

Kenton County Schools | It's about ALL kids.

**THE KENTON COUNTY BOARD OF
EDUCATION**

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WEBSITE: www.kenton.kyschools.us

Dr. Henry Webb, Superintendent of Schools

KCSD ISSUE PAPER

DATE:

8/30/2018

AGENDA ITEM (ACTION ITEM):

Consider/Approve Summit View Academy's application to the Greater Cincinnati STEM Collaboration for funding for STEM Bicycle Club for the 2018-19 school year.

APPLICABLE BOARD POLICY:

Click or tap here to enter text.

HISTORY/BACKGROUND:

Summit View Academy has received funding through the Greater Cincinnati STEM Collaborative for two STEM Bicycle Clubs in previous years. These clubs have provided students the opportunity to learn about STEM concepts while learning about bicycles. This club meets during the school day as well as after school and provides opportunities for our students to serve as peer mentors and service learning as they run a bicycle safety fair for a first grade class.

FISCAL/BUDGETARY IMPACT:

If the grant is awarded, funding for the teacher stipend will be granted to SVA. SVA is responsible for providing food for student celebration and transportation for bicycles to the year-end celebration on a Saturday in May at the University of Cincinnati..

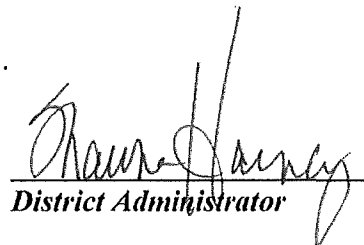
RECOMMENDATION:

It is recommended that the Board of Education approve Summit View Academy's grant application for a STEM Bicycle Club from the Greater Cincinnati STEM Collaborative.

CONTACT PERSON:

Carrie Holloway, Assistant Principal.


Principal


District Administrator


Superintendent

Use this form to submit your request to the Superintendent for items to be added to the Board Meeting Agenda.

Principal –complete, print, sign and send to your Director. Director –if approved, sign and put in the Superintendent's mailbox.

Kenton County Board of Education

Board Members: Carl Wicklund, Chairperson Karen L. Collins, Vice Chairperson Joshua Crabtree, Esq. Carla Egan Jessica Jehn
"The Kenton County Board of Education provides *Equal Education & Employment Opportunities.*"



Greater Cincinnati STEM Collaborative (GCSC)

STEM Bicycle Club and 3D Printer Club

2018-2019 Application Packet

Greater Cincinnati STEM Collaborative (GCSC) helps prepare students for their futures and to join Greater Cincinnati's workforce through connected, robust STEM (Science, Technology, Engineering, Math) learning pathways. STEM learning is propelled by business, education, community collaboration and our culture of incubation, acceleration, and inclusion.

Our vision is that Greater Cincinnati continues its growth as a technologically rich, vibrant community with the most talented STEM workforce in the country that is representative of the region's population. GCSC prioritizes organizations serving students underrepresented in STEM (low-income students, girls, and students of color – African American, Latino/Hispanic, mixed race) for direct funding and support.

Due to the generosity of our supporters and demonstrated positive impact, GCSC will again support 3d Printers Clubs and STEM Bicycle Clubs during the 2018-2019 school year.

Any school / school partner interested to lead a GCSC 3d Printers or STEM Bicycle Club in 2018-2019 must apply online by Monday, September 17, 2018.

3d Printers Club

The GCSC 3d Printers Club is a "heads on, hands on" project that uses an exciting, hot technology to engage students . . . 3D printers! For ten weeks after school 20 or more students design solutions to real problems using modeling software and a 3D printer. The club builds student confidence; strengthens students' design, technology, and problem-solving skills; and reinforces math and science principles taught during the school day.

The 3d Printers Club is designed for 5th and 6th grade students and aligned with both science and math standards (5th through 9th grades and extends well to other grades). The club offers two curricula: Problem Solving Inventions and 3d Grand Prix. The club concludes with an all-region "3d Printers Showcase" hosted at the University of Cincinnati (UC). 39 clubs ran in 2017-2018.

