

Handbook
for
Local Science Fair
Directors

2019-2020

Ohio District 13 Science Day



Dear Local Science Fair Directors,

This handbook has been designed to help you and your students prepare for the Ohio District 13 Science Day. Our website (<https://www.mountunion.edu/ohio-district-13-science-day>) also contains links to many of the individual sections within this handbook. **This year the Registration Process and handling of Required Forms will once again be completed through Stem Wizard.**

It is my hope that this information, as well as the information on the website, will be helpful to you as you prepare for District 13 Science Day on March 14, 2020. Other important dates to remember are:

- March 2, 2020
 - Online registration closes
 - All forms must be uploaded to the Stem Wizard site
 - All “Required Forms Checklists” and Fees must be received (see the Teachers tab on the webpage for more details)
- March 9, 2020
 - Online judge and volunteer registration closes
- May 9, 2020
 - State Science Day at The Ohio State University in Columbus

If you should have questions, please feel free to contact me via email (greineja@mountunion.edu) or at 330-829-8161. I look forward to working with you and your students!

Sincerely,

Jamie Greiner
Co-Director, Ohio District 13 Science Day

Ohio District 13 Science Day



Purpose of District 13 Science Day

What: The Ohio District 13 Science Day is an opportunity for the display and evaluation of student research projects that have been judged as superior at the local level. The highest rated superior projects (per quotas allowed) from District 13 are then eligible for participation in the State Science Day.

When: The Ohio District 13 Science Day will be held on Saturday, March 14, 2020

Where: Bracy Hall at the University of Mount Union
Alliance, OH 44601

Who: The Ohio District 13 Science Fair is open to students in grades 5-12 who have received a Superior rating at their school districts' local science fairs from the following counties: Carroll, Stark, and Tuscarawas.
Projects that have followed Ohio Academy of Science Standards from students who are home-schooled or come from schools where local science fairs are not held may also be submitted to the Ohio District 13 Scientific Review Committee for possibly entry. Please visit the District Fair Page of the website for more information.

Why: The Ohio Academy of Science is dedicated to encouraging and assuring the discovery, understand, dissemination, and practice of science, mathematics, and engineering. Each year in Ohio, there are more than 1,000 local Science Days leading to 17 District Science Days and culminating with the State Science Day, where more than \$1,500,000 is available in scholarships and awards.

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2020 District 13 Science Day Tentative Schedule of Events

7:30-8:30 am	Project Set-up and Check-in	Bracy Hall
8:00-8:45 am	Early Judging	Bracy Hall
8:00-8:30 am	Judges Meeting and Assignments	Bracy Hall
8:45-11:45 am	Project Judging* and Re-Judging as needed**	Bracy Hall
12:00-2:00 pm	Lunch for Participants Public Viewing of Projects Project Removal***	Hoover-Price Campus Center Bracy Hall Bracy Hall
3:00-4:00pm	Awards Ceremony	Hoover-Price Campus Center
4:00-4:30pm	State Science Day Registration Meeting	Hoover-Price Campus Center

*Only exhibitors, judges, and Science Day staff are permitted in Bracy Hall during judging

**Re-Judging Policy

From prior experience, we know that a majority of projects are judged fairly, reflecting the degree to which a student has met established judging criteria. We do, however, recognize that occasionally a project may be judged too severely, or an oversight may occur. A mechanism does exist to invoke re-judgment in such cases. The following rules regarding re-judging were adopted by the Ohio Academy of Science in 2002:

“Two judges will judge each project for the Ohio Academy of Science ratings. If each judge grants a total score within any one rating category (Superior, Excellent, Good, or Satisfactory), that specific rating will be granted to the student and no re-judging is permitted. Re-judging is automatic and is permissible **ONLY IF ALL THREE OF THE FOLLOWING CONDITIONS APPLY:**

1. The judges’ final ratings are in different categories;
2. The average of the judges’ scores is in the lower category, and;
3. If the judges differ in their total points by more than five points.”

***Certificates and award ribbons will be placed at the projects while the students are at lunch. Therefore, students are encouraged to leave their projects displayed and not remove them until after they eat lunch.

Guidelines for Teachers

Step One: Students identify a problem to research and plan a project.

Step Two: Students complete Research Plan Worksheets and fill out forms **1A and 1B**, and submit to the teacher for approval. After they are approved they must be returned to the student to upload to the Stem Wizard site (Teacher must verify that all forms are completed and uploaded to each Students Stem Wizard account using the “Required Forms Checklist”. This checklist must be submitted (hardcopy) for each student, along with the registration fee (check(s)) for each.

Step Three: A) Form a School Scientific Review Committee/Institutional Review Board. This committee reviews the student research plans to assure that there is compliance with the rules for research involving vertebrate animals, potentially hazardous biological agents, hazardous chemicals/activities/devices, and human subjects.

This committee will consist of a school administrator, science teacher, and school nurse or school psychologist. A veterinarian must also be included to review vertebrate animal studies.

B) Set a date for the committee to review all proposed project plans. Provide the committee with the completed forms (1A and 1B), Research Plan Worksheets, and Form 1, which is completed by the teacher. When a project is approved by the committee, the Chairperson signs Form 1B.

***Note: Students may not begin research until all signatures on Form 1, Form 1A, and Form 1B are secured (as well as any other forms required for the project).**

Step Four: Student complete research projects. Some projects may require supervision. Refer to the Science Day Standards to determine if a project requires supervision.

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Step Five: Evaluate student projects at a Local Science Fair using the Ohio Academy of Science Judging Criteria (information found on website). Projects that receive Superior ratings are eligible for District 13 Science Day.

