

# Bethlehem Christian Academy

## Grant Proposal for Technology Network Infrastructure

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**Bethlehem Christian Academy**  
**Grant Proposal for Technology Network Infrastructure**

The Bethlehem Christian Academy seeks \$4,490.00 from The Ambrose Monell Foundation for support of our project to provide a wireless network in our school in efforts to integrate technology into the classrooms.

Bethlehem Christian Academy (BCA) is a private, non-profit organization, and Christ Centered Educational Institution. BCA is governed by a church-elected board of trustees. Currently, BCA educates 97 Pre-Kindergarten through Eighth-Grade Students at our facility located at 27250 Emery Road, Orange Village, Ohio 44128. BCA employs 2 Administrators, 9 full-time Teachers, 1 part-time Teacher, 1 part-time Teacher's Aide, and 1 full-time Secretary. BCA draws its student population from the communities of Cleveland, Warrensville Heights, Garfield Heights, and other nearby communities. The population of our school is primarily black (97%) and 3% white.

The Academy was established in 1984 serving Orange Village and neighboring communities in Northeastern Ohio. We are located at 27250 Emery Road, Orange Village, Ohio, and we have established a website <http://www.bethlehembaptist.org/bethlehem-christian-academy.html>.

Our mission is to prepare students and staff for a Christ-centered life in a complex technological and globally interdependent world. Our vision is that all students will be enabled by technology to acquire the knowledge, skills, and attitudes necessary to become independent life-long learners. Our goal for this project is to have equitable access to computers and other technology tools where instructional needs are best served. We are in need of financial assistance in order to meet our goals for our students, and realize our vision for our students' success.

Technology at Bethlehem Christian Academy will be integrated into all subject matter of a student's education. This will prepare them to be life-long learners and enable them to be effective servants of Christ in a rapidly changing technological society. By pairing effective teachers with the power of technology we will realize an optimal learning environment. Having a wireless technology network with internet access will provide our students with the 21<sup>st</sup> Century Skills that they need to communicate and collaborate with global experts for critical thinking, problem solving, and creativity.

The project for which we request funds will make a difference in our lives in the following ways:

- 1) This plan will ensure the commitment to using technology to improve teaching and learning while meeting International Standards for Technology in Education (ISTE) and National Educational Technology Standards for Teachers (NETS-T) and National Educational Technology Standards for Students (NETS-S), which encompasses all areas of study at each grade level.
- 2) Technology will enhance our efforts to expand the curricula to address authentic problems and enable students to generate products that have use outside the context of the classroom.
- 3) Technology will enhance home-school connections, communication, and collaboration in learning.
- 4) Multimedia, software, and Internet tools will allow teachers to integrate in a variety of ways increasing student levels of critical thinking.
- 5) Technology will advance the diversity of student learning.
- 6) Technology as an important tool or strategy that will be used to improve and enhance the management structure of school, instruction, and learning.
- 7) Curricular adjustments and additions will be made to enable students to use technology to enhance and facilitate learning.
- 8) Students will be provided with opportunities to use technology to equip them to live in an age of information and reach out for information for learning beyond the walls of BCA.
- 9) An effective Technology Professional Development program that is sustainable and ongoing to promote Teacher initiative for integrating technology in the classroom.
- 10) Provide a technology network which has the capability to deliver specialized, rigorous hypermedia and multimedia activities for instructional and learning purposes.

### **Student Use**

#### **The ISTE National Technology Standards (NETS-S) and Performance Indicators for Students:**

**ISTE NETS-S1.** Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology:

- Students will use technology to create a variety of products as a result of their study and research (papers, graphics, videos, multimedia products, broadcasts, visuals, etc.).

**ISTE NETS-S2.** Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

- Students will be able to participate in collaborative projects with their peers in other schools across nation and around the world.
- Students will be able to communicate with experts in various fields to obtain information.
- Students will be able to participate in distance learning classes not available at local schools.
- Students will have access to listings of assignments, school events, notices, reminders, etc. from their homes.

**ISTE NETS-S3.** Students apply digital tools to gather, evaluate, and use information.

- Students will have immediate access to the school's learning resource databases from classrooms and the media center.
- Students will have access to outside resources from classrooms and the media centers.
- Students will have access to individual educational plans and lessons for certain aspects of the educational process.

**ISTE NETS-S6.** Students demonstrate a sound understanding of technology concepts, systems, and operations.

- Students will have access to a computer lab where they will be taught basic computer use, keyboarding, word processing, along with use of multimedia tools, databases, spreadsheets, research and communication tools.
- Students will use a variety of special technological applications, i.e., physical science, life science, art, music, mathematics, applied technology, etc.

## **Teacher and Staff Use**

**The ISTE National Technology Standards (NETS-T) and Performance Indicators for Teachers:**

**ISTE NETS-T2.** Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the NETS-S.

- Teachers will use appropriate technology to present lessons and information and to create varied and authentic learning experiences for students.
- Teachers will use technology to enhance students' learning and engage them in the learning process, i.e., problem solving, simulations, demonstrations, tutorials, drill and practice, multimedia presentations, authentic products, etc.

