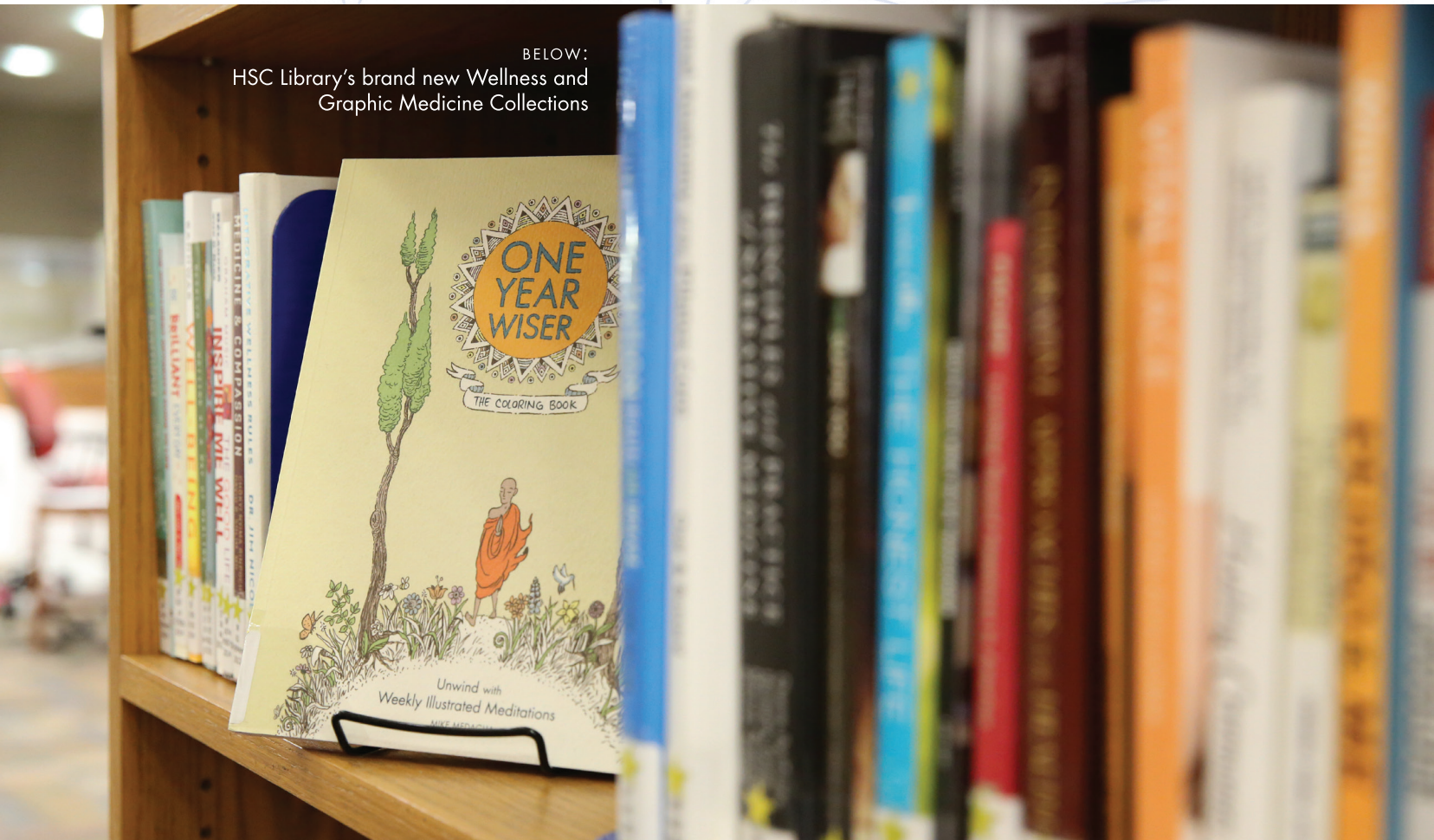
INNOVATIVE WELLNESS PROGRAMS IN THE HEALTH SCIENCE CENTER LIBRARY

BY ARIEL POMPUTIUS AND MARGARET ANSELL

In a cozy alcove on the first floor of the University of Florida Health Science Center (HSC) Library sits a low table with a puzzle and a small bookshelf. The rest of the library's print collection has been moved to the third floor to make more study space, and the library now prioritizes buying electronic books and journals to better support better support students, researchers, and physicians off-campus, so this small bookshelf stands alone. It rarely attracts a crowd, but the bookshelf's slightly disheveled appearance is proof that the contents are regularly browsed by visitors. This bookshelf houses the HSC Library's brand new Wellness and Graphic Medicine Collections. These collections were not explicitly requested by students or faculty, but grew from library projects that support the HSC and the local community. They were selected by librarians on those project teams who felt these unique collections would benefit library users.

The HSC Library staff and faculty have a record of innovative programming and outreach through subject-specific projects. In 2015, an HSC Library team conducted a National Library of Medicine-funded outreach project focused on educating the



BELOW:
HSC Library's brand new Wellness and Graphic Medicine Collections

ABOVE: Colored pencils and coloring books featured in library wellness programs

local community about HIV/AIDS information resources. In addition to developing programming and creating resources related to the subject, the teams proactively purchased library materials relevant to these areas.

In an era of user driven acquisition, where libraries often give up some control over the collection to the needs of the user, the HSC Library has found an innovative new role for librarian-selected collections through these projects.

The HSC Library's Wellness Initiative began when the interim director attended the American Association of Medical Colleges Annual Meeting in 2016 and saw an opportunity for the library to support the increasing interest in wellness within medical education. To assess patrons' need, the HSC Library Wellness Team created a survey asking library users which wellness programs they currently pursued on their own and ways the library could better support wellness in the HSC community. Based on feedback from the survey and research into what other libraries are doing for wellness, the HSC Library Wellness team created a proposal of scalable wellness programs, both active and passive, to encourage wellness behavior among library users. The proposal led to the creation of a variety of wellness programs at the HSC Library.

