

# SUSTAINABLE SOLUTIONS

*Engineering for our Future*

Participants will create and submit an original piece of writing that responds to the following contest prompt:

The 2022 EngineerGirl Writing Contest invites students to write an informative essay about the role of engineering in meeting one of the [Sustainable Development Goals](#).



## TO ENTER THE CONTEST

Write a short essay about how engineering can help meet one of these sustainable development goals. Include at least one example of a solution that demonstrates how engineering design can be used to solve current problems without risking the future.

More tips for writing a winning entry can be found below.



## WHAT DO I SUBMIT?

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You should submit an informative essay about the role of engineering in meeting one of the [Sustainable Development Goals](#).

All entries are limited to 650 words.

High school students are also required to submit a reference list with their essay. A reference list is optional for middle and elementary school students. This list does not count toward the word limit.

***ALL STUDENTS PLEASE NOTE:*** *Your name, address, phone number, or any other personally identifying information should **NOT** appear in the text of your submission.*

You may submit one entry in one – and only one - of the competition categories.

**All submissions must be original work.  
Any evidence of plagiarism will immediately disqualify an entry.**

A Submission may not contain offensive, libelous, sexually explicit, disparaging or other inappropriate content and may not defame or otherwise violate the rights, copyrights, trademarks, or rights of publicity, privacy, or reputation of any third party. A Submission may not contain any material to promote sale of a product or service.

Each entrant is solely responsible for the information, data, text, graphics, and other materials included in the Submission, whether publicly posted or privately transmitted. A Submission must be original and the entrant must (1) hold all necessary rights to all the materials and information in the Submission or (2) have permission from the holder of such rights, or (3) the materials and information in the Submission must be in the public domain. Winners will have to ensure that they have all rights necessary to permit them to transfer ownership of the essay, including transfer of any permissions and rights obtained from third parties, to the NAE.

## CAN I INCLUDE IMAGES OR DIAGRAMS?

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Yes. Each contestant may include one, and only one, image or PDF document file to accompany his or her submission. Only .jpg or .pdf formats will be accepted.

***CAUTION:*** *Beware of using images found online. Most of these images are protected by copyright and cannot be used without permission. You should only submit images that you create or that you are certain you may use. If you use an image protected by a Creative Commons license, please indicate that with your submission.*



While including images may improve your submission, they are not required. You should not rely on them to make your argument. Judges will be scoring the text of your submission; attached material may be used to break ties.

*PLEASE NOTE: Your name, address, phone number, or any other personally identifying information should **NOT** appear in the attachment. If it does, the file cannot be considered as part of your submission.*

## WHAT BELONGS IN MY REFERENCE LIST?

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A reference list is a list of the resources you used for research and to prepare for writing your essay. This does not count toward your word limit.

**Elementary school students** may include reference list of up to 5 resources, but it is *not required*. Create your list by including the following information for each resource:

- **Title:** The name of the resource. A resource can be a webpage, article, person, or other reference.
- **Author:** The person who wrote or created the resource. There may be multiple authors or sometimes an author can be an organization. If you cannot find an author you may write, "No Author Available."
- **Date:** The date the resource was created. If there is no date (for example on a webpage) the citation should include the date the page was reviewed for your essay.
- **Location:** Where we can find the resource. For webpages this is the URL. For printed resources include the name of the publisher.

**Middle school students** are *strongly encouraged* to include a reference list with up to 7 resources. Each resource may be listed using the [APA citation style](#) or with the information outlined above (for elementary school students).

**High school students** are *required* to submit a reference list of 3-10 resources with their essays. Each resource should be listed using the [APA citation style](#).

The quality of the reference list submitted with an essay may be used to break ties.

## HOW DO I SUBMIT MY ENTRY?

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Entrants should, whenever possible, submit their work through the online Entry Form: <https://www.engineergirl.org/127907/contest-submission-form>



Those with unreliable or slow internet connections may request a fill-in PDF form that can be completed offline and submitted via email. Request a form by sending an email to EngineerGirl@nae.edu with the subject line "2022 Contest form request". There is no penalty for using the PDF form.

