Industry Partners: Beyond the Basics

Deeper Learning 2016
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HTE 207

Presented by:

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Agenda For Our Time Together

- Introductions
- Gallery walk
- Q and A Round 1
- Applying it in your own context
- Q and A Round 2
Think Pair Share

Take 30 seconds to think about one of these prompts, and be ready to share with someone near you.

• Q: What is your school doing with Industry Partnerships that is going well?

• Q: What do you hope to get from this workshop today?
Gallery Walk Instructions

• Form groups of 2-3. If you came with a colleague, please break up! 😊
• Grab some Post-it notes, a pen, and head to a poster. Any poster is fine.
• As a group read through the poster, and use your Post-it notes to comment. What should you write?
  – Questions you have about what you read
  – Comments
  – Ways you have seen this done somewhere else differently
  – Ideas this gave you
  – Answers or comments on other group’s Post-its.
Questions, Answers, and Comments

Round One
QuickFire!

3 minutes of thinking and planning:

• Chose one new program, activity, etc. related to Industry partnerships (or change you want to make to an existing program). Think about how you will do it, potential roadblocks you may face, opportunities, etc.

  * Spend your time writing or thinking, whichever works best for you. Be ready to share with a partner in about 3 minutes.

• Grab an elbow partner
QuickFire!

– Person 1 has 2.5 minutes to share. Ask specific questions or raise specific concerns if you would like targeted feedback.

– Person 2 has 2 minutes to give reflective feedback on what they heard. You could do this by summarizing what you heard, asking “I wonder if...” questions, or responding to specific questions or concerns they may have asked or raised.

– Person 1 has 30 seconds to reflect on what they heard, respond to comments, or share next steps they are thinking of.

– Repeat!
Questions, Answers, and Comments

Round Two
Thank you!

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For more information about Da Vinci Schools please head to  
www.davincischools.org

For information about professional development opportunities at Da Vinci, please visit  
www.institute.davincischools.org
Industry partners can be involved during multiple stages of a project with students. A launch or "entry" event takes place at the start of a project to spark student engagement and buy in. Industry partners can be involved in the creation of this entry event by presenting students with a task they themselves would tackle or be there to guide them in a design challenge of sorts. Industry partners can also help to develop and critique projects for both quality and accuracy and can happen at multiple points throughout the project. A panel of experts can also be present at the end of a project to listen to student presentations and either judge or give a final critique on the final products. Lastly, if time is limited on the school or partner end, industry related guest speakers are another way to for partners to participate.

For example, Karten Design helped students develop and design functioning headphones. Another example involves 72 and Sunny (advertising firm) working students all of the way through a project: from entry event to project design to critique feedback and then the final presentation. For both of these projects, industry partners came once week to work with students and attended the final project exhibitions. Engineers from Boeing, Northrop Grumman, Raytheon, and SpaceX work with students in PLTW Engineering classes weekly, and put in extensive hours (sometimes hundreds!) as mentors for the Da Vinci Robotics team.
Sometimes the collaboration with industry partners takes place beyond the classroom, either in the planning phases or after the project has been completed. Industry partners have worked with teachers as they are in the initial phases of developing a project. In this type of collaboration, teachers meet with the industry partners and can either (1) share the skills and content they hope to cover and then brainstorm with the industry experts to develop the project or (2) the industry partners pitch ideas based on recent projects they’ve engaged in and the teachers then attempt to create a project from those starting points. For example, Karten Design pitched an X-Prize challenge to our students and that became their project (above and left). Alternatively, we have had industry partners help teachers to refine projects and make them more relevant and real-world while keeping the core components intact.

Once projects are complete, we have had industry partners help the school gain access to off-campus display and presentation locations, such as a museum, their offices, or in a publication. For example, students once presented a project at the A&D Museum, and another project done by our students was featured in a Fast Company article (pictured left) – both were done with help and connections from Karten Design.
Students receive a variety of career exploration and career preparatory opportunities on campus. Da Vinci Schools hosts career speaker workshops in which students can learn about industry members’ career trajectories, roles and career advice. Additionally, students can participate in mock interviews (above) conducted by industry partners in order to gain tangible interview experience. These are typically held prior to work experience or internship participation. Students also took part in industry hosted workshops at 72andSunny (left) where they received advice on getting internships.

Students also can participate in mentorship programs through companies like DIRECTV, who meet bi-weekly at lunchtime to discuss with DIRECTV employees about careers, networking, colleges, and resume building.

Work experience and internship opportunities have traditionally been managed by the Real World Learning Coordinator, who is full time and oversees the programs at all the high schools. With the expansion of the internships to a third campus as well as our new extended learning program, more support was needed. A teacher at each site now teaches the internship class during the afternoon seminar periods. These teachers are responsible for implementing the Da Vinci Schools “Passport to Real World Success” curriculum, which prepares students for work outside of schools. Students learn how to:

- write a resume
- write a cover letter
- obtain references
- conduct interview
- participate in job interview
- talk on the phone and write professional emails
- conduct a job search
As Career Technical Education (CTE) pathways are being developed in our schools, it is crucial that we collaborate with our industry partners to ensure that students are developing skills that will benefit them as they enter the workforce. They have been effective advisors in not just what we teach in those pathways, but how we approach teaching it. Boeing, Northrop, and Raytheon helped as we established our Engineering pathway at Da Vinci Science, and at Da Vinci Design Gensler Architecture is supporting our architecture pathway by advising on course offerings and pathway structure.

