



The 2024 MSMR Student Competition

Student Packet – Contest Explanation, Rules & Details

In MSMR's 2024 Student Competition, you may submit an **Essay**, a **Poster** or a **Website**. You may submit multiple entries, but they must be on different topics.

The Challenge

- For the **2024 MSMR Student Competition**, you are a journalist working at a science news service for teenagers.
- Your editor wants a report on a recent biomedical research break-through. You have to learn about this new research and present it in a way that shows you really understand what it is and what it means. Your presentation should also be appealing to your audience – teenage science students.
- Your editor will accept your work as an Essay, a Poster or a Website, but she is stubborn and cranky and has firm requirements for each kind of submission. *Make sure you don't get fired: follow the boss's rules, on the following pages.*
- As a journalist, you know that there are many ways to get info about new discoveries, including science websites, TED Talks, science news blogs, research journals, newspapers, magazines, news releases from research organizations, interviews, and your teachers, parents and friends. *To get you started, a few specific suggestions are included on pages 9 and 10, below.*

To Be Successful

- You must show that you understand the topic and can present it with originality, creativity, clarity and economy. Judging is based on (a) the quality of the information you provide, (b) how well your submission exemplifies the actual biomedical research, and (c) the power of your work. Create your entry so that your audience *wants to read or view it*.

Prizes (in each Level)

Students

- 1st Place \$500
- 2nd Place \$250
- 3rd Place \$100
- HM – Certificate of Merit

Classroom Grants to Teachers

- 1st Place \$150
- 2nd Place \$75
- 3rd Place \$50

All student winners also receive a book about science.



Rules – Read this whole page

Deadline

- All Posters, Essays, Websites and Entry Forms for the 2024 Competition must be submitted between January 1, 2024 and April 30, 2024, inclusive.

Eligible Participants

- **New England** students in grades 7 - 12. Every student is eligible: public, parochial, private/independent, home-school.

Submission

- **There should be *nothing* in the Essay, Poster or Website itself that specifically identifies you or your school. Put that information only in your Entry Form.**
- Submit by e-mail only. *Please follow these instructions exactly.*
 - **Essay or Poster:** (i) Complete and submit the [on-line Entry Form](#). (ii) Then attach your Essay (PDF) / Poster (PDF) to an e-mail addressed to MSMR President Jim O'Reilly at: james.oreilly@msmr.org (iii) In the subject line write your entry type (e.g., "Poster"). (iv) In the body of the e-mail write your name, telephone number, e-mail address, home address, entry title, and school name. (v) **PDF Notes:** When you create your PDF, make sure your security settings **allow** copying and printing. Do not use on-line or sample PDF-creating software that puts a name, logo or other symbol anywhere on your work. Do not send files that are on-line PDFs or websites. Entries must be "clean," standalone PDF files.
 - **Website:** (i) Complete the [on-line Entry Form](#). (ii) Place a link to your website on the form where indicated – Section 6.
- *Read and follow the specific category details on pages 4 through 7 below*

Important
PDF Notes

The Entry Form – Very important

- The [Entry Form](#) is essential and it must be completed fully. You may have to do some research (e.g., local news outlet contact name and e-mail).

Notification of Winners and Awarding of Prizes

- Winning students and their teachers will be notified in early June. We notify by e-mail, so accurate e-mail addresses for students and teachers are essential. As a backup, please be sure that the listed telephone can take a voice message. Winning students, their parents and their teacher are invited to the MSMR Annual Meeting where they will receive their awards, on June 21, 2024. Details will be sent to winning entrants.



The What A Year! Student Science Website

A Model for Your Work – The What A Year! student website

- See the next page for information about our **What A Year!** student science website (www.WhatAYear.org)

Every month, **What A Year!** (www.WhatAYear.org) presents a story of a recent biomedical research breakthrough. Each story answers three main questions:

1. What was the discovery?
2. How was it done and who did it?
3. Why is it important? (E.g., does it give us a better understanding of living systems? Does it point to a new cure for a disease or a new way to treat an injury or condition?)

Your 2024 Challenge – “Hot News”

- **For this competition, you are a science reporter.** Learn about a recent breakthrough that interests you and then create your Essay, Poster or Website to answer the three main questions above. Your submission must concisely and compellingly convey the information.

Some Points to Remember

- Understand your topic. If you don't get it, you can't present it well. The proof of really knowing something is your ability to explain it clearly to another person. **
- Posters, Essays and Websites must be your original work. Use your own thoughts and explanations. Make notes as you learn about your topic, and then construct your entry using your own words and examples. As with every research project, include references for your sources of information. A bibliography is required in this competition.
- Don't use obscure language; clearly explain uncommon technical terms. Remember, you are presenting to teens, not to a group of scientists.
- Judges will be interested in content clarity and impact, so avoid complicated fonts, vague graphics, odd special effects and merely decorative clip art. Graphics, whether in a Poster, or illustrating a point in an Essay, or as part of a Website, should help to powerfully explain its content. **
- Spelling and grammar count!