While the wellness proposal was in development, the team also compiled a list of authoritative and relevant consumer health resources to support the wellness initiative. These information resources are available on a bookshelf near other wellness programs like the library puzzle and the art and coloring kit. Although this collection was not requested by users originally, the books are now regularly checked out by patrons interested in wellness.

In the same year, the HSC Library also became interested in graphic medicine — the intersection between healthcare and comics. Graphic medicine is an emerging field connected to the medical humanities and has growing applications in health literacy and health science student education, as a method of inspiring empathy and improving communication between patients and providers. The UF HSC has a strong tradition of involvement in the medical humanities, but students and faculty are only just beginning to bring graphic medicine into their classrooms and clinics.

ABOVE: Wellness books and graphic novels from the health science collections.

A library instructor at the HSC Library began building a small collection of relevant graphic novels to support teaching graphic medicine as a one-credit course in the Honors undergraduate (un)Common Reads program. This program encourages faculty from departments across the campus to submit course ideas centered around a single book. The flexibility of the program allowed librarians from the HSC Library to introduce graphic medicine to honors undergraduates and explore potential applications for the new collection.

As clinicians, health researchers, and other health professionals evolve and expand to recognize new ways of understanding wellness and illness, both professionally and personally, it is the role of health science libraries to develop collections that reflect this expanded perspective. For example, when health information moved online, exciting new resources became available, such as clinical decision-making tools. Libraries need to recognize the value of these new resources and develop evidence-based methods of selecting the right resource for their users. As formerly non-traditional materials like graphic novels, personal narratives, and poetry become a standard part of the health science collections of tomorrow, librarians will need to develop new methods of collecting, marketing, and disseminating these materials.

When proactively created as part of larger library initiatives, collections can be a crucial part of creating a safe, neutral place for users to take refuge from professional and personal stressors. When combined with other services, like collaborative community puzzles and coloring supplies, strategic collections such as a print wellness collection become less about the information they contain, and more about the feelings they inspire and the space they create. By providing a space

ABOVE: A patron perusing a graphic novel from the collection.

