# School A Group 1 – July 13 2016

Speaker 1: Okay. Brilliant. What I'll do then is, I will let you guys discuss this first bit on your own, but I will stick around in case you have any questions, but I'll be here to help you ask questions about the questions if that makes sense?

Students: Okay.

Students: Charles Babbage made the computer, didn't he?

Students: Oh, yeah, he did. It was massive.

Students: He wouldn't. I have no clue about people.

Students: Einstein could be one.

Students: We would include Stephen Hawkings in as a computer scientist?

Students: Probably.

Students: He's a scientist.

Students: He is isn't he, and he's got like computers doesn't he?

Students: What counts as a scientist?

Students: Anything really.

Students: Does he work in the field of science?

Students: Computers.

Students: Influence the field of ... Oh Bill Gates. He made Apple.

Students: Oh yeah them two. The other one, there were two of them.

Students: Steve Jobs.

Students: I don't know the other one though. How would you complete the following sentence: Computers are for ...

Students: Learning.

Students: Internet.

Students: Research.

Students: Homework.

Students: Homework.

Students: Work.

Students: Jobs.

Students: Fun, entertainment.

Students: YouTube.

Students: Everything.

Students: Games.

Students: It's easier than writing stuff down.

Students: Makes life easier.

Students: To what extent do you agree or disagree with the following statements:

Students: I am the same person when I am online as when I am offline. No I'm not.

Students: No.

Students: No, I do not agree with that.

Students: I don't.

Students: I say things online that I would not say ... Yeah.

Students: Yeah, I'd agree with that.

Students: How much a person knows about computers changes how they interact with other people when online.

Students: Yeah, because if you find a proper computer geek he'll talk like about how to hack into stuff.

Students: I guess it actually depends on what you're doing on the computer.

Students: Yeah. If you're talking with your mates.

Students: If you're actually on a game.

Students: Yeah.

Students: Or even online, playing a game, talking to friends.

Students: How do you think you will use computers in the future? In ten years time what do you think the digital world will look like? The future.

Students: Touchscreen.

Students: Yeah, everything will be touchscreen.

Students: You can just touch it.

Students: I think robots will take over the universe. Not in 10 years, but.

Students: Computers will get smaller, as in like the monitor will get smaller.

Students: There will be able to process faster, if that's what you mean.

Students: Yeah.

Students: Well we've got iPads in the school now, I think they're just going to completely take over everything.

Students: It makes life easier.

Students: Tablet computers.

Students: Yeah, iPod's pretty much computers, mini computers.

Students: Yeah, and make like you know when they used to have like them big TV's, the box on that.

Students: Oh right yeah yeah, those like tiny ones down that pull out.

Students: [crosstalk 00:02:50] mobile phone's like. Start off they break, but now it's more [inaudible 00:02:55].

Students: They get more data.

Students: What do you think will be possible in computing terms in the future that is not possible now? You'll be able to order people to do something online, and then they'll do it in real life or something.

Students: There will be a lot of stuff.

Students: You can control stuff.

Students: Control a lot more than what you can now.

Students: There was all this payment.

Students: Isn't there that robot that [inaudible 00:03:22] all of your food?

Students: Oh yeah, like people will be less needed.

Students: There won't be as many jobs anymore.

Students: Everything will be done by computers.

Students: How much of your time do you think you will spend using computer or digital device when you're an adult?

Students: Quite a lot. It's going to really influence our jobs.

Students: If you think about it, a robot is a digital thing, so probably.

Students: I guess it depends on what like you'll be doing in the future.

Students: Even if you're a footballer, or emailing people and stuff. If you're like a teacher, you're going to have to email people and set up PowerPoints and stuff like that.

Students: Now, adults don't really do much computing. They didn't really have so much-

Students: Yeah, not really no.

Students: [crosstalk 00:04:06] need for like policemen, firemen, it will all be done digitally.

Students: Yeah, there were will be a lot more computers.

Students: What do you think of the impact of the computing curriculum is on you? What do you think is the main purpose of you learning computing and about computers in school?

Students: To help us in life, when we're older.

Students: Yeah.

Students: You have extra things that you can do, and more job range.

Students: You know what you're doing when you go into a job.

Students: It gives us extra education.

Students: If you think about it, if a proper elderly person wants to go on a computer, it will be a lot easier to use a tablet instead of a massive computer.

Students: Yeah, yeah.

Students: You contact people. It's easier, if you like help-

Students: There'll be a larger job range as well.

Students: Yeah, and it will be easier. You'll know what you're doing when you come to use them on your own, and you're not being told.

Students: Yeah, do what extent do you think that what you have learned in your computing classes relates to how you use computers in your everyday lives? About how you will use computers in the future. Well, if you like a proper computer person ...

Students: I don't think what we've been doing at the moment relates to what we do.

Students: No no no, that's what I was thinking.

Students: Not unless you come in that computing.

Students: Yeah, but you never know in the future.

Students: We'll really have to use Python everyday.

Students: Yeah like the stuff we're doing now, we're not exactly going to use that for, well it depends what job you do, but most jobs you're not going to really use that, are you?

