MAKE COMPUTING SPARKLE FOR OPEN EVENING

In this guide, **Alan O'Donohoe** of exa.foundation suggests how teachers might go about presenting their Computing curriculum area in the best light during a school open event

Whichever educational setting you work in, it is likely that you will have encountered the concept of an open evening or open day, and may have already experienced the frenzy of activity that leads up to the event. Although these events tend to be more common in the secondary and higher education sectors, there are signs that they are becoming more popular in primary and nursery education too.

Traditionally, schools and colleges have hosted open evenings to showcase the facilities to their community, with the principle aims being to:

- Market the school or college in general while promoting its facilities, values and culture
- Present the greatest strengths of the school or college in the most favourable light
- Persuade prospective students and parents in the process of selecting a school or college, that this is the school they should choose
- Allow visitors opportunities to learn more about curriculum provision and meet the staff

It can be a very rewarding experience to have interested guests visit you in your classroom because they want to discover more about the subject you teach, to look at the facilities and resources available, and admire your classroom wall displays (see 'Insiders Guide' in *Hello World* Issue 9). There is no doubt that preparing for an influx

Showing off fun activities

of visitors to your classroom can lead to increased workload. The intention of this guide is to minimise the stress, suggest time saving tips, and lead to better outcomes.

On those occasions when we find ourselves under the pressure of an impending deadline or important occasion, we don't always perform at our best. This is particularly true during those times when we experience a heavy workload, so exercise caution around some of the common mistakes that a busy teacher should avoid falling into. These, for instance.

Leaving it too late to recruit volunteers

Having enough of the best calibre of student volunteers to support your activities can really make a massive difference to the success or failure of your event. Though this seems so obvious it doesn't need stating, on too many occasions my workload has been so heavy in the lead-up to open night, that I've overlooked volunteer recruitment until it's too late. By that stage, I have ended up desperately trying to recruit any student who is available on the night, since my ideal candidates have already agreed to support activities in other areas around school.

Showing off your shiny kit

It's become a no-brainer in some quarters to rely on simply having enough attractive, new flashy pieces of educational technology, hardware, or software on display during open evening to woo visitors' attention – and then hope that this alone will be enough to

Hopefully satisfied customers!

ALAN O'DONOHOE

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stimulate the interest of visitors. It's certainly a helpful strategy for the busy teacher, since there will no doubt be high levels of interest around the shiny kit, especially if this is unfamiliar to your visitors. The problem is that this does not necessarily convey a typical experience to visitors, particularly in terms of learning experiences.

If you do choose this route, consider having a series of questions pre-prepared to prompt discussion with visitors:

- What positive effects do you think this technology will have on us?
- What potential do you think this offers in a learning context?
- Where do you think there may be potential for harm or abuse of this technology?

Too much is worse than none at all

Another common issue is having too many different activities on offer in your Computing classroom, which may just overwhelm your visitors altogether.

When I asked other Computing teachers to tell me how they typically organise their open event, one suggested ten activities that they usually have on offer! As it is, an open evening can be a very busy event across the whole of the school with many different activities all vying for your visitors' attention. Before they arrive in your classroom, if your visitors have previously visited seven other classrooms that evening, they may already be suffering from stimulation fatigue. By opting for the 'less is more' approach instead, having no more than three well-planned activities for visitors in your teaching space, that would have the effect of allowing visitors adequate time to explore these activities properly.

Being too busy to talk

If you have planned a comprehensive programme of activities to take place in your classroom, this is likely to demand much of your attention and require high levels of supervision from you, which will inevitably limit the amount and quality of time you have available to have meaningful discussions and interactions with visitors.

Instead, you should plan for your classroom to be a calm environment where there are opportunities for you to learn as much about your visitors and their interests as they might learn about you and your subject. Inevitably, visitors engaging in quality discussions are more likely to walk away with a positive impression of Computing in your school, and in the process you will have gained a deeper understanding of their impressions.

The one-person band

In our school, for many years we had a long-established habit of having activities on offer across all three of our Computing suites on open night, and in each suite, one of our Computing teachers supervised the activities on offer. At the end of the event, each of us was totally exhausted from the effort required to sustain visitors over a three-hour period. Then one year we plotted a different approach: we would join forces so that all of us would be together in the same room all evening.

This was a far better solution in many ways: by combining our efforts together in one classroom instead of three, we were able to ensure that we were better resourced for welcoming visitors, and able to provide a better experience for visitors too.