LEFT: A popular wellness initiative in the libraries — therapy animals! Students and staff enjoy the presence of therapy dogs to provide calm during times of high stress. "Beau", pictured here, and his owner are volunteers with UF Health who also visit patients in the Children's Hospital.

for explicitly non-technical materials, academic libraries can reaffirm that they are a place for personal reflection and self-care.

As librarians become more involved in the educational missions of their institutions, they have opportunities to utilize library materials as part of their own instruction, and to create collections for specific curricular purposes.

In these instances, the materials can be the subject of discussion, or, as was the case with the HSC Library's graphic medicine courses, they be can used as inspiration for student assignments.

As the trend in collection development moves toward user-driven purchasing models, librarians will select and purchase collections related to emerging trends and library projects. When users engage with library programs and become inspired, the library will be prepared with related resources available for users to explore.

Making in the Library

BY SARA GONZALEZ

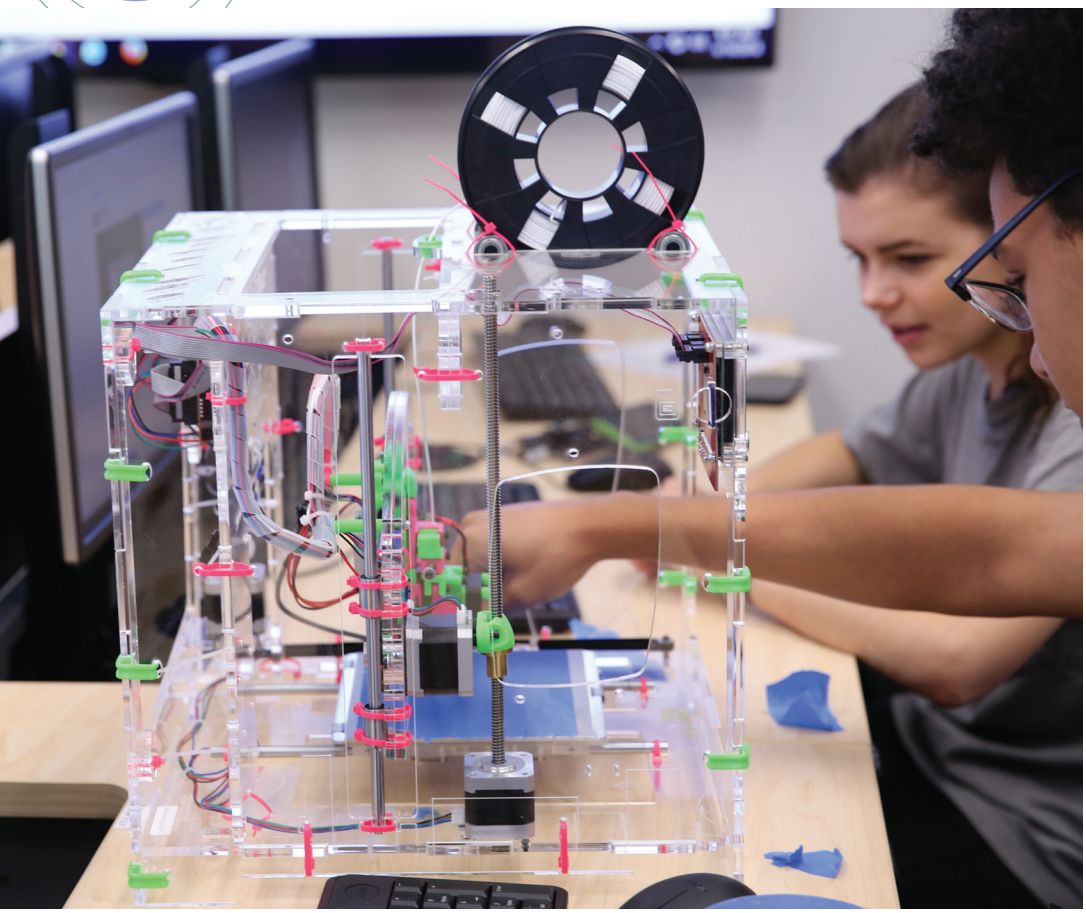
BELOW: Student gives the "thumbs up" to using the 3D-printed fishing line created by the GRiP technology club.

