Project SEED 2020 Application

As the Project SEED national office prepares for the new online platform for Project SEED proposal applications, we are providing this hard copy version to collect project information from your potential mentors. *Please note that you will have to copy and paste these responses into the online portal once it opens.*

| **Project SEED Site Name/ Sponsoring Institution:** | **Greater Houston Local Section** *Note that this can be the name of the institution that is hosting a majority of the students, the name of the local section that your SEED site resides in (preferred), or something else. Note that the site name should stay the same from year to year.* |
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| **Program Coordinator and Co-Coordinators:** | **Carolyn Burnley - cburn49@yahoo.com****Dr. Javoris Hollingsworth – javoris.hollingsworth@gmail.com***All persons listed as coordinators and co-coordinators will be contacted via email for Project SEED relevant matters, and will have equal access to the platform.* |

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| **Site Details** |
| **Total number of SEED students for Summer I:**  | **8** |
| **Total number of SEED students for Summer II:**  | **3** |
| **Total local matching funds for Summer I students (anticipated):** *Note that 2020 stipend amounts are increasing to $3,200 for 8-10 weeks. Recommended matching contributions will remain at $1,250 per Summer I student. We ask that returning coordinators contribute what they can****.***  | **$5,000** |
| **Total local matching funds for Summer II students (anticipated):***Note that 2020 stipend amounts for Summer II students are increasing to $3,800 for 8-10 weeks. Recommended matching contributions will remain at $1,500 per Summer II student. We ask that returning coordinators contribute what they can****.***  | **$4,500** |
| **F****unds requested from Project SEED:**  | **$27,500** |
| **Payee Tax ID:****Local Section Name: Great Houston Local Section** **Local Section Chair: Dr. Crystal Young**  | **How would you prefer to receive payment? Please check the appropriate box.****Mailed Check****X Electronic Deposit** |

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| **SEED Student Application Preferences** |
| This year, your entire Project SEED application will be on the online portal. All students interested in participating will have to submit an application online as well. Approved coordinators will then be able to view the applications nearest their site and select students for interviews (as needed). Understanding that many coordinators have additional application components, below are optional add-ons for the students to complete to apply to your site. Please check the box for the components you would like to add. |
|  | Optional Essay Questions. If you’d like to include essay questions, please select one or more of the questions you’d want included below.1. Describe yourself and tell us about your goals after high school.
2. Describe any lab experiences you have had in your education experience thus far, types of labs or activities you have done, and your overall confidence in your lab skills.
3. Why do you want to participate in Project SEED? Elaborate on how this experience might affect your education, passion for science, and/or impact your life outside of academics.
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|  | Upload a copy of your resume. |
|  | Upload a copy of your unofficial transcript. |
|  | Ask your high school teacher (preferably a chemistry or STEM teacher) to write a letter of recommendation on your behalf. |
|  | I do not want to add any of these application components. |

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| **Project Proposals – Mentor Details**Create as many copies of the following pages as needed for each proposal you intend to submit. There are three pages per project proposal. All areas highlighted in yellow should be completed. |
| **MENTOR NAME:** | **PAST INVOLVEMENT WITH PROJECT SEED:** |
| **Institution:** |  | **Have you served as a Project** **SEED mentor before?** |  | **YES** |  | **NO** |
| **Address:** |  | **Will students be offered career** **and college counseling?** |  | **YES** |  | **NO** |
| **City:** |  | **State** |  | **Zip** |  | **Are you a NSF Grant holder?      YES      NO****Are you a NIH Grant holder? \_\_\_\_\_\_YES \_\_\_\_\_ NO** |
| **Telephone:** |  | **Are you a PRF Grant holder?** |  | **YES** |  | **NO** |
| **E-mail:** |  | **Are you an ACS member?** |  | **YES** |  | **NO** |
| **Institution Type:** | **University** | **Government Lab** | **Industry Lab** |
| **High School** | **Other, Please Describe** |  |
| **Project Proposal Information Form**Includes Purpose, Abstract, Student Activities, and Safety Training Details |
| **Purpose and Abstract**In 25 to 100 words provide a statement of purpose and an abstract for the proposed project. The reviewers will be evaluating projects on the following criteria:* Is it chemistry, broadly defined?
* Is it research, broadly defined?
* Is it at an appropriate level for a high school student?
* Is it safe, narrowly defined?

