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Waste Into Energy transcript

Title: Angela Murray, Waste Into Energy

Duration: 5.50 mins

Speaker Names:

S1 Voiceover

S2 Angela Murray, Research Fellow, Waste into Energy Project, School of Biosciences

S3 Alison Flower, Master Magnets

S4 Ben Hill, Tickle Me Creative

S5 Professor Lynne Macaskie, Lead Academic on Waste into Energy Project, Professor of Applied Microbiology, Royal Society Industry Fellow, School of Biosciences

S6 Male demonstrator

S7 Male demonstrator

S8 Female demonstrator

S9 Sukhdev Bhatoey, Washwood Health Technology Centre

S10 Laura Errington, Yardleys School

P1 - Female pupil

P2 - Male pupil

Transcript start

S1 The Biosciences Department at the University of Birmingham has been working on their Waste into Energy project. This ambitious interactive education project brings together 20 years of energy research at Birmingham in areas as diverse as microbiology, hydrogen technology, nuclear remediation and materials recovery. It translates cutting edge science into a format that is hands on, enjoyable and easily understandable, aiming to stimulate, engage and encourage future undergraduates. Angela Murray and her team's aim was to sign up 10 schools and up to 1,000 pupils.

S2 One thing that we felt was lacking was our ability to go out and actually go into schools and be able to provide a service that was completely free and perhaps reached to students and to schools that traditionally didn't have the same links with the university.

S1 The first task Angela faced was deciding what form the workshop would take.

S2 We wanted to make it for anybody who was aged between 11 and 16 and to feel that the activities were suitable.

S1 It became apparent it was something they couldn't do solely in-house.

S2 We've had a number of different local companies helping us and they've offered everything from manufacturing time and equipment for things like the magnetic display that we wanted to put on, right the way through to web design.

S3 Is that kind of a size that you're looking for? We do bigger ones but obviously they get heavier as they go on.

S2 To be honest I think that's fine.

S3 It's a fantastic idea to make children enthusiastic about engineering, recycling, materials, because when they start to learn young and get enthusiastic that carries with them right the way through their school years.

S4 This purely is a simple basic visual concept of having four areas of work within the project and maybe a central result in terms of how it feeds into energy so we can replicate really nicely visually.

S1 A month until their first workshop and Angela's team are getting up close and personal with bacteria.

S2 This giant bacteria that we need to stuff is called Eric but the problem is when we put the quilt and stuff in him he's too floppy so we need some sort of strengthening or stiffening so that he'll stand up. Shall we try standing him up? Let's see what he looks like.

S1 Eric, the e-coli was a firm favourite with the team.

S2 Perfect! What we then did is we set up an 'Ask the Expert' email address which was lookatenergy.bham.ac.uk and it meant that any of the kids could email in their questions afterwards, we would act as a portal and would get some fo the leading academics in energy research from both within the University and the wider community to answer the questions and then feed back to them so it means that kids at 12, 13, 14 years of age are being able to contact with some of the cutting edge energy scientists in the UK.

S1 With the structure of the workshop agreed, it's training day for all the demonstrators.

S2 The kids are going to be coming in for 45 minute sessions. We have Year 10 students from three schools. There's going to be 110 of them in three sessions.

S5 Well it will be a wonderful result if at least some of the school pupils went away inspired thinking 'hey look, energy isn't just something that's being organised and steered by people way up at the top. I'm an individual person, I can actually make a difference here'.

S1 The next day the gloves were on with the University's Science Fair.

S2 Good morning everyone! [reply: Morning!] Much better, much better. All right, we're here this morning to talk to you and tell you a little bit about some of the energy research that goes on at the Birmingham Uni.

S6 Do you think there's anything else apart from the outside principles, anything in the properties that might be a reason why they're separate?

S7 Do you know what the catalyst does in that reaction? Any ideas?

S8 What is the type of micro-organism that makes bread go mouldy or furry?

S9 We think this is an ideal opportunity for them to see scientific applications in real life and some of the issues involved.

S1 After all the team's hard work and away from the comfort of campus how would the workshop be received?

P1 I'm expecting to learn how we can find energy to use in our daily lives from the waste we produce.

S10 It fits in really nicely with a lot of the curriculum. Hopefully this will provide them with some alternatives.

P1 We really enjoyed it, it was really good. I personally liked playing with the remote control cars and learning about hydrogen and the nuclear power plants.

P1 I liked this because the equipment that they actually use actually helps us to visualise.

P2 The people who's doing the experiments focus on you.

S2 The willingness of the demonstrators and people to help has been fantastic. I think it shows what an enthusiasm there is at Birmingham within both the post-doc and the PhD community, first of all for their research and secondly to get involved and to show other people that and to really try and showcase Birmingham. We're showing children that there's real world science that actually has a use and an immediate purpose so that you can take something from the lab bench, right the way through to being a useful product and they get to follow that and I think that's important when you're engaging peoples' interest. We're looking to try and make it so that it continues beyond this product because we're still getting requests every week for it to come out to different places.

End of recording

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