

SUMMARY of RULES for 2022 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 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

All required forms and additional information available at <https://sciencecitygkcsef.stemwizard.com>.

Human Participants in projects for all grade levels require approval by your school **before** experimentation starts. The IRB (Institutional Review Board) must include 3 different school employees: medical or mental health professional, educator (not 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.

Prior Approval by the **Kansas City Science Fair SRC** (Scientific Review Committee) is **required for the following four general types of projects** (see SRC approval process on page 2):

- 1. 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.
- 2. 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)**.

3. 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., autoclave sterilization or 10% bleach). Microorganisms may be collected from but NOT GROWN or maintained at home or at any other non-school, non-laboratory location.

4. 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. Scan into a single PDF file (if more than one page) and send as an attachment via **e-mail to the SRC Chair at FairSRC@unionstation.org**. Response by the SRC chair is usually within 72 hours during the school year (if proper contact is provided).

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

Intermediate Projects are from 4th, 5th, and 6th grades; Junior Projects are from 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 in the fair.

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 a complete scientific experimental process (including a 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. Generally, a minimum of three repeated or replicate 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 or identify 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 the 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.

DEADLINES:

The deadline to submit your project plan and forms **for prior approval is Friday, February 11, 2022** (to FairSRC@unionstation.org).

The deadline to submit your **registration and final project forms is 5 pm on Friday, February 18, 2022**. Forms, additional information, and on-line applications are available at <https://sciencecitygkcfef.stemwizard.com>.