LEFT: Samples of 3D printed hands.

When undergraduate Jessica Bergau wanted to start a club at UF to build prosthetic hands for children, her first step was to come to Marston Science Library to ask about partnering with the library's 3D service. Her initiative fit perfectly with the library's desire to support both students and outreach to the local community. The library provided free 3D printing for her new club, GRiP (Generational Relief in Prosthetics) and now, almost 4 years later, GRiP is over 100 members strong who creatively design and 3D print colorful hands for children and teenagers. This partnership is just one example of the impact that the Library enables by providing the UF community open access to maker technologies.

A dramatic transformation began in Marston Science Library approximately five years ago, as the introduction of 3D printers, scanners, and a renovation of the first floor led to a new emphasis on supporting student collaboration, innovation, and experiential learning. The Library now serves thousands of students each semester, and has become a high profile resource to the UF community. In addition to their use, the active virtual reality lab and 3D printers attract large campus tour groups several times a day.

This merging of collaboration space and technology has fostered a culture of making that welcomes all students, no matter their skill level, to explore and create. This made Marston the natural spot to host Swamphacks, a student-organized hackathon



LEFT: Students from Sara Gonzalez's class, *Exploring 3D with Building, Modeling, and Printing* (UF Honors Program) work on their 3D printed 3D Printer.

that draws university students from all over the southeast. This 36-hour event takes over the first and second floors where almost 600 students alternate coding and building with sleeping under the tables. Students take advantage of the numerous power outlets, strong wi-fi, and expansive tables to build both hardware and software. The winning entry from the 2018 Swamphacks was Wi-Fido, a mobile app and network adapter to identify security issues in home networks.

Marston's firsr floor is known as the Collaboration Commons, an entire floor of group-friendly tables, study rooms, and computer labs that also houses MADE@UF, a lab devoted to virtual and augmented reality. This space is home to the student club GatorVR and the VR for Social Good initiative, a multi-disciplinary collaboration to research and develop VR/AR experiences that focus on illustrating and solving societal problems. Students can check out VR headsets such as Oculus Rifts, Microsoft Hololens, and the HTC VIVE to both play and develop new programs.

Marston's 3D technology provides the tools for our students and researchers to push the boundaries in fields such as archaeology and anthropology where specimens are rare and extremely fragile. Brittany Mistretta, a PhD student in Museum Studies, spent a summer with the Grenada National Museum cataloging the museum's archaeology collections to create an online version of their permanent Amerindian exhibition. She brought along a 3D Structure scanner, borrowed from the Library, and 3D captured specimens and objects that she can now continue to examine digitally and reproduce using the 3D printers.

Sometimes abstract or complex concepts can be readily understood if rendered into a physical object that can be handled and manipulated. The Library's 3D printers have been a draw to instructors who have printed models such as chemical molecules, brains, and viruses for their students' benefit. Alexandra Skrivanek, a PhD student in Geology, recently printed a 2'x2' model of Florida to use with a digital sandbox for a large public

