



Wellesley Education Foundation

Inspiring the Love of Learning

Grant Application

INSTRUCTIONS: Educators may use this form to apply for a grant within the Wellesley Public School System. Please complete all required fields. If you are not able to complete your application in one sitting, you may save the application and return to it later, by clicking on the 'Save' button on the bottom right-hand corner of the application. Upon clicking 'Save', you will be provided with a link that will allow you to resume the application process at a later time.

Date

1/6/2020

Name

Beanie (Carolyn) Spangler

Email

spanglerc@wellesleyps.org

Staff Title

Teacher

Proposal Title

Protein Model Sets

Requested Funding Amount

\$2,000.00

Grade Level

11

12

School(s) for which your grant proposal applies:

Please select one of the following:

WMS

Does your proposal support one of the strategic initiatives outlined in the WPS 2013-2019 Strategic Plan, your school's School Improvement Plan, and/or the WPS Technology Plan?

WPS Strategic Plan

Please select a component of the WPS Strategic Plan

Provide broad-based learning opportunities as part of a world-class public school system

Are there co-applicants to this proposal?

No

Curriculum Area

Science

Is this a pilot?

No

Does your proposal involve Information Technology?

No

Authorized Administrators to Review & Approve Your Application

With the exception of district-wide proposals, authorization from your Principal and Department Head / Curriculum Coordinator is required in order for your proposal to be considered for funding. Please use the section below to add the name of your Principal and the names of any other Administrators that will need to review your proposal based on the following criteria:

- If your proposal applies to a single elementary school, **no additional** administrators are required
- If your proposal applies to multiple elementary schools, please add the appropriate Pre-K - Grade 5 Curriculum Coordinator(s)
- If your proposal applies to WHS or WMS, please add your respective Department Head (when applicable)
- If your proposal applies to all schools, please add the appropriate Central Administration personnel (e.g., Director of Curriculum)
- If your proposal involves information technology, it must be approved by the Director of Technology*

***NOTE: The Director of Technology will automatically be added as the first Administrator for all proposals that involve information technology.**

Principal Name

Chisum, Jamie

Administrators / Department Heads / Curriculum Coordinators

Administrator 1

Administrator Name

Wilkins, Nora

Title

HS Department Head- Science

Project Description

Please provide a concise description of your project outlining the need(s) and goal(s) it will fulfill.

These MIT Edgerton Center Protein Sets (<https://edgerton.mit.edu/k-12/teacher-resources/k-12-curriculum/dna-protein-sets/mit-edgerton-center-protein>) are teaching tools that will help students learn

about protein structure. They contain small, plastic representations of amino acids (the building blocks of proteins) that students will be able to manipulate and thereby learn how the characteristics of various amino acids ultimately determine the folding pattern (and thus the function) of each protein. Using these kits as part of the Biology curriculum will make hard-to-grasp conceptual content hands-on and easier for students to conceptualize. (We already use the Edgerton DNA kits, so I am confident of the quality and ease of implementation of these protein kits).

Attach supplemental document

How will your project advance innovation and excellence in the Wellesley Public Schools?

DNA stores information to build proteins and the study of proteins and protein structure is becoming more and more the focus of biologists. Having these kits will help students learn about the complicated steps of protein assembly, structure and folding that allows proteins to do various functions. While using manipulatives is not necessarily innovative, applying this proven teaching technique to protein building will allow students to better grasp a content area that some would argue is the future of the biology and medical fields.

Approximately how many students will benefit from this project, if funded?

450- 500 Biology students (multiple levels of Biology can use these kits. They can be stratified and used for differentiated learning depending on use and the depth of content. This includes AP Biology, Honors Bio, ACP and CP)

Please provide a timeline for the project identifying important activities and milestones.

Immediate implementation in multiple units (for example: macromolecules, membrane structure, immunity)

How do you plan to evaluate the project?

Student/teacher feedback

Budget

Materials & Supplies (Consumables)

Item Description	Quantity	Estimated Cost
MIT Protein Kits	2	\$2,000.00

Outside Services

Service Description	Hours	Estimated Cost

Other Costs

Item Description	Quantity	Estimated Cost

Shipping & Handling

Item Description	Quantity	Estimated Cost
shipping (included)		\$0.00

Is the success of this project contingent upon other funding? **Itemized Budget Total**

No

\$2,000.00

Please check the box below to indicate that your itemized budget matches your requested funding amount:

I have added all itemized expenditures that relate to the total funding amount I am requesting
Yes

If only partial funding were available for this grant, please identify your highest priorities and the associated budget:

I've requested 2 kits so that 2 classes can utilize the lesson at the same time. We can start with one kit (they are \$1000/kit). Also, it's possible shipping could be reduced because I can pick them up from MIT if needed (I've added 20% for shipping, but that is likely to be less).

Application Terms & Conditions

In submitting this grant application to the Wellesley Education Foundation, I agree to the following terms and conditions:

- All materials/technology/etc. are to remain the property of Wellesley Public School System.
- An evaluation of this project as funded must be completed.
- Promotional assistance will be provided to WEF as requested in the form of photos, testimonials, interviews and materials.
- Results of funded project will be shared with WEF and WPS colleagues as requested.
- Approval must be sought for any changes in the focus or implementation of the project.

I agree to the stated terms & conditions

Yes