

A) Applicant Information

1. **Project Title:** Archbold Area Schools curriculum expansion and partnering program model.
2. **Executive Summary:** Through the use of technology that we currently have in place and will implement through the grant, our school will be able to meet all three goals of the grant (student achievement, spending reductions, and utilizing a greater share of resources in our classrooms).

We will make use of our current 1 to 1 program, expand our virtual program and partner with local schools and universities to accomplish these goals.

Our students will be able to take courses through distance learning, online programs and utilize their iPads, computers, and our on site wind turbine to increase learning opportunities at our school and with others.

3. Lead applicant primary contact:

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8. Individuals responsible:

Aaron Rex-Superintendent.: Previously involved in Race to The Top, One to One iPad initiative, creation of Wapakoneta Virtual School, construction of wind turbine in partnering project with three Ohio schools, and multiple construction firms.

Administrative Team-Dorothy Lambert, Royal Short, Matt Shields: All of these individuals have also served as Race to the Top team members, have implemented either One to One programs, or other computer initiatives in their buildings.

Lorinda Brader and Josh Voll-Technology Team: Have been responsible for implementing the One to One program, have a great deal of experience in technology in education, providing trainings, etc.

Science and Math teachers at each building: Have been involved in Stem, and Race to the Top initiatives in the past.

B) Project Description

9. Goals:

- a. Student achievement
- b. Spending reductions in the five year forecast
- c. Utilization of a greater share of resources in the classroom

10. Description of the project: Mixed concept

11. Describe the innovative project: Our program will involve a variety of educational tools and programs that will allow our students in all of our buildings to learn in a multitude of ways. It will also give them the opportunity to not only use technology, but to interact with students in other schools to expand their learning as well.

We are currently using a polycom (IVDL-interactive video distance learning tool) to instruct students in American Sign Language. This system gives us the ability to teach a third language to our students without any additional cost, other than the textbooks used in this classroom. Funds from the grant would allow us to purchase our own polycom system (ours is borrowed) to continue to provide this class and others like it to our student body. We would also have the funds to purchase a more appropriate television for our students as they broadcast with students all over the State of Ohio.

In addition to offering American Sign Language we are currently in discussion with Toledo Public Schools to offer Chinese and other electives that our students may choose to take. This would allow students in our rural district the opportunity to have a broader selection of courses and also interact with students in another school setting.

We would also be purchasing another polycom unit for our students in the Math and Science areas. Our school currently has an Aeronautica 54-750 Wind Turbine. This turbine went online in February 2013 and not only supplies our school with electricity, but also provides us with valuable data that can be used in our classrooms and many others to provide instruction. Our website <http://www.kw4ed.org/archbold/Index.aspx> provides you with a live view of the turbine and <http://www.kw4ed.org/aas/turbines/Data.aspx> provides live data. Our school also has access through another program to track wind speeds, yaw position, blade pitch, daily totals and much more. Through the grant we will expand the use of this website and the instructional materials on it so that our kids can use it as well as the schools that we interact with. There are three other schools with sister turbines that we will share this data with and also interact over the polycom.

Our elementary and middle school students will also be learning from the turbine, as our high school students become subject specialists and travel to their buildings to

teach them lessons. We would also go as far as bringing in other schools, traveling to their sites, or partnering with them to do distance learning lessons.

In order to complete the work required in our science and math classes we would be purchasing two mobile labs. These labs would allow our classes to use the websites, create worksheets, charts, and presentations. These labs could flow among the classrooms and also be transported to our middle school and elementary for them to use when our students/staff go to teach their classes. We would also be purchasing one portable lab of iPads for our students to use to collect video, create presentations, use and develop apps that go along with our instruction in these areas. We are currently a 1 to 1 school and by using iPads we will allow our elementary and middle school students to see how these tools can be used in Math and Science. Our Stem club will also utilize these tools as they travel to the turbine and possibly the other locations.