Students: Python, or anything.

Students: No, you're not going to use.

Students: Unless you're creating a game and stuff.

Students: Yeah, unless like some actually works for it.

Students: Things like Excel skills and stuff like that, that will help.

Students: Unless you're going into a proper like full on computer job, you're not really going to need-

Students: I know the council use Excel and things like that.

Students: Yeah.

Students: It just helps you understand how a computer works, as well. What would make your computing lessons more engaging or exciting?

Students: I think more like hands on stuff. You know when we disabled that computer and we took all the parts out of it and put it back in? That was quite fun and I think more hands on.

Students: To be actually learning about a computer, as well as the stuff on it.

Students: Yeah, and stuff we're actually going to probably use.

Students: Maybe like, more kind of scratch stuff, to be able to make your own games. We're doing apps next, aren't we?

Students: Yeah.

Students: Use more programmes, because we've only used Python, Scratch and that's really it. Mostly Excel.

Speaker 1: Okay, that was really good. You guys went through those really quickly. Are there any of those questions that, having thought about them a little bit more, you would change your answer. Or not even change your answer, you had anything that you thought, oh actually, there was something else I wanted to say.

 I wanted to ask you about those statements at the beginning. You all sort of seem to say that you're not the same person online as you are offline.

Students: Yeah.

Speaker 1: Why?

Students: I think, yeah, because you're not in contact with them.

Students: It could be anyone.

Students: It's like say at least 90% of arguments in our friendship group happen online, don't they?

Students: Yeah, most arguments.

Students: It's just like, if there is someone that you don't know, and they ask you all about, you could say that there's something different about you. That does not actual, thing that you-

Students: Yeah, you're not going to know.

Students: Lying to keep people away from you.

Students: There's a lot more lying.

Students: Sometimes you say different things because you're like, looking at them, if you said it right. They're talking on the screen.

Speaker 1: Do you feel like the way you present yourself is a real way of presenting yourself, or is it not true, or is it just different?

Students: Like if you're talking to your friends online, you are real with them, but if there's a stranger that you don't know, come and ask you about your life or something.

Students: You're a bit vague with them.

Students: That's with why friends and stuff, you never know how somebody's saying a message.

Students: Yeah, that's the thing.

Students: They could be nice, or they could be sarcastic.

Speaker 1: Okay, and do you think that question about computers are for. If you had to rate it, do you think they're more for stuff at home and leisure and play, or are they more for work things?

Students: Work things

Students: Yeah, work.

Students: Rarely I use a computer, I usually use my tablet to watch YouTube or play games.

Speaker 1: Okay, so what is a computer? What would you say is a computer?

Students: A digital device that you can-

Students: It's like an iPad, but with more memory.

Students: Confuse your devices though, aren't' they?

Students: It works behind binary, it works behind like binary.

Speaker 1: It works on binary, so a computer ...

Students: It worked from like numbers from zero, one.

Speaker 1: As long as something is using binary, it's a computer?

Students: Yeah.

Speaker 1: Okay. What about, what do we mean by digital?

Students: Something with like, yeah, electronic and it has like a display.

Students: It's works on its own.

Speaker 1: It works on its own, okay. Cool. Can I just, again going back to some of those first questions, what would you consider a computer job, or a job where you would need computers a lot?

Students: Teaching.

Students: Anything in an office.

Students: Teaching.

Students: Counsel.

Speaker 1: An office job?

Students: Yeah, office jobs. Teaching, computer science.

Students: I think of stuff like, doctors to submit them, filing out files, medical forms.

Students: Game makers.

Speaker 1: Somebody said, I want to go into, somebody was really good at computing like one of you guys, and they wanted to do a job that sort of used computers a lot, what job-

Students: They could be like a game designer, or an app designer for the app store.

Students: Yeah, work for Apple or Microsoft.

Students: Yeah, work for Apple, some kind of big firm.

Speaker 1: Okay, so we're going to go over to that second set of questions now, but again, this is far more of a discussion. There aren't right answers, so if you don't feel like answering, that's fine. Or if it makes you think of something else, that's fine too.

 Have you guys ever come across the term computational thinking?

Students: No.

Students: I think I have.

Speaker 1: No. What do you think it might mean?

Students: Thinking like a computer.

Speaker 1: Thinking like a computer? Okay.

Students: Yeah, I don't know.

Speaker 1: You've never ...

Students: Logical thinking.

Speaker 1: Logical thinking?

Students: Or maybe mathematical thinking.

Speaker 1: Yeah? Is it something that you would want to learn? Do you think it would be an important thing to learn?

Students: Yeah, to know what it is and that. If it is like a computer, how computers think, or-

Speaker 1: How computers think. Do you feel like that's something that's currently covered in your learning?

Students: About learning about binary, which is how they're run, but with that, no.

Students: Kind of.

Speaker 1: Do you know how the binary relates to how they run?

Students: Yeah.

Speaker 1: Okay. Okay. Right. How many time do you feel that you spend using computers or digital devices in an average day?

Students: Phones and tablets, practically all the day. Maybe like my X Box if that can be classified.