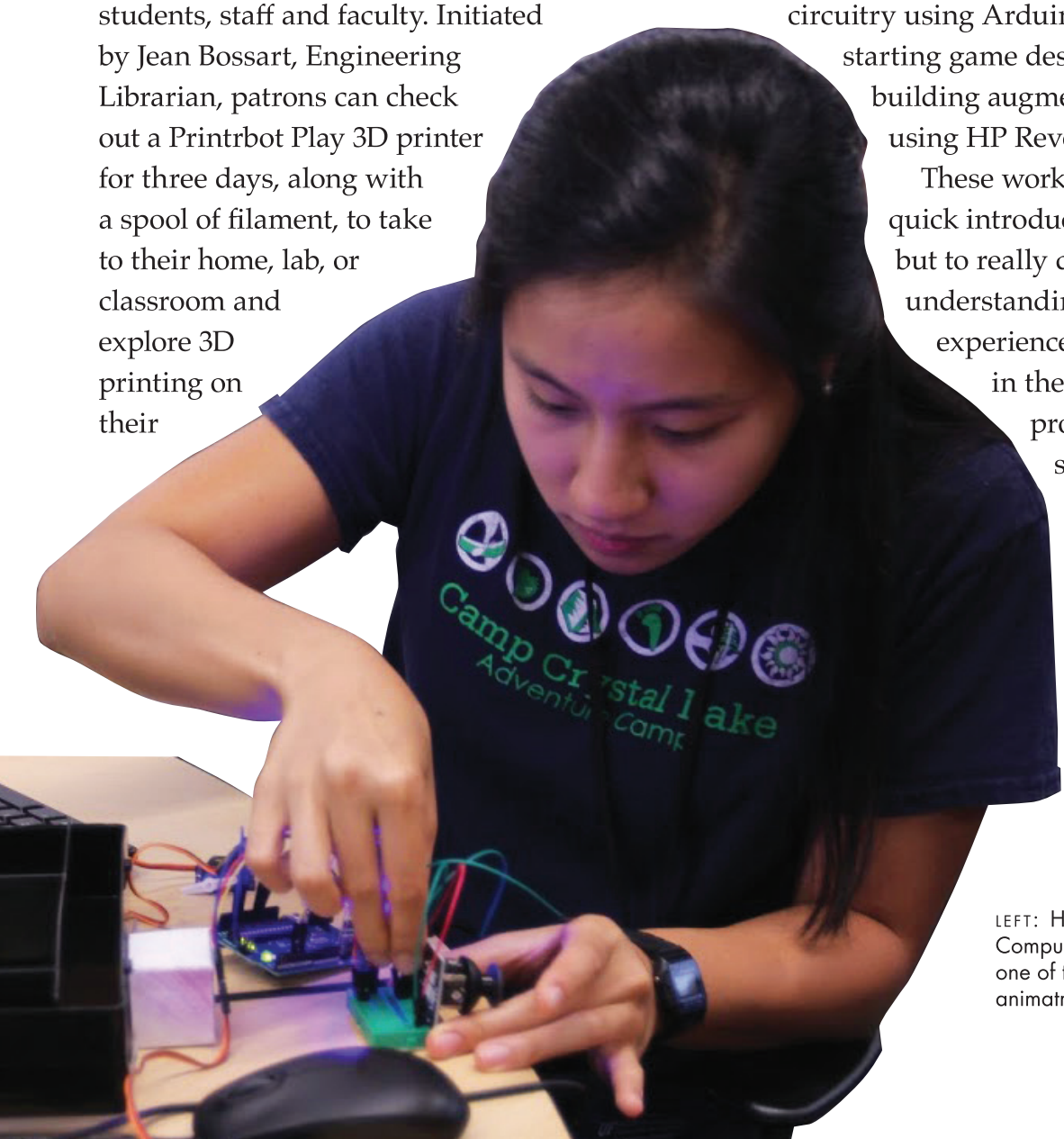
outreach event at the Florida Museum of Natural History. Children and their parents were drawn to the sandbox as Alexandra used the model of Florida to illustrate how climate change could affect Florida's coastline as sea levels rise.

Technologies such as 3D scanning and virtual reality may be emerging right now but are expected to become an important skill in the near future and ones that UF students need to develop expertise in. Marston is meeting this need for students by not only providing access to the technology but also the workshops and training that are essential to developing expertise.

