

Crusader Creation Commons: an introduction, costs, scope, and vision

Introduction: We have reached an interesting moment in education. The evolution of technology has grown past augmenting instructional strategies within the classroom to now powerfully and indelibly affecting and expanding the way that students are learning. The internet has moved from being a boundless digital data library towards becoming a virtual, seemingly limitless interface, a portal through which learners now freely pass in order to gain access to new experiences, unmatched curricula, and dynamic lessons from some of the top instructors and professors from around the world. What previously took weeks to happen within both research and instruction can now be achieved through the tap of a student's finger on a touchscreen.

As a result, we have achieved an interesting educational moment: the greatest limiting factor upon the pace and scope of a motivated student's learning *is the instructor in the classroom*. Provided with the right learning environment, tools, and access, a student can set their own course and pace in learning.

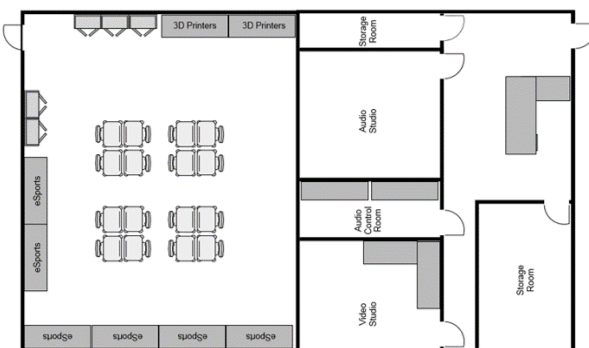
The Crusader Creation Commons at Northwest Christian School, a resource intended for motivated sixth through twelfth grade students, is being established as a next generation "Maker's Space" and a forum in which students will set their own learning horizons. Using a dedicated space on campus, a budget of \$500,000.00, and working with supportive corporate partners and foundations, the Crusader Creation Commons will be a cutting edge technology venue unlike any other Maker's Space.

Estimated cost of completion: \$500,000.00

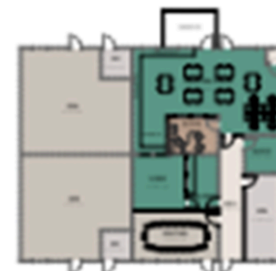
- \$250K: renovation of existing space (current elementary tech lab and art room)
 - Any single donor who is interested in naming rights for this building would be asked to cover this cost of renovation.
- \$250K + grants: requisite hardware and software
 - The campaign to raise these funds and secure these grants is already underway.

In terms of funding, the Crusader Creation Commons was first introduced to the school community during a fundraising dinner and auction three years ago. Since that time, the school has been working through the phases of fundraising, communicating the vision, and writing grants for supporting technology. ([The initial announcement of the Crusader Creation Commons to our school community is found here.](#))

Original draft design:



BGW Architects revised design:



PHASE 2 - CRUSADER CREATION
4,272 sq ft

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The Crusader Creation Commons will take over the equivalent of four classrooms. This space is found in the center of the campus.



“Crusader Creation Commons” concept: the distinctives that makes our space different will be two-fold:

1. [What is a “Maker’s Space”?](#)
2. **Distinctive #1:** Most maker’s spaces are centered around an *‘engineering’ concept*: students are coached through a multi-step problem-solving process that culminates in a tech-based solution. While the CCC could support such an approach (and may with younger users), our space would be rooted in an *‘entrepreneurial’ concept*: not only are the students solving a problem, they are creating something that has demonstrable value in three domains of creation described in Distinctive #2.
3. **Distinctive #2:** The [highest tier of Bloom’s new taxonomy is “creating”](#) (design, assemble, construct, author, develop). Helping students to recognize that they are created in the image of our Creator, we will provide a space where students can operate within this tier and create along three different channels:
 - **Create Community:** a space where students with similar interests and skills work together within common purposes or as part of a team. (i.e. [Lego robotics](#), [eSports](#), [a band recording a song](#), etc.)
 - **Create Change:** a space where students can find ways to solve problems or grow the influence of the Kingdom (i.e. [student-run podcasts](#), [NXNW Film Festival](#), [student films](#), [music videos](#), etc.)
 - **Create Commerce:** a space where students are encouraged to be entrepreneurial, combining their creative ideas with creative resources that enable them to make money. (i.e. DECA marketing club)

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Intended audience: The Crusader Creation Commons would be open to students in both the on-the-ground campus, the [Flex program of Northwest Christian's online program](#), and the [Frameworks program for public school students](#). All secondary students would pay an annual materials fee and then be “licensed” to use it after taking an introductory course (\$25/student) via NCS+ (our Canvas-based digital complement to the on-the-ground classroom experience).