Specific requirements

Essay The Essay should be between 1,000 and 1,500 words, not counting the bibliography. Use a readable non-script font, 10- to 12-point size and double spacing. Make sure that the Heading appears on the first page and number the pages. Do not put your name on any page.

Check spelling, punctuation and grammar. Do not rely solely on spell-check software: some typos create real words that would be missed by a spell-checker. Also, computer grammar-checkers can steer you wrong, so be sure to read over your work several times and get another human to review it, too. **

The following elements are required in your Essay: these *titles* are for guidance only ... they need not be included in your Essay.

- **HEADING** – The title of the Essay and the name(s) and affiliation(s) of the researcher(s). Your heading probably won't be the same as the one published by scientists in a technical journal; normally such titles use highly scientific words and are not clear to the general public. If you found the news on a website, in a press release or in an article in a non-scientific publication, you will see that the title is more readily understandable than the published scientific one. Invent one like that for your submission.
- **OVERVIEW** – Describe the research advance and its significance. Sometimes the researcher will have included that; a journalist or press officer writing about the discovery *always* will: in fact, it may be the lead item in the story.
- **CORE** – Describe the researchers' hypothesis, methods and results. This will probably be the largest part of the Essay. Give your editor enough detail so that she can envision how the research was carried out; was the hypothesis confirmed? Choose your details wisely: there is no need to identify, for example, the brand of lab equipment used, the dosing ranges for animal models, or other facts that a scientist would want, but that are not needed for the teenage reader's understanding of the science.
- **CONCLUSION** – Summarize the potential health benefits of the research (maybe years from now) to people and animals; or, explain the new level of understanding this gives us into how living bodies operate, and what that means for the future.
- **BIBLIOGRAPHY*** – List the references you used, such as magazines and newspapers, websites, interviews, dictionaries, encyclopedias. Each school has a preferred bibliographic standard style: use the one your school endorses. For websites, give the website name as well as the page URL.

END



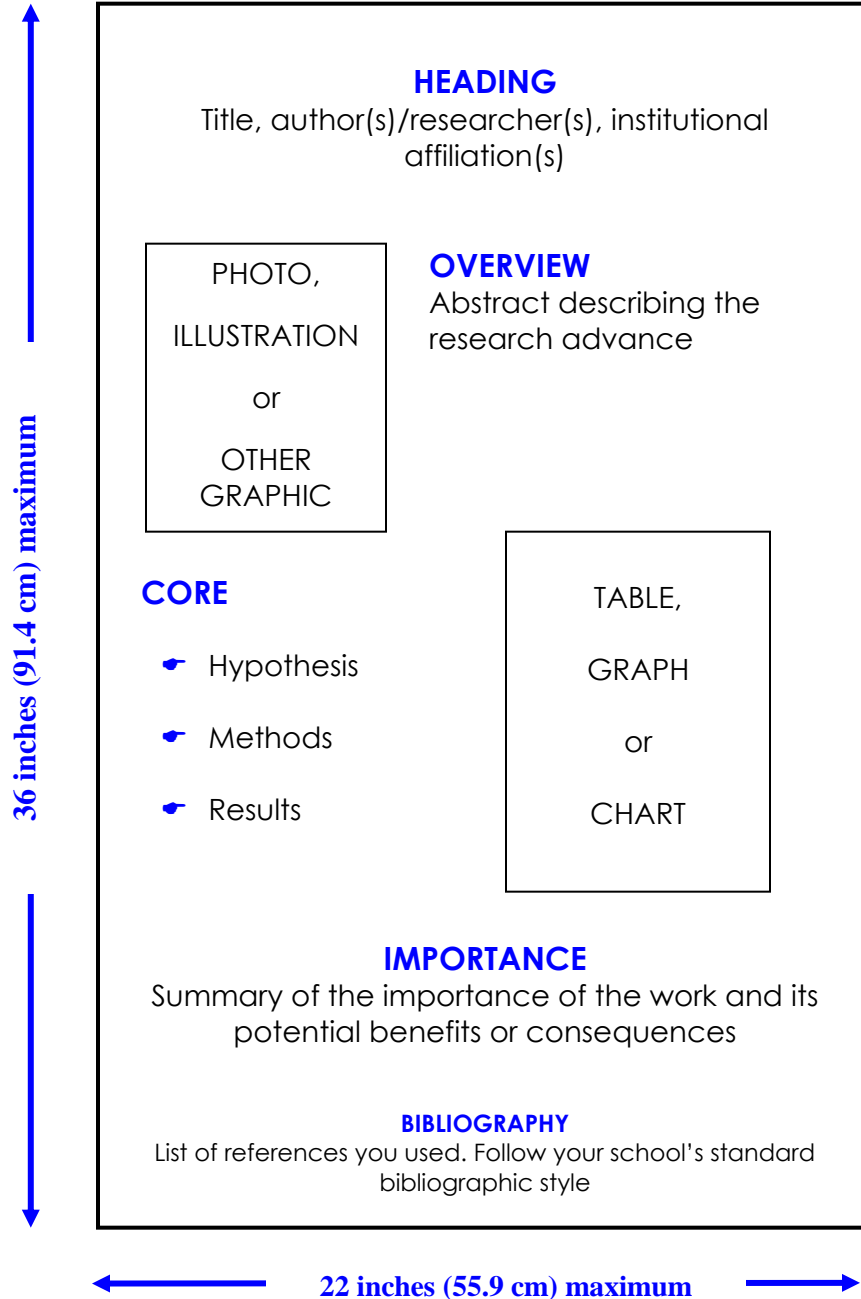
Poster Here is a schematic of a Poster. This is a sample only. It shows the Required Elements and *maximum* dimensions. Your Poster can be vertical or horizontal. Yours can be smaller or in a different height-to-width ratio. On page 6 there are more details about the Required Elements.