To be considered, submissions must include the full text of the essay and, if required, the bibliography. Links to material saved elsewhere (as a Google Doc, for example) will not be followed or judged.

ALL entries, regardless of how they are submitted, are presented to the judges in the same format, which excludes all personal information.

## WHAT IS THE DEADLINE?

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The contest will close at 11:59 PM, February 1, 2022, U.S. Eastern Standard Time. All entries, regardless of how they are submitted, must be *received* prior to this date and time in order to be considered.

## WHO IS ELIGIBLE TO COMPETE?

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The contest is open to individual girls and boys in the following three competition categories: Elementary School Students (grades 3-5), Middle School Students in (grades 6-8), or High School Students (grades 9-12).

The category for entry is based on US grade categories. Home schooled or international students should choose an appropriate category based on where the student would be placed if attending public school in the US.

Prior winners of the EngineerGirl writing contest who received a cash prize may not enter again in the same age group.

Employees of the National Academies of Sciences, Engineering, and Medicine and their immediate families or those living in the same household as a National Academies employee are not eligible to enter this competition.



## HOW WILL ENTRIES BE JUDGED?

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Submissions will be judged by a slate of volunteers that include professionals from various engineering fields. In addition to checking that submissions meet all of the basic rules, they will be looking for:

### Presentation of engineering (~30%)

*How well does the piece demonstrate engineering's positive and essential role in society? How well does it convey engineers' ability to solve a wide range of problems in different sectors?*

### Examples of engineering (~30%)

*How well does the piece illustrate how engineering design can be used to reach working solutions to real-world problems? Does it include specific examples?*

### Sustainable Development Values (~30%)

*How well does the piece demonstrate how engineering solutions can support key concepts of sustainable development?*

### Quality of writing (~10%)

*How well-written and persuasive is the piece?*

Extra credit may be given for outstanding originality, creative presentation, or particularly engaging examples.

Take time to review the contest scoring rubric, which is available online at: <https://www.engineergirl.org/143716/2022-scoring-rubric>

The quality of the annotated bibliography submitted with an essay may be used to break ties.

Finalists will be judged by the EngineerGirl Steering Committee. The decisions of the judges are final and incontestable.

## WHEN WILL THE WINNERS BE ANNOUNCED?

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Finalists will be notified in writing via email by May 1, 2022 and will be required to submit a signed copy of the EngineerGirl Use License and Release giving the NAE permission to publish the entry should it be selected as a winner.



Winners will be notified in writing via email by June 1, 2022, and the winning entries will be posted on the EngineerGirl website by July 1, 2022. A list of contest winners may be obtained by submitting a request in writing to: EngineerGirl Writing Contest, National Academy of Engineering, 500 Fifth Street, NW, Washington, DC 20001.

## WHAT ARE THE PRIZES?

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Winners in each grade category will receive the prizes listed below:

First-place winners will be awarded \$500.

Second-place entries will be awarded \$250.

Third-place entries will be awarded \$100.

All winning entries will be published on the EngineerGirl website. Honorable Mention entries will not receive a cash award but will be published on the EngineerGirl website.

In addition, judges will choose up to 17 “sustainable solution” winners – one for each goal. Each of these essays will be selected from all entries – regardless of age group – as the essay that best describes an engineering solution to a particular problem related to one of the goals. These essays will also be published on the site and their authors will receive a special prize to be announced with the winner selections.

Prize funds will be distributed to an individual winner (or the winner’s parent or guardian, if the winner is under 18 years old). Any federal, state, and local taxes, and all similar fees and assessments, are the sole responsibility of the prize recipient.

## HOW DO I WRITE A WINNING ENTRY?

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Take time to learn about engineers and engineering in general. The better you understand the engineering design process, the clearer and more persuasive you can be in your writing.