STEM Bicycle Club

The GCSC STEM Bicycle Club is a "heads on, hands on" project that engages 15 students for 10 weeks after school. Students break down and re-assemble bicycles they get to keep. The club builds student confidence; strengthens their making, problem solving, and persistence skills; and brings relevance to math and science principles taught during the school day.

The STEM Bicycle Club is designed primarily for 7th and 8th grade students and aligned with both science and math standards. It also extends well to other grades. See curriculum introduction here. The program includes extension curricula written by previous club teacher leaders (example, Inquiry Labs) and a culminating "STEM Bicycle Club Celebration" event hosted at UC. 19 clubs ran 2017-2018.

Both clubs provide students exposure to STEM career possibilities in design, engineering, advanced manufacturing, IT, science and more. This is accomplished most powerfully through the involvement of volunteer mentors / coaches, who are ideally in STEM professions.

Application Timeline

Milestone	Date
Applications announced and application window opens	July 30, 2018
Applications due	September 17, 2018
Announce club selections	November 16, 2018

Key Dates

Event	Who Attends	 3d printers club	 GCSC stem bicycle club
Professional Development (PD) and Training	Club Teacher Project Manager	November 28, 2018 9:00am - 3:00pm 3:00pm - 5:00pm (Optional Tech Session)	December 12, 2018 9:00am – 3:00pm
Project Debrief	Club Teacher Project Manager	February 27, 2019 11:00am – 1:00pm	May 1, 2019 11:00am – 1:00pm
Club Culmination / Field Trip, including campus tour	Students, families, club leaders and partners	March 7, 2019 9:00am – 1:30pm (3d Printers Showcase)	May 18, 2019 9:30am – 2:00pm (Celebration)

All events are hosted UC. Volunteers are welcome and encouraged to attend all events.

Submitting Your Application

Use this link to submit your club application:

[STEM Bicycle Club](#)

[3d Printers Club](#)

Schools / school partners may submit applications for each club if they are strongly ready and committed to both.

Once you're on the application site:

1. Make an account or sign in.
2. Begin filling out your information.
3. If you want to save a draft, scroll to the bottom of the application and click the "Save Draft" button. Access draft by logging into submittable.com, clicking the drop-down menu on the top right by your name, clicking "My Submissions," selecting "Saved Drafts" from the top bar, then clicking "Continue."
4. When your application is complete, click the orange Submit button. You will receive an email confirming your application has been received.

Club Selection Principles

1. **Inclusion and Access:** GCSC will award clubs disproportionately to educators (and their partners) serving students who are underrepresented in STEM (low-income students, girls, and students of color – African American, Latino/Hispanic, mixed race). GCSC will award clubs broadly across the region, while meeting other principles.
2. **Readiness & Commitment:** Club leaders and their sponsors must be committed to collaborate with GCSC and community volunteers to:
 - Maximize and measure positive student impacts
 - Share the story of club and student success
3. **Sustainability:** GCSC prioritizes funding clubs that will co-invest to cover at least a small portion of their club costs. In previous years clubs have accessed Title I or Title IV Block grant, 21st Century, PTO / PTA, local business, school foundation, etc. funds. GCSC is willing to help with partners' fund-raising (coaching / consultation, provide information needed for grant writing, letters of endorsement, etc.).
4. **Sponsor Priority:** Clubs will be awarded in line with sponsors' priorities: geographic location / diversity, student age and / or diversity, etc.

Club Resources Provided By GCSC

1. Curriculum that includes lesson plans and student workbooks.
2. Resources to learn how to use 3D printers and modeling software (3d Printers Club) and how-to videos (STEM Bicycle Club).
3. Online resources to support club planning, volunteer recruiting and orientation, student recruitment, family engagement, and more.
4. Professional Development (PD) / training and consultation for club leaders.
5. Club materials (bicycles and tools, 3D printers, etc.). Purchases and delivery are coordinated by GCSC.

6. Culminating events hosted at UC for club students, families, volunteers, leaders and other club supporters.
7. As needed a small budget for club food, teacher stipend, and transportation to culmination event / field trip.