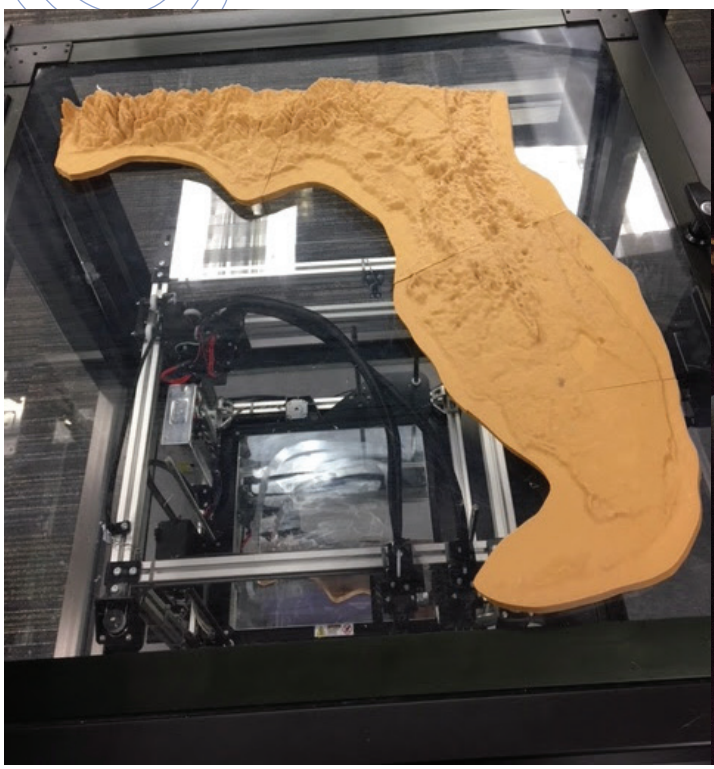
Marston Science Library was the first academic library in the nation to circulate 3D printers to students, staff and faculty. Initiated by Jean Bossart, Engineering Librarian, patrons can check out a Printrbot Play 3D printer for three days, along with a spool of filament, to take to their home, lab, or classroom and explore 3D printing on their own. Cost of 3D printing can be a large barrier to some students, especially when rapidly iterating to invent and finalize a design. Students can now try printing smaller versions by themselves and then, once satisfied with the model, can submit it for printing in a larger size on the library 3D printers.

One of our major goals is to ensure that all students, not just engineering or computer science, feel comfortable with exploring these maker technologies. Regular workshops are taught in the library and open to the UF community and the public. Topics for these one-hour sessions range from an introduction to 3D printing, basic 3D modeling, beginner circuitry using Arduino microcontrollers, starting game design using Unity, and building augmented reality experiences using HP Reveal.

These workshops give students a quick introduction to this technology but to really develop a firm understanding, they need hands-on experience. A new credit course in the Honors Program provides undergraduate students the opportunity to build 3D printers from scratch. Held in the science library, Dr. Sara Gonzalez developed this team-based course to welcome students with no prior experience and teach them both basic construction skills



LEFT: High school student from the Gator Computer Program summer camp uses one of the library's Arduino kits to build an animatronic.

