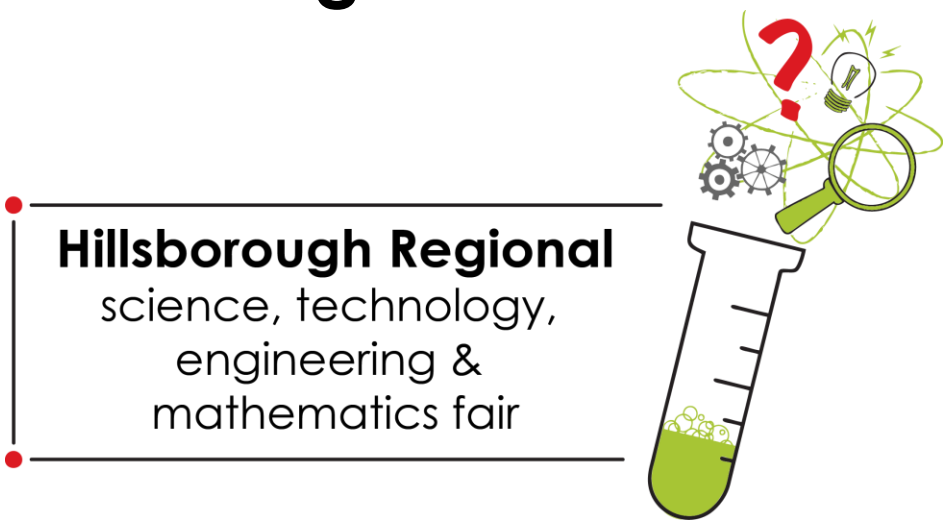
Hillsborough Regional HYBRID STEM Fair

Science, Technology, Engineering, and Mathematics

General Rules and Regulations



ELEMENTARY DIVISION
K – 5 Science

Hillsborough County PUBLIC SCHOOLS
Preparing Students for Life

Revised 9/2024

GENERAL RULES AND REGULATIONS
HILLSBOROUGH REGIONAL STEM FAIR
ELEMENTARY DIVISION K-5

ENTRIES

Every project entering the Regional STEM Fair must have previously been judged a winner at a school fair and the project deemed Regional STEM Fair quality. If your school has a tie at a certain grade level, please decide which project will represent your school.

Individual participants must be students enrolled in grades 3-5 in public, charter, or private school in Hillsborough County.

Grade K-2 students enter as a class.

Grade 3-5 students may enter as individuals, **OR**

Grade 3-5 students may enter as a small group of 2-4 students.
Students participating in small group projects must be from the same grade level.

ESE classes may enter a judged project as a whole class and/or be included with your small group project entries if represented by a group of 2-4 students from the same grade level.

Class Projects	Individual Projects	Small Group Projects	ESE Group: *From Self Contained ESE units Class/Individual/ Small Group
Judged Entries Allowed Per School K-2: 2 per grade Virtual	*Judged Entries Allowed Per School* Grades 3-5: 2 per grade Face to Face Grades 3-5: 2 per grade Virtual	Judged Entries Allowed Per School Grades 3-5: 2 per grade Face to Face Grades 3-5: 2 per grade Virtual *may include ESE small group of 2-4 students	Judged Entries Allowed Per School 1 ESE Self Contained class per school Virtual *Grades 3-5: 1 small group per school Face to Face *This category indicates students come from a self-contained ESE class.

It is the teachers' responsibility to inform and provide copies of these rules and regulations to the participants. It is the students' responsibility to be knowledgeable of these rules and regulations.

School registration form and registration fee of $100.00 per Hillsborough County Public Schools; $200.00 per Private schools and Charter schools by **December 2, 2024.**

Checks should be made payable to Hillsborough County Schools/Hillsborough Regional STEM Fair, and sent to:

Shana Tirado, Science Department
Hillsborough County Schools
ROSSAC
Rt. 7

or

Shana Tirado, Science Department
Hillsborough County Schools
901 East Kennedy Blvd.
Tampa, FL 33602-3408

TIMELINE:

School registration due: **December 2, 2024**
All project entries must be completed online by **January 14, 2025 (midnight).**
Online project data portal opens: **December 18, 2024- January 14, 2025 (midnight)**
Project data must be entered using the URL: https://forms.office.com/r/8kn2u1uqG2

Virtual STEM Fair projects will be entered into a Canvas Course. All messaging will be sent to individuals that are listed as STEM Fair Contacts.

