

JPMorgan Chase – “Code for Good” High School Design Challenge

Design-Lab High School’s Student Team

October 2015



DELAWARE DESIGN-LAB HIGH SCHOOL

ENROLLING STUDENTS FOR 2016-2017
IN GRADES 9, 10 & 11

DO YOU WANT TO GO TO COLLEGE?

DO YOU LIKE TO MAKE AND FIX THINGS?

ARE YOU ALWAYS SKETCHING?

DO YOU LOVE MATH AND SCIENCE?

ARE YOU CREATIVE & CURIOUS?

ARE YOU A MOTIVATED, YOUNG LEADER?

DO YOU CODE VIDEO GAMES?

ARE YOU EAGER TO JOIN & LEAD CLUBS?

Design-Lab High School offers tuition-free, public education on a beautiful wooded 12-acre campus at 179 Stanton Christiana Road, Newark, Delaware. Apply today... <http://www.schoolchoicede.org/ChoiceApplications.aspx>

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SCHOOLS
www.design-labschools.org



Design Thinking

How to solve a problem or achieve a goal

Discover

Identify and clarify the problem, goal or intent. Make sure you understand and solve the right problem. This often requires empathy – the ability to understand and share the feeling of others. What is the real problem? How can you restate the problem so that you see it in a different way? Has this problem or one like it already been or attempted to be solved? Who else is working on this problem? What analogous examples can you find? Who have you talked to?

Use QFT – Question Formulation Technique

<http://www.ibmidaatlantic.org/Experiencing-the-QFT.pdf>

Visualize

Capture possible solutions for the problem in a tangible form – words, numbers, images, sounds, movements. Do sketches, collect photos, take notes – show your ideas. How good are your ideas? What ideas have you overlooked? Do you have a lot of ideas (fluency)? Do you consider different approaches (flexibility)? Have you sought out the input and built upon ideas from others (elaboration)? Do you have a truly unique and original solution that meets and exceeds expectations (originality)?

Use Visual Note Taking techniques.

<http://showwithmedia.com/visual-notetaking/>

Prototype

Make quick, easy, inexpensive mockups or models of your best ideas. Test your ideas in a preliminary fashion to see which have the best potential to meet the needs and requirements. Practice or rehearse so that you have the skills to carry out the idea. Try out and experiment with the materials, processes, techniques, and resources necessary for successfully solving the problem.

http://www.slate.com/blogs/the_eye/2013/10/23/the_importance_of_prototyping_creative_confidence_by_tom_and_david_kelly.html

Present

Make a visual and verbal presentation of your results in a clear and compelling manner. Create a presentation model, prototype or exhibit of your ideas. Show each step of your process and answer any questions that need to be addressed before your solution can be implemented – materials, cost, time, unintended consequences, resources, budget, timeline, roles, responsibilities, etc. Tell a story that is compelling and motivating.

<https://hbr.org/2013/06/how-to-give-a-killer-presentation>

Creating Design-Lab's Climate and Culture 2015-2016 School Year

GOAL: To create a premier, dynamic, and cohesive behavioral and academic learning environment. Through creative thinking, mutual respect, and collaboration, Design-Lab's climate and culture will enhance the educational experience for our students, faculty, staff, and families.

These are the steps we have taken to implement climate and culture innovations:

- **Student Leadership & Excellence Program:** An inclusive school-wide positive behavior program that promotes leadership and excellence in our student population. Exemplary students display appropriate behaviors and become models for others to emulate. All students are given an opportunity to reach the highest levels of behavior and academic excellence.
- **School-wide building norms:** Implemented consistent building norms and expectations.
- **Classroom DOJO:** Evidence-based educational tool for educators to track data of students' positive and negative behavior within the classroom and school. Each student is scored on the following categories:
 1. Prepared/Unprepared
 2. On task/Off task
 3. Appropriate language/inappropriate language
 4. On time/Tardy/AbsentDescription/example: When students display positive behaviors in the four categories, he/she can earn a total of 4 points for the class period. When students display negative behaviors during class, the teacher deducts a point for the student's infraction. Each student has 6 classes per day, which means, each student can earn a total of 24 points per day, or 120 points per week. At the end of each week, staff review the student earned behavior data and divide it by total number of possible points, netting a percentage. The percentage informs the student ranking in the Student Leadership & Excellence program.
- **Mentoring Program:** Entitled: "Be Somebody Who Makes Everybody Feel Like a Somebody". All staff members embrace the opportunity to mentor 10-15 student mentees through weekly activities centered around the emotional, social and academic needs of the students both individually and small group.

- **Restorative Practices:** Teaching our students through positive role modeling, relationship building/repairing and fostering mutual respect, this restorative practice approach to servicing an inclusive youth population positively influences student behavior and strengthens civil society for the school culture and their individual futures.
- **Security Cameras:** 12 High Definition digital video camera systems strategically placed throughout the school building.
- **Lockers & Locks:** Staff conducted a whole-school assembly program to teach and set expectations for locker use and building the locker norms of the school.
- **Monthly School Assemblies:** For behavior management and incentives through review and celebration of accomplishments.
- **Identification of School Mascot:** Unveiling of the Design-Lab Dragonfly as the school mascot. (Students will design creative versions of the mascot via Art Club and personal interest for display in the school building. This fosters, building school community pride.)
- **Student Ambassadors:** 27 students chosen through an application, referral and selection process to identify exceptional student leaders within our school community who really embrace the school's vision and mission.
- **Spring Sports Launch:** Creating the sports program serves as a positive behavior motivator and contributes to the overall climate and culture of the building. Students who meet DIAA regulations and Design-Lab High expectations for academics and behavior may participate in spring 2016 sports: Baseball & Softball.
- **Driver's Education:** Implementing the State-approved weekend model offers students the opportunity to complete their individual driving time based on meeting the school's expectations. This is a clear student motivator to meet the expectations of the Leadership & Excellence program.

