Section Three: Making It Meaningful

The activities in this section, "Making It Meaningful," aspire to do just that – provide experiential learning and STEM career exploration opportunities for high school students with disabilities.

The University of Maine campus tour of STEM programs is easily one of the students' favorite activities. A sample schedule of a typical "tour day" follows. Resources and suggestions for structuring your own tour are included as well. While is it helpful to be on or near a university or college campus, industry or manufacturing-based tours may also provide exciting locally-based options. Additionally, many research and development firms provide information about their company and the type of work they do (videos, information sheets, etc.) on their websites. These options may be helpful if you experience travel or time limitations to do an actual tour. Don't underestimate local contacts: a visit to a local company or regional research facility may spark new ideas in your students.

- ⇨ Sample Tour Schedule
- ⇨ Resources and Ideas for Tour Development

Sample STEM Tour Day Schedule

February 20, 2012
9am-4pm
University of Maine
Orono, Maine

Schedule

9:00 a.m.

Corbett Hall - Room 220 - starting point for our day

A clear starting point for the students and their parents is an important part of a good tour day. Most of the students have never visited a university campus and many of the day's activities, from parking the car to site visits, will be a new experience. At this time you may wish to distribute copies of the day's agenda and a campus map. We encourage parents to attend the tour day if they're interested and many do choose to participate with their child.

9:30 a.m.

Kinesiology Laboratory — tour of research areas and option to try out some of the equipment being studied.

The first stop on the tour is the kinesiology laboratory. Here, the students see and try several types of exercise equipment being used in research projects studying human movement and conditioning. The students are introduced to a variety of measuring devices, data collection and adapted equipment used in the lab's research.

10:15 a.m.

Undergraduate Admissions — Chadbourne Hall: student presentation and question and answer session with admissions counselor.

At the Undergraduate Admissions office, the students hear a short talk from a current UMaine student who is on a STEM career path and is also a person with a disability. The student shares his story of transitioning from high school to college and what he has learned in this process. The student mentions accessing Disability Support Services and shares some of his individual accommodations. Time is provided for students/parents on the tour to ask questions. Next, we hear from a UMaine admissions counselor who begins with a short video showcasing the university. The admissions counselor also provides information about the process for applying to the university, important courses to take while in high school and a general time frame for applying. Time is provided at the end for questions and students depart with informative handouts about undergraduate education at UMaine.

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11:30 am

Memorial Union — walking tour of this central campus location and lunch break.

Tour participants walk from the Undergraduate Admissions office to the Memorial Union. During the academic year, the Union is a hub of activity: the Union houses programs, services and facilities used by both students and the general public. The walking tour showcases a number of specific offices and programs of special interest to the students including the Career Center, Fraternity & Sorority Affairs, Commuter and Non-Traditional Student Programs, Computer Store, Student Services Center, University Bookstore, Campus Radio Station, and Center for Student Learning.

The students are provided with meal tickets and explore the wide variety of menu options available. Ordering lunch in this busy environment can be a little confusing for students, so instructors are well advised to "float" and be available to provide assistance as needed. The students eat their lunch in the large cafeteria in the company of university faculty, staff and students.

1:00 p.m.

Disability Support Services — discussion with program director

After lunch, the tour resumes with a visit to Disability Support Services. Here, students are able to see what the office looks like, meet the program director and staff, and learn how a student accesses disability-related supports at the college level.

1:30 p.m.

Foster Center for Student Innovation is the next stop and a very popular part of the tour. Here, students learn about innovation engineering, try out some hands-on activities, and meet current student-entrepreneurs from UMaine.

2:15 p.m.

Advanced Structures and Composites Center

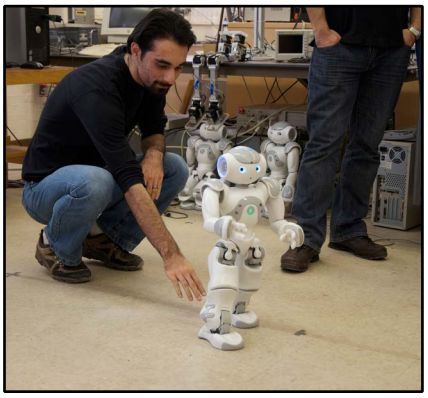
The Advanced Structures and Composites Center is one of Maine's premier research and development facilities. Here, students observe and learn about some of the cutting edge technology that's creating products like deepwater offshore wind turbines, Bridge-in-a-Backpack, and blast resistant wood structures.

4:00 p.m.

Corbett Hall - Room 220

The tour concludes where it began in Corbett Hall, Here parents pick up their children and head home from an action-packed day of experiential learning and STEM career exploration.

Photographs from UMaine STEM Tours



Resources and Ideas for Tour Development

The online resource links provided here include many interactive sites to introduce students to STEM–based concepts and applications. Because web-based materials change frequently, we encourage you to do your own searches to locate information, as well. Try using search terms such as "STEM high school resources," "virtual STEM tours," "STEM and college" or "STEM jobs in (name of your state)." When locating new resources, it is always wise to preview them carefully before introducing the sites to students.

Master Tools — This site provides eight interactive math and science tools and simulations for students in grades 6-12. All simulations and curriculum materials meet the new National Science Education Standards and National Math Education Standards.

Shodor. (1994-2014). *Master tools*. Available online at http://www.shodor.org/master/

STEM Education Resource Center — This site includes nearly 4,000 science, technology, engineering and math resources for students in grades Pre-K to-5 and 6-12, as well as free, self-paced modules for teachers teaching global climate change to middle school and high school students.

PBS Teachers. (n.d.). *STEM education resource center*. Available online at http://www.pbs.org/teachers/stem/

eGFI. Dream Up the Future — This site promotes engineering education with K-5, 6-8, 9-12 grade-level lesson plans, activities, outreach programs, and links to web resources. Teachers and students can download the first three issues of eGFI magazine.

eGFI. (n.d.). Available online at http://www.egfi-k12.org/

Exploratorium — This resource provides interactives, web features, activities, programs, and events for grades K-12.

Exploratorium. (2014). Available online at http://www.exploratorium.edu/

Harpeth Hall STEM Education for Girls — Established by the Harpeth Hall School, this center brings together educational leaders to improve STEM instruction and STEM opportunities for girls.

Harpeth Hall STEM Education for Girls. (n.d.). Available online at https://stem.harpethhall.org/

Tech Maine- Careers and Education— The TechMaine Technology Careers and Education Portal provides a wealth of information about Science, Technology, Engineering, and Math (STEM) careers in Maine and the educational opportunities and resources available for technology professionals.

TechMaine. (2013). *Careers and education*. Available online at https://techmaine.com/careers-and-education

STEM Career, Resources for Students — This site was developed by a school counselor to introduce students to STEM career possibilities.

Feller, R. (2010). *STEM career, students*. Available online at http://stemcareer.com/students/