



On 1-15-21 Principal Stamper spoke to Brogan Perez regarding the inability of the principal to sign during this time. (DAC)

City of Hyattsville

2020-21 Education Enrichment Grant Program

City of Hyattsville

2020-21 Education Enrichment Grant Application

Due date: January 15, 2020

Late proposals will not be accepted

SECTION 1 – APPLICANT INFORMATION

Name: KEMS, Inc. (Kids Excelling in Math and Science)

Position: David A. Crocker, President

School: Hyattsville Middle School

Email Address: dcrocker@umd.edu

Phone Numbers: 301-699-5969; [REDACTED]

Amount Requested: \$500.00

Check Should be Payable To: KEMS, Inc.

Project Start Date: Feb. 2021 Project End Date: May 2021  
Not before January 2021 Not after July 1, 2020

Reminder: A final report is due by July 1, 2021

SECTION 2 – SIGNATURES

Principal's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Principal's Printed Name: Ms. Chanita Stamper

Applicant's Signature: David A. Crocker Date: 1-14-21

Applicant's Printed Name: David A. Crocker

SECTION 3 – DESCRIPTION OF GRANT REQUEST

Title of Project: KEMS Remote Learning at HMS

Please attach a typed description of the grant request (three-page limit)



# UNIVERSITY OF MARYLAND

MARYLAND SCHOOL OF PUBLIC POLICY

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College Park, Maryland 20742-1821  
301.405.6330 301.403.8107 FAX

Date: 15 January 2021

To: Brayan Perez ([bperez@hyattsville.org](mailto:bperez@hyattsville.org)) Education Enrichment Grants, City of Hyattsville  
From: Dr. David A. Crocker, Director Emeritus, KEMS – Kids Excelling in Math and Science  
Re: Application for Education Enrichment Grant: KEMS Remote Learning at HMS

## **1. Application Covering Letter (Attached)**

## **2. Description of Grant Request**

“Kids Excelling in Math and Science” (KEMS) is an after-school enrichment program in its sixth year (11<sup>th</sup> semester) at Hyattsville Middle School (HMS) in Prince George's County, Maryland. KEMS, Inc. is a not-for-profit incorporated in the state of Maryland. KEMS requests an Education Enrichment Grant (EEG) from the City of Hyattsville for \$500.00 for the 2021 spring semester. Whether or not COVID-19 is over, and EEG grant would help defray KEMS expenses with respect to mentor fingerprinting and background checks as well as liability insurance. Should the pandemic be over (highly unlikely), the funds will help pay for a UMD bus that would transport KEMS scholars and staff to the Smithsonian National History Museum (NHM), where KEMS scholars, under the guidance of NHM staff, will focus on the NHM’s exhibit on climate change, climate science, and citizen responsibility.

The KEMS curriculum ranges over the natural and environmental sciences with an emphasis on doing “hands-on” science and using science to help solve societal problems. University of Maryland (UMD) graduate and undergraduate students work with Hyattsville Middle School staff to create innovative curricular programs relevant to the needs and resources of the school and its neighborhood. In non-pandemic times, UMD students serve as KEMS mentors and role models during once-a-week sessions at Hyattsville Middle School. Teachers and mentors facilitate small-group and hands-on activities, challenge the students to think as scientists, ask questions, observe, explore, enjoy, and protect/improve their world. They also encourage teamwork, nurture leadership and citizenship skills, and help with curriculum development.

Pre-COVID-19 KEMS themes included “Climate Change and Citizen Responsibility,” “Environmental Science and Food Policy,” “Life and Technology on Planet Earth and Beyond: Science and Stewardship,” “(En)powering the World,” and “Chemistry, Food, and Agriculture: Combatting Hunger with Science and Policy.” “Water Watchers: Toward the Anacostia River and Beyond.”

Early in the 2020 spring semester KEMS was to take a field trip to the National Air and Space museum and examine a space traveler’s perspective on the “blue planet” and the issue of climate change. Later in the semester KEMS was to visit, hopefully with funding from the Hyattsville Educational Enrichment Grant, the Smithsonian National History Museum (NHM) and fully

engage in their climate change and global warming exhibit. The pandemic struck in March 2020, and KEMS had to cancel both its field trips and its

in-person engagement with HMS. Since the summer of 2020, the KEMS team has been working with HMS administrators and the two HMS teachers sponsoring KEMS to develop a role for KEMS in the virtual learning environment. Drawing on HMS's experience with remote teaching in the fall of 2020, KEMS and HMS have settled on a two-pronged approach in which KEMS provides both academic support and science enrichment to supplement HMS's educational goals during COVID-19.

