

SCHEDULE AND GUIDELINES

2023 WNY INVENTION CONVENTION



SCHEDULE

NOW- Inventors start/finish/improve inventions and begin creating 3-6 minute video.

3/1/23- Registration opens at wnyic.zfairs.com. Please register your **INTENT** to participate as soon as possible. You can complete registration when everything is finished.

4/22/23- Registration Closes. All materials must be uploaded by this time. Online Originality Judging begins.

4/30/23- Western New York Invention Convention is held at the Buffalo Museum of Science. Participants will present their inventions to panels of judges from STEM fields across Western New York. Prizes will be awarded in Grade Levels as well as Special Categories.

4/30/23- Award Ceremony held at Buffalo Museum of Science. Top 5 Winners Announced. The top winners will be invited to participate and register for the National Invention Convention held at The Henry Ford in Dearborn, Michigan

6/07- 6/09/23- National Invention Convention at the Henry Ford in Dearborn, MI.

WHY A VIDEO?

National Invention Convention already requires a video for participation. WNYIC has adopted this requirement for our online originality judging.

ARE TEAMS ALLOWED?

Teams of 2 are allowed. If the Inventors on a team are in different grades, the team will participate in the highest grade bracket of the two inventors.

WHAT IS IN THIS DOCUMENT?

Guidelines for planning, filming, and uploading your video are included.

A judging rubric is included so you know the categories you will be judged on.

INVENTION VIDEO EXAMPLES



Kindergarten

In this video, the young man is provided prompts.

This is acceptable for K-3rd grade only.

No Pecker Egg Collector

<https://youtu.be/7GIGr3tk3lk>

4th Grade

From 4th to 8th Grade, the videos need to be filmed without any audio prompts.

Beat The Cheat

<https://youtu.be/83SxKWXmSxA>

Game On

https://youtu.be/xLZZ__92PtM

5th Grade

Scandicapped (shows an onsite team-WNYIC only allows 2 per team)

<https://youtu.be/EGUjSuuxjws>

6th Grade

Peanut Butter Singles

https://youtu.be/3_1ZrotUY_8

8th Grade

Tie Mask (shows an at-home team of 2)

<https://youtu.be/NDwBm5HSqfY>

Hint:

Notice that voice levels and the lighting is very important

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HOW WILL THE INVENTION BE JUDGED?

Invention Process – 40 points

Identifying & Understanding & Ideation- How did the inventor uncover this problem? How did the inventor become passionate about this problem? Who else might experience the same problem and to what end? How did the inventor arrive at the solution?

Designing & Building - How did the inventor design the invention to work? How did the inventor choose the materials used to build the invention?

Testing & Refining - How did the inventor refine the design through testing? What challenges did the inventor encounter? How did the inventor overcome those challenges?

Invention Impact – 25 points

Originality: Is the invention unique, novel, and creative? Is it different from prior inventions? What research did the inventor do to determine their invention's originality?

Environmental or Social Impact - How does the invention improve environmental or social conditions or have very little damage to the environment?

Inventor Communication – 35 points

Prototype or Model: Does the prototype clearly communicate the key things that make the invention effective and beneficial?

Display Board: Is the information clear and neat?

Live Presentation with Judges: Presentations should not exceed five minutes. How well does the inventor present? Is the information concise? How well does the inventor answer questions from the judges?

Video: Does the video clearly communicate the invention process and impact? Is it organized, clear, and concise? Do inventors show enthusiasm and speak without reading from cue cards?

Inventors Logbooks: Is the Invention Process documented? Are there sources cited for research? Is the inventor's thought process evident?

Hint:

The next page will show a reminder of the Invention Process.

7-STEP INVENTION PROCESS



Identifying

Identifying a problem means brainstorming and using research to discover problems and who might have these problems.

Understanding

Understanding means using empathy and research to discover problems and who might have them.

Ideating

Ideating means thinking about the problem, brainstorming, and researching different ideas and options to solve the problem.

Designing

Designing means deciding what your invention's solution will be made of, what it will look like, and how it should work

Building

Building means assembling your invention into a prototype using the materials and the processes you have decided to use.

Testing

Testing your solution is how you find what works and what doesn't. You will modify or change your design, make the changes, and test those changes. This process is repeated until your invention or prototype works well.

Communicating

Communicating means explaining the problem, the research you did, how your invention solves the problem, who might use your invention, your process in creating this invention, and how you might make it even better.

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Hint:

The lighter arrows show the general order of the Invention Process.

The arrows on the side mean that you may find you need to repeat some steps.

PRESENTATION GUIDELINES



GUIDELINES FOR VIDEO PRESENTATIONS: PLANNING & PROMPTS

- The video should be between 3-6 minutes long
- There should be **NO editing or post-production effects** (the video should run continuously)
- For students in grades K-3: Parents may prompt students with questions (see “For K-3 Inventors” below)

For K-3 Inventors

K-3 inventors may need an adult to prompt them with questions from behind the camera.