***SAMPLE******Project Purpose and Abstract****One important (and now enormous) class of microporous molecule-derived materials are the so-called metal-organic frameworks (MOFs), where metal ions are polymerized by simple reactions with organic ligands to create new, crystalline, frameworks-like materials with varied structures and properties. This SEED project will focus on synthesizing new MOF materials that are embedded with simple organic host molecules. The host molecules which are separately synthesized and available in the Holman lab exhibit interesting molecular recognition properties; they are capable of, for example, reversibly binding gases in a highly selective fashion. We seek to be the first to incorporate such molecules into MOF materials.***PROJECT TITLE:****PROJECT ABSTRACT (maximum of 500 words):** **How many students do you anticipate assigning to this project? Note that there is a maximum of two students that can be assigned per mentor.****Summer I Students****Summer II Students****STUDENT ACTIVITIES (maximum of 500 words):**In no more than words, describe the specific chemistry, techniques, and other scientific activities associated with the project. It is important that you provide specific descriptions of these activities and not simply general ideas. See below for an example.***SAMPLE******Student Activities******Keeping in mind that the SEED student will be a high school student, describe the specific chemistry, techniques, and other scientific activities that the students will do:****One of the beautiful features of MOF chemistry is that their chemical syntheses can generally be quite simple. The Project SEED student will perform simple reactions (mixing stoichiometric quantities of compounds in organic or aqueous solvents), with simple, non-hazardous reagents (simple organic compounds and simple metal salts), under simple conditions (room temperature, perhaps heating under pressure) yet will be able to make interesting new materials that have never before been synthesized. The challenges lie in the characterization of the materials formed. Characterization will be performed by, for example, X-ray diffraction (powder, single crystal) techniques, gas sorption, thermal gravimetric analysis (with tandem mass spectrometry), and elemental analysis.***STUDENT ACTIVITIES (maximum of 500 words):**Keeping in mind that the student being monitored is a high school student, describe the specific chemistry, techniques, and other scientific activities that the students will do:       |
| **Student Safety Training**The program requires that all Project SEED students receive *comprehensive* laboratory safety training, which may be achieved through your institution’s training program, sitting with the student to review the Laboratory Safety booklet that the ACS National Project SEED Office will provide all first-time participating students, or via some other means. *It is NOT sufficient to ask the student to read the safety booklet.***Materials and Procedures**Careful consideration regarding the materials and procedures that high school students can safely use should address the following areas of concern: * Federal guidelines specify that persons under the age of 18 cannot use radioactive materials.
* The Project SEED Committee prefers that the student does not work with:
	+ Human and nonhuman primate blood, body fluids, tissues, or retroviruses
	+ More than minute quantities (e.g. gas chromatography standards) of controlled substances
	+ Select carcinogens, reproductive toxins, or acutely toxic chemicals
	+ Any organisms or procedures categorized above Biosafety Level 1. A useful summary of biosafety levels can be found at:

<https://www.cdc.gov/training/QuickLearns/biosafety/>Use this section of the application form to specify any bio-hazardous materials or procedures that are involved in the project, and how you will train and monitor the high school student. |
| **SAFETY TRAINING DETAILS:****How the students will receive Laboratory Safety Training:****Institutional Safety Program:       YES       NO****ACS Safety Booklet:       YES       NO****The policies of this manual are a minimum. You may refer to the following link for additional information****on safety.** [**https://www.acs.org/content/acs/en/about/governance/committees/chemicalsafety**](https://www.acs.org/content/acs/en/about/governance/committees/chemicalsafety)**Other Safety Training Description: (Please describe if applicable)**Because of their age and inexperience, some materials and procedures are inappropriate for high school students. If the student will use any of the following, please check the appropriate box. **Controlled Substances (only minute amounts; such as those used in gas or liquid chromatography):** **Radioactive compounds or materials (note that Federal guidelines restrict usage):** **Pathogenic Organisms (please indicate the BSL level):** **Bodily Fluids (limited to those not containing pathogens):** **Other (Please describe below):****Other important materials or procedures:****If you checked any of the boxes above, you must indicate additional safeguards to be taken for inappropriate materials or procedures. This can include PPE, engineered safety solutions, additional training, or other safeguards:** |