

ENVISION
- **RESEARCH**
COMPETITION



— What is ENVISION Research Competition?

- THE PROBLEM
 - Clearly defined under-representation of girls and nonbinary students
 - Women are 27% of the STEM workforce
 - According to a 2017 survey, nonbinary individuals feel “invisible” in STEM workforce



— What is ENVISION Research Competition?

- THE PROBLEM
 - Lack of accessibility to scientific research
 - Lab resources
 - Mentorship



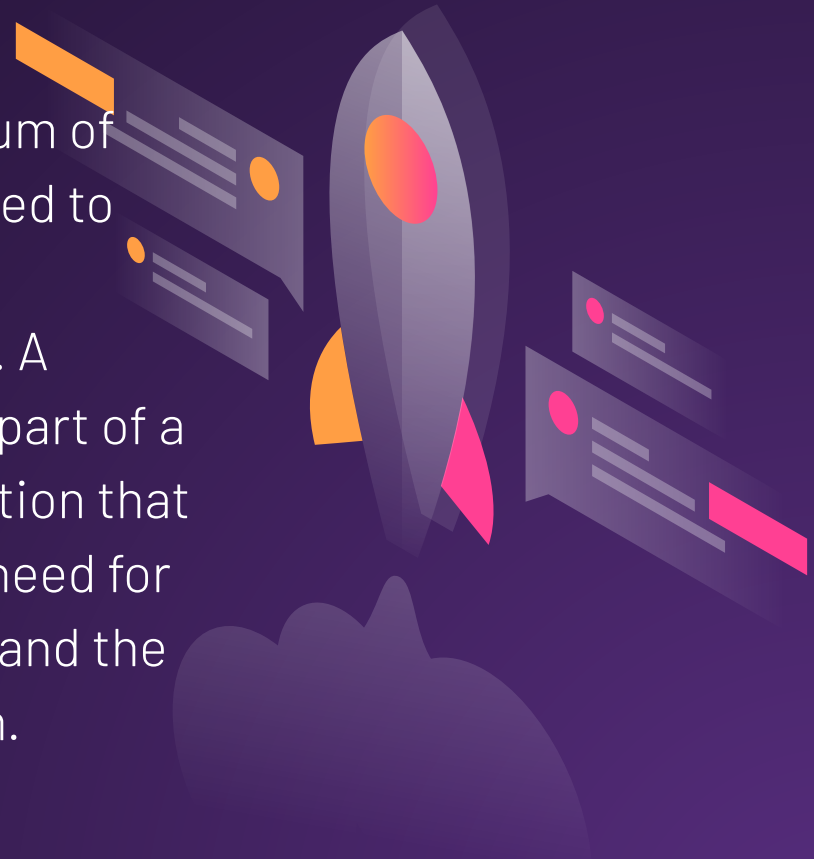
— What is ENVISION Research Competition?

- ENVISION's SOLUTION: proposal-writing
 - Founded in 2019
 - Mission is to expose high school students to research methodology and thought process without requirements for resources



What is — proposal writing?

A grant is a sum of money awarded to scientists for research use. A proposal is a part of a grant application that explains the need for the research and the research plan.



WHAT MAKES A GOOD PROPOSAL

Significance

The research must be solving a severe problem or a problem which affects many people.

Feasibility

The research must be scientifically sound and likely to yield results.

Innovation

The research will be awarded extra points if it employs a unique or creative approach to the problem.

Approach

The research will be awarded extra points if the selected approach minimizes costs and employs the latest advances.

— ENVISION ENTRY CATEGORIES

Mathematics

The science of numbers, quantity, and space. May include but is not limited to pure mathematics, abstract mathematics, and some applied mathematics. Sample topics include combinatorics, topology, probability and statistics, and algebra.

Computer Science

Descriptions of current progress and research along with challenges and insufficiencies

Physics

The science of matter and energy, including mechanics, heat, light, and radiation. Sample topics include astrophysics, biophysics, and nuclear physics.

Chemistry

The science of matter, its composition and interactions. Sample subcategories and topics include structural biochemistry, inorganic and organic chemistry, drug discovery, and nanoparticles and nanomaterials.

Engineering

The science of design, building, and use of engines, machines, and structures. Subcategories may be bioengineering, environmental engineering, and civil engineering. Sample topics include synthetic biology and medical devices, land reclamation and pollution control, and naval systems.

Biology and Medicine

The study of living organisms and the diagnosis, treatment, and prevention of disease in these organisms. Sample subcategories and topics include cell physiology, neuroscience, and animal and plant sciences.

— ENVISION ENTRY GUIDELINES

- You may work by yourself or in groups of up to four.
- The format must be as follows:
 - 8 1/2" × 11" white paper, with 1" margins
 - 12 point Times New Roman font
 - Title page and abstract page are the first two pages
 - Length of five to fifteen pages including the title and abstract page but discluding space occupied by diagrams and References
 - Labeled section titles with each of the 6 components listed above



ENVISION ENTRY REQUIREMENTS

Title page

A title page with the proposal title and name of author(s)

Abstract

An abstract summarizing the problem and your solution which must be <150 words

Introduction

Summary of the significance of the research problem

Literature review

Descriptions of current progress and research along with challenges and insufficiencies

Methods

A detailed explanation of the research you or your team intends to conduct, including how it will lead to progress in that scientific area and anticipation of any obstacles that may prevent the progress of this research

References

APA formatted references



HAPPY
PROPOSAL
WRITING!