Include specific, detailed examples. This is one of the most effective ways to improve persuasive or non-fiction writing. Do plenty of research so that you can provide not only facts and numbers, but also testimonials, personal accounts, or historical comparisons.

Choose to focus on something that you care about or that you are curious about. It is easier to do research and write about something that’s important to you. Your interest in the subject will also come through in your writing, making your piece more powerful.



Any technology developed to reach a sustainable development goal can have spillover effects – good and bad – in other areas. If this is the case for the solution you're writing about, try to include a discussion of those effects in your essay.

An engineer is often responsible communicating to others the potential risks of a given project. The most sustainable solution may be to stop something rather than to create something. You can choose to write an essay about a solution like this.

The most successful essays will demonstrate how diversity and unique perspectives help engineers create better solutions to problems. As you conduct your research, make special note of problems that have been tackled by diverse teams or that addressed the concerns of specific (often underrepresented) groups.

## Additional Requirements and Disclaimers

By entering this competition, each individual entrant (for individuals under 18 years old, the individual's parent or guardian) grants the NAE a worldwide nonexclusive, royalty-free, transferable license to use the essay, or any portion thereof, for NAE purposes, and grants NAE a world-wide, non-exclusive, royalty-free, transferable license to use the entrants' names, likenesses, photographs, and/or biographical information for advertising, publicity, and promotional purposes.

If selected as a winner, each individual (and for individuals under 18 years old, the individual's parent or guardian) hereby agrees to irrevocably grant and assign exclusively to the NAE all rights, including copyright interests in the essays, under all laws, treaties and conventions throughout the world, in all forms, languages and media, now or hereafter known or developed without limitation. Use, publication, or dissemination by winners of their respective essay may be permitted at the discretion of NAE, as approved in writing in advance by the NAE. Submitting an essay to this competition does not guarantee that the Submission will be displayed or used by NAE.

Use by NAE of a Submission does not necessarily reflect the views of the NAE, and in no event shall NAE assume or have any responsibility or liability for any Submission, in whole or in part, or for any claims, damages, or losses resulting from the use and/or appearance of any Submission or the contents thereof.

NAE reserves the right to refuse any Submission in its sole discretion. NAE also reserves the right at any time during the competition to remove or disqualify any Submission when it believes in its sole discretion that the entrant has: (i) infringed any third party's copyright; (ii) failed to comply with these Terms and Conditions; or (iii) failed to obtain the necessary consents as set out in these terms and conditions.

NAE shall not be liable for any claims, costs, liabilities, damages, expenses, and losses arising out of (i) NAE's use of the Submission; (ii) the entrant's participation in the competition; (iii) technical failures of any kind including but not limited to problems or delays arising from software or equipment malfunctions or computer viruses; and (iv) any events outside NAE's reasonable control.

By entering this competition, each individual entrant, (and for individuals under 18 years old, the individual's parent or guardian) represents and warrants that: (i) the entrant is the sole author, creator, and owner of the Submission; (ii) except for material used by permission, none of the intellectual property rights in the Submission, or any portion thereof, has been assigned or transferred to anyone other than the entrant; (iii) the Submission, through its creation and its submission as an entry, does not violate any applicable laws; and (iv) the Submission, through its creation and its submission as an entry, does not infringe upon or violate intellectual property rights held by any third person or party.



Any entrant who supplies false information, enters the NAE EngineerGirl Writing Contest by fraudulent means, or is otherwise determined to be in violation of the eligibility criteria or terms of EngineerGirl Writing Contest shall be ineligible for any prize and shall be required to forfeit any prize obtained based on such information or means.

By entering a Submission in the Contest, each individual entrant (and for individuals under 18 years old, the individual's parent or guardian) agrees to comply with and be bound by the official rules and decisions of NAE.

All references to NAE contained herein refer to the National Academy of Sciences on behalf of the National Academy of Engineering.

This Contest is void where prohibited. The Contest shall be governed by, construed and enforced in accordance with the laws of the District of Columbia.

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This competition is made possible by the  
generous support of our contest sponsors:

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