Speaker 1: [inaudible 00:10:21]

Students: Four hours.

Speaker 1: Four hours?

Students: Yeah, go home and message people online.

Speaker 1: You go home, and most of the day, once you're home, you're on something.

Students: Yeah, unless you're doing homework you're pretty much on your phone or on X Box.

Speaker 1: Is it mostly for socialising? Playing games?

Students: Yeah, that's what we use it for, I'd say.

Students: I use it more over the weekend because I do like homework or things.

Students: Like communicate, because I was talking to my friend last night who lives up on a caravan. Well, he doesn't really live, he goes up. We know him quite well, and I was talking to him online when he's going to go up, and just me, to help with him.

Students: Yeah, I have a Portuguese cousin and obviously I can't go and see him every weekend like I do, like some of my English cousins. The only way I really keep in contact is like through messaging and online, Instagram and stuff like that.

Students: We're becoming more social because she only lives down the road from me really, and I still message you, don't I?

Students: Yeah.

Speaker 1: You're spending quite a bit of time, but what you're doing online on computers is mainly social stuff.

Students: Yeah, social media.

Speaker 1: Do you ever do any programming, or do you ever-

Students: Not at home, just mainly at school.

Students: I do.

Speaker 1: You do? What do you do?

Students: I do Python.

Speaker 1: Okay, you do Python at home. Any other sort of-

Students: I might play games.

Speaker 1: More computing stuff. Play games?

Students: I just play higher or lower, I'm addicted to it.

Speaker 1: Okay, so what's the term? I mean you kind of covered this a bit, but what's the term social media mean to you?

Students: Kind of like, every ... Like kind of social media like Instagram, Facebook, Snapchat.

Students: Where you chat to your friends.

Students: Yeah, something that you use with the internet.

Speaker 1: What makes something a social media?

Students: Well, you can visit people's profiles and talk to them, and see what they post.

Students: Something originally meant to share photos, thoughts, stuff like that but has now been tending to more of a chatting, online chat room type of-

Speaker 1: Do you like social media?

Students: Yeah.

Students: No.

Students: It's where you contact with people.

Speaker 1: I think I know the answer, but kind of with a show of hands, how many of you would say you use social media regularly? Everybody, all six of you. Okay. You'll notice, when I ask for hands, I have to say the number, because when I'm listening back I won't be able to see. You all use social media?

Students: Yeah.

Speaker 1: Do any of you consider yourselves part of kind of online groups or communities? Like a guild, or.

Students: Yeah.

Students: Yeah, definitely.

Students: Like, all of us well, we kind of are already in a community because we all follow each other, or most of us follow each other.

Speaker 1: Okay, now are any of you parts of groups that are made up of people who maybe you don't meet up in real life very often, or you meet very rarely?

Students: Games.

Students: I don't know about you, but I have this chat with all my people from my American football club, I don't know if like you [inaudible 00:13:11].

Students: Yeah, I do.

Speaker 1: People you don't, you do know though?

Students: Yeah, yeah you speak to, yeah. Yeah.

Speaker 1: You said you plays lots of games online, didn't you?

Students: Yeah.

Speaker 1: Are you part of any guilds or anything like that?

Students: Like, cluster clones with that account, man.

Speaker 1: Basically the question is really, are there people that you talk to online relatively often who you either don't meet often, or who you would probably consider friends, but you probably either haven't meet, or haven't met up with often?

Students: Sometimes.

Students: I go to guide, which we have a group chat for, but we only do once a week.

Speaker 1: Okay, a guide's chat?

Students: Yeah.

Speaker 1: Is that like an online thing, online guide?

Students: No, like we speak like once a week. We don't really like, communicate. We do these things, challenges and things, but we don't classify each other as like best friends and stuff because we don't see each other often.

Speaker 1: Yeah, okay. What about you two?

Students: I have chats with friends in America, I met years ago last time I was there that I've not seen.

Students: I have chats with friends, but then they invite their friends to the chat that I've not met, so I talk to them, but I'm not like seeing them in real life.

Speaker 1: Yeah, there's nothing wrong with it, I'm just curious because it's one of those things that we talk a lot, people like me, teachers and people who talk about learning, teaching computing, talk a lot about whether it's good or bad for kids to have friends online and I don't know if we always touch base with people like yourselves about how you're relating to other people, and whether you have lots of friends you never met, or whether it's not something you do, or.

 Is there anything you do, this isn't part of the question, but are there things that you do that you do to keep yourself safe?

Students: Yeah, I put my account on private.

Students: Yeah, I do that.

Students: If people want to follow you, then you can just decline it.

Students: You can block people.

Students: Never share like personal locations or anything.

Speaker 1: Do you think that stuff, that sort of stuff you're just talking about, is stuff that people your age know, are pretty aware of?

Students: Yeah.

Students: Not everyone uses it, but people know about it.

Students: Most people, like most people who are kind of ... Well, they have a social media account and they've got lots of followers, who they may not know. They may not realise the dangers kind of, if they come across-

Students: Like a dirty old man.

Students: Yeah.

Students: I think people are more obsessed with seeing the number of followers they have rise than making sure they know everybody.