Too shy to try

While many visitors will quite happily engage with the activities on offer and participate in discussions during open night, some visitors may be so shy or polite that they need gentle prompting or persuasion to engage in the activities on offer. Taking care not to be too pushy or overly assertive, I recommend your young volunteers practice inviting the quietest of visitors to take a closer look, and try some of the activities. The question, "would you like to try this

> "ANOTHER COMMON ISSUE IS HAVING TOO MANY DIFFERENT ACTIVITIES ON OFFER IN YOUR COMPUTING CLASSROOM

It's the children who'll sell the subject best

You can't beat a BBC Micro!

activity here?" is open-ended enough to allow your most timid of visitors to politely nod and take a step backwards if it's not their thing. See the advice on using Computing Ambassadors.

Computing Ambassadors

Recruit volunteers from early on, then train them to engage with visitors. Suggest a three-point strategy for them: Welcome, Offer, Support. A little time spent training your Computing Ambassadors will pay off during the event.

- Welcome – This can range from a friendly welcoming smile to a "Hello! My name is Alan. May I ask your name?"
- Offer – Suggest some of the activities available, "Would you like to try debugging some GCSE Computer Science programming projects?"
- Support – Stay with them and lead them through the activity they choose, offering praise or support as appropriate

I spoke to educational technology Ellie Overland – who oversees secondary ITT in computing at Manchester Metropolitan University – about computer ambassadors, and she said that, "I have recently been to visit some fabulous open evenings. It was the children who really sold the subject, they were leading the activities and talking passionately about the subject".

Activities need to be memorable for your visitors...

Suggested examples of activities

If you plan to have three different types of activity on offer as suggested below, it means you will be able to offer your visitors different types of experience depending on their motives for attending the event

1. Pupil work display

Aim: To present visitors with a snapshot view of the learning that takes place
Audience suitability: visitors of all ages

Have some examples of pupil work on display to show some evidence of typical learning experiences in the classroom. In a primary setting, these could include games and projects that children have created using Scratch, with opportunities for visitors to try out the projects and offer some feedback to contribute to the development.

In a secondary setting, you might include some previous solutions to GCSE programming projects to demonstrate the level that students have been working on. If you had some 'sabotaged' examples of the students' coded solutions, you could ask visitors if they could spot the syntax errors or semantic errors that had been deliberately added in, to test their observational powers, leading into a discussion about debugging. Alternatively, you could have some sticky labels for visitors to attach to relevant sections, for example sequence, selection and iteration.

2. Hands-on experiences

Aim: To provide visitors with enjoyable and memorable experiences
Audience suitability: younger visitors

If you choose to have some hands-on activities for visitors to try themselves, make sure that these are accessible to those with

. ..and fun too!

little prior knowledge or experience. You could have a range of challenges that gradually increase in difficulty. Make sure that your computing ambassadors know to keep their hands away from the keyboards and mice when the visitors are trying computer-based challenges. I have found that nested challenges based around the use of Minecraft Pi or Mozilla X-Ray Goggles have the right balance of fun, engagement, and challenge. However, they do take some time to set up. Some teachers have enjoyed a lot of success with an activity that produces a physical outcome that visitors can take away as a keepsake.

3. Talking points

Aim: To stimulate some discussion with adult visitors
Audience suitability: adult visitors

You could demonstrate some artefacts that make use of new and developing technologies, or dust off your collection of artefacts from the history of computing. You will find that objects like this will help stimulate all sorts of interesting discussions. Whether you choose to show off the latest augmented or virtual technologies or a collection of floppy disks, vintage games consoles and controllers, some adult visitors will find their curiosity gets the better of them and will want to ask questions to discover more. That, or they'll want to take you on a trip down memory lane with them while they regale you of tales of a misspent youth playing video games, or how they built an Asteroid clone in 6502 assembly language.

Suggestions from teachers

1. Pupil work display

- **Tom Rattle:** Since our use of Scratch is now predominantly cloud-based when we use it with our classes, it's really easy to show off some of the most impressive pieces of Year 7 work to give a taster of what they'd be doing in their first year.
- **Paul Powell:** I organise work from all year groups on display, and for programming in particular, I show progress from Year 7 through to Year 11. I find this really helps to engage those parents with an interest in the technical aspects.

Have pupils on hand to help

Be on hand to give guidance where needed

- **William Lau:** I've had some GCSE students in to work on their GCSE programming project. It didn't count towards their 20 hours and they knew it wasn't graded. However, they simply wanted to get their head around 2D arrays and file writing and they figured that three hours one evening in school would be better than sat at home. Eight months later, the same students who took part were all on track and predicted 8s and 9s or A*s respectively.