For the upload of virtual projects
Canvas platform opens: **January 27, 2025**
Canvas platform closes: **February 5, 2025 6pm**
Virtual judging will begin **February 7, 2025**.

Face to Face STEM Fair for (grades 3-5) will submit a log and project board.
Early Bird set up at the Tampa Convention Center is **February 11, 2025**.
Face to Face judging is **February 12, 2025** at the **Tampa Convention Center.**

SPECIFIC GRADE LEVEL REQUIREMENTS

Grades K-2:

Students work collectively with the help of a directing teacher to produce a class project as an engineer, inventor, or scientist. The winning class will submit a video to be judged virtually. Projects will be judged for categorical awards and be eligible for special awards.

Grades 3 - 5:

Students work as individuals or groups of 2-4 to complete a scientific experiment, engineer a solution, or invent a new product to solve a problem. Students can opt to participate virtually creating a video, or face to face completing a log, interview (on site), and project board.

STEM Fair log required for ALL projects: (Kindergarten- Fifth Grade) The log should show evidence of student work throughout the experimentation period. This requires dates to be recorded as each part of the project is done. A background paper is NOT required for any K-5 projects.

Any projects that require a Human/Animal Research Form must submit the form to the teacher for approval, and keep a signed copy in the log.

CATEGORIES

Grades K-2 class projects are divided into 3 categories by grade level:

Engineering
Invention
Scientific experimentation

Grades 3-5 individual projects are divided into 8 categories by grade level:

Life Science	Behavior Science	Earth/Space Science	Physical Science Matter
Engineering	Inventions	Physical Science Energy	Math/Computer/Coding

Grades 3-5 small group projects are divided into 8 categories by grade level:

Life Science	Behavior Science	Earth/Space Science	Physical Science Matter
Engineering	Inventions	Physical Science Energy	Math/Computer/Coding

** The selection of category is the responsibility of the student with guidance from the teacher.

RESEARCH INVOLVING HUMANS/ANIMALS

Students who intend to conduct research involving humans/animals must file a research plan **Human/Animal Research Form**, p. 7 with the School's Review Committee* **BEFORE** starting research. Refer to the attached information concerning humane considerations.

No surgery or dissection may be performed.

Non-mammalian vertebrates, excluding birds, may be used in biological experiments, provided that harm does not result from such experiments.

RESEARCH INVOLVING HUMANS

Normal physiological and behavioral studies for the human animal may be conducted, provided that such projects are carefully selected so that neither physiological nor psychological harm to the subject can result from such studies. No student should be allowed to proceed with any such research unless an adult supervisor determines that no physical or psychological risk is involved.

Students who intend to conduct research involving humans must file the **Human/Animal Research Form**, with the School's Review Committee* **BEFORE** starting research. This form must accompany the student's data log. Refer to information provided in this section.

PROHIBITED RESEARCH:

RESEARCH INVOLVING MOLD, GERMS, BLOOD, BACTERIA, POISONOUS MATERIALS

Projects involving **BLOOD** and **PATHOGENIC AGENTS (bacteria, any kind of mold, viruses, fungi, parasites, etc.)** are **prohibited**. (Applies to all pathogens-human, non-human, and plants). Projects involving poisonous materials (including but not limited to gases, plants, and chemicals) are **prohibited.**

*__Yeast is the ONLY approved exception.__

RESEARCH INVOLVING WEAPONS

Weapons include any kind of guns, arrows, catapults, knives, darts, paint ball guns, needled, Nerf guns or replicas of a gun, or explosives (including rocketry engines). Any projects including these items are **prohibited** at the elementary level. Any objects that could cause bodily harm are prohibited. Please email Shana Tirado (Shana.Tirado@hcps.net) if there are any questions on your student projects.

School's Review Committee is a group of qualified individuals responsible for evaluation of student research for compliance with the rules. Members of the committee could include the school assistant principal, principal, guidance counselor, psychologist, M.D., or Ph.D. in areas of science or science research, etc. Designate one member as the chairperson.

*Guidance from rules and regulations comes from the FLDOE Safety Statutes.