Students: Yeah,

Speaker 1: Do you think it's important that you know everybody?

Students: Yeah.

Students: Yeah, but not-

Students: Quite a bit, but like, if someone that you don't know starts talking to you, then just ignore them.

Students: If not know them, know of them.

Speaker 1: Yeah, okay. As I said it's not really one of the questions, but it's interesting to kind of explore of what people are thinking. How much you guys know, do you feel like that's stuff you've been taught, or stuff you kind of learned along the way?

Students: Learned along the way.

Students: Both.

Students: Yeah, sort of both, yeah.

Speaker 1: Okay. When you're an adult, how important do you think it will be to understand how computers work? Not necessarily how to use them, but the stuff you're learning on how to like, programme, that sort of stuff.

Students: Maybe like, if there's kind of a job that I share about.

Speaker 1: Why do you think it'll important?

Students: Because if like depending what job you have, if you create taste and they expect you to and something it's always good to have that knowledge, just in case.

Speaker 1: Okay, so you think it'll always be, even if you don't necessarily use it, it'll be useful to understand?

Students: Yeah.

Students: Seeing you know they have applications, send them over the internet. If people don't know how to do that, then you might not be able to get a job because you might look unprofessional in a way because you don't know how to add like different things to it to make it look more professional. Like pictures and things like that.

Speaker 1: I don't quite, I think I know what you mean, but I don't quite feel like you've explained it very well. Do you think that it will be important to make like a website to look professional?

Students: Yeah, to look more professional on your job.

Students: Yeah, like if you're the head of the business. Like if you're just one of the workers, you don't really have to make the website unless that's your job. One of these head of businesses, you offer a little job, you need to make a website but there's all these websites now-

Speaker 1: What you were saying is that just to get the job, you would need to be able to put things on like, online CV or?

Students: Yeah, because if you're talking about before, if it turns into like all computers, and you don't know how to use one, you might struggle to get a job because you might not be able to do online CV's and things.

Speaker 1: Do you think how you behave on social media will affect your ability to get a job in the future, or should it?

Students: Yes.

Students: Definitely.

Speaker 1: Do you think it should, or do you think it will?

Students: Well, it depends on if your profile's private, because if your profile's private, you can't see ... Like, your business can't see what you're saying. Like my mom had a colleague who put something on Facebook about the school. She works at a school, and she got fired because it was a bad comment about the school and she got fired because she put it on Facebook, so.

Speaker 1: Have other people come across anything like that before, or heard of stories like that?

Students: No.

Speaker 1: Do you think that's right?

Students: Well, there was an advert on TV and it was saying how, like if your social media name was like little.miss.trouble or something it affects your job search. It should be your name.

Speaker 1: Well sometimes, I mean it depends on what it is. There's arguments both ways, right? Like we were just saying about safety, you don't want to give away your name necessarily to people you don't know, so. There must be somewhere in the middle between having something that describes you, but you also don't want something that makes you look bad.

Students: You have to make sure you're being quite mature about it.

Speaker 1: You think you should have a chance to, like your social media should be like your criminal record? It should be anything you've done before a certain age can get hidden away? Disappear?

Students: Yeah. People might not be not as aware.

Speaker 1: How do you think you will use computers in the future? Thinking forward to some point in the future, maybe when you're grown up, maybe just the next few years. How do you think you personally will use computers, or how would you like to use computers in the future?

Students: Probably-

Speaker 1: For work, for at home, for hobbies? Whatever.

Students: Probably job applications.

Students: Work more than anything else.

Speaker 1: What do you think you'll do specifically?

Students: I don't really know.

Speaker 1: Okay, that's fine.

Students: I do more work because as you get older, you start getting off like games and things, so. Unless you're like a gamer. I would do more work on it.

Speaker 1: When you envision using computers for work, do you envision doing, writing letters, or-

Students: More numbers, because I'm not really good at writing. I'm better at math and stuff.

Speaker 1: Okay, doing sort of math stuff.

Students: If your job's like a YouTuber, that's going to go quite a lot of computer knowledge, or.

Students: Attitude.

Speaker 1: Do you think you'll use them at home for anything you'll do at home?

Students: Yeah, definitely.

Students: The news, probably.

Speaker 1: What?

Students: The news.

Speaker 1: The news, so you'll go online for the news. What about, have you ever come across the term internet of things? Do you know what that is?

Students: No.

Students: No.

Students: Don't know what it means.

Speaker 1: All right. Do you think that, what about ... Using computers like in your car, or in your home to lock things? Would you want to do that?

Students: Well, not no, not really. For your home, locking your door whatever, if something goes wrong, that's obviously quite a big mistake because someone could get in. Like there's this thing called Hive, there's that advert, which is like where you can lock your door, you can turn on lights, you can turn off the telly by your phone, but if something goes wrong like communication from a satellite goes wrong and you thin you've locked up and you've not. That's going to be quite a big problem.

Speaker 1: You think it's a problem because you don't really trust computers.

Students: Yeah, something could go wrong at any time.

Students: It could work both ways though as well, because if something happens to you while you're in your home, and you've locked it using the phone, then people might not be able to gain access.