The academic support initiative will provide one-on-one tutoring of HMS students in math and science. Tutoring will occur weekly and be integrated into HMS's scheduled small-group meetings on Wednesdays. Students who could benefit from additional support will be recommended by their science and math teachers and our tutoring will be informed by regular input from the recommending teacher to maximize our impact on student success. Concurrently with this tutoring initiative, we will translate our enrichment activities to a virtual environment to provide a fun and engaging supplement to classroom instruction. A new activity will be presented each week alternating between fun experiments using common household supplies (for example, exploring physics concepts through online simulators, an "Egg Drop Challenge", and identifying rocks using vinegar), and computer coding activities (using materials developed by Code.org). These activities will maintain student engagement in scientific experimentation and teach important real-world computer skills. The KEMS team has worked closely with teachers and administrators from Hyattsville Middle School in developing this two-pronged plan that will provide a safe and effective KEMS program in a virtual environment. Implementation of this plan was delayed in the fall due to new virtual safety and liability protocols, but we are ready to hit the ground running this spring and look forward to working with HMS students again soon

*KEMS Staff and Team (which meets regularly on zoom to plan, evaluate and improve its interaction with HMS administrators and teachers):*

- **Founder of KEMS and Director Emeritus:** Retired in 2019 from UMD's School of Public Policy, *Dr. David Crocker* is KEMS Board of Directors President
- **Hyattsville Middle School Sponsors:** *Ms. Yasmin Guzman, science teacher; Mr. Timothy Chen, mathematics teacher.*
- **Program Manager Emeritus:** *Will Hoover*, a sixth-year PhD student in the Department of Geology. A KEMS mentor for five years as well as Program Manager and Acting Director for two years, Will helps coordinate KEMS engagement with HMS.
- **Co-Directors:** *Lori Willhite (UMD PhD student, Geology); Christiana Hoff (UMD PhD student, Geology); and Robert Dalka (UMD PhD student, Physics).*
- **KEMS Mentors:** KEMS has an outstanding team of 10 female and male mentors who are UMD graduate or undergraduate students in physics, biology, geology, biogeochemistry, engineering, criminology, public policy and public leadership.

### **3. Target Population**

KEMS targets 6<sup>th</sup>- 8<sup>th</sup> grade students at Hyattsville Middle School. KEMS has grown steadily and impressively. KEMS started with 5 students in the spring of 2016. In the last two years, we have engage with 60 HMS students and average 30-40 students in each classroom session and field trip. Entering and continuing in KEMS is cost-free, voluntary and appeals to students of

different ages, ethnic backgrounds, economic status, and learning abilities. KEMS students have been evenly divided with respect to gender, ethnicity, and grade level. Hyattsville Middle School has more than 1000 students, two-thirds of whom are of Hispanic origin, one-third are African-Americans. HMS is a Title I school, and in 70 per cent of its students enjoyed “free lunches.” KEMS caters to students who have a deep passion for and knowledge of STEM issues as well as those who have little, if any, prior exposure to – or interest in -- STEM. Older students often mentor younger students. Our sponsoring HMS teachers, who regularly participate in HMS sessions and field trips are adept at connecting KEMS lessons to those of their regular classes. One of the notable features of KEMS is the way its staff and mentors have integrated into HMS.

#### 4. Location of the Project

In non-COVID-19 times, KEMS primarily takes place at Hyattsville Middle School. Weekly sessions are held on school grounds, utilizing classroom space as well as the school’s gardens and athletic fields. KEMS takes advantage of the many opportunities in DC and Maryland to go on field trips to EcoCity Farms, Riverdale Farmers Market, the Koshland Science Museum, the NASA-Goddard Space Center, the Parkland Water Treatment Plant, the Paint Branch Creek, and the University of Maryland’s nuclear reactor, particle acceleration lab, and biogeochemistry lab. We have been able to take advantage of these marvelous resources only because of outside funding of which Hyattsville Education Enrichment grants have been crucial.

During the pandemic, KEMS will implement the two programs described in section 1, aimed at providing academic support and engaging experiments and activities. HMS has been appropriately known for its fine programs in the creative and performing arts. We believe KEMS provides a quality STEM supplement to this important emphasis. In times of COVID, KEMS seeks to supplement HMS teachers’ remote educational opportunities, especially for those students falling behind, and to provide interested students with challenging at home science experiments.

#### 5. Project Timeline

Should COVID-19 permit, which is unlikely, KEMS will launch in February 2021 and have a field trip to the Smithsonian National History Museum in April. Should COVID-19 continue in spring 2021, as is likely, KEMS will launch in the first week of February and continue until early May with weekly tutoring hours on Wednesday and following our previously developed set of weekly experiments and activities.

#### 6. Detailed Budget Plan for Spring 2021 (Pandemic Income and Expenses: \*)

Income	Expenses
\$750.00 Smithsonian History Museum (pending)	750.00 UMD bus o Smithsonian Museum
\$500.00 Do Good Challenge Mini Grant (pending)*	\$500.00 Student weekly snacks and juice
\$500.00 Hyattsville Educational Enrichment Grant (pending)*	\$625.00 Ten Volunteers finger printing and background checks @\$62.50 each; (Required) * \$350 science materials (for making online videos)
	\$500 Liability Insurance
<b>Non-Pandemic Total: \$1,750.00</b>	<b>Non-Pandemic Total: \$2,725.00</b>
<b>*Pandemic Total: \$1,000.00</b>	<b>*Pandemic Total: 1,475.00</b>

#### 7. COVID-19 Safety Measures: KEMS will comply with PGCPs and HMS safety measures