



## THE INSTITUTE MODEL: A New Direction in Learning at Wildwood

Our grandparents' school experience in America just after the First World War looked remarkably similar to most current American classrooms. And yet, if you compare the world of today to the world a century ago, almost every system is radically different from what it was back then. Think of medicine, travel, and communication. Or technology, space exploration, and agriculture. All major systems have recreated themselves, fueled by innovation and progress—*except* education. How can it be that in a vastly changed world, our entire education system remains stagnant? Where is the model that reflects our changing world?

### **The Institute Model developed at Wildwood answers this question.**

It revolutionizes what it means to educate students in a world where the ability to adapt and thrive in rapidly changing workplace environments are the norm rather than the exception. **Indeed, the Institute Model is an entirely different road map for education.**

Thanks to the generous philanthropy of four Wildwood families, the school's first of three planned upper school Institutes,

the Wildwood Institute for STEM Research and Development (WISRD) was launched in the fall of 2014. Wildwood's Institute Model brings together students with deep passions in particular areas of academic interest. In conventional educational models, teachers decide what students will study. **The Institute Model flips this paradigm on its head.** Student scholars enrolled in Institutes are the ones who decide what it is they want to learn. They are charged with developing their own

individualized learning outcomes, a process similar to that used by university labs and think tanks to define priorities and strategically identify areas of focus. Coached by Wildwood teachers and supported by outside mentors in their fields of study, students figure out how to acquire the knowledge. They do so through original work that addresses complex, real-world issues. As WISRD founding director Joe Wise says, **"If you're reading about it, that's history, not science."**

## INTEREST-DRIVEN PROJECTS: REAL-WORLD IMPACT

Wildwood Senior Olivia C. discovered WISRD last summer when she happened upon the Institute workspace in the mezzanine area at the middle and upper campus. "I saw a plastic prosthetic hand made up of a dozen parts that looked like they'd been made with a 3D printer," she says. "I'm really interested in prosthetics—so this was intriguing."

This was Olivia's first encounter with WISRD, and she never considered herself much of a science student. "But then I met Joe [Wise]," she says, "and started talking to him about 3D printing. Before I knew it, I'd signed up for the class as my elective. Now I'm printing and assembling these prosthetics myself."

Olivia's desire to help children in need also motivates her. Her WISRD work this year contributes to Enabling the Future, a global nonprofit that connects a worldwide network of volunteers who design and produce affordable custom prosthetics for children who are missing digits.



So what does all this look like on a daily basis? In the Institute Model, it's about the work, the discovery, and the transference of knowledge that adds value to our society in big and small ways. The Institute Model is not limited by traditional classroom walls or even existing school structures. Students enroll in a class and participate during school hours. However, the work happens in many ways and places. WISRD students have internships in labs around Los Angeles where they extend their learning outside the walls of our school campus. And they partner with companies and

nonprofits to design and test new products, globally and nationally.

