

## 2016-2017 Metro Detroit Junior Innovation Competition Competition Overview and Rules

**Overview:** The Detroit Junior Innovation Competition hopes to promote STEM by challenging middle school students in the metro Detroit area to research and develop a new scientific innovation and explain it through a short essay or video. Students are encouraged to think about the problems facing society and brainstorm technological solutions to solve these problems. Although most students will not have access to labs, students are highly encouraged to use internet and print resources to dig deeper into their research areas and apply this knowledge to their project. Students with the best ideas and presentations will be given cash prizes and mentorship to work on their projects and make their ideas a reality over the upcoming 2017-2018 school year.

### Eligibility

- All entrants must be United States citizens or legal residents residing in the Metro Detroit area or attending a school in the Metro Detroit Area.
- Students must be in 6th, 7th, or 8th grade in the 2017-2018 school year.
- Projects that have been submitted and won a prize in another competition may not be submitted. However, we do encourage you to build upon your other project if you wish.
- Students can enter alone or work in a group of two with one teacher/coach as a mentor.
- Any project with signs of plagiarism will be immediately disqualified.

### How to Participate

- Participation in MDJIC is completely free!
- Individuals or teams must come up with and research a new scientific idea, and then explain this idea through a video or written essay.
- Submissions for the competition will open in August 2017 and must be submitted to [mdjic.com/submissions](http://mdjic.com/submissions).
  - The timeline for submissions is July 1, 2017 until September 10, 2017.
- The winners will be invited to attend an awards ceremony in late September.

### Prompt

Develop a new engineering concept or combine multiple preexisting engineering concepts and then apply those concept(s) innovatively to solve a problem in the world. Students/Teams can choose to explain their ideas through a written essay OR a video.

**Written Entries:** Your write up (5 pages MAXIMUM) should include four parts:

1. Introduction and Problem  
Summarize your idea, the problem it is solving, and why that problem needs to be solved. Include your motivation for solving this problem.
2. Your solution and plan:  
Describe how you plan to create a solution to this problem. Explain the research you have done in regard to this problem. What further experimentation or testing do you need to come up with a solution? What are the time and monetary expenses needed for this solution?

### 3. Conclusion and Consequences

Explain what effects this will have on the world and how effectively it will solve the problem. Mention any drawbacks to your solution. Conclude your paper with a good wrap-up paragraph.

### 4. Bibliography:

Cite any sources that you may have used in researching for your projects using the MLA format.

**Video Entries:** Video entries must have excellent video and audio quality. Entries must be less than 10 minutes in length. The guidelines of the video entries are the same as the written entries:

#### 1. Introduction and Problem

Summarize your idea, the problem it is solving, and why that problem needs to be solved. Include your motivation for solving this problem.

#### 2. Your solution and plan:

Describe how you plan to create a solution to this problem. Explain the research you have done regarding this problem. What further experimentation or testing do you need to come up with a solution? What are the time and monetary expenses needed for this solution?

### 3. Conclusion and Consequences

Explain what effects this will have on the world and how effectively it will solve the problem. Mention any drawbacks to your solution. Conclude your paper with a good wrap-up paragraph.

### 4. Bibliography:

Cite any sources that you may have used in researching for your projects using the MLA format. This can be done either within your video, or you can submit a separate bibliography document with your video.

## Rules

- All written projects must be in size 12 Times New Roman Font and double spaced with 1-inch margins. There is a 5-page limit on the written project.
- Video entries must have clear audio and video. The length of the video must be under 10 minutes.
- The ideas in the project must be original and cannot be copied from another source.

## Mentors and Parents

Students are encouraged to consult professionals or mentors in their research area to learn more about the topic of interest and develop their projects. Parents are also

encouraged to explain concepts and connect students with professionals. However, the project itself must be completely the work of the student, and not be written by parents or mentors.

### **Submission**

- Projects can be submitted from August 1, 2017 until September 10, 2017. Projects must be submitted online at [mdjic.com/submissions](http://mdjic.com/submissions).
- Projects must be submitted with the title set as [First Name/Last Name/School Name]. For example, if my name is John Smith and I attend Boulan Park Middle School, my submission title will be [John/Smith/Boulan Park Middle School]
  - If you are a team, then only include the name of the team leader in your submission

### **Judging**

Each project will be judged by the MDJIC board and guest scientists. Projects will be judged on the following criteria:

- **Completeness:** Does the project address all necessary topics for a proper proposal?
- **Creativity:** Does the project offer a unique and innovative solution to the problem?
- **Research:** Does the project show that the author has a clear understanding and has developed sufficient knowledge of the problem to come up with a proper solution? Is the solution realistic and logical enough to be implemented properly?
- **Impact:** To what degree will the proposed solution benefit society?
- **Mechanics:** Projects will be judged on whether it adheres to the required format (12 size Times New Roman font, double spaced, 1-inch margins, max 10 pages for written; high quality video/audio and <10 minutes for video). Projects will not be judged on spelling or grammar unless the number of mistakes impacts the meaning and organization of the project.

**Prizes:**

The top 3 winners will receive trophies, scholarships, and mentorship from high school students to continue work on their project. Two honorable mention students will also be selected to receive scholarships and trophies.

Award	1st	2nd	3rd	Honorable Mention (2 students)
Prize	\$500	\$250	\$100	\$50

**Patents, Rights, and Trademarks**

Students own all rights over the materials and ideas that they produce. However, we reserve the right to use the student's and the mentor's name, photograph, quotes, and the material for publicity and promotional purposes. We will not infringe or patent any work or idea of the student's work.