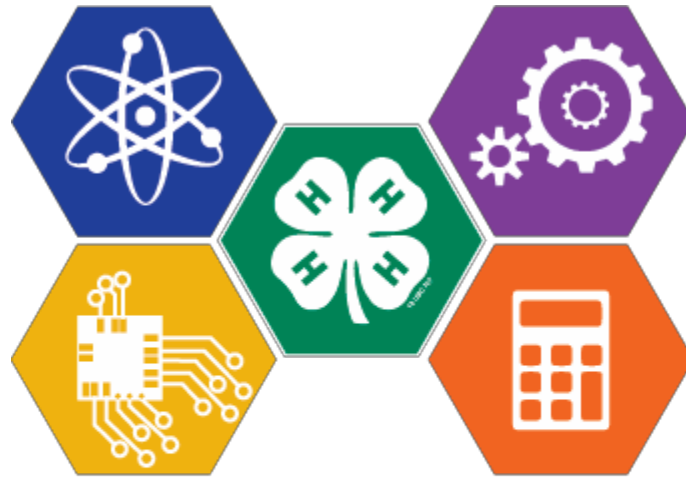




2nd Annual 4-H STEM Fair



STEM
Science·Technology
Engineering·Math

Saturday May, 2nd 2020

10:00-2:00 at Harison Gym, Malone, NY

Grades 3-12

Registration Due April 27th Mail registrations to

Franklin County 4-H CCE, 355 West Main St., Suite 150, Malone, NY,

12953 E-mail to- eat93@cornell.edu

On-line Group: https://reg.cce.cornell.edu/2020_STEMFair_group_216

On-line Individual: https://reg.cce.cornell.edu/2020_STEMFAIR_216

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STEM Project Tips

1. When choosing a project make sure the project is something you truly find interesting and want to learn more about. Projects can be from any number of STEM categories. For ideas check out the category list in this packet.
2. Follow the Scientific Method when developing your project:
 - Ask a question- your project should be focused around answering this one question. For example “What cheese makes the best grilled cheese sandwich?”
 - Do some Research- look into the background of your project, the history, and anything else that deals with your project topic.
 - Make a Hypothesis- simply make an educated guess on what YOU think the answer to your question will be.
 - Test your Hypothesis- do different experiments to see if your hypothesis is correct or not. Remember to stay focused on your initial question. It is ok if your hypothesis is not correct. The more times you do an experiment the more reliable and accurate the results will be.
 - Analyze the data- You have to keep good records on all of the tests you perform. In this step you will look at all of the information and develop graphs or charts to help you see the “big picture” of your results.
 - Draw a Conclusion- how did your results turn out? Was your question answered?
3. Prepare your titles, charts, graphs, drawings, and diagrams. Make them large enough to see, neat, and colorful. We encourage you present your project through a computer base system like Google Slides or Powerpoint, but you can have visual aids on display.
4. Prepare and practice your presentation. Be able to tell about what you used, what you did in your experiments, and what you found out. Know it well enough that you don’t have to read it from the presentation.
5. Plan a time line so you don’t leave everything until the last minute. If you need help, tell your parents and your teacher, the earlier the better.

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STEM FAIR RULES

1. Safety First! Make sure you choose a project that is safe for you to do. If there are dangerous aspects of your experiment, like using a sharp tool or experimenting with electricity, please have an adult help you or have them do the dangerous parts.
2. Wear protective goggles when doing any experiment that could lead to eye injury.
3. Respect all life forms. Do not perform an experiment that will harm a person or animal.
4. All experiments should be supervised by an adult.
5. Always wash your hands after doing the experiment, especially if you have been handling chemicals.
6. Any project that involves drugs, firearms, or explosives are NOT permitted.
7. Any project that breaks district policy, and/or local, state, or federal laws are NOT permitted.
8. Use safety on the Internet! NEVER write to anyone without an adult knowing about it. Be sure to let an adult know about what websites you will be visiting, or have them help you search.
9. No in person experiments will be performed on the Fair day. Only Project results will be presented. If you build something for your project you can put the final product of display.
10. We encourage all projects to be presented by a computer base system like Google Slides or Powerpoint. However, physical visual aids may be used as well. Make sure you have a charged device or the proper electrical hook up.
11. Your presentation needs to include each step of the Scientific Method as listed in the Tips.
12. You must use and cite at least 2 sources in your research step.
13. Your STEM Fair presentation should be 5-7 minutes in length.
14. There will be a panel of judges evaluating the presentations. Awards will be distributed at the conclusion of the Fair.
15. Projects may be completed as an individual or as a group. The group does not need to be made up of the same grade level but, will compete in the grade level category based on the oldest member.
16. Once Registrations are received permission slips and code of conducts will be sent to the participant to be signed by both participant and parent/guardian.