Step Six: Help prepare and register students who will be attending District 13 Science Day on March 14, 2020. NOTE REGISTRATION PROCESS using Stem Wizard.

To participate in District 13 Science Day, projects MUST HAVE:

1. A physical display that includes a poster, research report, and lab notebook
2. An Abstract
3. Research Paper
4. Completed forms

Online registration opens December 2, 2019. Students MUST register online and pay the \$25 participation fee by March 2, 2020. Teams must complete online registration together and each participant must pay the \$25 registration fee. If students are paying the fee directly, please have checks made payable to University of Mount Union and the student's name included in the memo line. If the school is paying the fees, have checks made payable to University of Mount Union and the school in the Memo line.

Step Seven: Each School Chairperson must ensure that all project registration materials (Abstract, ISEF Forms, Research Paper, and Consent and Release Agreement) are uploaded to the Stem Wizard Registration site and mail all checks and Signed "Required Forms Checklists" for each student to the following address:

Jamie Greiner – District 13 Science Day Co-chair
University of Mount Union
1972 Clark Ave.
Alliance, OH 44601

Included in the mailing should be:

1. Completed Required Forms Checklists for each student and checks.

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Step Eight: For every three (3) projects a school sends to District 13 Science Day, that school must also supply one (1) judge. **Judges must register online by March 9, 2020 and indicate which school they are representing in their registration (Comments Section).** So, if your school sends six projects, your school must supply two judges. If your school is sending eleven projects, you school must supply three judges. Each school must also provide one (1) volunteer. This can be a parent. **Volunteers must register online by March 9, 2020 and indicate which school they are representing in their registration.**

Suggested Timeline for Teachers

Action/Activity	Suggestions/Materials	When
Introduce Science Fair to students and parents	<ol style="list-style-type: none"> 1. Give students and parents a checklist of all the steps of a science fair project and dates by which each step must be completed 2. Distribute Science Day Standards to each student 	1 st nine weeks of school
Form a school SRC and IRB Committee	<ol style="list-style-type: none"> 1. See the guidelines for membership under Step Three in Guidelines for Teachers section of this manual 	1 st nine weeks of school
Introduce forms and help students fill-out portions that must be completed before experimentation begins	<ol style="list-style-type: none"> 1. Form 1A 2. Research Plan 3. Form 1B 4. Checklist for Adult Sponsor (Form 1) 	2 nd nine weeks of school
SRC/IRB reviews all proposed project plans and signs off on appropriate forms	<ol style="list-style-type: none"> 1. Form 1B 2. Form 1, if all other required forms are completed <p>Some students will need to complete additional forms, which the SRC/IRB will have to see BEFORE signing off on the project</p>	2 nd nine weeks of school
Students complete research projects Some students may need equipment and lab space at school	<ol style="list-style-type: none"> 1. Set aside a few minutes during several class periods for students to ask questions 2. Arrange time to work individually with students, is possible 	2 nd nine weeks of school
Students write research paper and abstract and prepare display board	<ol style="list-style-type: none"> 1. Set aside time to evaluate these components and time for students to revise 	3 rd nine weeks of school, before local fair
Students present projects at local fairs	<ol style="list-style-type: none"> 1. All superior rated students may attend District 13 Science Day, but MUST register online by March 2, 2020. 	3 rd nine weeks of school
Solicit judges and volunteers for District and have them register online	<ol style="list-style-type: none"> 1. For every three projects your school sends, you must supply one judge 	No later than March 9, 2020

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	2. Each school must supply one volunteer	
Students register online	1. Set aside time to help them do this, or walk them through the process for them to complete on their own	No later than March 2, 2020
Chairpersons mail Required Forms Checklists for each student, along with checks.	1. Make sure you have verified that all forms are completed properly and uploaded on the Stem Wizard site 2. Checks are made payable to University of Mount Union	Must be received by March 2, 2020
District 13 Science Day	1. Bracy Hall on the University of Mount Union Campus	March 14, 2020

Required Forms

The following forms are **REQUIRED** for all students participating in local science fairs affiliated with District 13, as well as those who qualify for competition at District 13 Science Day. The only Ohio specific form is the Ohio Academy of Science Consent and Release Agreement; however, the Ohio Academy of Science has adopted the Intel International Science and Engineering Forms as additional required forms for participation in local and district fairs and State Science Day (found on website [Important Dates](#) tab: [Resources](#) side bar).

It is important to note that many forms **must** be filled out **prior** to experimentation. Completion of the forms at the proper times and in their entirety is the responsibility of the student, parent, and teacher.

An Abstract, Form 1, Form 1(A), Form 1(B), a Research Paper, and The Ohio Academy of Science Consent and Release Agreement are the only forms required for ALL projects. The additional forms are only needed for projects incorporating the aspects covered by those forms.

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Science Day Standards

District 13 Science Day follow the standards set forth by the Junior Academy of the Ohio Academy of Science which in turn adheres to the standards set forth by the Intel International Science and Engineering Fair of the Society for Science and the Public. All projects **must** adhere to the standards described below. Failure to do so will result in disqualification from District 13 Science Day.

Ohio Academy of Science Standards can be found online at:

<https://static1.squarespace.com/static/545d32b5e4b0719cb5aae580/t/5d606407d0bba6000151b517/1566598152916/SCIENCE+DAY+STANDARDS+09-01-19.pdf>. This is the most up to date version of the OAS Standards and should be the only version referenced by students, parents, and teachers.

The Intel International Science and Engineering Fair Standards can be found at:

<https://student.societyforscience.org/international-rules-pre-college-science-research>. As a reminder, **all** projects must follow the ISEF Standards, even if the projects are not being submitted for ISEF consideration.