

SUMMARY of RULES for 2023 GREATER K.C. SCIENCE & ENGINEERING FAIR

GRADES 4 THROUGH 8

If your project involves any of the following, please carefully read the related rules in this document:

1. Human Participants or Volunteers (Form 2) – requires their consent for participation; these projects require an IRB approval at school (see below for IRB membership).

Four additional types of projects require prior approval by the Science Fair **SRC** (Scientific Review Committee):

2. Human or Animal Tissue (Form 1) – cells, blood, fresh teeth, body fluids, etc.
3. Hazardous Materials (Form 3) – hazardous things not commonly used in classrooms
4. Microorganisms (Form 4) – mold, bacteria, other organisms (not brewer's or baker's yeast)
5. Non-human Vertebrate Animals (Form 5) – can observe but can't cause any harm

Additional information available on the Fair website at
<https://unionstation.org/event/gkc-science-fair/>

1. Human Participants in projects for all grade levels require IRB approval **before** experimentation starts. The IRB (Institutional Review Board) consists of three different people: medical or mental health professional, educator (not the the teacher sponsoring the project), and a school administrator. Schools that do not have an appropriate medical or mental health professional (psychologist, psychiatrist, medical/osteopathic doctor, licensed social worker, licensed clinical professional counselor, physician's assistant, Doctor of Pharmacy, or registered nurse) can contact the science fair office for assistance in identifying someone to fulfill that role. IRB prior approval must be documented on **Human Participants Form 2 (4-8)** after the student researcher has specifically answered three questions about their science fair project. Any individual that is an Adult Sponsor (teacher) or Parent/Guardian for a student cannot serve on the IRB for that project. After IRB approval is completed, Form 2 is to be copied and used as the consent form for all study participants (including the student researcher) and their parents when appropriate (see specific instructions on the form). **All signed human consent forms should be included with the completed Fair Application or delivered when setting up the project at the fair.** This same process should be completed for invention projects if human participants will test the invention and there is a potential health or safety hazard or if personal data will be collected. If a student uses publicly available data (with no personal interactions) or performs only behavioral observations in an unrestricted public setting with no interventions or interactions by the researcher (and no collection of personally identifiable data, e.g., name, birth date, address), it is not a human participants project, and Form 2 is not required. Consent forms will not be available to the public.

Final prior approval date is February 17th, 2023. If you are unsure, please contact the SRC, provided by Science City at Union Station at FairSRC@unionstation.org at the beginning of your project. ***Prior Approval* by the Scientific Review Committee (SRC) is required for the following four general types of projects:**

2. Human or Animal Tissues (defined as cells, tissues, blood, fresh teeth, body fluids, etc.) require **Form 1 (4-8)**. Human hair, sterilized teeth, and meat/meat by-products from grocery

stores or restaurants do not require this form or prior approval by the SRC although sources of these materials must be clearly identified in the project description.

3. Hazardous Materials (irradiation, DEA-controlled or prescription substances, alcohol or tobacco, and any chemicals or devices not routinely used in grade 4-8 classrooms) require **Form 3 (4-8)**.

4. Microorganisms, including bread mold, (purchased or collected/cultured from any environment) other than baker's or brewer's yeast require **Form 4 (4-8)** and must be grown only at school or an appropriate research laboratory with supervision and appropriate methods of disposal (i.e., sterilization or bleach). Microorganisms may be collected from but **NOT GROWN** or maintained **at home** or at any other non-school, non-laboratory location.

5. Animal Projects (involving non-human vertebrate species) require **Form 5 (4-8)**. These projects can include **only behavioral observations** and no direct human intervention, no interference with the animal's normal physiology, activities or diet, and must follow all federal and state fish, game and wildlife laws and regulations. For example, students may observe birds using different feeders of different colors but must provide only the normal diet for that type of bird. Inventions may only be tested on or by non-human vertebrate animals such as dogs, cats or rodents, with the same restrictions.

***To obtain SRC (Scientific Review Committee) Prior Approval** (required before experimental work begins), complete the required forms as outlined above. Scan and send completed/signed forms via **e-mail to the SRC Chair** at FairSRC@unionstation.org. Response (if student or teacher contact info is provided) is usually within 72 hours during the school year (or 5 business days during the summer) from the current SRC Chair.

GENERAL PROJECT RULES for GREATER K.C. SCIENCE & ENGINEERING FAIR

Intermediate Division projects are from 4th & 5th grades. Junior Division projects are from 6th, 7th and 8th grades. Projects can be completed by **individual students** or **teams of up to three students**.

Demonstration projects (i.e. with known outcomes) and opinion surveys are not allowed.

Product testing (other than testing required for invention projects) is discouraged for entry into the science fair but if submitted as an intermediate or junior project, will require the complete scientific experimental process (including written hypothesis) using an OBJECTIVE data evaluation scale and at least 10 replicates or repeated tests of the experimental variable. Other types of experimental projects should have an adequate number of trials. Usually a minimum of three trials should be conducted at the intermediate level but this may vary by grade and experimental design. An objective measurement scale may be prepared by the student as part of their project such as the use of commercial paint chips to match specific colors.

Project displays cannot include microorganisms (such as bacteria or mold) or any living organisms; photos are preferred for illustration of work on these projects. Full face photos of students are acceptable if permission has been granted on the human consent form (Form 2) and student researchers may include their own names on their project displays. Sources of all photos (i.e., a

credit line) should be provided in the project display; if all photos are from the same source or photographer, a single global credit line is acceptable.

The deadline to submit your project to the Greater Kansas City Science and Engineering Fair is **5 pm on Friday, February 24, 2023**. Forms, additional information, and on-line applications are available at <https://unionstation.org/event/gkc-science-fair/>

Links to 4-8th grade forms:

- **Form 1 – Human Tissue** <https://unionstation.org/wp-content/uploads/2021/08/Form-1-Human-Tissue-2023-fair.pdf>
- **Form 2 – Human Participants** <https://unionstation.org/wp-content/uploads/2021/08/Form-2-Human-Participants-2023.pdf>
- **Form 3 – Hazardous Materials** <https://unionstation.org/wp-content/uploads/2021/08/Form-3-Hazardous-Materials-2023-fair.pdf>
- **Form 4 – Bacteria & Mold** <https://unionstation.org/wp-content/uploads/2021/08/Form-4-Bacteria-and-Mold-2023.pdf>
- **Form 5 – Vertebrate Animal** <https://unionstation.org/wp-content/uploads/2021/08/Form-5-Vertebrate-Animal-2023-fair.pdf>

Registration Links:

****Before you begin, please have the following things ready to add to your application:**

- Abstract, Paper or Research Plan, and \$7.00 project fee.
 - Teachers who will be paying for multiple projects together can contact Katie McCurley at kmccurley@unionstation.org

Intermediate Division (4th & 5th grade)

- **IN-Individual Projects** <https://uskc.wufoo.com/forms/rzbuia404b96xf/>
- **IN-Team Projects** <https://uskc.wufoo.com/forms/rnach3x194k54d/>

Junior Division (6th, 7th & 8th grade)

- **JR-Individual Projects** <https://uskc.wufoo.com/forms/r1owcsyf0ohanke/>
- **JR-Team Projects** <https://uskc.wufoo.com/forms/r1hg6pfl0j0p53f/>