Elements of the program:

- Video production: Northwest Christian sponsors the annual [“NXNW High School Film Festival” \(held each year at a local Harkins theater\)](#). As well, in addition to both an annual play and musical, for nearly a decade, Northwest Christian High School students have participated in the making of a movie—both in front of and behind the camera. ([See an example.](#)) The Crusader Creation Commons will further the creativity and technical ability of aspiring filmmakers.
- Robotics: Using [Lego Mindstorms robotics](#), secondary students would have two opportunities: (1) Help to lead the elementary after school Lego Robotics club, and (2) Participate in their own secondary robotics team which would compete annually in the [First Lego League](#).
- Podcasting: Northwest Christian already has a podcasting recording studio, top-of-the-line podcast recording equipment, and a growing number of school-based podcasts: [Kingdom Culture Conversations](#), the [Off the Page Book Club](#), and [Kingdom Currents](#). Once the Creation Commons is complete, we will move the podcast studio there, provide students with access and support, and encourage them to record and launch their own podcasts.
- Music recording: Northwest Christian has a strong instrumental music and choral program. In addition, we have a growing online musical competition called [“Crusader’s Got Talent”](#). A recording studio within the Creation Commons would enable aspiring musicians and producers to expand their horizons.
- eSports: The [Arizona Interscholastic Association has an eSports division](#) and the Crusader eSports program is already a strongly competitive member. The program and its coaching staff have done a wonderful job of forging a sense of genuine community within a group of students who might otherwise be tempted to retreat to their own bedrooms to play video games autonomous of friends and fellow students.
- HAM radio: Having secured a number of generous grants from the [Phoenix-based Thunderbird Amateur Radio Club](#), Northwest Christian has a HAM radio system, FCC-licensed station ([Call Sign: KJ7JPI](#)), club (NCARC), and after school classes which allow students to work towards their own HAM radio licenses. Once the Creation Commons is complete, this would all be based there. As well, in that the Thunderbird Amateur Radio Club already meets on our campus, their monthly meetings would be moved there too.
- 3-D printing: Due to the generosity of [Micropulse West](#), Northwest Christian has been given a top-of-the-line (\$50K) 3-D printer. ([More on the type of printer here.](#)) We have put this to great use. For example, last year, a middle school afterschool club secured a grant from SRP to learn how to 3-D print and build their own functioning and flying drones. This sort of program would grow within the completed Creation Commons.
- Other programs that we are investigating, working to secure grants for, and launch within the Creation Commons include: graphic design, electronics/Arduino, laser cutting, soldering, sewing, pottery, gardening, coding, woodworking, auto mechanics, virtual reality, Cricut, photography, and animation.

Other grants that are already in-hand:

- The Floyd Family Foundation has provided the funding to launch a “technology library” which would enable students to “check-out” powerful tech tools in much the same way you would check out a book from the library. Students would have the ability to take these tools home for the duration of the “check out” period, learn the ins and outs of the tools, and put them to great use.

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- Siemens Education has provided a \$250,000 grant to the Creation Commons that gives students access to a [Learning Advantage Academic Gold Membership](#) as well as unbelievable [software access](#) (see link for list) and tutorials that teach the students to use the engineering and computer programming software and earn their own individual certifications. This is the first time that Siemens has made this grant available to a high school.

Potential grant applications

- [Student interest survey](#)
- [Draft of equipment wishlist](#)

Annual budget

- Annual impact to school budget: \$59,500.00 ($\$35,500 - \$95,500.00 = -\$59,500.00$)
 - Expenses: \$95,000.00
 - Crusader Creation Commons Champion: \$45,000/year
 - Annual Board-directed, school-year-ending “sinking fund” for hardware and software replacements and upgrades: \$30,000.00
 - Annual materials costs: \$10,000.00
 - Annual licensing fees: \$10,000.00
 - Revenue: \$35,500.00
 - \$25 orientation course: estimated 300 annual participants x \$25.00 = \$7,500.00
 - Each aspect of the CCC requires a course
 - Course fees are varied
 - \$40/secondary student fee: estimated 700 students x \$40.00 = \$28,000.00