2. Hands-on experiences

- **Matt Moore and Jan Dowding:** Kodu. Makey Makey with Play-Doh or fruit. Minecraft server with large-scale build challenges.
- **Penny Cater:** Crack The Code – have a safe filled with sweets and visitors have to solve a binary puzzle to find the number to unlock it.
- **Jamie Edmondson :** Parsons Problems using Scratch, putting the blocks in sequence to tell a simple joke. Use a GreenScreen app like Do Ink to place visitors in the places they would most like to visit. With a mobile device connected to a large screen, visitors could use a coding app like A.L.E.X or Lightbot to solve the different challenges.
- **Katie Vanderpere-Brown:** I have shared resources for 'Binary Muffins' activity on the Computing At School community site here – **bit.ly/2mcZS58** [login required], and 'Journey of a selfie', here – **bit.ly/2ILKH2w**.
- **Claire Buckler:** Our most popular idea has been a broken apart Pac-Man game, built using Scratch which visitors had to solve

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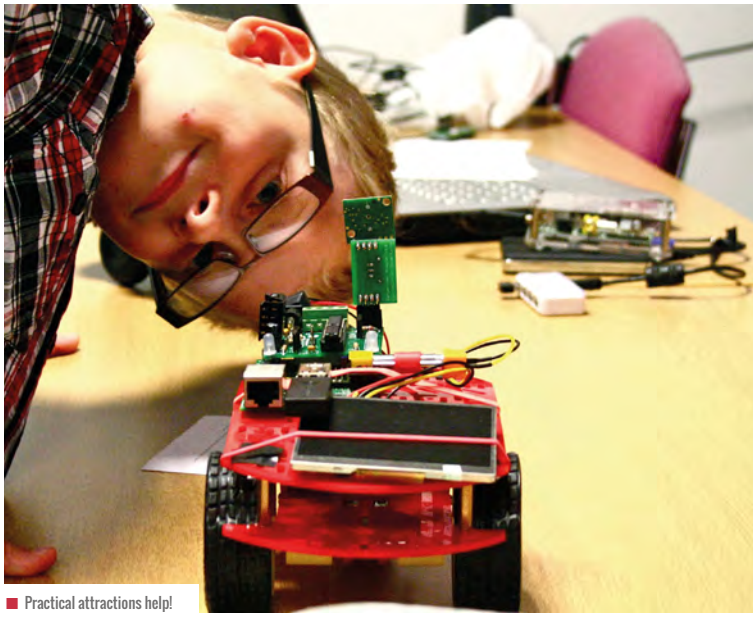
together. Other problem-solving puzzles like peg puzzle or Towers of Hanoi have been popular.

- **Sarah Twigg:** A nice idea I've tried is to have a message written in binary on the board, for instance 'Welcome to Computing', and provide visitors with the ASCII table, to help them to convert it. If they are successful then they receive a little certificate or reward.
- **Michael added:** A variation on Sarah Twigg's suggestion, we had the ASCII board up and binary equivalent, and made little cards so they could write their names or initials in binary.
- **Amanda:** Visitors made key chains with their initials encoded in ASCII that they could take away. We bought lots of empty key chains and a bag of two-colour pony beads, and visitors followed a guide as to which colour went where. We used wool, but a stronger cord would work better, threaded it through, and left them so just a link with the wool was attached and the visitors could do one initial or two.
- **Chris Sharples:** A Digital Leader wearing a sorting hat (sourced off eBay) with a micro:bit supposedly sorting into Hogwarts houses (but really Griffindor!) and a dance mat for squashing bugs using Raspberry Pi (code courtesy of University of York Computing Department).

3. Talking points

- **Penny Cater:** We have a 3D-printed Rubik's cube solver, Lego Mindstorms, and Mambo Drones that I get students to prepare the week before and run the show.
- **Alex Clewett:** Set up a game like **@KeepTalkingGame** using Oculus on Gear VR or another VR headset.
- **Oli Howson:** Get the Sinclair Spectrum out! (Other 8-bit computers also available).
- **Tom Rattle:** I brought a Sphero BB-8 in from home and recruited some Year 9 students to show visitors how to code the blocks to make it roll around. That drew a small crowd and didn't take much effort beyond pairing it to the iPad with Bluetooth.
- **Donna Shah, Alicja Wojtowicz, Ben Barnes, and Jan Dowding** all recommended children demonstrate some micro:bit projects that they have built and have projects available that visitors can try building themselves.
- **Paul Powell:** I connect RetroPie (a Raspberry Pi-based games emulator) to the big screen which keeps the room busy, and also prompts conversations about the Raspberry Pi computer. (HW)



Practical attractions help!

FURTHER INFORMATION

For more free, friendly advice about planning the best kind of open evening experiences, contact the author of this guide Alan O'Donohoe via **alan@exa.foundation** or **@exafoundation** on Twitter.

Getting hands-on

8-bit classics!