

# Summary of Rules for the Southwest Kansas

## Science and Engineering Fair Projects

### 1. Divisions for Southwest Regional Fair:

The southwest regional will divide into three categories to allow the most opportunities to the students in Southwest Kansas. These Divisions will be:

Senior = Grades 9 through 12

Intermediate = Grades 6, 7, and 8

Junior = Grades 4 and 5

Early Education = Grades pre-K through 3

At state level the divisions will be: Division I (grades 9-12) and Division II (grades 6-8), and Division III (grade 4-5). Early Education can compete at regionals only, there is no state division.

### 2. Categories

Within each division, students can compete in the following categories:

- Animal Science
- Behavioral/Social Sciences
- Biochemistry
- Biomedical/Health Science
- Cellular & Molecular Biology
- Chemistry
- Computational Biology and Bioinformatics
- Earth and Environmental Science
- Embedded Systems
- Energy (Chemical & Physical)
- Engineering Mechanics
- Environmental Engineering
- Materials Science
- Mathematics
- Microbiology
- Physics & Astronomy
- Plant Science
- Robotics and Intelligent machines
- Systems Software
- Translational Medical Science

### 3. General Rules for all categories

- a. Demonstration projects are NOT ACCEPTED for the fair. Product testing (other than for invention projects) is not allowed.
- b. All experiments require a minimum of three replicate test of variable more are preferred for regional level.
- c. A brief description (an abstract) of 150 words or less must accompany each exhibit and be at the judges' disposal during the entire science fair (this document is to be submitted with the entry form also).
- d. Investigations and display work must be done by the exhibiting individual(s). If a team project, there may not be more than three members on a team. Source of advice, research, and equipment must be stated. No exhibitor may repeat an

exhibit they have presented in previous years at local, regional, or international science fairs unless it is an expanded version of the project for the previous year.

- e. Project displays cannot include unsealed microorganisms or any living organism; photos are preferred for illustration of work on these projects. Photos of vertebrate animals involved in lab procedures of any sort are prohibited. Full face photos of students are acceptable, but student's names may not be on projects. Sources of all photos (i.e., a credit line of origin) must be presented in the project display. If all photos came from one source or photographer, one global credit line is acceptable.
- f. Human subjects in a research project for all grades levels require Institutional Review Board (IRB) approval. An IRB must consist of a medical professional (school nurse will suffice), science teacher and a school administrator. Anyone signing projects as an adult sponsor, parent, qualified scientists or designated supervisor cannot serve on the IRB for that project. All signed consent forms must be sent with the fair application.
- g. No dangerous chemicals, open flames, explosives, exposed electrical wiring, poisonous organisms, hazardous materials, corrosive substances, poisons, drugs, controlled substances, or anything which could be hazardous are allowed at the display.
- h. Bacteria, fungi, spoiled foods or molds are not allowed to be displayed with your project. Photographs may be used to show results of their use. Experiments with these substances must be approved by our Scientific Review Committee (SRC) before experimentation begins.
- i. Entrants may not exhibit any liquids including water.
- j. No fresh, prepared or packaged human or animal foods, or substance that looks like food will be allowed at display.
- k. Entries will be reviewed by the SRC and must meet their approval. Anything the SRC considers to be unsafe will result in disqualification. SRC decisions are final. Safety is the highest priority, if in doubt check the ISEF rules book at their website (<https://student.societyforscience.org/rules-all-projects>) or preapprove the project with our SRC.

#### 4. Grades 4 through 8 specific rules

- a. All school projects require the following forms:
  - i. Checklist for adult sponsor-must be signed and dated prior to experimentation
  - ii. Student checklist-actual start date must be later than signature on any form
  - iii. Approval form
- b. Prior approval by the SRC is required for the following projects:
  - i. Human/animal tissues (cells, blood, fresh teeth, body fluids, etc. ). Hair, sterilized teeth, and meat or meat by-products from grocery stores or restaurants do not require a preapproval form
  - ii. Hazardous materials (chemicals or devices not routinely used in classrooms, radiation, DEA-controlled or prescription substances, alcohol or tobacco).
  - iii. Bacteria other than baker's or brewer's yeast require a prior approval form and must be grown only at school or a laboratory with appropriate supervision and methods of disposal (i.e. sterilization or bleach).
- c. Behavioral observations of vertebrate (non-human) animals are acceptable only with no direct human intervention, no interference with their normal activities or diet, and compliance with all federal or state fish, game and wildlife laws and regulations. No prior approval is necessary for these projects. Inventions may NOT be tested on vertebrate animals.
- d. If humans are used to test an invention or part of an experiment the appropriate form must be completed and approved.

#### 5. Grades 9 through 12 specific rules

- a. All ISEF rules must be followed to be eligible to compete at state level. The following are based on those rules to give you an overview. Complete rules can be viewed at: <https://student.societyforscience.org/rules-all-projects>
- b. All high school projects require the following forms:
  - i. Checklist for adult sponsor-must be signed and dated prior to experimentation
  - ii. Student checklist-actual start date must be later than signature on any form
  - iii. Approval form
- c. Prior approval is required by the SRC (Scientific Review Committee) for projects involving any of the following:

- i. Vertebrate animals of any species require Form 5 and students may not personally perform any invasive or interventional techniques on vertebrate animals. Students must look for alternatives to the use of vertebrate animals and are prohibited from projects that cause pain or suffering.
  - ii. Potentially hazardous biological agents require Form 6. Use of any of these agents also requires direct supervision by a qualified scientist or designated supervisor. (The only microorganisms exempt from prior SRC approval are bakers and brewers yeast).
- d. Additional forms required for some High School projects

## 6. Display

Last but not least, prepare a display to showcase your project. The display needs to be neat, concise, and visually appealing to attract the attention of judges and other interested people. The display must convey the concept of your project in a matter of seconds. For readability, it is best to use large font sizes on signs and labels. A sample project display is given below.



Grades 4<sup>th</sup> through 8<sup>th</sup> size limits are 18" deep (front to back), 42" wide (side to side).

Grades 9<sup>th</sup> through 12<sup>th</sup> size limits are 30" deep (front to back), 48" wide (side to side), and 9 feet high (floor to top).