The final piece of our grant proposal would be increasing our course offerings through the use of virtual classes. We currently have 15 students taking 41 courses online, however, much of this is strictly for remedial work, or for students with health issues. With much of today's learning taking place online at the high school level and especially the post-secondary, we would like to offer each of our students the ability to take one online course before they graduate. In a school our size (1250 students in the district) we do not have the staff to offer many of the electives that larger schools do. Online programming along with our distance learning would open up so many more options for our young people. We currently use Apex learning to offer these courses and have maxed out our 15 licenses. With the help of the grant we would be able to offer our students the choices that they deserve.

In addition to course offerings we will offer these same courses to students who may consider withdrawing to attend a virtual academy. This will keep those students and their state share of funding in our school system. Courses will also be offered to students that are currently home schooled who may have an interest in virtual programming. This would be mutually beneficial as they would get the course work and we would be able to include them in our student count, therefore bringing in more state funding to our district.

To accommodate the increase in computer usage we would purchase one portable lab that could be utilized for this type of programming.

12. Describe how it will meet the goals selected above:

- Student achievement-Our students will have the ability to take a broader range of courses and also implement new types of learning in our school. This will aide them in their achievement at the high school level, and also provide the experiences needed for college and the work force. Additional foreign

languages, AP courses, a broad range of electives are all coursework they can get through virtual courses and the combination of distance learning. AP courses will allow them to earn college credit and more challenging academics will help with the ACT and college readiness.

The technology piece of the grant will also provide a huge asset when it comes to them having success beyond high school no matter what they choose to do.

- Spending reductions-Through the funding of our computer courses, polycom systems, website improvements, and needed technology, we will no longer have to incur these costs as a district, or take on the extra costs.

In addition we will be able to offer courses in elective areas without hiring new staff, and also reduce staff through retirement as we have done over the last few years.

- All of these funds will go directly to helping students in the classroom. Resources will be utilized to purchase materials and courses that can aid our students and benefit them immediately. Resources that had been used to purchase materials such as computers, iPads, website development, will be able to flow back into our classrooms for teacher and student use.

13. Financial documentation:

Completed the Straight A Financial Impact Template

14. What is the total cost for implementing the innovative project?

- Total project cost: \$168,910.93
 - The budget items that are explained below will be strictly purchased from grant dollars. There will be no additional funding needed.
- 1) 2 Polycom units will be purchased $\$4500.00 \times 2 = \$9,000$
 - 2) Monitors will be purchased to go along with these units. $2 \times \$550 = \1100.00
 - 3) 3 portable classrooms with 30 laptops, totaling 90 of Mac Airs will be purchased at a cost of $\$1150.00 \times 90 = \$103,500.00$
 - 4) 3 charging/portable carts for iPads $3 \times \$2032.00 = \6096.00
 - 5) 1 set of classroom iPads (30) will be purchased at a cost of $30 \times 499.00 = \$14,970.00$
 - 6) 1 portable cart for iPads $\$2,599.00$
 - 7) Licenses for our computer courses will be purchased at a cost of $\$5000 \times 3 = \$15,000.00$

8) Aide for first year at 16.60 per hour X 8 hours x 3 days per week X 36 weeks=\$16,645.93

15. What new/recurring costs of your innovative project will continue once the grant expires?

The only recurring costs from our project will be for courses that are purchased from virtual programming \$5000 per year (\$15,000) and distance learning.

We would also be paying our technology aide at 16.60 per hour (contractual amount) for 8 hours per day x 3 days per week for 36 weeks at \$16,645.93

However, as we continue to offer students courses that they can purchase for additional credit as a course fee, and through the maintaining of our students, possible recruitment of others, we will be able to make the project self-sustaining. In the future we also plan to offer courses to other schools such as French, Spanish, Advanced courses (AP) that will bring in new dollars as well.

16. Are there expected savings that may result from the implementation of the innovative project?

- We currently pay \$3000 for our limited online programming through APEX learning, this cost would be eliminated.
- We would not fill one retirement in our physical education/health department. Students would be taking enough courses of health online that we could share two teachers between the MS and the HS. Expected savings would be on full time teacher salary of \$37,744.65 per year for a new hire plus fringe benefits.
- Our school was anticipating purchasing mobile labs to increase our capability in our classrooms. The purchase of the labs and carts would save the district \$109,596.00
- Through the purchase of iPads we would not be purchasing these tools for our Stem group to use in educating fellow students at the high school, middle school and elementary. This would save the district \$17,569.00
- The school district would not have to purchase 2 Polycom units and monitors at a cost of \$9000.00

17. Provide a brief explanation of how the project is self-sustaining:

The only ongoing cost of the grant will be the online coursework at \$5000 per year, but these licenses would be purchased at the beginning of the grant for five years.