PROJECT RULES - RESEARCH INVOLVING VERTEBRATE ANIMALS (EXCLUDING HUMAN SUBJECTS)

Humane Considerations

The legitimate use of animals in the classroom, in the laboratory or in science research projects presupposes two postulates. First, the use of animals for learning, as it is for testing and research is morally acceptable; and second, that man has a responsibility to grant the animals used in research every humane consideration for their comfort and well being.

The moral responsibility that we all have toward animals means that we cannot give free rein to students in research involving animals. Consequently, those of us who would nurture a healthy curiosity in youngsters are placed in a delicate position. To "turn off" a prospective biologist or physician by excessive limitations would be a serious mistake. We know that through science fair work thousands of today's physicians, dentists, veterinarians, scientists, engineers and science teachers were given an important impetus toward their careers.

The proper care and use of animals is a primary consideration in school research projects. If the student can acquire this concern, through becoming familiar with animals and their needs, it will be beneficial to both the scientific and personal development and education of the student.

The use of Protista and other invertebrates is to be encouraged for most research involving animals. Their wide variety and the feasibility of using larger numbers than is usually possible with vertebrates make them especially suitable.

This is not to say that the use of vertebrate animals should be prohibited. Certain forms of investigation can only be done with vertebrates. But since the higher forms of animal life are more complex, more experience and training are required to use them properly. Under proper supervision, there is no reason why students should not be permitted to use vertebrates in research.

All animals should be lawfully acquired, and their care and use must be in compliance with local, state and federal laws. Lack of availability of information about the proper care and use of animals is not an acceptable excuse. There are numerous publications, sources of information and professionals available who can supply information on proper care.

Proper care is imperative since quality animal research demands quality animal care. If animals are not used or cared for properly, the accuracy of the data is certainly questionable, and thus the value of the project greatly decreased or even destroyed. Non-behavioral studies involving common laboratory animals (rats, mice, hamsters, gerbils, guinea pigs and rabbits) are permitted only in an institutional environment and cannot be conducted in the home. A student must have an adequate knowledge of the characteristics, care and handling of the species to be used in order to do good research.

The use of animals by students under qualified adult supervision is both necessary and important for learning about life science and for encouraging an interest in careers in the life sciences. To be done properly, however; it must include a concern for the humane and proper use of animals, particularly vertebrates. To ensure this, qualified adult supervision is essential.

PROJECT RULES - RESEARCH INVOLVING VERTEBRATE ANIMALS (EXCLUDING HUMAN SUBJECTS) (Continued)

All research involving live vertebrate animals must conform to the following rules:

1. Research must be conducted with a respect for life and an appreciation of humane considerations that must be afforded by all animals. Development of new, or refinements of existing, surgical techniques, or research which is carried to a lethal conclusion without proper sacrifice, are neither humane nor do they develop a respect for life, nor are they educational, and thus are not allowed.

2. Surgical procedures on vertebrate animals will only be done within academic, hospital, clinical or institutional research facilities under direct adult supervision to ensure proper technique. This rule is intended specifically to prohibit such procedures at home.

3. The comfort of the animals used in any research experiment shall be a prime concern. No research using live vertebrate animals shall be attempted unless the animals have been obtained from a reliable source and the following conditions can be assured: appropriate, comfortable quarters; adequate food and water; humane treatment and gentle handling. Proper quarters and care must be provided at all times, including weekends, holidays and vacation periods, to be in compliance with federal and state guidelines. Animals must be observed daily to assess their health and welfare.

4. Under no circumstances should the student be allowed to perform sacrifice unless under the immediate supervision and in the presence of the animal care supervisor, qualified scientist and/or the designated adult supervisor (except in an emergency which would require a humane termination of life).

5. Observations of wild or domestic animals in their normal habitat where no contact with individual animals is involved require only a Human/Animal Research Form.

6. Weight loss in animals is one significant sign of stress or toxicity and maximum permissible weight loss or growth retardation of any experimental or control animal is 15 percent.

7. Acid rain, insecticide and herbicide toxicity studies using live vertebrate animals are prohibited. Tissue and invertebrate studies are recommended as alternative models for testing.

To provide for humane treatment of animals, an animal care supervisor who is knowledgeable in the proper care and handling of laboratory animals must assume primary responsibility for the conditions under which the animals are maintained.

