

RESEARCH REGULATIONS – Middle School Division

1. The Science Fair projects may not involve at any stage of the project the following:

- Blood products, fresh tissue, teeth or bodily fluids
- Nonhuman vertebrate animals and their parts, exception eggs
- Ingestion or inhalation of any substance by humans subjects (no smelling/wafting or eating/chewing of **ANYTHING**)—**NOTHING** in or on parts of mouth—including but not limited to teeth, tongue, lips.
- Pathogenic agents*
- Recombinant DNA
- Carcinogenic or mutagenic chemicals
- Compressed gas (including, but not limited to CO₂)
- Controlled substances*
- Explosive chemicals
- Hazardous substances or devices (including, but not limited to BB guns, paint ball guns, potato cannons, air cannons)
- High voltage equipment
- Highly toxic chemicals
- Lasers (any strength)
- Ionizing radiation X-rays or nuclear energy
- Radioactive materials (except non-ionizing, naturally occurring materials)

***FURTHER EXPLANATIONS**

Controlled Substances

Controlled substances, including DEA-classed substances, prescription drugs, alcohol and tobacco are **not** allowed.

Pathogenic Agents

- Pathogenic agents are disease causing, or potential disease-causing organisms such as bacteria, viruses, viroids, prions, rickettsia, fungi, mold and others.
- Organisms collected, isolated and/or cultured from any environment (e.g., air, soil) are considered potentially pathogenic and experiments using these procedures will **not** be allowed.
- Raw or partially processed human/animal waste is considered to contain potentially pathogenic agents.

Please refer any safety questions to:

MSSEF Middle School Review Committee

Karin Lebeau, 508 856-1529, or karin.lebeau@umassmed.edu

Sandy Mayrand, sandy.mayrand@gmail.com

2. All human research projects must have an Informed Consent Form (Form C) attached.

- All human research projects including surveys, professional tests, questionnaires, and studies in which the human subject used is also the researcher need Regional Safety Review Committee (RSRC) approval. Copies of standardized and/or student prepared tests, surveys, etc. to be used must be attached to the Research Plan for approval. Questions 1, 2, and 3 on the Informed Consent Form must be filled out by the student researcher before submission to the RSRC for approval.
- After safety approval, Informed Consent Form (C) must be signed by all subjects involved in human research projects prior to the experimentation. Copies of all signed Informed Consent Forms must be submitted with the Registration Form to enter the Fair. If a participant is under 18 years old, the parent/guardian signature is required.

3. Experiments with non-pathogenic microorganisms* must have a Designated Supervisor Form (Form D) completed and submitted for RSRC approval.

Experiments with any non-pathogenic organisms may only be conducted in a laboratory setting (not in the home) with the following capabilities:

- The laboratory work is to be supervised by an individual with general training in microbiology.
- Standard practices for sterile technique must be observed.
- Work is to be done on an open bench or fume hood.
- Purchased microorganisms must be identified and certified as non-pathogenic from the supply house with full name of microorganism, source of purchase and catalog number.
- Lab coats must be worn.
- Culture plates/tubes of bacteria must be sealed and not opened in the laboratory after culturing and growth.
- Sub-culturing is not allowed.
- Decontamination must be achieved by either chemical disinfectants or steam autoclaving.

****Two exceptions: Baker's and Brewer's yeast do not need Form D.***

4. Special Safety Concerns

Other situations such as use of power tools, chemicals, etc. which require adult supervision of the middle school student's project need to be documented on Form D, Designated Supervisor.

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