

2026

Pikes Peak Elementary Regional



Saturday April 25, 2026

Tesla Center

2560 International Circle

Colorado Springs, CO 80909

Sponsored by Colorado Springs School District 11

TABLE OF CONTENTS

DISCLAIMER	3	
ESSENTIAL INFORMATION	4	
EVENT REGISTRATION	4	
EVENT SCHEDULE	4	
EVENT LOCATION	4	
AWARDS	5	
CATEGORY DESCRIPTIONS	6	
BIOLOGICAL SCIENCE	6	
COMPUTER SCIENCE	6	
CONSUMER SCIENCE	6	
ENGINEERING DESIGN	6	
HEALTH AND BEHAVIORAL SCIENCE	6	
MATHEMATICS	6	
PHYSICAL SCIENCE	6	
ROBOTICS	7	
PPRESTEM FAIR RULES AND REGULATIONS	8	
SECTION 1: STUDENT ELIGIBILITY AND PROJECT REQUIREMENTS	8	
SECTION 2: SPONSORSHIP, SKILL DEVELOPMENT, AND ADULT OVERSIGHT		8
SECTION 3: HUMAN PARTICIPANTS	9	
SECTION 4: BIOLOGICAL MATERIALS (PLANTS, ANIMALS, MICROORGANISMS)		10
SECTION 5: HAZARDOUS CHEMICALS & PHYSICAL HAZARDS	10	
SECTION 6: ELECTRICAL AND MECHANICAL SAFETY	10	
SECTION 7: DISPLAY AND EXHIBIT CONSTRUCTION REQUIREMENTS	11	
SECTION 8: SIZE AND SPACE REGULATIONS	11	
SECTION 9: PROHIBITED ITEMS AND MATERIALS	12	
SECTION 10: FAIR OPERATIONS & STUDENT RESPONSIBILITIES ON-SITE	12	
SECTION 11: PROJECT EVALUATION CRITERIA	13	

DISCLAIMER

Our goal is to give every student the chance to learn, explore, and present their work at the highest standard of scientific practice. The requirements in this booklet represent the official guidelines of the Pikes Peak Elementary Regional STEM Fair (PPRE STEM fair) and are aligned with the International Science and Engineering Fair (ISEF), the globally recognized benchmark for student scientific research fairs. These expectations, along with all applicable state and federal laws, help ensure a safe, fair, and inspiring experience for all participants.

Schools, sponsors, and students share responsibility for meeting these standards. School rules may add expectations but cannot replace or override the regulations provided here. All projects must follow the rules as written, any additional guidance does not supersede these standards.

We welcome students of all abilities, and reasonable accommodations* may be considered with advance notice when they support equitable participation and do not compromise safety or fairness. Accommodations cannot involve adults completing the project on the student's behalf. Requests submitted on the day of the fair cannot be reviewed.

Students with financial limitations are encouraged to reach out for support, as cost should never prevent participation.

These guidelines exist to help students grow strong scientific habits, support their well-being, and create an environment where everyone's work can shine. We appreciate every school's partnership in helping students succeed.

* Accommodation requests are not guaranteed and must be submitted at the time of registration for the fair to be considered. Only official PPRE STEM fair representatives may approve accommodations. If no written confirmation is received prior to the event, the request should be assumed not granted, and no same-day exceptions can be made.

ESSENTIAL INFORMATION

EVENT REGISTRATION

Registration Deadline Wednesday, April 17, 2026 11:59 PM *No late registration will be allowed so the event can be planned accordingly.*