Students: Yeah, exactly.

Speaker 1: You think that computers should, I mean this is being really simplistic about your answer, but computers are for work, and that's fine? That should stay that way, because-

Students: Put them in the cars is dangerous. Driving.

Students: Yeah, because you could just switch off.

Students: It's like using your phone in the car. If it's in built, it's obviously not the same as not being in built, still dangerous.

Students: [inaudible 00:21:42] in the car. Nowadays, because you can just like ring people and answer the phone, but-

Students: I think people feel more secure like actually physically locking your door or something, than using a phone to-

Speaker 1: You almost think that, if you had a key, even if it might control a computer, that would feel more secure because-

Students: Yeah, because you can feel yourself doing it, like you know you've done it.

Speaker 1: The physicality of the aspect is really important.

Students: Yeah, definitely.

Speaker 1: Thinking, what about for sports hardware? Do you think there's any sports that will change with computers?

Students: Not sure really.

Students: I think football, maybe.

Speaker 1: Maybe? What way?

Students: They've already kind of changed it with going on to LOG.

Speaker 1: What's that?

Students: That's where like there's a goal, if there's an argument where a goal's not gone in, then they can check on goal line technology, which will prove whether it's in or not.

Students: That's using computers.

Speaker 1: Anything else?

Students: Maybe like robotic referees for the team.

Students: I know it opens but like this technology, which makes you look at the cost without actually giving in to it.

Speaker 1: Okay, cool.

Students: It's like 3D virtuality where they put like a miniature version of the golf course in front of them, and then they've showed the way how to hit it and things.

Speaker 1: Are those, are these any things that like you'd use, or? Effect you at all? No?

Students: The talking have put in ... In American football, they're talking to put in like, this special material into the turf. It's like, pressure plates but they're not, and it shows where the players are so you can look at it at home, and just put in. There's all these cameras that like, float around, they look like they're floating around on a string on that one and stuff.

Speaker 1: Do you think-

Students: It's almost like taking the game out of it, it's more-

Students: Yeah I know, I don't like it.

Speaker 1: I mean, you guys seem pretty kind of sceptical of computers, then. Just from this whole discussion.

Students: It's like the stuff that we know, like we know about, so for me doing stuff like we're happy with that, but it's the unknown, because we don't know what's going to happen.

Speaker 1: Do you feel like you're learning enough that's less unknown, because of what you're learning in class? Or do you still just feel there's still a lot of questions?

Students: There's a lot of questions, because the stuff we're learning in class, it's not the stuff we're talking about now like sport and stuff. We're learning about how to make games, not make games.

Students: Use computers, and like coding-

Students: Yeah, it's coding, it's not stuff we're going to-

Students: Use it.

Students: Yeah.

Speaker 1: Do you enjoy learning the coding?

Students: Yeah, but I think it would be better if we used actual like, live stuff.

Speaker 1: Like, what do you mean by that?

Students: Like, learning about this like spot stuff, and all the how to use computers in the future, and how they're going to change.

Speaker 1: How do you think, I mean, nobody has a crystal ball, so how do you think we should decide how we're going to use ... Like, how do you think you'll use computers in the future?

Students: Probably more often than we're using now.

Students: Yeah, definitely.

Students: The future's kind of rapidly coming on us.

Students: Changing.

Students: Science is constantly trying to make new things for our benefit.

Speaker 1: What sort of, just out of curiosity, what sort of jobs do you all want to do?

Students: I want to be a maths teachers.

Speaker 1: A maths teaching? What about you?

Students: A policeman or something.

Speaker 1: A policeman, okay.

Students: A sportsman.

Speaker 1: A sportsman.

Students: Like, work in a hospital or something.

Speaker 1: A doctor, or nurse, or?

Students: Yeah.

Speaker 1: Doctor.

Students: Doctor.

Students: Computing or PE teacher.

Speaker 1: Computing or PE teacher, okay. None of you want to be like a computer scientist, or a games designer, or anything that needs-

Students: Not really.

Speaker 1: Would any of you want to start your own businesses.

Students: Maybe, if there's like ... We were just out of the blue, me and Robbie were thinking of doing like a business when we're quite older. It's like, buying clothes off a cheap website and putting it up for more.

Speaker 1: Do you feel like computers change your opportunities?

Students: Yes. To create more websites, or to create your own website, to publish your job.

Students: Sell stuff on the internet, so people don't have to go into a shop anymore, you can just go online. eBay or whatever and buy what you want, and it's coming like the next day.

Speaker 1: Is it mainly that you can reach more people with that?

Students: Yeah.

Students: It also helps you get more jobs, because you can set up shop, like recommended job places, and then you can look how good it is and see if you want to like apply for it.

Students: It puts people out of jobs as well, though. Computers. It like, when you go to the supermarket and you can scan your own food, that puts people out of jobs because you're doing it yourselves instead of having to do it.

Speaker 1: Do you think that, I mean, the argument often with those sorts of technologies, there've been motivation for hundreds of years now. The argument generally is, that those jobs are created somewhere else. Even if you can't get a job scanning food as a supermarket assistant, there's a job needed to make that technology.

