing it but now I know it really doesn't help and it's just taking it's time, and I [inaudible 00:08:26], especially if it really [crosstalk 00:08:29].

B-: Does anybody else have thoughts on that one?

Kid 3: Uhh, no I don't.

B-: That's a really good example. How about in the future, how do you think what you're learning with computing will affect how you use computers in the future?

Kid 3: Everything will be digitalized.

B-: Everything will be digitalized, what do you mean by that?

Kid 3: Everything will ...

Kid 1: [inaudible 00:08:57]

Kid 3: Yeah, everything will have [inaudible 00:09:01].

B-: Okay.

Kid 3: And can actually [crosstalk 00:09:04].

Kid 1: And it's like what we just said, the [inaudible 00:09:07].

B-: Yeah.

Kid 3: Or like nano science.

Kid 1: Yeah, so you can have like [crosstalk 00:09:14].

B-: So, A–'s not nearby for this one, so what would make your computing classes more interesting or more exciting if anything?

Kid 1: I mean, basically make games we play.

B-: Making games you play?

Kid 1: So like, make stuff that we can use like ...

Kid 3: And make things that interest us, not necessarily programme one thing that we can't really use.

Kid 2: I feel maybe working more as a team instead of like getting your task and setting up by yourself.

B-: Yeah?

Kid 2: Like everyone chips in to like build it together.

B-: Do you guys have any thoughts? Okay.

So, that's the first half, we have another set of questions but we'll go through them quickly, those have been great. So far, based on those questions and how much you had to think of things, how would you judge this discussion so far? Two thumbs up if it was great, one thumbs if up somewhere in the middle ... Down if you ...

Kid 2: [inaudible 00:10:23]

B-: Great? Yeah? Anything that anybody has thought of and they really want to say it, but they couldn't figure out how to fit it in? Or a question for me?

Kid 5: How have other people's responses been compared to our class?

B-: Uhm, similar in some ways. I have to say your answers to the computer scientists questions was far more ... Far more, in general actually. You knew more of the computer scientists and you knew more of the fundamental computer scientists so ... Nobody said von Neumann, I don't think anyone even said Tim Berners-Lee so you guys clearly have a better understanding of the development of computer sciences and also, I'm saying this, from your answers so far it shows that you have learned a lot more kind of fundamental things about how computers work.

Kid 3: I think that's due to the new exam systems.

B-: Yeah, it's really ...

Kid 3: We've gotta learn ...

B-: You think it's the exams or how it's taught?

Kid 3: I think we've got to learn that so [inaudible 00:11:32].

B-: Well, so do you like the depth of what you learn about computing?

Kid 3: Yeah, it's quite interesting learning about how it all started.

B-: So, we're moving on to some of these other questions, and somebody said computational thinking earlier, have you guys all come across the term computational thinking?

Kid 3: Yeah.

Kid 1: Yeah.

B-: What does it mean to you?

Kid 3: To think logically.

Kid 1: Yeah, it's thinking logically.

Kid 5: To think in a different language than we code in ...

B-: Yeah?

Kid 5: Because you can't just say that if this equals that then, you have to kind of ... Coding different language according to that programme.

B-: So do you think that you have to use computational thinking to write code?

Kid 2: Yeah!

Kid 5: Yeah.

Kid 3: Yeah.

Kid 1: You've got to take nothing for granted, you've got to run through everything in like a step-by-step, not kind of assume that the computer will know what to do because it doesn't.

B-: Yeah, so how many of you have your own computer at home and if you add it up how many kind of computers and digital devices have you got in your house? How many would it be?

Kid 1: A lot.

B-: A lot. How many of you have your own computer?

Kid 3: As in a laptop? Not a desktop?

B-: Like a computer, either one, a computer that you're the main user of?

Okay, and how many computers do you have your home just in general? And there's no right answer, don't ...

Kid 1: It's not like, desktop wide?

B-: Yeah, [inaudible 00:13:06]. How would you ...

Kid 1: Or like phones as well?

B-: If you want, yeah.

Kid 5: 61

B-: 61?

Kid 5: With the desktop, yes.

B-: Okay.

Kid 1: I don't know, about five million.

B-: Quite a lot?

Kid 1: Well all the models. Well I suppose active, in use models, probably about 10 or 9.

B-: And not in use ones?

Kid 1: Probably about [inaudible 00:13:29].

B-: Okay.

Kid 1: Because my dad like keeps like all of the previous iPhones he's had. He's even [inaudible 00:13:36].

B-: Our house is quite like that. We have, you know [inaudible 00:13:42] that we use a lot, then 5, 6, 7, 8, 9, 10 that include the ones that are broken.

How much time do you feel like you spend using computers on an average day? What's that mean?

Kid 2: A lot.

Kid 3: Procrastinating and using them though you should be doing other things.

B-: So like, if you had to say a number in hours, how much time do you spend using computers on an average day?

Kid 5: Two and a half.

B-: Two and a half? Is that about right or is that too much you think?

Kid 5: For me too much, but I just kind of get addicted to them and then ...

B-: What do you do?

Kid 5: I just watch videos.

B-: Okay. Anybody else? Are there ...

Kid 1: I spend about four of five hours because at school I use the computer quite a lot as well and then at home. I mean it's not all free time and stuff because it's also like homework and [crosstalk 00:14:37].

Kid 2: If you're counting smart phones about four maybe.

B-: And do you consider yourselves part of any online communities, groups, or forums, anything like that? So, groups of people that you're part of or friends that you have who you only know online and you probably haven't met them face to face or not very often.