Questions Parents Ask

Is your curriculum college preparatory?

The curriculum is college preparatory. Students are scheduled for seven classes in grade 9 and 7 classes in grade 10. See the attachment, "College Preparatory Course of Study". In 2015-2016, freshmen are scheduled for English 1, Interactive Mathematics 1, Integrated Science, Civics/Regional Planning, Physical Education, and Technology Education Design. Sophomores are scheduled for English 2, Interactive Mathematics 2, Biology, Big History, Driver's Education, and Media Design.

Will you have Advanced Placement courses?

Advanced Placement courses will be offered in the 2016-2017 school year in English, Mathematics, Science, History, and Computer Science.

How do you handle watching movies in the classroom?

Films and video are used for educational purposes as part of a teacher's lesson plan and/or unit of study. Technology Education Design and Digital Media Design classes use films and video to teach the design curriculum and for media literacy. Students produce stop motion animation films and videos in Digital Media Design.

Do you have lockers?

Every student will be issued a locker and a combination lock. Locks will be issued to students from Jan 22-27, 2016. The Dean of Students and staff will train students on how to use the combination locks.

What kind of technology do students have access to?

From November 2015 to present, freshmen and sophomores have had access to DELL desktop computers and software in the Technology Education Design and Digital Media Design computer labs. Digital Media Design students use video cameras and digital still cameras.

In spring 2016 we are implementing Google for Education school-wide. Chromebooks were purchased for each student and teacher. A Google for Education certified trainer worked with the faculty this fall and winter. Additional trainings happen in January and throughout the spring.

I have heard that students with behavioral issues will not receive a Chromebook.

Students who display behaviors in the bottom tiers of the Student Leadership and Excellence Program, must improve their behavior to the higher tiers before being issued a Chromebook. Any Design-Lab student can improve his/her behavior, thereby earning the privilege to borrow a Chromebook. All Design-Lab students continue to have access to the desktop computers in the labs.

Implementing the one-to-one model will include issuing written communications to parents outlining policies and expectations for technology use. Parents and students must sign an agreement to comply with the provisions of the policies.

Do you offer a foreign language?

In 2015-2016, Dr. Delia Lugo is a certified Spanish teacher who teaches a section of Spanish 2 to sophomores. We will conduct a search to hire a full-time Spanish certified teacher for the 2016-2017 school year.

Do you have bells to dismiss/start classes?

We do not signal the change of classes with bells. The school philosophy is that we are preparing students for the modern, professional workplace and therefore will not implement a bell system.

Do you have clocks in the classroom?

There are face clocks in the classrooms.

Why is my child written up for being late to class?

Students have two minutes to transition from a previous class or from lunch to the next class. The teacher marks students late when they exceed the two minutes. Students are responsible for getting themselves to the next class on time. Teacher record tardies in the Classroom DOJO system and these data affect the student's ranking in the Student Leadership and Excellence Program.

What is your teacher retention rate?

In 2015-2016, one teacher (out of 12) left the school and was replaced by a certified teacher. That means that staffing at Design-Lab High School is very stable.

How do you communicate with parents?

The school sends electronic group messages through MailChimp, text messages to parents' cellphones with the *Remind: Safe Classroom Communication* app, individual email messages in Outlook, hard copy mailings, and telephone calls. Parents are invited to attend the quarterly parent-teacher conferences to learn about his/her child's academic progress and the monthly Parent Teacher Organization meetings at the school. The Design-Lab website has up-to-date information on school events and happenings.

Do you have Driver's Education?

This year, Driver's Education is offered to sophomores in the spring semester 2016 on weekend. This is a state-approved model that was supported by the DOE and Office of Management and Budget. Students receive the required classroom time and driving time from January through July 2016 with certified Driver's Education teachers. Design-Lab High is leasing a Driver's Ed car outfitted with the required dual braking system and special mirrors.

DESIGN-LAB HIGH

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<http://design-labschools.org/delaware-enrollment.php>





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TODAY!**



DESIGN LAB HIGH SCHOOL IS A TUITION FREE, COLLEGE PREPARATORY, PROGRESSIVE PUBLIC CHARTER SCHOOL

OUR STUDENTS EXPERIENCE DESIGN LEARNING

Our comprehensive Design-Learning approach develops the students in communication, collaboration, critical thinking and creativity; skills that they'll need to be successful in the global economy of the 21st century.

WE UTILIZE THE STEMD™ CURRICULUM

Courses integrate the academic disciplines of science, technology, engineering, and mathematics –

plus media and design (STEMD). Our students develop multiple literacies, including digital, visual and media literacy, as well as reading, writing and mathematics. Advanced Placement courses are offered to achieving students.

OUR APPROACH FOSTERS INNOVATION TECHNOLOGY-ENRICHED TEACHING & LEARNING:

Students and teachers use technology tablets, the Internet, programs and software for instruction and production, as a daily part of learning. Through

innovative, technology-enriched study, students research and produce projects, edit digital sound and images, create animations, design products, create websites, and write code for programs and games.

PROJECT-BASED SERVICE LEARNING: Interdisciplinary project-based study helps our students apply, in-depth, the content they learn. Service learning is the lens through which our students identify, study, and solve problems facing their city and the world.