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4-H Public Presentations- Speaking Tips:

Your Speech - Why?

- It will help you: plan and organize your thoughts for presentation to others
- Gain self-confidence before a group
- Gain valuable leadership and self-discipline skills
- Understand skills in researching a topic and presenting it in a convincing manner
- Develop a pleasing personal manner and an effective delivery system
- Become an active citizen and an effective community leader who can teach and inspire others
- Become more effective at many of life's tasks.

Prepare Well!

Select a topic you are interested in, know something about, or are willing to research. It should be one in which you and your audience will be interested and about which you can enlighten them. In developing your speech, focus on a main idea or theme. Build your speech around this focal point. Do not try to cover a topic that is too broad.

Get Organized:

- Introduction- Attract the audience's attention with a quotation, poem, or a startling question or statement of fact. Those first few words count! Spark your listeners' interest and they will stay with you throughout your presentation. State the purpose of your speech and what you hope to accomplish.
- Body- This is the "meat" of your talk. You can present information in several ways to your audience. You might like to try one or more of the following patterns:
 - The time pattern – arrange your talk historically around the past, present, and future.
 - The space sequence – arrange your talk geographically. For example, you might be interested in water pollution. You could trace it from its source as it moves downstream.
 - The problem-effect-solution – very effective in speeches because your experiences tend to fall in these categories. For example, the oven was too hot, the biscuits burned, so the biscuits were fed to the birds. State the problem, describe its effects, and suggest ways to solve it.
 - The narrative sequence – in simple terms, just tell your story from beginning to end.

Remember, it's your story, so be sure to put yourself into it. Personal experiences add a lot.

- Conclusion- As you close, briefly summarize your main points and appeal for specific action (if that is the intent of your speech). This is your final opportunity to reach your audience, so make it count! Here are a few tips for ending your speech:
 - Never talk about stopping. Just stop!
 - Always stop while your audience still wants you to continue.
 - Close with the idea you most want the audience to remember.
 - One effective way to end is to summarize the main points. Another method is to leave your audience laughing or smiling.

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STEM Categories

- **Environmental Science and Alternative Energy**
 - *This category provides young people first-hand experience in utilizing alternative energy, conserving energy, and learning how to limit humanity's impact on our environment.*
- **Engineering and Technology**
 - *This category uses hands-on activities such as robotics, rocketry, computer science, electrical engineering, and wood working to teach problem solving, creative and critical thinking, and build excitement!*
- **Plant and Animal Science**
 - *This category engages and excites youth in agricultural science topics like vet science, biotechnology, raising and training animals, and forestry. Topics like food and consumer science would also be including in the category.*

Remember that STEM stands for Science, Technology, Engineering, and Mathematics. If you have a project idea that is not listed above then select the other category when registering.



Individual Registration

Name of Participant _____

Address _____

Parent/Guardian Name _____

Email or Phone Number _____

Grade level _____ School or 4-H Club Name _____

My Project Category is: (please circle one)

- Environmental Science and Alternative Energy
- Engineering and technology
- Plant and Animal Science
- Other _____

My Project Title is: _____

Please provide a brief description of your project:

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Group Registration

Group name _____

School or 4-H Club Name _____ Grade Level(s): _____

Our Project Category is: (please circle one)

- Environmental Science and Alternative Energy
- Engineering and technology
- Plant and Animal Science
- Other _____

Our Project Title is: _____

Please provide a brief description of your project:

1. Name of Participant _____

Address _____

Parent/Guardian Name _____

Email or Phone Number _____

2. Name of Participant _____

Address _____

Parent/Guardian Name _____

Email or Phone Number _____

3. Name of Participant _____

Address _____

Parent/Guardian Name _____

Email or Phone Number _____

4. Name of Participant _____

Address _____

Parent/Guardian Name _____

Email or Phone Number _____

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