

THE DA VINCI DISCOVERY CENTER OF SCIENCE AND TECHNOLOGY, INC.

**Job Description**

October 2024

<b>Job Title:</b>	Fab Lab Instructor and Technology Specialist
<b>Department:</b>	Education, Innovation and TechEd
<b>Reports to:</b>	Assistant Director, STEAM Education

<b>Type of position:</b> <input checked="" type="checkbox"/> Full-time <input type="checkbox"/> Contractor <input type="checkbox"/> Seasonal <input type="checkbox"/> Part-time <input type="checkbox"/> Intern <input type="checkbox"/> Permanent	<b>Hours:</b> <input checked="" type="checkbox"/> Days <input checked="" type="checkbox"/> Weekends <input checked="" type="checkbox"/> Evenings <input checked="" type="checkbox"/> Holidays	<b>FLSA Classification:</b> <input checked="" type="checkbox"/> Exempt <input type="checkbox"/> Nonexempt
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**GENERAL DESCRIPTION**

The Fab Lab Instructor and Technology Specialist will support the Fab Lab Manager in the strategic operation and execution of programs at the Da Vinci Science Center. This role focuses on designing, developing, and delivering engaging hands-on experiences in digital fabrication, robotics, and creative design for students and adults at the Science Center and at school and community sites. They also are responsible for assisting in maintaining and operating equipment in the Fab Lab, Mobile Fab Lab, Media Production Studio, and Innovation Studio. The ideal candidate will possess a strong education background with technical experience, a passion for hands-on learning, and the ability to train staff in the use of advanced technology. This role is ideal for an innovative educator passionate about fostering creativity, critical thinking and problem solving through STEAM (STEM and the Arts).

The Fab Lab Instructor and Technology Specialist will carry out programs that meet educational benchmarks and leverage the educational potential of our dedicated spaces like the Fab Lab, Mobile Fab Lab, Innovation Studio, Media Production Studio. Programming includes (but is not limited to) field trips, camps, school workshops at Da Vinci and school sites, Innovation Studio challenges, exhibit floor activations, floor demonstrations, after-school programs/science clubs, scout programs, overnight programs, career programs, lifelong learning programming for all ages, public programs, and entrepreneurship opportunities.

The Fab Lab Instructor and Technology Specialist will assist in carrying out the logistics and operational aspects of the dedicated spaces mentioned above. This involves ensuring operation of equipment for programs as well as instructing programs. This includes establishing and maintaining a high-energy, professional, and fun work environment, and providing leadership to maintain operational standards to deliver the Science Center's mission to bring science to life and lives to science.

**SPECIFIC JOB RESPONSIBILITIES**

**Curriculum Development and Instruction:**

- Develop and lead workshops and classes that integrate arts and technology, utilizing equipment such as 3D printers, laser cutters, CNC routers, vinyl cutters, and other digital fabrication tools.
- Lead teams to develop and implement lessons, demonstrations, activities, media, and other program content that is engaging and relevant to diverse audiences (including K-12 students, educators, entrepreneurs, and community groups), aligned to STEELS standards, and consistent with best practices of inquiry-based pedagogy.
- Attend and actively participate in training sessions to understand and implement the Da Vinci Science Center's inquiry-based approach, next generation science teaching and learning, and effective presentation techniques.
- Train educators, staff and volunteers on how to safely and effectively use the Fab Lab and mobile fab lab equipment for instructional purposes. Support the delivery of curriculum by demonstrating the practical use of technology and machinery in a learning environment.
- Demonstrate and work towards mastery of effective presentation techniques, inquiry-based pedagogy, PA STEELS, project-based learning, design thinking, maker education, science content, and exemplary customer service.
- Set up equipment (including Mobile Fab Lab equipment) and teach educational programs.
- Exhibit positive youth development in classroom management strategies that are appropriate to the physical, social, and emotional development of diverse guests.
- Represent the science center professionally to school and community contacts.

- Incorporate feedback into future lessons.
- Clean educational space after each program.
- Deliver scheduled on-site programs including member nights, summer camps, public programs, and more as needed.
- Deliver mobile fab lab programs at school and community sites.

**Entrepreneurship and Prototyping Support:**

- Provide equipment training and technical assistance to youth and adults completing individual or group projects.

**Equipment Maintenance & Troubleshooting:**

- Assist the Fab Lab Manager with routine maintenance and basic troubleshooting of all Fab Lab equipment, including 3D printers, laser cutters, CNC routers, and other digital fabrication tools so that all machinery is in proper working order and organized, clean, and ready for use. Address technical issues promptly to minimize downtime.

**Media Production Studio Support:**

- Assist with the basic operation and maintenance of the Media Production Studio, including audio and video recording and postproduction equipment.

**Safety & Compliance:**

- Make safety a priority. Complete all safety training and follow all safety guidelines. Enforce safety protocols for the Fab Lab and Mobile Fab Lab and ensure compliance with established procedures. Conduct regular equipment safety checks and ensure that all users are trained in safe operating practices.

**Administrative:**

- Provide positive interactions with teachers, students, and other customers. Deliver memorable programs. Demonstrate cultural competency and welcome all customers. Continuously improve Da Vinci Science Center products.
- Support the Science Center’s mission and values statement, support the mission to bring science to life and lives to science, and display a commitment to diversity, equity, inclusion, access, and belonging in all aspects of your work.
- Assist with recruiting staff, volunteers, and interns. Participate in coaching staff, supporting a culture of feedback, innovation, and growth.
- Assist in collecting data to evaluate the impact of programs as needed. Incorporate feedback into future programs.
- Promote exemplary communication by actively participating in team meetings and represent the FabLab team in other cross departmental teams.
- Participate in future planning and development of new program initiatives.

**REQUIREMENTS**

Driver’s License and successful completion of a criminal background check including checks through Pennsylvania State Police and Pennsylvania Child Abuse Registry and FBI fingerprinting checks are required.

**CONCLUSION**

This job description is intended to convey information essential to understanding the scope of the Fab Lab Instructor and Technology Specialist position and it is not intended to be an exhaustive list of skills, efforts, duties, responsibilities or working conditions associated with the position.

*Management reserves the right to revise duties as needed.*

- Other duties as assigned.

**TO APPLY: Submit Cover Letter and Resume to Assistant Director, STEAM Education, Ann Bebout, [ann@davincisciencecenter.org](mailto:ann@davincisciencecenter.org)**