Club Roles and Responsibilities

1. **Project Manager:** Plans the club, including logistics and resources. Is the primary communication interface between the school, parents, community partners, volunteers, and GCSC. Key partner with the teacher to plan space and food, recruit students and obtain family permissions, administer post-club surveys, arrange transportation to culmination event. Collaborates with others to recruit volunteer coaches / mentors. Ensures organization agrees to and accepts GCSC club grant terms. Serves as liaison between teacher and technical (IT) support to ensure all required technology is operational (3D printer connections, connection to STEM Bicycle Club videos). With club teacher plans involvement of students' families.

GCSC has seen many types of people successfully provide project manager leadership, including: resource coordinators, school counselors, after-school / 21st Century coordinators, instructional coaches, other teachers, administrators, community partners, and volunteers.

2. **Teacher:** Prepares and leads club meetings, using provided curricular resources. Creates tie-ins to science and math curriculum taught during the school day. With club project manager plans involvement of students' families. Ideally, is a K-12 math, science, engineering, or other STEM / STEAM teacher.

High-Level Action Plan for STEM Bicycle and 3d Printers Clubs

1. Determine club leaders (project manager, teacher) and set club schedule.
1. Decide club meeting location / work space.
2. Recruit volunteer coaches (mentors) from the partner organizations identified & confirmed during the application process.
3. Notify technical (IT) personnel of 3D printer connection, STEM Bicycle Club video-viewing needs.
4. Attend all-region club training / professional development at UC.
5. Plan food.
6. Plan how and where club materials will be stored between club meetings.
7. Select students. Collect permission forms and media releases.
8. Plan parent / family involvement.
9. Plan for club visitors, including media.
10. Run club, including:
 - Administer online surveys regarding club impact and benefits
 - Regularly post club news and pictures on social media
11. Attend all-region project debrief at UC.
12. Attend all-region club culmination / field trip at UC with students, families, volunteers, and other club partners.

"Thought Starter" Planning Resources

[Student Selection](#)

[Attracting Volunteers](#)

[Workspaces & Technology](#)

[Family Involvement](#)

Questions?

Contact GCSC at gscstemed@gmail.com if more information is needed to complete an application. Inquiries should include a description of the information needed and full contact information (name, organization, email address, and phone number).

PART I: APPLICANT & CLUB INFORMATION

On whose behalf (organization) is this application being submitted? *

Summit View Academy

This organization is considered a: *

School

Non-profit

Other

If you answered "School" to the above question please provide the Principal's name below. *

If you answered "school" to the above question please provide the Principal's email below. *

Lesley.smith@kenton.kyschools.us

If your organization is a "non-profit", please provide your 501 (c) 3 number below. Otherwise, please enter N/A.

N/A

If your organization is a "non-profit", please provide your website URL below. Otherwise, please enter N/A. *

N/A

Please provide the name and organizational role of the person submitting this application. *

Jason Shattuck, STEM Bicycle Club sponsor

Please provide the email address of the person submitting this application: *

Jason.shattuck@kenton.kyschools.us

Please provide the best contact number of the person submitting this application: * 859-359-9600

Please provide the organization street address here: *

5006 Madison Pike

Zip Code *

41051

City *

Independence

State *

KY

Please describe your organization and why you are interested in hosting this club. *

Summit View Academy is a STEAM focused P-8 school in Kenton County. We were fortunate enough to host an amazing Bike Club last year that occurred during our Genius Hour class for 6th grade students and was also held one day a week after school for students who were unable to participate

during Genius Hour due to scheduling of other enrichment classes such as band and chorus. This program was a great opportunity for our students to make a connection to a skill that most of them have, riding a bike, to the actual STEM concepts involved in making a bike work. It was also a great opportunity for our students to practice their leadership skills as the students who participated in Genius Hour were the mentors for the after school program since they were now the experts. Students learned about systems and also participated in both a Bicycle Inventor's experience as well as a service learning opportunity where they taught first grade students about bicycle safety. The STEM Bicycle Club provided a wealth of learning opportunities for our students.