Students: Yeah, but like you might not have the qualifications to do that.

Students: It's the people that like actually live over here who work doing the scanning and stuff. Can't get a job making it, because that's going on at the end of the country.

Students: If you're working scanning food, you might not have a qualification or you might not have the knowledge to then go get put out of a job, and then go make the scanned-

Speaker 1: You think even if it creates jobs, it doesn't create-

Students: No, it doesn't create jobs for the people who are losing jobs. It creates jobs for people who don't have jobs.

Speaker 1: You just think that the world should stay the same?

Students: No, I think people should progress, but not in some ways.

Students: Yeah, like progress but not as rapidly as we should be doing.

Speaker 1: Do you feel like it's too fast?

Students: Yeah, definitely.

Students: A lot, just like because in the last couple of months, or maybe like the last year, they brought out these Segway things.

Students: They're exploding everywhere.

Speaker 1: The ones you stand on? Not the Segways, but the-

Students: It just like the ... You brought out so many iPhones, and stuff like-

Speaker 1: How many of you heard of-

Students: I think it should like with technology more than just like, focus on simple things.

Students: I think we need to adapt the technology we have now before we make any more advancement.

Students: Like eco cars, I don't even know how those work.

Speaker 1: Eco cars, or driving those cars.

Students: Yeah, and they're like electric engines, like.

Speaker 1: Do you feel like, and as people kind of, kids who are learning about it, because often the feeling among the grown ups is that the younger, the younger people understand technology better, but you guys feel like you don't understand?

Students: Well, we understand the stuff that we've been growing up. Like Word, and PowerPoint, and Microsoft, all that.

Students: iPads.

Students: Yeah, iPads and that. We understand that, because since we were born, it's been right in front of us, and we've had it all our lives. Like, my dad has no clue how to work his phone, because he's 60. He didn't grow up with it, so he doesn't know how to work it but we do.

Speaker 1: You feel like you do, but you feel like even already in the last what, how old are you, 15 years-

Students: Yeah, the stuff that we don't have to, yeah.

Speaker 1: Have any of you heard of anything called Moore's law?

Students: No, I don't.

Students: No.

Speaker 1: Spelled M-O-O-R-E-S. Moore's law. It's been around, it's not a real law. It's a theory, that's so far proven correct. It's been around quite a while. I don't know exactly. I think in the sixties, but it is the idea that the computing power, originally what Moore said was that computing power would double every two years. The amount of computing power that you can use, because of the hardware advances, can double every two years. That's actually proved to be not quite right, it's actually about every 18 months. The computing power we have.

 You guys are off to [inaudible 00:29:22], so you can understand, if you imagine that as a graph, you get an exponential curve and your computing power is just advancing incredibly.

Students: Yeah, like and I don't think it's good for us, because we only know the stuff we've been growing up with, so like Elizabeth said, we need to like understand what we've got first before we move on.

Speaker 1: Do you feel like, like even with phones, you haven't had a chance to understand?

Students: No, I, there's waterproof phones now. Obviously we understand what that does, but [crosstalk 00:29:52] you need to wait until everyone has one before we can advance again, because before we know it, waterproof phones will be out like, next year or two year's time. Waterproof phones will be something everyone will have.

Speaker 1: Right, so ...

Students: People buying like new things, and other things will come out.

Speaker 1: Does everybody agree with me, that things are advancing too fast?

Students: Yeah.

Students: Yeah.

Students: Yeah.

Students: We're relying so much on technology.

Speaker 1: Georgia, you look like you're not sure if you agree.

Students: Yeah, and no. It depends if you have the thing that's just come out, say and a new iPhone's just come out and you got that, but then a new one comes out. You'll understand how to use it, but if you've not had that previous iPhone, well.

Students: I think there are more important technological advances we could be making, like sciences and stuff, rather than new features on iPhones.

Speaker 1: You feel a little bit like, I'm trying to summarise what you're saying, so I might be wrong. The advances are too concentrated on commercial things?

Students: Yeah.

Students: Yeah.

Students: New, new product that everyone has.

Speaker 1: Do you feel as kind of people in the world, do you feel like there's a pressure to have the newest thing?

Students: Yes, definitely, 100% yeah.

Students: Yeah.

Students: Sort of like, this Pokemon Go, I haven't seen it and everyone wants it.

Students: How dangerous.

Students: It is dangerous, because-

Students: People go into odd places.

Students: The location.

Students: You're taking to around a location that you might not know, and there might be people that-

Students: Quite a few children in our neighbourhood have missing, and stuff.

Students: You know where the rarest Pokemon are?

Students: Yeah?

Students: Burglars and kidnappers hide where the rarest Pokemon are. Kids go out with their phones to try and get it, and when they're not looking, you'll come from behind and rob you.

Speaker 1: Do you think like, would any of you download it?

Students: Pokemon Go?

Students: Not after finding that out.

Students: No, I don't want it.

Students: It's stupid anyway.

Students: It is, yeah.