No research may be undertaken with vertebrate animals that involves anesthetics, drugs, thermal procedures, physical stress, organisms pathogenic to man or other vertebrates, ionizing radiation, carcinogens or surgical procedures, unless these procedures are performed UNDER THE DIRECT SUPERVISION OF AN EXPERIENCED AND QUALIFIED SCIENTIST OR DESIGNATED ADULT SUPERVISOR IN AN INSTITUTION LABORATORY. In addition to the Qualified Scientist, a Designated Adult Supervisor will be required when the research is not conducted in the Qualified Scientist's laboratory.

These Rules and Procedures have been excerpted from the International Science and Engineering Fair Rules.

*If required by School Review Committee due to possible risk to animals or humans.

HUMAN/ANIMAL RESEARCH FORM

***Required For <u>All</u> Projects Using Animals or Humans. Include a copy in the STEM Fair log.**

<u>MUST BE COMPLETED PRIOR TO DOING ANY ANIMAL OR HUMAN RESEARCH</u>

Type or Print

Student Individual / Group Name(s):_____

Grade: _____ Category: _____

School: _____

Teacher's Name: _____

Title of Project: _____

_____

Starting Date of Experiment: _____

Explanation and Purpose of Experiment: _____

_____

_____

_____

Describe how the animal(s) / humans will be used in this experiment. Include provisions for animal care and safety. For <u>Human Research</u>, include procedures to minimize any risks:

_____

_____

_____

Signature of Student: _____

I certify that I have reviewed the research plan prior to the beginning of the experiment, and it does comply with the Animal or Human Research Rules of the Hillsborough Regional Science Fair. Please keep a signed copy in the STEM log.

Date: _____Signature:_____
Chairperson – School Review Committee

*Signature of Adult Supervisor (Human Research)_____

*Signature of Animal Care Supervisor: _____

*If required by School Review Committee due to possible risk to animals or humans.

Virtual Submissions

VIRTUAL PRESENTATIONS

Students may have assistance with their presentation, however, the project and information shared must be done by the students.
Virtual presentations should be no longer than 5 minutes long.
Students should ensure that their presentation adheres to the rubric.
Names/School logos may not appear during the presentation.
Students may display prototypes, demonstrate experiments, and solutions, in accordance with all rules.
It is the school's responsibility to ensure media releases are on file.
Small groups may include all members in the virtual presentation.
Submissions must by uploaded on the Canvas platform **by February 5, 2025** utilizing the naming conventions sent to the STEM Fair contact.

PRESENTATION RESTRICTIONS

Chemicals and any liquids (including household products), foods, gases, open flames, and explosives may not be used.

Pictures of dead or dissected animals may not be used.

Controlled or illegal substances, including over the counter drugs, prescription drugs, alcohol, or tobacco may not be part of the entire display.

Knives, syringes, or any sharp objects are not to be displayed.

The exhibition of human/animal parts is prohibited.

Face to Face Submissions

ADULT CHAPERONES

All participants must be accompanied to the Hillsborough Regional STEM Fair by an official adult designated by the school. This sponsor is responsible for supervision of the participants during the fair. It is the school's responsibility to provide the adult chaperones with field trip forms.

SECURITY

The Hillsborough Regional STEM Fair Committee will make every effort to safeguard all projects and equipment. **EXPENSIVE EQUIPMENT SHOULD NOT BE DISPLAYED**. Facsimiles should be used to prevent loss or damage. Students may display equipment of appropriate size during judging if it follows the rules and regulations for displays and is removed immediately after judging.

DISPLAYS

Students may have assistance with basic display construction: however, arrangement of display material on the display board must be done by the students.

THE MAXIMUM AREA FOR DISPLAY IS 40 cm DEEP, 122 cm WIDE AND 100 cm HIGH. ANY DISPLAY SHAPE OR DESIGN IS SUITABLE AS LONG AS IT FITS INTO THE MAXIMUM DISPLAY AREAS. All displays must be self-supporting.