Event Webpage
Registration Link

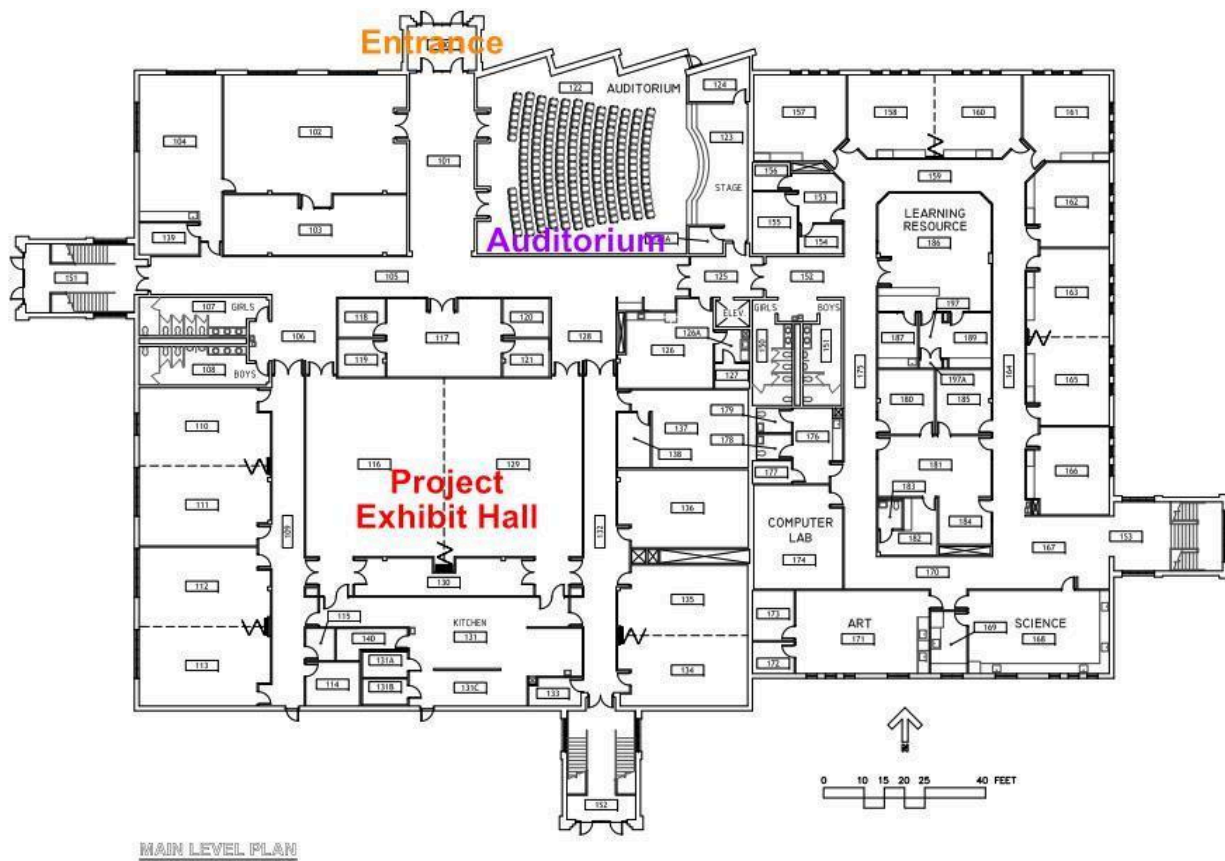
EVENT SCHEDULE

8:00 AM	Doors open at 8AM for check-in and project set-up	<i>Project Exhibit Hall</i>
9:00 AM	Judging and continues until complete (No parents are allowed in Project Exhibit Hall during judging)	<i>Project Exhibit Hall</i>
11:00 AM	Public viewing of projects and lunch for participants*	<i>Project Exhibit Hall</i>
12:00 PM	Magic of Chemistry show	<i>Auditorium</i>
1:00 PM	Awards follow as soon as possible after the Magic of Chemistry show	<i>Auditorium</i>

* Pizza and a drink are provided for all student participants in addition to volunteers. Special dietary requests cannot be accommodated at the event.

EVENT LOCATION





AWARDS

The following is a list of awards presented:

- First, Second, and third place for both 4th and 5th grade participants in each category based on the top 3 average scores.
- One overall winner based on the highest overall score

CATEGORY DESCRIPTIONS

Students should speak with their project supervisor or teacher to confirm the correct category for their project. Categories help ensure that judges review each project fairly and consistently.