**SCHEMATIC
(SAMPLE LAYOUT)**

Remember that this is a sample layout only ... it shows the required elements in **BLUE**. Your Poster should reflect your own design style.

The next page (6) has more details on the Required Elements.

We can accept only PDF files of your Poster. Please do not send other forms of graphics file. Note: The program you use to create your Poster *may* limit the actual Poster size. Plan carefully in advance.





The following elements are required on your Poster: these *titles* are for guidance only ... they need not be included on your Poster. The use of photos, charts, tables and other graphic tools that clarify the research is strongly encouraged.

Check spelling, punctuation and grammar. Do not rely solely on spell-check software: some typos create words that would be missed by a spell-checker. Also, computer grammar-checkers can steer you wrong, so be sure to read over your work several times and get another human to review it, too. **

- **HEADING** – The title of the Poster and the name(s) and affiliation(s) of the researcher(s). Your heading probably won't be the same as the one published by the scientists in a technical journal; normally such titles use highly scientific words and not very clear to the general public. If you found the news on a website, in a press release or in an article in a non-scientific publication, you will see that the title is more readily understandable than the published scientific one. Invent one like that for your Poster.
- **OVERVIEW** – Describe the nature of the research advance and its significance. Sometimes the researcher will have included that; a journalist or press officer writing about the discovery *always* will: in fact, it may be the lead item in the story.
- **CORE** – Describe the authors' hypothesis, methods and results. This will probably be the largest part of the Poster Give your editor enough detail so that she can envision how the research was carried out; was the hypothesis confirmed? Choose your details wisely: there is no need to identify, for example, the brand of lab equipment used, the dosing ranges for animal models, or other facts that a scientist would want, but that are not needed for the teenage viewer's understanding of the science.
- **CONCLUSION** – Summarize the potential health benefits of the research (maybe years from now) to people and animals; or, explain the new level of understanding this gives us into how living bodies operate, and what that means for the future.
- **BIBLIOGRAPHY*** – List the references you used, such as magazines and newspapers, websites, interviews, dictionaries, encyclopedias. Each school has a preferred bibliographic standard style: use the one your school endorses. For websites, give the website name as well as the page URL.

END



Website Here are the required elements of the Website as well as technical requirements and restrictions. Make sure that your Website includes your Bibliography.*

You have wide latitude in creating your Website, but it must include the elements listed below (although you do not have to specifically label each section of the Website unless you want to). Remember, you are making a Website in order to take advantage of the power of the web (e.g., mouse roll-overs, pop-ups, animations, etc.), but you cannot simply have a page that is a series of links to other websites. Text on your site may not exceed 1,000 words and should probably be a lot less.

Check spelling, punctuation and grammar. Do not rely solely on spell-check software: some typos create other words that would be missed by a spell-checker. Also, computer grammar-checkers can steer you wrong, so be sure to read over your work several times and get another human to review it, too. **