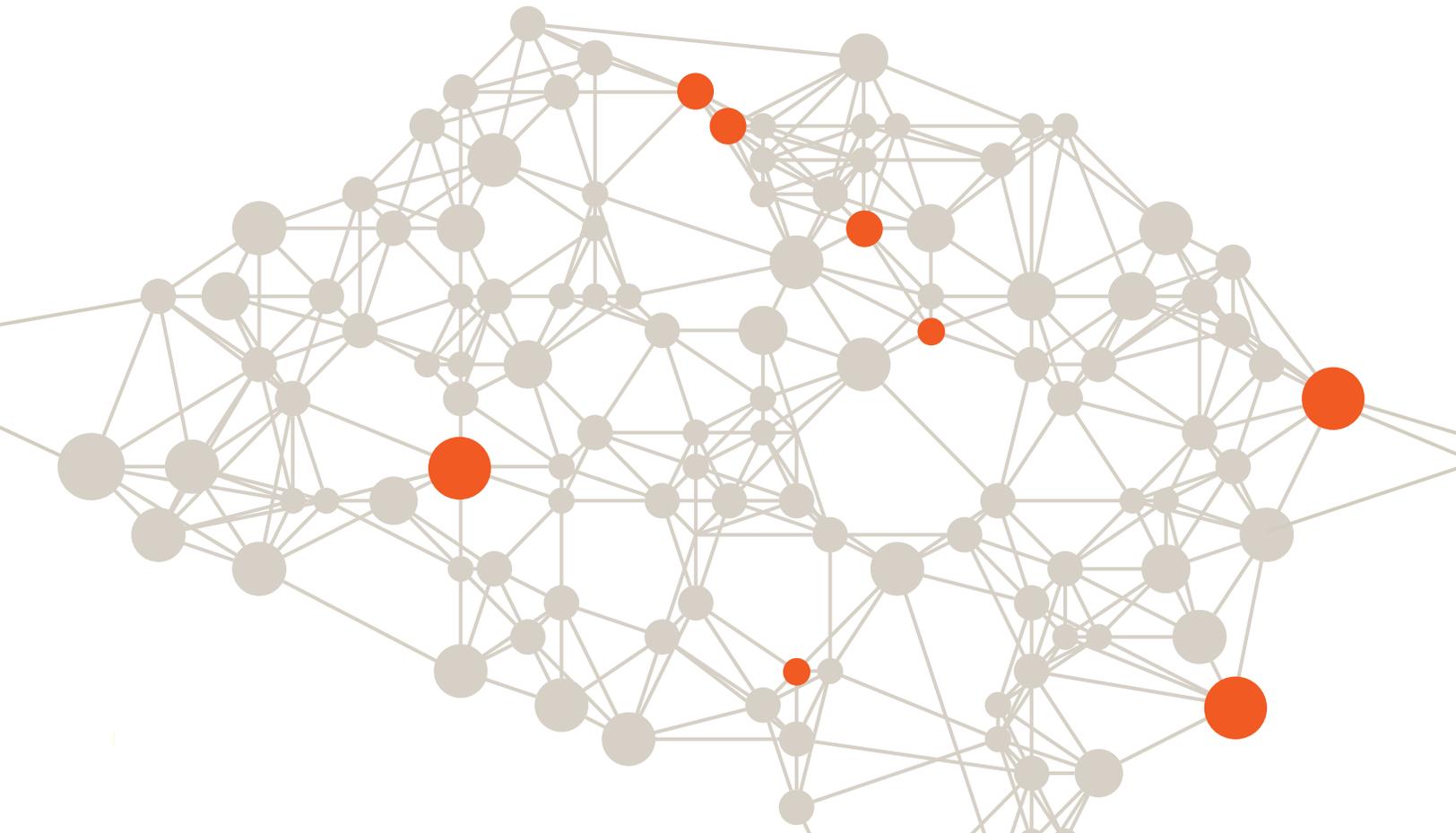
Through collaboration with SMALLab, GameDesk, NASA, Cal Tech's Jet Propulsion Laboratory, the UCLA Plasma Lab, e-Nable, and other companies and organizations, WISRD students work with mentors in the local and global community. They contribute to research and innovate in real ways that live beyond their upper school career. Our students are not simulating or practicing. They are instead working side by side with professionals and graduate students to create and design. They have access to materials and human capital

that most high school students do not because these partners see our students as valued collaborators.

Tenth grader Felix S. found a community in WISRD that he believes propels him forward. "There is only so far you can go in any one particular science or math course, and in WISRD, you can go as far as you want," he says.

Joe explains: "We tend to give students credit for their homework or particular assignment, but we don't do a good job of having learners integrate their knowledge. If we can get them to transfer something they know into a bigger context, that is the holy grail of education." The ability to confidently take learning from one set of data and apply it to a new set and then to construct deeper understandings is the work of Wildwood's Institute Model. This idea of cultivating the ability to actually

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do something with your learning is the future of education and what will make our grandchildren's education look different from that of our grandparents'.