**ISTE NETS-T3.** Teachers exhibit knowledge, skills, and work processes representative of an innovative professional in a global and digital society.

- Teachers will use technology as an integral part of their classroom for instruction, communication, and management.
- Teachers will have immediate access to a database of BCA curriculum goals, objectives, theme/unit plans, course syllabus, assessments, etc.)
- Teachers will have access to a student database with pertinent information about students' learning styles, special needs, special interests, curriculum accommodations, health data, emergency information, test scores, course registration, discipline records, etc.
- Attendance and grading will be done electronically.
- Teachers will communicate electronically with colleagues within the school, the district, and across the nation for input, assistance, and exchange of ideas.
- Teachers will have access to a wide range of databases containing theme/unit plans and other educational resources.
- Teachers will use electronic mail for access to BCA and local school announcements, memos, calendars of committees and facilities, and each other.
- Staff voice and/or electronic mail will be available to all staff, students, and parents.
- Teachers will be able to use technology for student portfolio assessment.

**ISTE NETS-T5.** Teachers continuously improve their professional practice, model lifelong learning, and exhibit leadership in their school and professional community by promoting and demonstrating the effective use of digital tools and resources.

- Teachers will be able to engage in staff development programs delivered electronically.

### **Administrator Use**

**The ISTE National Technology Standards (NETS-A) and Performance Indicators for Administrators:**

**ISTE NETS-A1.** Educational Administrators inspire and lead development and implementation of a shared vision for comprehensive integration of technology to promote excellence and support transformation throughout the organization.

- Administrators will use technology to manage information relative to curriculum implementation, student activity, and student and teacher performance.

**ISTE NETS-A2.** Digital Age Learning Culture Educational Administrators create, promote, and sustain a dynamic, digital-age learning culture that provides a rigorous, relevant, and engaging education for all students.

- Administrators will provide learner-centered environments equipped with technology and learning resources to meet the individual, diverse needs of Administration, Teachers, Staff, and Students.

**ISTE NETS-A3.** Educational Administrators promote an environment of professional learning and innovation that empowers educators to enhance student learning through the infusion of contemporary technologies and digital resources.

- Administrators will use electronic technologies to facilitate productivity, access information for decision-making and professional growth, and perform school management tasks.
- Administrators will use technology to conduct research regarding district wide needs and learning trends.
- The use of technology will enable administrators to communicate easily and frequently with parents, peers, students and staff.

## **INFRASTRUCTURE NEEDS/TECHNICAL SPECIFICATION**

According to the National Technology Plan, 2010. Transforming American Education: Learning Powered by Technology, "... the infrastructure includes people, processes, learning resources, and policies and sustainable models for continuous improvement in addition to broadband connectivity, servers, software, management systems, and administrative tools. Effective educational use of technology requires up-to-date technological tools and the technical support that allows for consistent, planned use by staff, students, administrators, and parents. As resources become available, the school will be provided with the necessary hardware and software to implement this plan. All hardware purchases must meet school specifications. The review, evaluation and purchase of computer hardware is a collaborative process between building Administrators, Teachers, and Church elected Board of Trustees.

The wireless network project will take approximately 2 months to implement, and we expect the following concrete results:

The BCA building is a split level design. Golden Construction and Remodeling proposes to install a total of six Wireless Access Points (WAP) devices installed according to the glowing areas outlined in the building floor plan.

One WAP will be installed on the first floor centered between rooms 13 and 14.

One WAP will be installed on the first floor centered between the Art room and Room 16.

One WAP will be installed in the second floor office area.

One WAP will be installed on the second floor – Inside of the library.

One WAP will be installed on the third floor – Centered in the hallway outside of room 25.

One WAP will be installed on the third floor – Inside of the computer lab.

The above plan will provide for adequate signal strength and capacity in the classroom areas along with built-in redundancy.

The following voice, video, data foundation level technologies will be implemented: Wireless Network with voice, video, and data connections in offices and classrooms, with the following wired computer workstation specifications:

- \_ K- 4 classrooms - 1 station
- \_ 5-8 classrooms – 2 stations
- \_ Media Center - 6 stations
- \_ Computer Lab – 24 stations

#### 1. Security Software

- Fortigate/FortiWiFi -60D Series Security Appliance
- Microsoft Security Essentials

#### 2. Management Software

- Fortigate/FortiWiFi -60D Series Security Appliance

#### 3. Software at each location includes, but is not limited to the following list:

- Microsoft Security Essential Anti-virus software for PC workstations
- Browser Software: Microsoft Internet Explorer and Google Chrome
- Open Source Software (i.e., Productivity Software, Assessment & Evaluation Software, Communication and Collaboration Software, Web Tools 2.0)
- Smartboard Software
- Other software for integration with curriculum