Students may display **models only during judging**. Students must keep models with them until their category is called to the judging area. Models may **NOT** exceed the display space on the table in front of their project board. **Models must be removed by the student when their judging category is released. *Ensure the students can carry the model, board and log at the conclusion of the judging.**

STEM FAIR PARTICIPANT OR SCHOOL NAMES/LOGOS MAY NOT APPEAR ON DISPLAY MATERIALS OR BACKGROUND PAPERS PRIOR TO JUDGING. K-2 class projects may have student first names, while grades 3-5 should have no reference to the participant's name anywhere on the project. Students who participate in data collection activities in any grade level may be identified on the project by first name only. Identification, sent to teachers by the committee, must be placed on the center back of the display in a location that is not visible to judges or officials. A label, providing the project identification number will be furnished and must be attached to the back of the project, a different label will be on the front and another label on the log.

The Regional STEM Fair directors reserve the right to reject projects they deem inappropriate.

Photographs depicting the participant(s) involved with his/her projects are permissible. Schools may not be identified. No school T-shirts worn in photographs.

Students should be prepared to speak to judges and showcase their project based on the 3-5 Face to Face Judging Rubric.

DISPLAY RESTRICTIONS

Chemicals and any liquids (including household products), soils, foods, gases, open flames, and explosives may not be displayed. Wrappers may be used on displays instead.

Pictures of dead or dissected animals may not be displayed.

Plants or plant parts may not be displayed.

Controlled or illegal substances, including over the counter drugs, prescription drugs, alcohol, or tobacco may not be part of the entire display.

Knives, syringes, or any sharp objects are not to be displayed.

The exhibition of human/animal parts is prohibited.

Any item that could be easily pulled off and swallowed will be removed or secured by the screening committee.

Glass items and plastic "baggies" **are not to be displayed**.

Straight pins, staples, and tacks are not to be used to secure materials onto display boards.

Hillsborough County Public Schools

Hillsborough Regional science, technology, engineering & mathematics fair

MEMORANDUM **DATE:** September 2024

TO: Elementary Administrators

FROM: Shana Tirado, K-5 Science Supervisor

SUBJECT: **Hillsborough Regional Hybrid STEM Fair Registration Form**

If your school is choosing to participate in the 2024 – 2025 Hillsborough Regional Hybrid STEM Fair, please complete the information below to indicate your intent **and** the name of the STEM Fair contact person for your school. This information will facilitate the online procedure.

Elementary Division registration fee:
$100.00 for Hillsborough County Public Schools
$200.00 Private Schools and Charter Schools **Private Schools and Charter Schools will be responsible for additional costs for any grade 6-12 students advancing to the State and International Fair.**

Please make checks payable to Hillsborough County Regional STEM Fair.

Return this form to:
Shana Tirado, K-5 Science Department
Route 7

or

Return this form to:
Shana Tirado, K-5 Science Department
901 E. Kennedy Blvd.
Tampa, FL 33602-3408

Due date: December 2, 2024

If you have any questions, please contact my office at 272-4485.

2024-2025 HILLSBOROUGH COUNTY REGIONAL STEM FAIR
K-5 DIVISION REGISTRATION FORM

Hillsborough Regional science, technology, engineering & mathematics fair

We: ☐ ARE participating in the Hillsborough Regional STEM Fair.

☐ ARE NOT submitting entries for the Hillsborough Regional STEM Fair, and hosting a school wide Science STEM Fair on _____

SCHOOL: _____

ADDRESS: _____

PHONE # _____

Please Print:
STEM FAIR CONTACT PERSON(s): _____

Email Address(s): _____

Submissions per site:

Maximum submissions per site

Grades: Kindergarten- Second Grade, ESE (VIRTUAL OPTION ONLY)			
Kindergarten	First Grade	Second Grade	ESE Self Contained
2 virtual class projects per site	2 virtual class projects per site	2 virtual class projects per site	1 virtual Class project

Grades: Third- Fifth Grade				
	Third Grade	Fourth Grade	Fifth Grade	ESE Self Contained
Virtual	2-virtual individual projects per site *and/or* 2-virtual group projects per site	2-virtual individual projects per site *and/ or* 2- virtual group projects per site	2-virtual individual projects per site *and/or* 2- virtual group projects per site	1-virtual group project per site
AND/ OR				
Face to Face Tampa Convention Center	2-individual projects per site *and/or* 2- group projects per site	2-individual projects per site *and/or* 2- group projects per site	2-individual projects per site *and/or* 2 group projects per site	1-group project per site