This is at the core of Wildwood's philosophy around choice, engagement, and project-based learning. Our requirement that students must demonstrate their learning through classroom demonstrations of knowledge (demos), labs, projects, senior projects, Gateways, and Exhibitions leads us to the next evolution in education that emphasizes what it means to do something with your

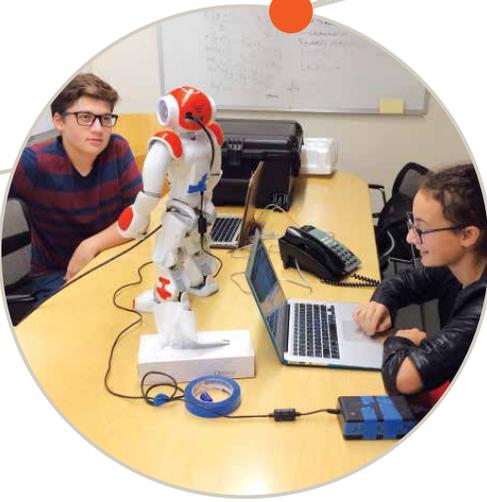
learning. And the doing something is not about moving on to college as it has traditionally been defined. The doing is about innovating, creating, making, designing, communicating, and solving.

It is actually much more difficult to be a teacher in this classroom than the traditional classroom where everyone is studying the same text, doing the same lab, or solving the same problem. Teachers, like students, must let go of the paradigm in which there is a correct and already known answer that they are supposed to produce. Teachers and students must be flexible, resourceful,

and willing to say, "I don't know, but let's find someone who does know or who might be able to ask us good questions." Students must be willing to fail many times before succeeding and must learn to see those "failures" as successes if they hope to discover something meaningful and real.

William Spady defines learning outcomes as "high-quality, culminating demonstrations of significant learning in context."<sup>1</sup> Eleventh grader **Dylan V.** describes learning outcomes as differently motivating. **"You get to decide your own trajectory,"** he says. "In the beginning of the year, you aren't told that you're supposed to accomplish things. You choose. **That provides different and greater motivation to the student than in a regular class."**

There are more than 20 current WISRD research-and-development projects for the 26 students involved.



## INTEREST-DRIVEN PROJECTS: REAL-WORLD IMPACT

Ninth grader Aiden S.'s WISRD work investigates how robots can relate to humans on an emotional level. Building on original research and coding conducted last year by inaugural Institute member Owen Leddy, '15, Aiden is working with a programmable, commercially available humanoid robot that the WISRD students have named Lucy. He's already programmed it to make announcements for WISRD at All School Meeting and has an even bigger idea: He wants to program Lucy to detect and respond to a person's emotions—to share in someone's excitement or cheer someone up who's having a bad day.

Aiden's also learned a life lesson that science often teaches: Things don't always go according to plan. "I realized early on," Aiden says, "that while Lucy has a camera, she can't understand human facial expressions." So Aiden decided that he would have to program Lucy to understand voice commands. "In order for my program to work, you have to be honest—tell Lucy when you're happy and when you're sad, then she can try to cheer you up."

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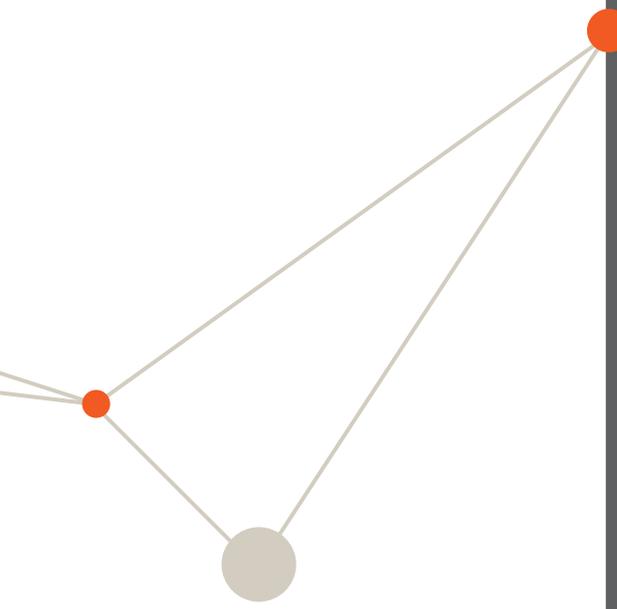
Several students have their hands and minds in multiple projects. They rely on each other to help them see what to explore next and how to approach new problems. **The Institute Model requires students to construct and share knowledge. "We are constantly collaborating, and there is no barrier," senior Ella G. says. "At all knowledge levels, we rely on each other for support."**