#### 4. Administrative Software

- Browser Software: Microsoft Internet Explorer and Google Chrome
- Open Source Software (i.e., Productivity Software, Assessment & Evaluation Software, Communication and Collaboration Software, Web Tools 2.0)

#### 5. Other Resources

- International Standards for Technology in Education (ISTE), National Educational Technology Standards for Teachers (NETS-T)
- International Standards for Technology in Education (ISTE), National Educational Technology Standards for Students (NETS-S)

## **PROFESSIONAL DEVELOPMENT for TECHNOLOGY NETWORK INFRASTRUCTURE**

Professional development and resources will be provided to ensure that BCA staff has the appropriate competencies needed to use technology network, the Internet, and educational technology resources. Required and encouraged training options include: BCA technology training sessions, college/university courses, and collaborating with other school systems. All staff will be trained as new products and services are added.

### **Technology Network Training Goals**

Appropriate integration of technology into curriculum is dependent on a strong staff development program. Our goal is to hire a part-time Technology Coach to provide training so that all staff will be able to achieve the integration guidelines as well as use the technologies to assist in their work and delivery of curriculum. Priorities for training will be determined through staff surveys and collaboration between the Technology Coach, Teaching Staff, and Administrators. The following components of technology training will be included in all BCA training sessions:

- Connection to ISTE NETS for Teacher and ISTE NETS for Students competencies
- Basic use of specific software/hardware
- Integration techniques for use of technology with the curriculum
- Access to follow up support.

BCA currently has computer hardware and software for Professional Development in Technology and is seeking a part-time Technology Coach to conduct the training. Training is essential for preparing teachers to integrate technology into the classroom. training priorities, level of need, and curriculum needs.

### **District Staff Technology Training Opportunities & Timeline**

- BCA will have two Professional Development Days each year in which one-half of the days will be devoted to technology training.
- Summer workshops for technology training will be organized to enhance curriculum integration.
- All classroom teachers are required to be with their students in the computer lab to support the curriculum instruction and technology integration. Classroom teachers have access to training, along with their students.

### **SUPPORTING RESOURCES**

BCA is committed to providing the following resources to support teaching and learning using technology. Professional Development in Technology will include utilizing a variety of resources: on-site hands on training, and on-line web-based instruction, video & print training materials. A part-time Technology Coach will provide Professional development in Technology to Administrators, Teachers, and Staff.



**BUDGET FOR WIRELESS TECHNOLOGY NETWORK INFRASTRUCTURE**

The Ambrose Monell Foundation Bethlehem Christian Academy Grant Proposal for Technology Network Infrastructure Budget Plan			
Budget Category	Description	Cost Calculation	Grant Request Amount
Wireless Cost	(6) Wireless Access Points & POE Injectors - \$100 X 6	\$600	\$600
	(1) 1000 ft. Cat 5 Spool Cable & Connectors	\$150	\$150
	(6) Wireless AP Installations – \$150 X 6	\$900	\$900
Internet Cost	(1) Fortigate/FortiWiFi - 60D Series Security Appliance	\$950	\$950
	(1) Security Appliance Installation and Setup	\$300	\$300
	AT&T High Speed Internet Direct Pro (Dynamic) Plan- \$45/mo. X 12	\$540	-0-
Professional Development for Technology Network Infrastructure	(1) Part-time Technology Coach – \$30/hr. X 21 per school year	\$630	\$630
	(8) Teacher stipend for participation in Summer Workshop – \$60/day X 2	\$960	\$960
	Workshop supplies including paper and books- \$20 X 8	\$160	-0-
		<b>Total Cost</b> \$5190	<b>Grant Request Total Amount</b> \$4490

## **COORDINATION OF RESOURCES**

A yearly budget will be provided for technology resources for the purchase of hardware, software, expendable supplies, and continued training will come from a variety of sources:

- \_ Line item in annual operating budget
- \_ Gifts from supporters earmarked for technology
- \_ Grants designated for technology acquisition, upgrades, and training
- \_ Contingency fund for major repairs, misc. needs
- \_ Parents/Church supporter for donation of services --- BCA relies heavily on the support of its families and church community.

## **MONITORING, ASSESSMENT, AND EVALUATION**

The Administrators, Teachers, and Church elected Board of Trustees will be responsible for annual review and evaluation of the technology plan. The committee will also use the rubric as recommended by the Ohio Department of Education. The technology committee will measure and report the effectiveness of BCA use and integration of technology. In addition, the committee will assess the amount and type of computers, network services, use of other technological tools, etc. The results of these assessments will be utilized to generate strategies for continuous improvements of the project.

We invite you visit the project in prior, during, and after the development stage. We welcome any assistance you may provide. We will be glad to submit any additional information you may require to make your decision to be a part of our project.

Sincerely,

Mrs. Christine C. Warner, Administrator and Principal  
Bethlehem Christian Academy  
440-315-4828