Kid 3: No.

Kid 5: No.

B-: No?

Kid 5: I know people more [inaudible 00:15:04].

Kid 6: [inaudible 00:15:06]

B-: What was that?

Kid 6: I have a few, that like I know a few friends that have met like online friends.

B-: Yeah, and when you're an adult, how important do you think it'll be to understand how computers and software work, if at all?

Kid 2: Quite, because there'll be more in computers, if they're developing, because we're adults then we'll not learn about as much as if we were in school at that time, so I think we'll need to research it and learn more as the computers and stuff advance in the future.

Kid 1: So get to know the basics because in like ten or twenty years it's probably going to be so complicated that ...

B-: So do you think you have to learn the basics now because it's going to be so different in the future that if you don't learn the basics now ...

Kid 1: Kind of yeah, it'll be important to learn the basics so that you can see kind of the similarities in [crosstalk 00:15:57].

B-: How do you think you'll ... What do you think you'll use computers for in the future? Sort of work? Or in your house? Or hobbies? Or sports? Or? Do you think you'll ...

Kid 3: Most things in your life.

B-: Most things in your life? That's not very specific.

Kid 1: [inaudible 00:16:11], everything, I mean.

B-: Everything?

Kid 1: That you can control, lights ... Stuff. And then like sports, you can like [crosstalk 00:16:21].

Kid 5: I definitely feel like it'll be most things because people using their phones for like say, Uber, to get a taxi and stuff these days so it'll be more like that.

B-: Any other thoughts on what you'll use computers for? Anything you won't use computers for?

Kid 1: [inaudible 00:16:40]

B-: I don't know, in general. Anything that you thought that you'll never use a computer for, then we might close.

Kid 3: [inaudible 00:16:48]

B-: The answers so far have been we'll use them for everything so I'm just ...Trying to figure out what ...

Kid 3: I think I can think of something that would ...

Kid 1: Maybe like sport, like I won't need a computer to help me go for a run, I feel like I'll be able to do that for myself.

B-: Of course a lot of people use their step counters for when they go for a run and that's a computer.

Kid 3: Maybe not physically, the actual movement.

B-: Yeah, yeah. In five years time, what do you think you'll remember from what you've learned about computing in schools?

Kid 1: Uhhh, [crosstalk 00:17:28].

B-: Say that again.

Kid 1: [inaudible 00:17:30]

B-: You don't remember a lot of it?

Kid 3: Yeah.

Kid 2: I don't reckon much, just because if I don't use it then it just goes away. Definitely like the basics where I use everyday [crosstalk 00:17:45].

B-: Okay, so if you ... What sort of ... I'm assuming because you guys are all ... You're tens right? You've all chosen computing in some form?

Kid 3: Yeah.

B-: If somebody's not very good at computing, what do they need to do? How do they need to change to be good at it?

Kid 3: Uhm, time.

B-: You just need to spend ...

Do they need to change kind of as a person at all? Do you think they need to be a different sort of person of some sort?

Kid 3: Approach the situation a little differently.

B-: What do you mean by that? From what to what?

Kid 3: Maybe, uhm, I don't know.

B-: Okay.

Kid 3: Think about the problem in a different way.

B-: But you do think that you do have to approach problems in a certain way?

Kid 3: Yeah.

B-: Does everybody agree with that? That you need a certain kind of mindset to approach the problem, and that if you don't have it in order to get through it you have to take that ...

Kid 3: Yeah.

B-: Do you think that learning about computing, and thinking back to last year a little bit, changed your choices and decisions about the future at all?

Kid 1: Not really.

Kid 3: Maybe a little bit.

B-: Maybe a little?

Kid 3: Before I was adamant that I was going to be a vet, but maybe I'd go into a different area or job.

B-: Okay.

Kid 3: [inaudible 00:19:10]

B-: Okay. Now that you know it's possible?

Kid 3: Yeah.

B-: Any other thoughts on that? Things that you've maybe changed your ... You had more decisions or fewer decisions because it changed your choices about the future?

So the final question is, is there anything that you think you should be learning about computing and computers but isn't currently covered, or hasn't been covered in computer lessons? What do you wish you were learning?

Kid 1: I feel like, more about when a recent breakthrough comes out, or like a new technology maybe in computing. I feel like maybe do a lesson about that instead of ... That'd be quite good.

B-: Yeah.

Kid 3: I want to programme things to actually move and maybe the [inaudible 00:19:55] thing.

B-: Yeah, or the internet things, you talked about that.

Kid 3: Yeah.

Kid 1: Yeah.

B-: Anything else? Any other ...

Kid 1: Maybe learning how to ... because we do coding but it's just online so maybe learning how to use that in the real world.

B-: So making software that you can use in the real world or making ...

Kid 1: Yeah just like making apps do stuff, cause visual basic and stuff ... Isn't really [inaudible 00:20:25].

B-: No, it's quite ...

Kid 1: Maybe a way to like, learn how to make [inaudible 00:20:30].

B-: Yeah. Anything else? That you wish you were learning or you'd like to learn about computers?

Great, that is all of the questions so we've covered everything. Do you guys have ... Are there any answers that I haven't asked the questions for? Anything that you want to say or anything I should have asked, you think "If I was doing this interview I would have asked this." or another. No?

Has that been all right? Hasn't been a ... you've lost your lunch for no good reason.

A–: Ah, no. Would you like a mint? That's all I've got.

B-: Right, thank you very much.

Kid 3: Cheers.