Questions that might help your inventor when filming:

- Can you tell me how you thought of this invention?
- What problem are you trying to solve with this invention?
- How does your invention work?
- Did you make any changes to your invention? Why did you make those changes?
- Who do you think will use this invention?
- Does your invention help the world, or just a few people?
- What impact on the environment do you think your invention will have?

PLANNING YOUR CONTENT

Use the Judges Rubric to plan the content of your video.

Here are some tips that all grades should find useful:

- **Begin with introductions-** Each inventor should say their name, grade, school, and the name of their invention
- **What makes your invention Original?-** Talk about the originality of your invention and the research you have done to discover what makes your invention original, **OR** a big improvement on a product that already exists.
- **Be sure to talk about all steps of the Invention Process**
 - How did you identify the problem?
 - How did you determine which idea you wanted to pursue?
 - What challenges did you encounter?
 - What changes did you make and why?
- **Statement Starters You can Use (these are just examples)**
 - "Other things I discovered through my research were...."
 - "My challenges were...."
 - "I discovered that..."
 - "I changed and improved my solution by...."
 - "My solution is different because...."

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Hint:

The following pages will help you with your content and timing of your video AND your live presentation

GUIDELINES FOR VIDEO PRESENTATIONS: TOPICS & TIMING

When preparing for your presentation, use this outline as a guideline

- These topics are what judges will be scoring you on, so you want to make sure you address these in your presentation
- Overall, the judges want to hear about your invention process, so spend time explaining how you arrived at your end result
- The times suggested for each topic are just that, a suggestion
- Don't feel that you have to speak for that long. Be concise with what you have to say, and do not worry if your video does not reach the maximum time

Invention Process (app. 2 minutes)

Problem and Solution identification – Identifying, Understanding, Ideating

- Arrival at the problem
- How did you uncover the problem?
- How did you become passionate about this problem?
 - Answer could be a personal story with connection to problem or a written process of identifying and researching a problem and its impact

Research on who is affected by this problem

- What sources did you use to uncover the problem your invention solves and to better understand the situation?
 - Answers could be a personal story of how you were inspired or a bibliography of sources. If you spoke to an expert, tell us about what you learned!

Arrival at the solution

- How did you arrive at your solution?
- How does your solution solve the problem you identified in your research?
- What sources did you use to uncover your solution and to better understand your ideas?

Originality research

- What research did you do to see if something like your invention already exists?
- How did you modify your ideas to be unique?

Hint:

These timing suggestions are approximate! The video needs to be THOROUGH and between 3-6 minutes long. The live presentation should be no longer than 5 minutes.

GUIDELINES FOR VIDEO PRESENTATIONS: TOPICS & TIMING

Engineering Design Process (app. 2 minutes)

Designing, Building, Testing

- Present your prototype
- How does your prototype work? Show the judges in your video. If you have a non-working model, explain how your prototype would work.
- How did you choose the materials used to build the invention?

Testing and iteration

- How did you test your invention to see if it would work?
- What changes or refinements did you make to your invention during the testing process?
- What challenges did you face and how did you overcome them?
- What did you learn as a result of inventing?

Invention Impact (app.1 minute)

Entrepreneurship - Marketing, Why it's Valuable (eg. social value, etc.)

- Social/environmental impact of the invention
- How does the invention improve environmental or social conditions or have a minimal environmental impact?

Your market or audience

- Who might use your invention?
- How much might it cost if you were to sell it?

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Hint:

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GUIDELINES FOR VIDEO PRESENTATIONS: TOPICS & TIMING

How To film Your Video

- Film with a smart device (phone, tablet, etc.) or video camera
- Plan what you are going to say
- If you are on a team with both inventors onsite, decide who will talk about which topics before filming
- If you are on a team where one inventor lives elsewhere, decide who will be the presenter but do your planning together OR
 - You may do a recorded Zoom presentation but make sure the lighting and sound is good in both locations
- Use your prototype and display board in the video
 - Find a quiet, well-lit spot where you can set up your display board, invention and you have room to present
 - Natural light from windows works well
 - Do not stand in front of the window; you'll appear as a shadow
 - The light should be coming toward you, your invention, and your display board
- Use a loud, clear voice
- You may want to practice your presentation a few times with the camera to get comfortable and to make sure about the timing, sound, and lighting

How To Upload Your Video

- **You will be asked to upload your video directly to wnyic.zfairs.com**
- If you are not ready to upload and want to continue with your registration, you will click "Save & Continue" to move to the next page
- You **MUST** upload a video to zfairs to be a participant in Invention Convention
- Because the zfairs site is private, you can put your name in the title of your video
 - Your video will be permanently linked to your entry
- Do not pay your registration fee until your video (and Logbook) are uploaded

Hint: Before recording, take a deep breath and relax. Remember, you are the expert on your invention!