- **HEADER** – The title of the Website and the name(s) and affiliation(s) of the researcher(s). Your heading probably won't be the same as the one published by the scientists in a technical journal; normally such titles use highly scientific words and are not clear to the general public. If you found the news on a website, in a press release or in an article in a non-scientific publication, you will see that the title is more readily understandable than the published scientific one. Invent one like that for your submission.
- **OVERVIEW** – Describe the research advance and its significance. Sometimes the researcher will have included that; a journalist reporting about the discovery *always* will: in fact, it may be the lead item in the story.
- **CORE** – Describe the researchers' hypothesis, methods and results. This will probably be the largest part of the Website. Give your editor enough detail so that she can envision how the research was carried out; was the hypothesis confirmed? Choose your details wisely: there is no need to identify, for example, the dosing ranges for animal models, or other facts that a scientist would want, but that are not needed for the teenage viewers' understanding of the science.
- **CONCLUSION** – Summarize the potential health benefits of the research (maybe years from now) to people and animals; or, explain the new level of understanding this gives us into how living bodies operate, and what that means for the future.
- **BIBLIOGRAPHY*** – List the references you used, such as magazines and newspapers, websites, interviews, dictionaries, encyclopedias. Each school has a preferred bibliographic standard style: use the one your school endorses. For websites, give the website name as well as the page URL.
- **TEAMS** – Teams of up to two (2) students may submit Websites. Each submitter must complete an individual [Entry Form](#), check the "Team" box, and list the other team member's name.



Useful Links for Researching

What A Year! - monthly research stories – www.WhatAYear.org

Learn what **What A Year!** is all about, but don't use any of our stories for your own entry.

Organizations whose members conduct or sponsor research

These organizations' members include colleges, universities, hospitals, biotechnology firms, medical device firms, and pharmaceutical firms. Not every research facility is a member, so if you have a particular place in mind, go to its website and look in its News section. Note: If you have interest in a particular disease or condition (e.g., diabetes, colitis, cancer, heart disease, autism, malaria, depression, Alzheimer's, macular degeneration) find associations or organizations that focus on that condition and see what research they are sponsoring or reporting.

Massachusetts Society for Medical Research – <https://www.msmr.org>

Biotechnology Industry Association - <https://www.bio.org/>

Massachusetts Biotechnology Council – www.massbio.org

Massachusetts Medical Device Industry Council – www.MassMEDIC.com

Curious Science Writers – www.curiousciencewriters.org

Print and on-line publications

This list excludes subscription publications. Many libraries, especially college and university libraries, subscribe to scientific publications in the life sciences.

BioMed Central – www.biomedcentral.com

Over 100 open-access journals.

BioProcess Online – www.bioprocessonline.com

Frontiers in Biosciences – www.bioscience.org

A journal and virtual library.

Genetic Engineer News – www.genengnews.com

PubMed – www.ncbi.nlm.nih.gov/pubmed/

PubMed is the National Library of Medicine's search service: it provides access to over 15 million citations.

Science Daily: Science News and Articles – www.sciencedaily.com

More Resources

NIH RePORTER – <https://projectreporter.nih.gov/reporter.cfm>

(The RePORT Expenditures and Results, RePORTER system, is an electronic tool that allows users to search a repository of NIH-funded research projects from the past 25 years and access publications since 1980, and patents resulting from NIH funding. It includes information on research projects funded by the NIH as well as the Centers for Disease Control and Prevention (CDC), Agency for Healthcare Research and Quality (AHRQ),



Health Resources and Services Administration (HRSA), Administration for Children and Family (ACF), and U.S. Department of Veterans Affairs (VA).)

EurekaAlert! – www.eurekaalert.org

Science headlines from the American Association for the Advancement of Science (AAAS).

The New York Times and **The Boston Globe** both report on science in their print and on-line editions. **The Boston Globe** pays particular attention to news releases and announcements from New England companies and institutions.

STAT – www.statnews.com - A product of The Boston Globe, STAT covers health, medicine, life sciences and the business of making medicines, from an academic, bio-sciences and political perspective.

TED Talks - <https://www.ted.com/talks>

TED is a platform for ideas worth spreading. Started in 1984 as a conference where technology, entertainment and design converged, TED today shares ideas from a broad spectrum — from science to business to global issues — in more than 100 languages. Meanwhile, independent TEDx events help share ideas in communities around the world.

*** A Word About Wikipedia**

We love Wikipedia, but please remember that Wikipedia should not be your primary reference. Get your information from first-hand sources, and always double-check what you read in any on-line reference site, especially those that allow anyone to edit an article.

"Wikipedia cannot guarantee the validity of the information found here. The content of any given article may recently have been changed, vandalized or altered by someone whose opinion does not correspond with the state of knowledge in the relevant fields. Note that most other encyclopedias and reference works also have similar disclaimers."

http://en.wikipedia.org/wiki/Wikipedia:General_disclaimer.

**** A Word About Original Writing vs. Copying and Plagiarism**

We understand that you are going to be starting with a print or on-line source (or sources). This may make it a little harder to break away from other authors' thoughts and presentation and make this story your own. This is an effort you should make – the only way you will really master the information is to study it and explain it in your own terms to your specific audience – teenage science students. If you do need to use a brief exact citation, you must acknowledge it with quotation marks and a footnote. Our judges will be severe if they detect plagiarism – which is really just thoughtless copying.