Limit: 200 words

What is your organization's service area? Specify state, county, and city/township/village/community.

Independence, Kenton County, KY

Are you applying for funding for a new or existing club? *

New

Existing

Have you confirmed with your school / district IT staff that they will provide your club with any needed tech support?

None needed

PART II: STUDENT INFORMATION

How will students be selected to participate in your club? How will your club ensure their readiness and commitment, including to attend at least 80% of club meetings? *

An information session will be held for all interested students during Genius Hour as well as after school. Students for this club will be selected after undergoing an application process, including a brief teacher recommendation as well as a signed parent agreement stating the expectation of student attendance in the club meetings. Students will be selected on their ability to commit to attendance and their interest statement as to why they want to be part of the club.

Limit: 200 words

How will you ensure diversity (ethnic, gender, leadership skills, academic performance and potential, etc.) within your club? *

During the application review process, priority selection will be given to students of diverse backgrounds including our Free and Reduced Lunch program members in order to provide them with an experience that they may otherwise not have the opportunity to participate in. The opportunity to be in a mentoring relationship with a positive peer role model will benefit this population – whether they are the mentor or the mentee. We will also be looking at our leadership

talent pool to make sure that we have a diverse group that learn from one another and build positive peer relationships.

Limit: 100 words

What percentage of your club's students will be low-income (reduced/free lunch eligible) students? Describe these students.

Our school population is currently has about 42% of our students participating in the Free and Reduced Lunch program. Our club's students will be representative of this population.

Are you interested in running an all-girls club? *

Yes

No

Unsure

We would prefer to include all qualified students to participate in our club, however, we did have success last year by creating gender specific small groups and allowing female students the opportunity to work on a STEM bicycle project within an all girls group. This group was one of the most successful group in our club.*

Resources that may help inform your response: <http://greatercincvstem.org/girls-in-stem/>
(Videos and more)

Limit: 100 words

PART III: PARTNER INFORMATION

Who will be your club's project manager? *

Carrie Holloway

Please specify a name.

Enter his/her email address: *carrie.holloway2@kenton.kyschools.us

What is his/her role in your organization?

Asst. Principal

Who will be your club's teacher? *

Jason Shattuck

Please specify a name.

Enter his/her email address here: * Jason.shattuck@kenton.kyschools.us

Please choose the statement that best describes your plans for volunteers: *

I have a network of mentors/volunteers that will help with this club.

I am currently working on getting mentors and volunteers to help with this club.

I need assistance in securing mentors/volunteers to help with this club.

Only my organization staff will help mentor / coach club students.

What partner organization(s) will provide volunteer coaches to your club? *

We will use a number of student mentors who have participated in the SVA STEM bicycle club in previous years. These students were highly successful in the program last year and it gives them an opportunity to work on leadership skills. We are working to gather mentors from our school's community to participate as adult mentors.

Limit: 100 words

Please indicate the expected ratio of coaches to students. *

For example, 1:1, 1:2, etc.

1:4

If your club will be hosted at a school, has the school principal confirmed his/her support for the club? *

Yes

No

Club will not be hosted at school

If your club will not be hosted at a school, where will it be hosted?

Parents can play the starring role to support their child in STEM. How will families be involved in your club? *

We will have open after school sessions for parents to visit. We will be using social media to keep families aware of the progress students are making. Parents will be invited to the GCSC STEM Celebration Day at UC. Last year, we had families involved in our SVA Bike Club Celebration Day that we hosted at our school. Families ran stations and assisted in games and food for our students. We plan to have the same type of Celebration Day again this year. Families will also be invited to the

Spring SVA Showcase where students will be demonstrating their Bicycle inventions for the school and community in April.

Limit: 200 words

PART IV: SUSTAINABILITY

GCSC prioritizes funding clubs that will co-invest to cover at least a small portion of their club costs. In previous years clubs have accessed Title I or Title IV Block grant, 21st Century, PTO / PTA, local business, school foundation, etc. funds to support their clubs. GCSC is willing to help with partners' fund-raising (coaching / consultation, provide information needed for grant writing, letters of endorsement, etc.).