For the safety of all participants, **no organic materials of any kind may be brought to the Fair.** This includes live, dead, dried, or preserved organisms, as well as any food, plants, soil, seeds, or fungi (including mold culture plates). This rule aligns with ISEF Display & Safety regulations and applies to all grade levels.

BIOLOGICAL SCIENCE

Projects focused on living systems or organisms. Topics may include plant or animal biology, ecosystems, environmental relationships, or the study of fungi, or protozoa.

COMPUTER SCIENCE

Projects that create solutions to problems using a variety of technologies. Topics include, but are not limited to, computer hardware, software / app / game design, networking technologies, and artificial intelligence.

CONSUMER SCIENCE

Projects that evaluate or compare products. Topics may include product performance, environmental impact, waste reduction, or sustainability considerations.

ENGINEERING DESIGN

Projects that create, design, or improve a device, tool, process, or material. Topics may include building prototypes, modeling solutions, testing structural designs, or optimizing performance. Both physical and digital designs are welcome.

HEALTH AND BEHAVIORAL SCIENCE

Projects examining human health, habits, learning, or behavior, as well as the behavioral patterns of other organisms. Topics may include hygiene, cognitive tasks, wellness, social interactions, or responses to environmental conditions.

Note: Any project involving human participants must follow appropriate safety and privacy practices and may require teacher approval before beginning.

MATHEMATICS

Projects that apply mathematics to solve a problem. Topics may include analysis, probability, or statistics, to solve a problem, but not demonstrate how a mathematics process works.

PHYSICAL SCIENCE

Projects exploring non-living systems or natural physical processes. Topics may include changes in matter, energy, weather, astronomy, geology, magnetism, electricity, heat, light, and sound.

ROBOTICS

Projects that focus on designing, improving, or using robots / drones to solve a problem. Topics may also include control systems, machine/human interface, or biomechanics / prosthetics.

PPRE STEM FAIR RULES AND REGULATIONS

Sponsors and students are responsible for reading and following all rules. These standards protect student safety, ensure fairness, and align our regional fair with national ISEF expectations. Projects that do not meet these rules may not be eligible to compete or receive awards.

SECTION 1: STUDENT ELIGIBILITY AND PROJECT REQUIREMENTS

1.1 Rule Compliance

All students competing in the PPRE STEM fair must adhere to all rules as set forth in this document.

1.2 Qualifying Projects

To qualify for participation at the PPRE STEM fair all projects must have been previously reviewed at the local level. This could include:

- Participation at a school or district science and engineering or STEM fair.
- Participation in a homeschool competition.
- Reviewed by a teacher as part of a class project or capstone assignment.

1.3 Single Project

Each student is only allowed to enter one project.

1.4 Student Work Requirement

Projects must be designed, built, and completed by the student. Adults may teach skills and provide general guidance but may not construct or substantially design the project.

1.5 Individual Projects Only

Only individual projects are accepted. Group projects will not be judged.

1.6 Previously Entered Projects

Projects from prior years may not be re-entered. Students may reuse equipment only if the project purpose, experiment, and results are entirely new.

1.7 Purchased or Pre-Made Components

Commercial parts, kits, and borrowed materials may be used, but they must be clearly labeled on the display as “purchased,” “borrowed,” or “pre-assembled.”

1.8 Abstract Requirement

An abstract is not required for elementary students unless required by their school.

1.9 No Demonstrations

Projects that are demonstrations, literature reviews, ‘library’ research, informational projects, and/or ‘explanation’ models are not allowed at the PPRE STEM fair.

