

2022-2023 Research Methods Course Application

This course is a 3-year experience that allows students to build research skills, develop scientific writing and presentation skills, design and conduct research, attend local science symposia, visit research facilities, and submit to local fairs and competitions. The first year involves acquisition of general research skills, including: reading and critiquing scientific literature, collecting and analyzing data, drawing conclusions, and presenting findings. Students will be honing these skills to allow for the development of their own research proposal. This proposal will be carried out over the summer and/or in the successive years of the program. Therefore, Years 2 and 3 will largely be dedicated to carrying out and analyzing their experiment as well as preparing their data for presentation to the greater scientific community and beyond.

Because of the individual attention provided, course registration is limited and priority will be given to students who demonstrate the following qualities:

- A sincere **interest** in learning about research in a particular field
- A willingness to be a **self-starter** and a **highly motivated** independent researcher
- A genuine desire to **invest a great deal of time** in exploring the area of interest

If you remain interested in the course and plan to commit three years to research, please fill out the form below and submit to Ms. Katz (Room 280), Ms. Smolyn (Room 270), or Mr. Eastburn (Room 287) **by December 15th**. All components of the application must be received by that date in order to be considered for the program.

Note that your application will include the following, described in more detail below:

- Contact information and signatures
- A summary of your research interests
- Read an article and discuss it at your individual interview
- Markers of Success Rubric (see attached) filled out by a Math, Science, or English teacher (cannot be a teacher of the Research program)

Personal Information:

Name: _____

Current Grade: _____

Preferred email address: _____

Parent/Guardian(s) Name: _____

Parent/Guardian(s) Email: _____

Student Signature: _____

Date: _____

Parent Signature: _____

Date: _____

Guidance Counselor: _____

Biology Teacher: _____

Summary of Research Interests

Attach a 200-word written description of your research interest to this application (i.e. What do you think your focus will be as part of the program?). Make sure that your writing is clear and concise! You will not be committed to the project you propose, but this will just give us an idea of the potential subjects our class will focus on.

Interview Process

As part of this process, you will attend an individual interview with one or more of the Research teachers. These will be held at break and during Tiger Time in early January. Please keep an eye on your email, as that is where we will communicate with you to schedule an interview time.

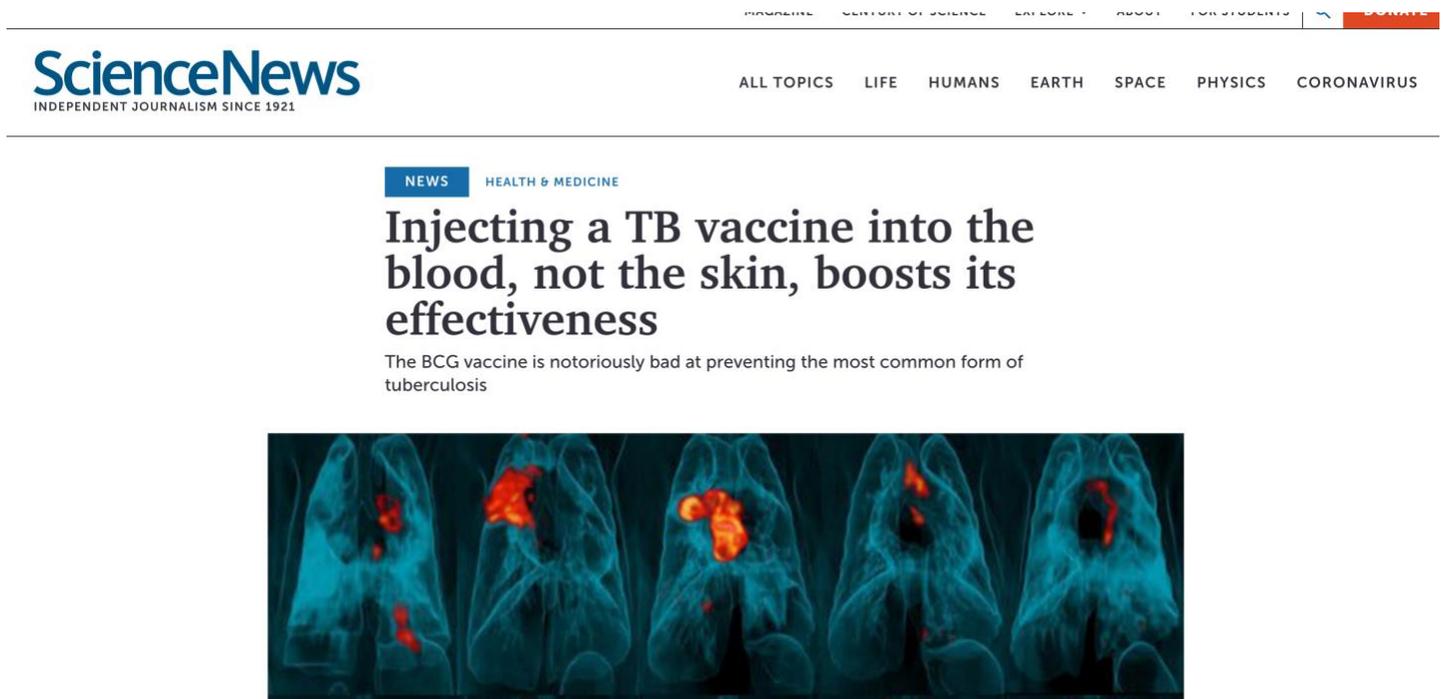
At your interview, we will ask you some questions about yourself and your interest in the Research program. We will also discuss a research article, so please read the article assigned and come prepared to talk about it.