Another way industry partners can support a CTE pathway is to “certify” that pathway. The certification could include a certain series of courses, work experience opportunities or other related activities. There is also potential value in the connection between a high school program, its industry partners and its post-secondary partners. Whether post-secondary students mentor high school students or intern with the industry partner, creating a pipeline from college to career benefits all parties involved. For instance, Gensler has Cal Poly SLO co-op students working in their offices in Los Angeles and we are working on getting those students to either mentor groups of Da Vinci high school students during a project or offer a Summer Architecture Camp in LA. Gensler has also helped our work with our local Community College, El Camino College, as well as exploring a relationship for the pathway with Cal Poly San Luis Obispo.
Holding staff professional development (PD) at an off-site location is another way to engage with industry partners. Da Vinci has held PD days at inspirational and creative offices on “big picture” days as well as organization-wide meetings. Teachers have shared that a shift in their workspace has allowed them to work distraction-free with their team and that it inspires them to create projects that lend themselves to industry and solving real-world problems.

In January of 2015 Da Vinci worked with many of our key industry partners to host small groups of teachers from all of our school sites for short tours of their work places with a debrief and discussion time following the tours. The intention of the tours was multifaceted: to enable teachers to see first hand what modern workplaces look like; to get feedback from industry partners on our Habits of Mind and other ‘soft skills’ learning outcomes; and to brainstorm authentic project and project outcomes with them. Teachers visited places like SpaceX, Raytheon, 72andSunny (below right), Gensler, and Youtube, USC Institute for Creative Technologies, Mattel, Belkin, Northrop, Electronic Arts, Karten Design, OMD Entertainment (below left). Da Vinci staff reported that they found the time spent and feedback from industry partners invaluable when considering the authenticity of their school’s learning outcomes as well as their own projects.
Internships, Work Experience, Job Shadows

Students connect with industry by visiting industry offices through a variety of programs that give them workplace exposure and allow collaboration with industry experts. High school students can participate in a work experience elective in which they work at local businesses for free for 4-6 hours per week and obtain elective credit. Currently, 116 students are placed at over 45 businesses. Businesses range from Old Navy and REI to Kerlan Jobe Orthopaedic Clinic and Dependable Solutions Software. Teachers conduct random site visits and managers evaluate students throughout the semester. Students also have the opportunity to apply for summer internships at local for-profit and non-profit businesses such as SpaceX, Susan G. Komen, and Boeing. Lastly, Da Vinci organizes job-shadow days to get students out of the classroom and into the workplace. A goal for 15-16 and beyond is to expand the options for internship and work experience opportunities in fields related to our newest pathways, and to expand the internship program throughout the summer to enable more students to complete an internship before graduating.

“We were thrilled with our student interns. They were smart, hardworking, reliable and completed tasks at a great rate. We didn’t realize how much we needed them until we got them. Everyone is very happy with their work, and their work habits and upbeat nature make them a pleasure to work with, as well. Thank you so much for working with us to so perfectly meet our needs.” - Belkin

“The students from Da Vinci allowed us to accomplish many side tasks that we would never have had time to do. They were punctual, on task, efficient, and positive. We would welcome them again. It was a great experience.”

Roundhouse Marine Studies Lab and Aquarium

“I think your program is fantastic! Da Vinci students were a great help to our program. Their energy was infectious and the staff loved having them around.”

Kerlan-Jobe Orthopaedic Foundation
HOW TO GET INDUSTRY PARTNERS TO THE NEXT COMMITMENT LEVEL

Businesses partner with Da Vinci Schools for a variety of reasons, many of which provide reciprocal value for Da Vinci Schools and the participating organization. Often, it is part of the organization’s mission to give back and/or disseminate their knowledge. For example, Gensler Architecture believes in teaching students the importance of the design process. Businesses also partner to create a pipeline of employees with the exact skill set they are looking for. As their employee population is aging, businesses like Boeing seek to fill the gap with highly qualified graduates. Through working with Da Vinci students, they are ensuring that the local population is prepared with the skills they will need for their future workforce. Businesses also often have corporate social responsibility (CSR) built into their business model, thus looking for ways to develop initiatives that will help society. This may look like mandatory employee volunteer days, giving a percentage of profits to a cause, or participating in events to improve their company’s public relations. Lastly, some companies offer ways for employees to engage with schools and children in order to boost employee morale. At Da Vinci we have found that providing a large menu of corporate involvement options beyond the typical (but important!) students internship or work experience opportunities encourages the partners to think differently about how they want to be involved, and opens the door-up to exciting options that we could never have thought of on our own!