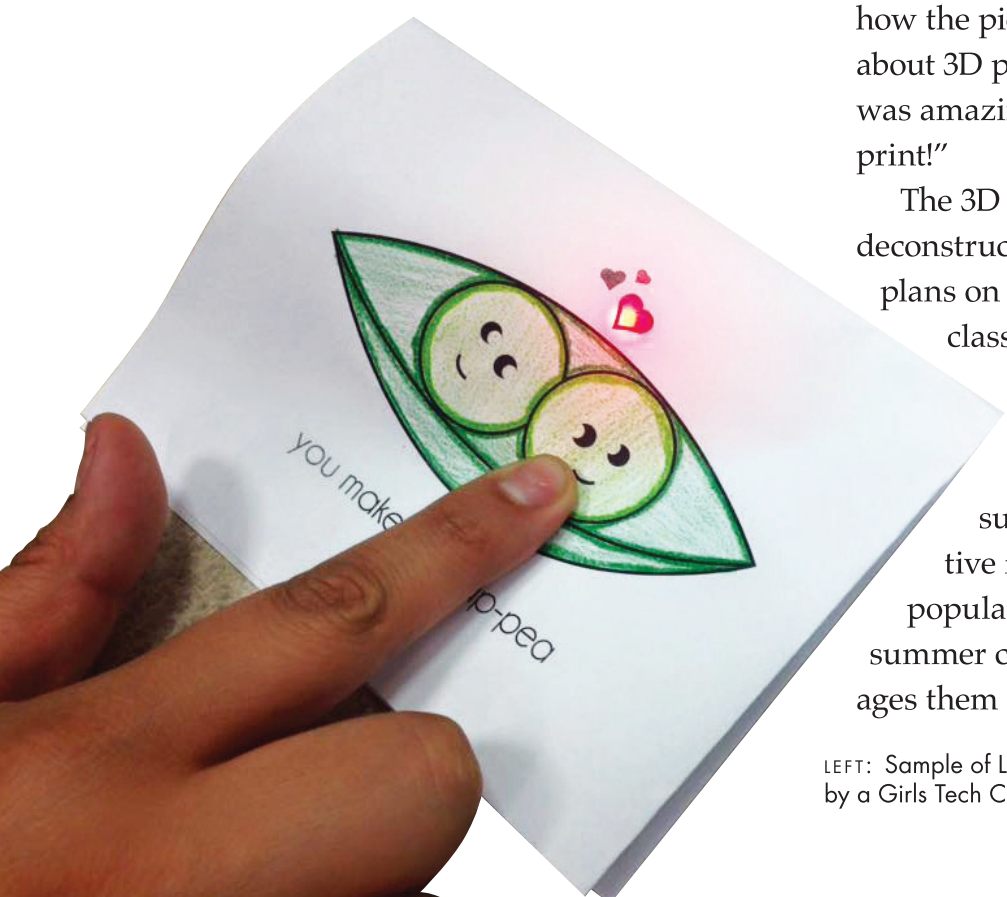


ABOVE: Young students view a projected display on a 3D printed "digital sandbox" map of Florida.

along with 3D modeling and scanning. Students reacted with immediate enthusiasm to the class, with enrollment filling within two minutes after registration opened. Near the end of the semester, Aubree Stillmann expressed her pride at completion of her 3D printer. "I loved seeing our 3D printer come together! I did not have experience with 3D printing before, so I was not sure how the parts would fit together to make a 3D object. It was great working with my group to build the printer and learn how the pieces were put in place. I learned a lot about 3D printing and really enjoyed my class. It was amazing to watch our printer make the first print!"

The 3D printer kits are designed to be easily deconstructed after the class is over and Gonzalez plans on teaching both the semester-long class again along with an all-day build workshop in the summer.

Outreach to local K-12 schools to introduce maker technologies and support their teachers is a major initiative for Marston, along with its highly popular Girls Tech Camp. This week-long summer camp for middle school girls encourages them to explore STEM careers through