The article can be accessed using this link :

<https://www.sciencenews.org/article/tb-vaccine-injection-blood-skin-effectiveness>

You can also visit the website “Science News” and search for the article there: *“Injecting a TB vaccine into the blood, not the skin, boosts its effectiveness”* by Tara Haelle (Jan 1st, 2020).

Here is what the article looks like so you know you are reading the correct one:

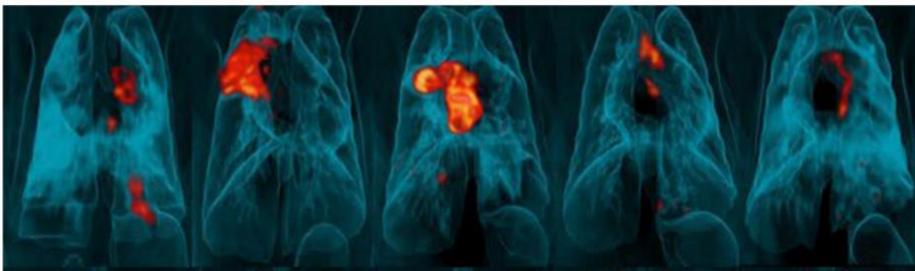


ScienceNews
INDEPENDENT JOURNALISM SINCE 1921

NEWS HEALTH & MEDICINE

Injecting a TB vaccine into the blood, not the skin, boosts its effectiveness

The BCG vaccine is notoriously bad at preventing the most common form of tuberculosis



Markers of Success Rubric

Please detach this rubric from your application and give it to your math, science, or English teacher to complete. You may not ask one of the program teachers (Ms. Katz, Ms. Smolyn, or Mr. Eastburn) to do so if you have them as a teacher. Teachers can **return this form** to Room 280, 270, or 287, and can also put it in one of our mailboxes or email it to us.

Name of Student: _____

Name of Teacher Completing Form: _____

Class Taught: _____

Directions: Circle the phrases that best apply to the student for each criterion. You can provide any additional comments about this student in the space below the rubric.

Criterion	Level 4	Level 3	Level 2	Level 1
Active Participant	<ul style="list-style-type: none"> Engages actively in all aspects of the learning process. Often takes on leadership roles in the classroom. 	<ul style="list-style-type: none"> Engaged in most aspects of the learning process. Occasionally takes on leadership roles in the classroom. 	<ul style="list-style-type: none"> Engaged in some of the learning process. Reserved, rarely takes on leadership roles 	<ul style="list-style-type: none"> Engaged in little or none of the learning process. Never takes on leadership roles.
Work Completion	<ul style="list-style-type: none"> Always prepared for class. Work produced demonstrates excellent effort. 	<ul style="list-style-type: none"> Frequently prepared for class. Work demonstrates above average effort. 	<ul style="list-style-type: none"> Sometimes prepared for class. Work demonstrates satisfactory effort. 	<ul style="list-style-type: none"> Rarely prepared. Work demonstrates little to no effort.
Academic Independence	<ul style="list-style-type: none"> Consistently demonstrates intellectual curiosity. Consistently self-motivated and independent. 	<ul style="list-style-type: none"> Frequently demonstrates intellectual curiosity. Usually self-motivated and independent. Occasionally depends on teachers/peers to guide 	<ul style="list-style-type: none"> Sometimes demonstrates intellectual curiosity. Sometimes self-motivated and independent. Sometimes depends on peers/teachers to guide. 	<ul style="list-style-type: none"> Rarely demonstrates intellectual curiosity. Rarely or never self-motivated, frequently depends on prompting and/or teacher assistance for guidance
Class Attendance	<ul style="list-style-type: none"> Rarely Absent 	<ul style="list-style-type: none"> Occasionally absent 	<ul style="list-style-type: none"> Sometimes absent 	<ul style="list-style-type: none"> Chronically absent

Additional Comments: