

PLAYBOOK ADDENDUM

STUDENT OPEN HOUSES: DO'S AND DON'T'S

After the creation of the guide *Community and Student Plant Tour Events*, AMBA surveyed attendees of such events to get actual student feedback on what they liked most about the student plant tours, what they liked least and what they wished they had seen during the tour itself. **AMBA members provided nearly 200 surveys from which to pull the following data.**

STUDENT PLANT TOURS: FAVORITE FEATURES

PLANNED GAMES

Planning a game can be a great way to get students involved in an interactive manner. For example, one mold builder demonstrated the making of a “frisbee disc” and then created a game for the high school students to participate in using the fabricated item.

FEATURED MACHINERY

Overwhelmingly, students across all surveys cited featured machinery as their favorite part of the student plant tour. Favorite machines included: CNC machines (particulaly 5-axis), EDM machines, mills in action, laser cutters, silicone molding, 3D printers, gun drills and more.

SEEING THE OVERALL PROCESS / FINAL RESULT

During each plant tour, many students referenced how transformative seeing the entire process was to their pre-formed idea of mold building. While seeing the machines and the parts they made was exciting for students, it was most eye-opening to see how all of the different pieces, from each department, came together.

RECEIVING A GIVEAWAY

When available, students loved receiving some kind of giveaway during the plant tour. A particular favorite during one event was an earbud holder and a frisbee.

WATCHING THE TECHNOLOGY

In addition to seeing featured machinery, students really enjoyed seeing the role of technology in the mold building process. Many students didn't realize that software systems - such as CAD/CAM - played such a huge role in the building of a mold, nor did they realize the technical expertise required to operate the programs.

UNDERSTANDING THE CAREER POSSIBILITIES

While students were excited to see individual machines, software programs and more, many really enjoyed understanding the entire process, the role that they could play and the skills required to do well.

FOOD AND BEVERAGE

As simple as it sounds, students loved when food and beverage options were offered, particularly during less interactive presentations.

STUDENT PLANT TOURS: WORDS OF CAUTION

STATION LENGTH

Many students struggled with the amount of time spent at each station. In some cases, the students were rushed through and felt they missed interesting/important content; in others, the details became too technical and the students lost interest.

TIME SPENT STANDING VS. SITTING

For many of these students, they're used to periodically sitting and then standing - most aren't used to being on their feet all day, listening to a few hours of presentations. In several cases, students wished that either chairs had been available or they would have spent a little more time moving around.

NO HANDS-ON ACTIVITIES

Students became particularly unengaged during tours with little-to-no hands-on activities. As interesting as the machines were, the students were much more excited during tours that featured some kind of activity, giveaway, demonstration or some other interactive opportunity.

NOISE/SCENT LEVEL IN FACILITY

Many students commented on either the smell of the facility and/or the difficulty of hearing during the tour due to loud noise.

SIZE OF GROUP VS. FACILITY

In some cases, the facility struggled to accommodate the size of the student group walking the tour. This meant that in some cases, students either had difficulty hearing, passed stations due to time restraints and/or were stuffed into rooms that were too small and stuffy for their size of group.

STUDENT PLANT TOURS: POTENTIAL OPPORTUNITIES

CONSIDER HAVING A FLOOR DEMONSTRATION

During an upcoming plant tour, consider the parts that the students will see and have a specific floor demonstration that ties into the creation of that part. This helps students see the machinery at work and also how that employee's role ties into the entire process.

SET EXPECTATIONS BEFORE THE TOUR BEGINS

Many students cited specific machines they wanted to see or activities in which they had hoped to participate. Think about setting expectations before beginning the tour. One way to do this might be ask the students at the beginning what machines and technologies they hope to see, and then explaining what will and will not be possible/relevant. It also allows the host to point out features during the tour in which students may be particularly interested, making the facility that much more interesting and relevant.

PRACTICE TIMING WITH STATION PRESENTERS

One of students' least favorite features of their plant tour was the station length being too short or too long. Providing a stopwatch to presenters during the tour, doing practice runs before the day itself and leaving time during each station for Q&A might be helpful tools for staff. Also consider asking allowing questions to be asked throughout the presentation, not just at the end.

SHARE A RECAP WITH TEACHERS AND STUDENTS

In many cases, students had additional questions after the tour. At the end of the tour, ask students to write down what they missed and/or hoped to learn, and provide a recap after the event on what they learned and what they missed. This also could be an additional training tool for parents, educators and others.

MAKE THE EXPERIENCE INTERACTIVE

A shop floor is not always the safest place for students, but that doesn't mean students can't participate in an interactive activity. Some examples include:

- designing a game around parts fabricated in the shop
- creating a Bingo card of machines and/or employee roles to spot during the tour
- having a floor demonstration scheduled at a specific time of the tour
- building a specific part during an activity
- exploring a particular kind of software

MORE INTERESTED IN MOLD BUILDING?

At the end of each survey, students were asked whether they were more interested in a career in mold building after touring the facility. Here are some of their free-response answers.

YES

- Seemed interesting to work with machines
- It looks like the employees are having fun
- I understand the whole process now a lot better
- It's exciting knowing that I can create anything
- Several roles require lots of technical training and working with software and computer programming
- Looks way cooler than it sounds
- Designing seems really cool
- Provides an open career path with lots of possibilities
- Cool to see the complexity of the machines and what they can make
- Seems like it'd be fun to work with mills and CNC machines
- Cool to see how it impacts the world and how you can turn ideas into "real-life"
- Hadn't considered this as a potential career before, but now I think it could be really interesting
- Requires a lot of hands-on work
- Includes a high level of engineering
- Enjoyed seeing how many people are involved in the process and how the design leads to the final mold
- The team uses good problem-solving
- Jobs look very professional

NO

- Don't want to be in a factory all day
- Requires a lot of math and technical training
- Already plan to go into construction and civil engineering
- Wouldn't want to work with presses all day
- More interested in the auto mechanical and electrical engineering fields
- More interested in business
- Already employed