We would also be paying our technology aide at 16.60 per hour (contractual amount) for 8 hours per day x 3 days per week for 36 weeks at \$16,645.93

Due to the fact that we will be able to maintain students who would have left for virtual school, enrolling students who may be home schooled, and finally charging a course fee for students to buy additional courses, these costs will be offset.

In addition, we will be utilizing the polycom system to provide courses to other schools. Spanish, French, AP and advanced courses will be provided to other local schools and they will be charged a per student fee of \$400. This charged amount will help to offset the costs of our continued use of virtual programming and also teacher salaries.

All other aspects of the grant are teacher and student based and will be carried out as regular aspects of the classroom.

18. Time line for successful implementation:

- Proposal time line dates

Plan: 10/31/2013

Narrative explanation: Our plan will be ready by the end of October. We have all of the items identified for purchase. We have talked to or met with all of the parties who would be part of the project. I have met with our science teachers who will take part in the project. Stem club students have met with the teacher and are apprised of their role. My high school principal (Royal Short) and myself have traveled to Toledo Public Schools to see their distance-learning program and have an initial agreement with their school district. I have spoken with my middle school and elementary principals on how we will implement the new technology into their classrooms in science and math. I have also met with my math instructor to discuss how we can use the technology and data from our turbine in his classes as well. We currently use online courses, but will only need to begin the purchase and promotion of our expanded online courses. We can then offer these to students during our second semester.

Implement: 01/21/2014

The implementation of the plan will begin with second semester. Our students will begin to use the new technology to interact with our turbine at all levels in our school buildings. We will train our high school specialists in math and science to work with our elementary students so they can travel to those buildings in the spring. We will contact other school buildings that we have relationships with over the polycom to share data. At this time Kenston schools and Pettisville schools would be part of this learning partnership as they have sister turbines.

Our American Sign Language classes will begin to use our new polycom systems second semester and we will start to promote the courses that we will have available through Toledo Public Schools. We will also begin to look for relationships to offer classes to local rural schools in courses such as AP Calculus, French, and other electives that they cannot provide for their students.

Our students will have the opportunity to sign up for additional courses offered through virtual programming. Since this is something that they will be exposed to in college, we will offer it to our seniors and juniors and work down through the grades. My administrative team will also begin to talk to parents who may be thinking about withdrawing for virtual schools about the opportunities that we can provide. Home schooled families will also be contacted to do similar things so they can have this free online programming. By doing this we will expose them to our school and also begin to receive partial funding for their enrollment.

Summative evaluation: 6/20/2014

By the end of the school year we will be able to provide a summary of the program thus far. We can measure our successes in the classroom district wide through the students using data from our turbine in math and science. This will expand their learning and give them real life experiences right on our campus. This info will be shared with our school board and community.

We will also be able to determine how successful our polycom program (distance learning) and virtual programs have been due to enrollment, student success, and feedback. We will use Google docs to survey our students on their experiences and also collect information about what courses they would like to see in the future.

The same will prove true for our virtual programming as we measure participation and success in these classes. Students will earn elective credits and be better prepared for college. We will also survey our students who are involved. In June we will also have an idea of what our numbers will be for the following year, but will carry out some of our recruitment into the summer.

Spring will give us an opportunity to develop relationships with local schools for next year (providing them classes) through distance learning and see if this will be a lucrative way to pay for our programs that we purchase through Toledo Public and help offset teacher salaries.

Our administrative team will evaluate our programs bi-weekly at our meetings and have constant communication with the staff and students involved.