**At the core of the Institute Model is teaching students to ask deep, analytical, multilayered questions and then chart the path to the answers.** Posing good questions is an essential piece

of Wildwood's student-centered philosophy and the Habits of Mind. We assume that all students with the right set of resources may find the answer to the question, but **nothing short of exceptional critical-thinking skills and the confidence to fail affords learners the audacity to ask probing, essential questions.** A worthy question is hard to form and sometimes scary to ask, especially if you as the learner are aware that there might not be a known answer. Thoughtfully formed, students' questions can challenge our assumptions and force us to re-examine the knowledge we think

we already have. The Institute Model is a reflection of Wildwood's belief that students can and must ask the questions that will ultimately change the world.

Sometimes people ask what students aren't getting or what they miss when the teacher is not the curriculum designer. The Institutes have a set of common standards that all students are assessed on regardless of their particular field of study. Assessment isn't about the content of the work but about the skills students are developing. The idea that students won't leave a classroom with a predesignated set of content knowledge is a scary thought for some. But bold, innovative learning is a core Wildwood value. The Institute Model allows every student to choose different content while pursuing the same set of broad skills.



## WILDWOOD SCHOOL'S UPPER SCHOOL INSTITUTE MODEL RECEIVES PRESTIGIOUS MATCHING GRANT FROM THE EDWARD E. FORD FOUNDATION

Wildwood was recently awarded a \$50,000 matching grant from the Edward E. Ford Foundation, a premier foundation funder of independent schools. Wildwood is the only Southern California independent school to receive a grant from the Edward E. Ford Foundation in 2015. The award will be used to help fund the first of three planned academic Institutes directed and run by students. Proposed new Institutes are: the Institute for Digital Design and Entrepreneurship and the Social Good and Community Leadership Institute.

The Wildwood Institute for STEM Research and Development (WISRD), launched last year with the generous underwriting of four Wildwood families, inaugurates the school's Institute Model and is a hallmark program for teaching and learning in Wildwood's upper school. WISRD provides a framework for the best ways to help students develop the 21st-century skills that are essential to success: mastering content, risk taking, problem-solving, critical thinking, collaboration, and navigating unfamiliar situations with comfort.

"The Edward E. Ford Foundation grant will not only allow us to continue to expand the Institute Model at Wildwood, but it's also a clear affirmation of the quality of the work that our students and my colleagues and I are doing," says Landis Green, head of school. "It's not hyperbolic to say that it's an honor to receive support and objective affirmation from the Edward E. Ford Foundation. As architects of their own learning experience, as teachers of other students, and as partners in applications of their knowledge, Institute participants take even greater ownership of their work than in their regular classes at Wildwood. It's a dynamic new structure for us, a natural evolution of our progressive and project-based program."

Funding from the foundation will be used to conduct a formal research study analyzing the impact the Institute Model has on student learning.

### ABOUT THE EDWARD E. FORD FOUNDATION

The mission of the Edward E. Ford Foundation is to strengthen and support independent secondary schools and to challenge and inspire them to leverage their unique talents, expertise, and resources to advance teaching and learning throughout this country by supporting and disseminating best practice, by supporting efforts to develop and implement models of sustainability, and by encouraging collaboration with other institutions. For more information about the foundation, visit [eeford.org](http://eeford.org).

The future planned **Institute for Digital Design and Entrepreneurship** will allow students with interest in animation, architecture, graphic design, Web development, photography, and much more to explore this new model of education. **The Social Good and Community Leadership Institute** is the third of our planned Institutes and will draw on Wildwood's strong commitment to multiculturalism and global leadership. If the definition of reforming is "to change something in order to improve it," then Wildwood's Institute Model can truly be described as "education reform." 

<sup>1</sup><http://www.ascd.org/publications/educational-leadership/mar94/vol51/num06/Choosing-Outcomes-of-Significance.aspx>

You can read about the work WISRD students are doing on the Wildwood Way Blog at [wildwoodschoolblog.org](http://wildwoodschoolblog.org) and on the student-created and managed WISRD website at [wwisrd.org](http://wwisrd.org).