Students: People can easily hack into a phone. From your location. If it's got your location on it, then they can easily ... I don't know if it's got like an online thing where you can see where other people are that are playing it. If it does then, like-

Students: It's sort of like helping burglars in a way though, because they can like, track your phone and things.

Students: Yeah, I know.

Students: Make it easier for them.

Students: It's scary, thinking people like to track you down.

Speaker 1: Okay, so you guys seem to have a lot of worries about technology.

Students: Yeah, like it's the stuff that we don't know. It's the unknown that we're scared of. Like the stuff like, Microsoft and phones that we've got now we understand them, we're absolutely fine, but it's the stuff that we don't have yet.

Students: May be coming out.

Students: Yeah, and the unknown that we don't like because we've never seen it before.

Speaker 1: Again, changing perspective. We were kind of thinking immediate, far-ish future for that for a bit. In five year's time, what do you think you're going to remember from your computing classes? Your computing lessons?

Students: You'll remember the basic stuff.

Speaker 1: What do you mean by basic stuff?

Students: Like, how to use Excel.

Speaker 1: Have you learned that in your computing lessons?

Students: Yes.

Students: Also like-

Students: Basic programming.

Students: The binary stuff.

Speaker 1: When you say basic programming, what do you mean?

Students: Like Python and stuff.

Speaker 1: You think you'll remember a bit of Python?

Students: Yeah.

Students: The simple like, code.

Students: Yeah, simple codes.

Students: Binary.

Speaker 1: Which is the simple code?

Students: Like, printing.

Students: Printing.

Students: Variables, stuff like that.

Speaker 1: Okay. Do you think you'll use it?

Students: It depends what job.

Students: It depends what job you want to do, don't it?

Students: It's just the job, isn't it?

Speaker 1: Do you think that, and this is a hard one, do you think that learning Python, even if you never use Python again, do you think learning Python is useful?

Students: Sort of.

Students: It depends on the job, really.

Students: It really does.

Students: I think it's because if in like future, it's going to change with like computers. If you've a computer breaks, you'll actually know how to fix it, and-

Students: Yeah, and know what's gone wrong.

Speaker 1: Do you feel like that now? Do you feel like you can fix things on your computer?

Students: No.

Students: Some things.

Students: Well, it depends on how bad it is.

Students: Yeah, some things.

Students: If there's a proper big virus, then maybe not, but like if there's a technical issue inside the computer, we know where the motherboard is and all that.

Speaker 1: Like, give me an example. If the motherboard came out, you'd know how to replace it?

Students: Yeah, we did this last summer.

Speaker 1: Would any of you, for example, just ... Would any of you be interested in like, changing a screen on an iPad?

Students: Yeah, we've done it. It would be fun, yeah.

Speaker 1: Okay, so you could do, that's something you feel like you've learned.

Students: Yeah.

Students: I think learning Python and stuff, it's just more of like interest, like learning how a computer works. I don't think it will be that necessary for later on. Just more curiosity than anything else.

Students: Maths like, in real life and maths, you're not going to, if you're not doing anything to do a maths, like if you want to be a footballer or whatever, you're not going to need to know how to expand brackets but if you want to do something to do with maths, you are going to need to know that sort of, is that the same in computing.

Speaker 1: Do you think people you know, your parents, stuff like that, use those sorts of math concepts?

Students: No.

Students: My mom does, because she's a maths teacher, but my dad doesn't.

Students: My dad does. He's a finance manager, so.

Students: My dad and mom do.

Speaker 1: Okay, so it sort of depends.

Students: Yeah, it does.

Speaker 1: Do you think it's worthwhile, learning those sort of general math things? Even if you're not going to use them?

Students: Kind of is.

Students: Depending on what it is.

Students: Basically, you know across every job.

Speaker 1: Okay, so do you think ... I'm going to ... Do you think that learning what you've learned in computing has changed kind of the choices or decisions you've made about the future?

Students: Yeah, because computers have-

Speaker 1: That was a really affirmative answer, Jack.

Students: I was finishing.

Speaker 1: Why ... why definitely?

Students: No, Jake could finish.

Speaker 1: Okay, Jake, you finish.

Students: It's just like, if computers, because computers have gone so far that they've completely opened up new windows for us to get jobs. They've now come with now, sportsmen who work on technology but actively do stuff. It's kind of like, they work at home to like, buy new things for their active life, kind of thing. It's just like-

Speaker 1: I think I know what you mean, but I don't quite get there. I think, could you explain what you're saying a bit more? I think it's really interesting.

Students: Say like, if you want to a physio kind of, then you can work on like how to be a physio online, and then you can actually be a physio in real life.

Speaker 1: You can study online, and-

Students: Yeah, yeah.

Speaker 1: Okay. Anybody else?

Students: As well, in the future, I don't know in primary the computing, I didn't know it like was an actual subject. Then when I was learning [inaudible 00:36:12] I wanted to do it for GCC's and things like that.

Speaker 1: You're definitely going to do something with computers, you're really excited by it.

Students: Yes.

Speaker 1: You feel like you wouldn't have done that if you hadn't learned what you've learned?

Students: Yeah.

Speaker 1: Anybody else?