19. Expected changes to the instructional and/or organizational practices.

The types of programming that we are implementing will be totally new to our district. Even though our school has had a great deal of technology in the area of 1 to 1 learning. There has never been much done with distance learning and virtual programming. We are currently in our first year offering only one distance class and only limited virtual programs for our remedial classes.

These new tools will open up a whole new realm of possibilities for our kids and give our teachers an opportunity to teach in new ways. Students will be provided with a way to take a broad range of electives that are not there for them now.

With the use of the new technology in our buildings our kids at all levels will be able to use our turbine and its information to learn science and math in an interesting way. We can take physics, math, biology, and tie them directly into data that we are collecting on site. Our schools will have the opportunity to see math and science in action and teach others about it. Up to this time we have had very little interaction with the turbine, other than the fact that we know it creates data. Not only will our students use it, but also we will be able to share this information with other schools that have the same technology with the use of our computers, laptops, and polycom units. Learning and teaching will take place in a whole new way.

20. Describe the rationale, research or past success that supports the innovative project and its impact on student achievement, spending reduction in the five-year fiscal forecast or utilization of a greater share of resources in the classroom.

The implementation of the virtual programs will no doubt offer our students the ability to take a broader range of classes. In my previous position as a high school principal, I started a virtual academy and was able to witness students taking courses that we could not offer due to staffing. This affords them the chance to earn an honors diploma, a well-rounded education for college, and experience in the type of class they will see in college and the workforce.

The distance learning program through the polycom will do very similar things. Students will take classes in a non-traditional setting that is being done in college, other high schools and the workplace. These courses such as American Sign Language, Chinese, AP, and advanced courses will have a huge impact on their achievement. It will also give our school a way to distribute these same types of courses to other schools to offset our costs and even help pay staff salaries. We will market courses such as French, AP Calculus, Social Studies electives and more to our local schools who also struggle in offering a broad range of courses to their students.

Finally, the technology that we purchase will offset costs that would have been spent from our general fund. Over \$100,000 will purchase laptops and iPads to be used by our students at all grade levels. Our classes will have experience with this technology that is required for 21st century skill development. They will also share their information with their fellow classmates and those from other schools at the elementary, middle, and high school levels.

Through the school selling virtual programs, recruiting students back, or keeping them from leaving, we will save the district dollars. Selling courses through distance learning provide much needed funds and technology purchases will save the district finances. Our virtual classes will also allow us to reduce at least one staff member through attrition after retirement. Depending on our success it could save more funding in the future.

21. Is this project able to be replicated?

Yes

22. How?

I have personally witnessed the success of virtual programs, as I was the head of our virtual programming while serving as a high school principal. This can be done in any district that wants to provide options for its students. It is being done all over Ohio and the country. We will have a model for our program that will be published on our website.

Distance learning through the polycom is being done in Archbold now successfully. The grant would allow us to own our own technology and expand it to offer more courses/choices through other schools and possibly down the road, universities. This is being done now and will continue to grow.

Archbold Area Schools is not the only school with a turbine in the State of Ohio, as we have partnered with two others in our state. This data is widely available on the Internet and can be used by any school for their learning experiences. We will be happy to partner with any school or help to provide curriculum. Through the grant we will solicit others to take part in these valuable learning opportunities.

23. Substantial Value and lasting impact:

Once the program is started it will continue to grow and will be quantified by the number of students enrolled, the number of courses taken, courses purchased by other districts, and finally classrooms impacted by student led instruction.

Students over the next five years and after due to savings will continue to take online programming and distance courses offered across the state/country. Through course fees and selling of courses we will continue to offer similar courses. (In fact some courses such as American Sign Language are offered for free currently).

Our science and math students will have direct access to data online and use the technology to grow and teach others in our district and the State. This will benefit our kids and others who are able to hear their message.

After the initial investment as demonstrated in our financial impact statement, there will be little to no money invested in this program to maintain it. Savings and income will be earned through our distance programs to offset our costs.

24. Specific benchmarks related to the fund goals identified in question 9 that the project aims to achieve in five years? Include any other anticipated outcomes of the project that you hope to achieve that may not be easily benchmarked.