SECTION 2: SPONSORSHIP, SKILL DEVELOPMENT, AND ADULT OVERSIGHT

2.1 Sponsor Role

Teachers, parents, and mentors may:

- Explain scientific concepts
- Demonstrate safe tool use
- Review materials for safety
- Help students think through problems

Adults may **not**:

- Build or assemble the project
- Create the display
- Collect data on behalf of the student

2.2 Required Adult Supervision

Adults must supervise:

- Any cutting tools
- Any electrical construction
- Heat sources used at home
- Any testing involving human subjects
- Any activity with potential risk

SECTION 3: HUMAN PARTICIPANTS

3.1 Minimal Risk Only

Projects involving people must involve no more than minimal risk, similar to normal school activities.

- Examples of allowed minimal-risk activities:
- Anonymous surveys about habits or preferences
- Memory or sorting tasks
- Simple reaction-time activities

3.2 Anonymity Requirement

Human participants must remain anonymous. Students may not collect or display:

- Names
- Photos
- Videos
- Contact information
- Personal identifiers

3.3 No Medical or Physiological Experiments

Students may not administer substances, change diets, measure bodily fluids, or run experiments that may impact health.

3.4 Protected Data Collection

No collection of data protected under FERPA, COPPA, or Colorado child-privacy laws.

3.5 Participation of Minors

All human subjects under the age of 18 must have signed parent/guardian permission to participate. All signed permission forms must be included in the data notebook and be available for review.

SECTION 4: BIOLOGICAL MATERIALS (PLANTS, ANIMALS, MICROORGANISMS)

4.1 Prohibited Biological Materials at the Fair

No live, dead, preserved, dried, or stored organisms may be displayed. This includes:

- Animals or animal parts
- Insects
- Microorganisms (mold, bacteria, algae, yeast)
- Soil, pond water, compost
- Fresh produce or seeds
- Petri dishes or slides

4.2 Humane Treatment Rule

All observations of animals must be humane and non-intrusive. No procedures may cause distress, harm, or deprivation.

4.3 Potentially Hazardous Biological Agents

No projects are allowed that involve potentially hazardous microorganisms (including bacteria, viruses, viroids, rickettsia, fungi, cyanobacteria, and parasites) and recombinant DNA (rDNA) technologies.

4.4 Use Photos Examples Instead

Students must present biological work through photographs, diagrams, or charts rather than physical materials.

SECTION 5: HAZARDOUS CHEMICALS & PHYSICAL HAZARDS

5.1 Chemical Restrictions

The following may only be used in projects with adult supervision:

- Toxic, flammable, or corrosive chemicals
- Bleach stronger than household levels
- Acids or bases stronger than household vinegar/baking soda
- Combustible materials
- Pressurized gases
- Dry ice
- Sharp objects
- Sharp tools
- Pressurized devices
- Projectiles
- Items resembling weapons
- Anything capable of causing injury

5.2 Controlled Substances

Student projects are not allowed to use any DEA-controlled substances, prescription drugs, alcohol & tobacco, firearms and explosives, radiation, lasers, or vapes.

SECTION 6: ELECTRICAL AND MECHANICAL SAFETY

6.1 Power Supply Limits

If electricity is used for a project:

- Only battery DC or 110-volt AC power may be used
- Maximum of 15 amperes
- Motors larger than 1/4 HP are prohibited

6.2 Construction Safety

Electrical elements must include:

- Proper insulation
- A grounded or two-prong plug
- An easily accessible on/off switch
- No exposed wiring
- No homemade or open-blade switches

6.3 Wiring Safety

Wires must be securely fastened using insulated clips only. Nails, staples, and tacks are prohibited.

6.4 Battery Safety

Batteries must be secure and leak-proof. Car batteries, wet-cell batteries, or modified battery systems are prohibited.

SECTION 7: DISPLAY AND EXHIBIT CONSTRUCTION REQUIREMENTS

7.1 Stability and Durability

Displays must be sturdy, freestanding, and able to withstand handling and foot traffic.

7.2 Props or Excess Materials

The display should focus on the student's scientific thinking. Extra props not relevant to the research should be avoided.

7.3 Noise Limitation

Any sound-producing device must remain at normal room volume and may exceed it only briefly for judges.