Students: I think computing's opened up loads of windows, because once again it comes down to what job you want to do, but it has opened up so many windows. Like if you're a businessman, you can solve stuff really easily, and you can communicate with people halfway across the world. I can communicate with my Portuguese cousin, and in touch with her.

Speaker 1: Let me ask you about that word you're using, because it's not one people would normally use, but I think it's really interesting. You said windows. You'd say, so it opens up a view on other things, but not necessarily opportunities?

Students: It depends how you want to use like, it can open up opportunities if you use it correctly.

Speaker 1: Would you say it opens windows or doors?

Students: Both, really.

Students: Both, definitely.

Students: Because if-

Speaker 1: Do you see the difference I'm making, by the way?

Students: Yeah, yeah, yeah.

Students: If you open a window you can see what the job's like, and you can actually go for it through the door.

Students: If you use it correctly, if you use the opportunity.

Speaker 1: Right, last couple of questions. First of all, we'll come to that other one in a second actually. Is there anything that you feel like you should be learning about computing or computers, but isn't covered in your computer lesson?

Students: Inside the computers.

Speaker 1: Inside the computers, okay.

Students: How different technology works, like phones and things. We're learning about computers, so because I think phones, they work on the same like, binary but it's different, because they give you different things like in a touch screen, and then like different apps.

Students: Learn what to do if like your computer was hacked, or if it had a virus, that wouldn't have to solve it, how to fix it.

Speaker 1: right, because we're practical, making some stuff.

Students: Like stuff to do that you're going to use.

Speaker 1: What about, how to use things like Word, or Excel, or-

Students: We know how to do that.

Speaker 1: Do you feel like you already know that?

Students: I feel most people do, yeah.

Speaker 1: Where did you learn that?

Students: Well, growing up with it.

Students: Well, primary.

Students: Yeah, primary school.

Students: Making like, making stuff, yeah posters, stuff like that. Yeah, we just know how to do it because we've grown up with it.

Speaker 1: You feel like you don't need to be taught? You just know.

Students: Yeah, we just know how to do it.

Students: You should be able to like, learn it.

Speaker 1: Is that stuff you learn at home?

Students: It's stuff that we've picked up along the way, and that we've learned in primary, and sort of being taught.

Students: I think it's stuff that you just found out on your own when you could get from presentations and stuff.

Speaker 1: You feel like you don't need somebody to teach you how to use Microsoft Word?

Students: No.

Speaker 1: Publisher, you can just do it.

Students: Yeah.

Speaker 1: Okay, so this last question is a little bit complicated, but have a think about it. Can you tell me how you feel your work in computing is assessed, or graded, or marked? What do you do that gets you good marks? What do you do that gets you bad marks? What kind of behaviour specifically to computing is not allowed do you think?

Students: I don't know, really.

Students: In grading I think it's like, it's not just on your programme, it's more on your plan and things like that.

Students: Your actual understanding.

Students: Your actual understanding of how it works.

Students: Because like, you might be able to copy someone's work.

Students: Then in your like, attitude, you have to really concentrate because some of the things are quite difficult, so-

Speaker 1: Do you think you get better grades if you write long programmes, or short programmes?

Students: Probably not, it's just that programmes that work.

Students: No, it's the detail.

Students: It's the detail of like the algorithms and the plans.

Students: Yeah, and it's like, because when we made that game in Scratch, so I didn't even look if it worked or not. It didn't go onto the game that we made. He just looked at our plan, so that shows that-

Speaker 1: Okay. Do you think that's right?

Students: No, I don't. Well, no-

Students: No, probably not.

Students: I think because like the game, the reason he does it I think is because you can copy someone's work and put it on Scratch, and then but it's only you that can really do your planning and stuff.

Students: He asked to see too any screenshot any errors that you've made, and then like the screenshots-

Students: You have to show how you've done stuff, as well.

Speaker 1: Do you think it's important to not make errors? Which of these would you ... Would you agree with? It's better to make errors and correct them, or it's better to not make any errors at all?

Students: Probably make errors and correct them, because- [crosstalk 00:40:32]

Students: Then you learn yourself.

Students: Then you learn.

Students: He said that to make errors, it's a lot easier to get marks if you correct the errors and put it on a top sheet.

Speaker 1: In some ways, you'd rather make the errors and correct them, rather than get-

Students: Yeah, because it gets you more marks.

Students: You can help people. If they make the same error, then you can help them.

Speaker 1: Is that true, how does that compare to other classes?

Students: I think it's the same really in most.

Students: If you make errors, then you learn, and you won't do it again.

Speaker 1: do you think that's recognised in other subjects?

Students: In English. Teachers don't really want you to make errors, but in computer studies, they do want you to make errors.

Students: Yeah.

Students: Like in practicals in science, if you make an error, it's just all gone wrong.

Students: Yeah, and in maths if you're like, if you get a question wrong on your homework then you can't really go back and correct it, whereas it's on a computer so you can.

Students: You get more marks in computer science if you make an error, but in maths, you'd get marked down for it.

Speaker 1: Okay, and that's the end of your lesson today.

Students: Yeah.

Speaker 1: Okay, well then I will-

end