Student achievement:

First benchmark period will be the end of the first semester/end of the school year (June 2014)

Short term-Demonstrated in the first four months of implementation. We will identify how many students have enrolled in online programming and their success rate. We will track grades for these courses and survey our students using Google docs to get feedback on the program.

We will also determine the number of students who have signed up for courses in 2014-2015. These will be identified in terms of coming back for more courses, new students taking credits, students coming in from home school or previously in outside virtual programming.

Students in our distance learning program through the polycom will be surveyed to get their feedback. We will document how many new courses that we are able to offer and also look at the number of students who are signed up to take courses. The

number of courses being transmitted to other schools and coming into Archbold will also be evaluated.

The classes that take part in the technology/wind turbine program will be asked to provide feedback on their experience. We will also solicit feedback from other schools that we communicate with about the turbine. This will impact students in the high school math, science classes and also students in science and math at our middle and elementary school levels. These students will be utilized to give presentations and we will record these presentations and post on our website as evidence.

All of these practices to determine student achievement will be carried out at the end of each semester/beginning of the year. June 2014, August 2014, January 2015, June 2015.

Spending reductions:

This will take place in the exact same manner as above. We will utilize the data from our five year forecast and permanent improvement fund to determine the savings and income that we gain through the project.

At the end of the school year/June we will be able to determine how much we have saved through technology purposes (computers/iPads/polycoms). We will also know the cost of computer courses and income for students purchasing courses. We will be able to determine as well the cost for purchasing distance classes through other entities if needed.

If we have staff reductions, which we anticipate 1-2 we will also be able to evaluate these savings in our five-year forecast.

Cost/Reductions will be evaluated each semester and in-line with the release of our five-year forecast and PI fund accounts.

Resources in the classroom:

With the purchase of new computers and iPads we will see right away the flow of technology in the classrooms. These portable units will be signed out on our staff technology resource page so we can track their usage. By doing this we will see how often they are utilized and by what grade levels.

As grant dollars will be used to purchase these new technologies we will document in our PI account notes where the money that is "freed up" will flow. General fund dollars and PI funds will be re-allocated to classrooms for other needed tools in our curriculum.

We will keep an excel spreadsheet of all items that are purchased with the grant money and also items that were made possible for purchase due to reallocation. This will be done on the same cycle at the end of each semester.

25. Plan to evaluate the impact of the concept, strategy, or approaches used:

-During the implementation of our program we will collect the following data. This will be collected each semester and evaluated for progress. At the end of each school year we will evaluate the needs for the next school year in terms of licenses and courses offered or needed from other providers. All of the information will be entered into excel and charted as well. During each five year forecast cycle we (treasurer and myself) will look at the financial impact to measure the success of the program as well.

We will also evaluate from our sign out sheets the use of the new technology and how it is being implemented in the classrooms. Each semester we will survey our students to see how they have been impacted through this new instruction.

- 1) Number of students and courses taken in an online capacity (excel spreadsheet)
- 2) Student success rate/grades in these courses (excel spreadsheet)
- 3) Student feedback on these programs collected in Google docs
- 4) Costs and income created from these courses (excel spreadsheet)
- 5) Number of students and courses taken in a IVDL (distance learning) capacity (excel spreadsheet)
- 6) Number of students and courses that we distribute to other districts (excel spreadsheet)
- 7) Costs and income created from these courses (excel spreadsheet)
- 8) Feedback from students in Google docs
- 9) Utilization of computers and iPads in the classroom at each building. Identify what they are being used for in research/presentation/data collection in our math and science classrooms (there will be a sign out sheet created in our staff resources to monitor usage)
- 10) We will monitor our students traveling from the high school to the elementary and middle school to teach students how to integrate the data from the turbine into classroom learning. The number of classes and students reached will be charted.
- 11) We will collect feedback from students involved in the program on Google docs.
- 12) We will collect data in excel on how many times our students communicate with other districts about our turbine and share information. This will be done with our 2 sister turbines and other locations as we see interest. All grade levels will be involved.
- 13) Collect the number of guest speakers that we have in relation to the turbine and data collected.
- 14) Collect the number of times our students and staff do presentations to other classes/schools/seminars. For example, presenting at capital conference.