7.4 Running Water

No water connections are available. Any required water must be in a closed system. Students must clean spills immediately.

7.5 Light Needs

No natural light is available. Projects requiring light exposure must plan to use artificial lighting or photographs.

SECTION 8: SIZE AND SPACE REGULATIONS

8.1 Exhibit Dimensions

Maximum display size:

- Height: 4 feet above the table
- Width: 3 feet
- Depth: 15 inches

8.2 Space Boundaries

All project components must fit within the assigned space. Nothing may be attached to walls, tables, or adjacent displays.

8.3 Floor Use

Project materials may not be placed on the floor except necessary electrical cords or fixed equipment. Space under tables may be used for student personal items.

SECTION 9: PROHIBITED ITEMS AND MATERIALS

Prohibited items include:

- Aerosols
- Apparatus with belts, pulleys, chains, or moving parts with tension or pinch points that are not appropriately shielded
- Batteries with open-top cells or wet cells or battery packs over 100 watt-hour capacity
- Biological materials of any kind
- Dangerous tools
- Drones or any flight-capable apparatus unless the propulsion power source removed
- Food
- Glass
- Grease or oil
- Hazardous chemicals or materials
- High-pressure systems
- Lasers
- Open flames
- Odor-producing materials
- Powders
- Sharp items (syringes, needles, pipettes, knives, etc.)
- Sublimating solids such as dry ice or liquid nitrogen
- Weapons, ammunition, reloading devices or replicas

SECTION 10: FAIR OPERATIONS & STUDENT RESPONSIBILITIES ON-SITE

10.1 Setup and Cleanup

Students are responsible for setting up and cleaning their own exhibits.

Optional helpful items to bring:

- Tape or glue for minor board repairs
- Paper towels for spills
- A small backpack for personal belongings
- Waterbottle

10.2 Personal Items

Students are fully responsible for all personal items. There is no secure storage. All valuables should remain with the student at all times.

10.3 Student Presence at Display

Students must stay with their projects during judging unless instructed otherwise.

10.4 No Unpermitted Photography or Videography

To protect minors under FERPA, COPPA, and Colorado child-privacy laws:

- No photos or videos may be taken of students during judging
- No photos or videos may include identifiable students
- No recording devices may be used at the project tables
- No images or videos from the fair may be posted online or distributed

10.5 No Testing During Public Viewing

Experiments may not be run during public hours. Displays must remain in a safe, non-operational state.

SECTION 11: PROJECT EVALUATION CRITERIA

11.1 Scoring

All projects are evaluated on a score of 0 to 5 where 0 equals the criteria is not present and 5 equals a superior quality. Because there is some subjectivity from the judges, all projects will be scored by a minimum of 3 judges. The average of their scores will be used to determine the project's final score.

11.2 Science and Engineering Notebooks

A science or engineering notebook (process journal) is used to document research, record data, and take notes. Students should use the notebook during the presentation to support the project's information.

11.3 Science Project Criteria

- Scientific Process
 - Testable Question
 - Hypothesis
 - Variables
 - Materials
 - Procedure
 - Data
 - Analysis
 - Conclusion
 - Application
- Presentation
 - Display - organized & attractive to audience
 - Display - student uses notebook and images to discuss findings and data
 - Oral Presentation Quality
- Time and Effort
 - Thoroughness
 - Effort

11.4 Example Science Display



11.4 Engineering, Math, and Technology Project Criteria

- Design Process
 - Problem addresses a real and specific need
 - Research is present
 - Requirements specified
 - Materials
 - Construction process
 - Prototype Sketches
 - Construction Drawings
 - Evaluation criteria
 - Evaluation results
 - Future ideas
- Presentation
 - Display - organized & attractive to audience
 - Display - student uses notebook and images to discuss findings and data
 - Oral Presentation Quality
- Time and Effort
- Thoroughness
- Effort

11.2 Example Engineering, Math, and Technology Display