Which of the following costs will you (and /or your partners) be able to cover? Check all that apply.

Club Food

Teacher Stipend

Transportation to Showcase event

PART V: READINESS & COMMITMENT

Does your organization agree to use GCSC's program evaluation tools and processes if you are granted a club? *

Yes

No

Unsure

Is your organization committed to obtain media releases for club students and regularly sharing club news and picture using social media during club weeks? *

Yes

No

Unsure

Is your organization willing to host visitors, including the media, during club weeks? *

Yes

No

Unsure

Please elaborate on your responses to the previous three questions. *

Our STEM Bicycle Club has been open in the past to visitors and we have hosted guest speakers from Bicycle Stores and Clubs from the Greater Cincinnati Area. We will obtain media releases for all students and will share club news and pictures through the teacher Twitter Account and school Twitter Accounts. Information about the club will be shared on Facebook through the school PTSA account. Social Media posts will tag the Greater Cincinnati STEM Collaborative as well as any outside agencies involved in the club.

Limit: 200 words

Has your organization identified the location/work space for your club? *

Yes

No

If you responded "No," comment on your response here.

Limit: 100 words

Please choose the answer that best describes your plans to connect the Math and Science concepts taught in school and activities done in your club. *

I will have guests visit the club to help make explicit the connections between core math and science skills, club activities, and real STEM careers.

I will explicitly show core math and science objectives and topics within the science or math curriculum and discuss how they apply to weekly club activities.

I plan to borrow ideas from the club activities and use them during the school day in science or math classes.

I plan for club members to show to other students what they have learned during club activities.

I have not figured out how to connect concepts taught during the school day with club activities.

Other

Please comment on your response to the previous question. *

Our STEM Bicycle Club will run during the regular school day, during our Genius Hour class period (50 minutes every day). Guest speakers and teachers will be invited in to share their expertise in STEM fields to support the GCSC curriculum. For example, our assistant principal will visit and teach some of the science related activities on Force and Motion as well as Newton's Laws of Motion. This connects to the Middle Grades Science standards in KY. We will invite guest speakers from STEM careers related to bicycles to discuss proper measurement techniques for bike fittings, the technology used to complete a professional bike fitting, etc. Connections will be made through the

Passport stickers to the Science Cross Cutting Concept of Systems and the idea that a bicycle is a system of interacting sub-systems. Students will engage in the Engineering Design Process through the Bicycle Invention part of the curriculum where students design a prototype of an invention to solve a problem that bicyclists face. Our school student resource officer will come and discuss bicycle safety with our club as they prepare to teach younger students about bicycle safety.

Limit: 200 words

Based on the schedule shown on the right, when will you likely start your club? *

End of February

GCSC will provide Professional Development (PD) / training on December 12, 2018. UC will host an all-region Celebration event on May 18, 2019

Based on the schedule shown on the right, when will you likely complete your club?

Middle of May

GCSC will provide Professional Development (PD) / training on December 12, 2018. UC will host an all-region Celebration event on May 18, 2019

Thank you for your interest in the STEM Bicycle Club. Use this box if you have additional notes regarding your application.

Hopefully, this will be Year 2 of the SVA Bicycle Club being run through our Genius Hour program, and we will not be in need of bicycles for each student for this year's club. Last year, we housed the bicycles at school and were able to use them with students to support our program during the school day in Genius Hour and after school with the additional students. Our students rode the bicycles here at SVA during our SVA Bike Club Celebration Day. Our plan was to provide a bicycle from our supply for any student that was in need of one after the program was complete (we had indication that most students had bicycles at home). Much to our surprise, after contacting all families to see what our need was, there was not one student that was in need of a bicycle. Our bicycles will be reusable for this year's club and our club runs off of the equipment from our Bike Club from 2015-16 (tool kits, bike racks, etc.) We do have a few bicycles that could be replaced due to normal wear and tear from the building of bicycles. We would also like to grow our group to include more students who can be working on their own bicycles, which would require us to need a few more bicycle kits to add to our stock.

SubmitSave Draft