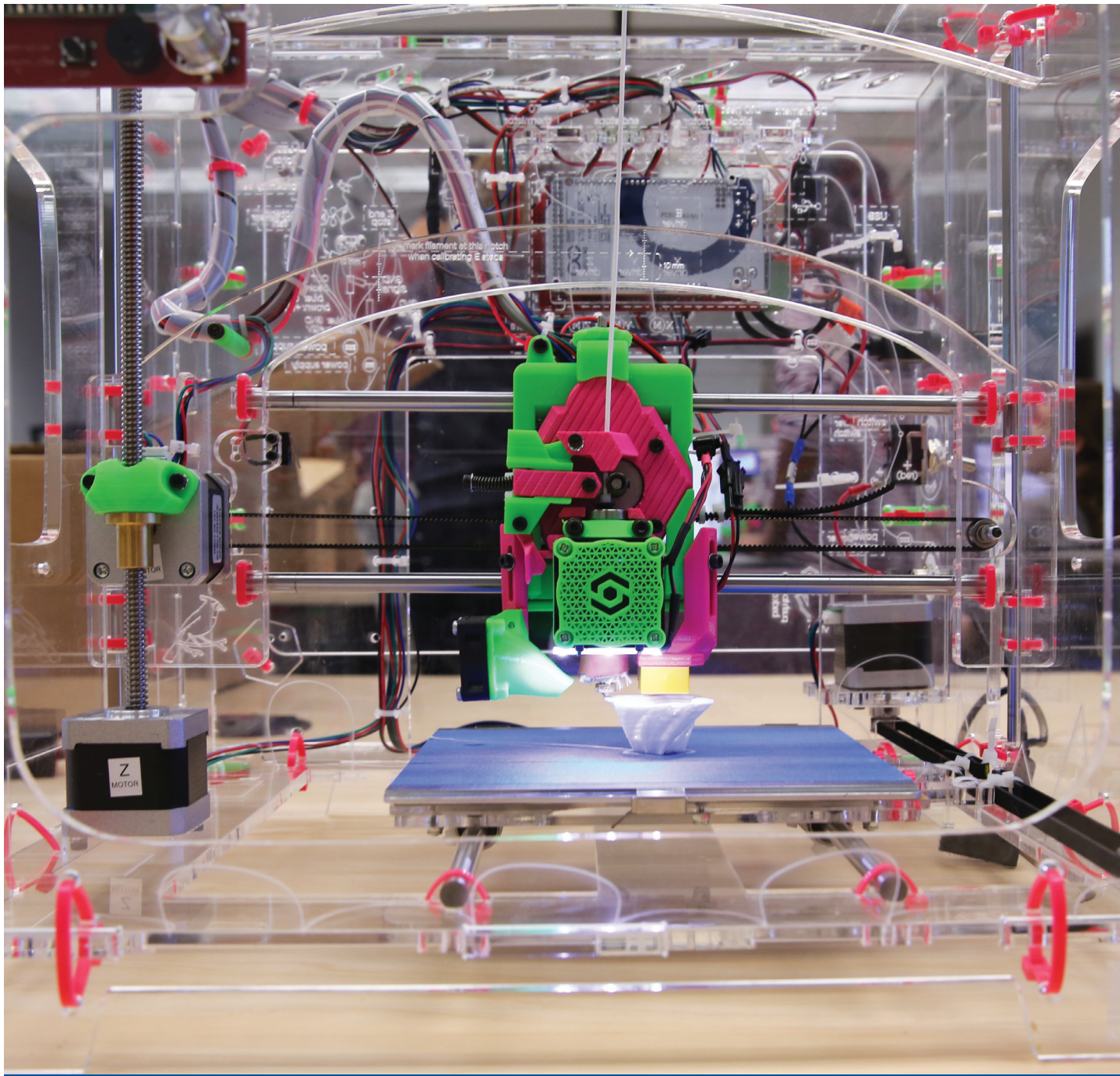
LEFT: Sample of LED "light-up" card created by a Girls Tech Camp student.

introductions to coding, 3D printing, video production, and augmented reality. The girls meet UF researchers and become comfortable in navigating an academic library. Now in its 3rd year, Marston held another fun week for the 2018 camp of developing tactile books, augmented children's stories, and competitive recitations of Pi.

Inspired by the enthusiastic response from patrons, librarians in Marston are continuing to explore new maker technologies to enable student projects, faculty research, and teaching. In the upcoming year, students will be able to check out 360° cameras and a tool library to encourage repair and reuse of devices. Our goal is to provide the tools necessary to enable UF students and faculty to build the future.

ABOVE: Some of the participants and teachers at 2017 Girls Tech Camp.

LEFT: UF student experiments with and experiences Virtual Reality.



Students in *IDH 3931: Exploring 3D with Building, Modeling, and Printing*, taught by librarian, Dr. Sara Gonzalez, built this Jellybox 3D Printer from scratch.

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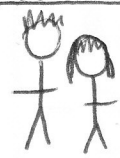
Introduction

of Graphic Medicine Manifesto

- personal way of explaining things
  - ex: visual pain scales
  - adults vs. children

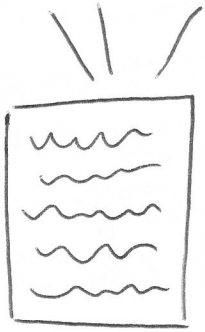


"visual literacy" the blind?
↳ can some people be excluded from graphic medicine?

"form follows function"
- individuality
- unconventional approach

- graphic medicine extends into more formal art forms

the graphic medium makes content more memorable.



humanities ↔ sciences

bridges many disciplines

- popular culture affects stigmas

NPR PODCASTS
↳ story comps; the moth
- very personal and powerful

[it can be difficult for medical professionals
- to cope —
with the emotional aspect of medical care]

ABOVE:
A UF student's "field notes" regarding the wellness and self-care program initiatives in the Health Science Libraries
(See page 21 for further reading).