2019 Chico Science Fair
GUIDELINES

Dear Students:

The CHICO SCIENCE FAIR will be held February 25 - March 1, 2019. Now is the time to be thinking about a science question that you would like to creatively explore. Last year, over 650 curious Chico students investigated some part of our world and entered their projects in this local fair.

Design your project and plan to exhibit it, or come and see the Science Fair as a visitor. The fair will be at the Silver Dollar Fairgrounds, Commercial Building.

Looking forward to seeing you,
Christine Weston and Dr. **Becki Brunelli**

Who is Eligible: Any student in grade K-12, attending a public or private school in the confines of Chico or CUSD. Please check with your teacher or principal on how your school will determine the projects that will enter in to the Chico Science Fair or if it is simply an individual choice of the student. If your school has a preliminary Science Fair, please understand that Chico Science Fair is separate and requires its own application.

How to Enter: Fill out the on-line application at **www.chicosciencefair.org**.

- I**ndividua**l project entry requires a unique email address except where a teacher or parent wants to register more than one child. In that case, one unique email address can enter as many as 20 students (multiple students in a family or from a class or school).

- **Group** projects may enter with 2 to 4 participants per group. The group will use one unique email for the entire group.

- **Classroom** projects are entered by a teacher with a unique email address.

The **deadline is midnight, Monday night, February 18, 2019.**

NO PROJECT WILL BE ACCEPTED WITHOUT REQUIRED AGREEMENT ON ELECTRONIC WAIVER FORM

For Information or questions: Chico Science Fair, P.O. Box 6832, Chico, CA 95927
Email: chico.science.fair@gmail.com
Or check Web Site Contacts: http://www.chicosciencefair.org/contact.htm

Project Types and Judging Standards:
Projects entered at the CHICO SCIENCE FAIR will be displayed and judged by grade level, using established rubrics (available on the website). Ribbons will be awarded for Best of Grade (Rosette), 1st, 2nd, 3rd and 4th places. Students may enter an experiment, a demonstration or a collection as detailed below.

- **Projects using the Scientific Method with unknown or unpredictable results** and **projects with a known results** (replicating an existing experiment) will be evaluated based on the following categories (see rubric for details):
  - Scientific Method
    - Question
    - Background information
    - Hypothesis
    - Materials and Procedures
    - Design of Experiment
    - Results
    - Conclusions
  - Completeness
  - Workmanship (Attractiveness)

- **Projects that are demonstrations** such as how a computer works, how a telegraph works, etc.; dissections with labels; models such as electrical circuitry; scientific drawings and displays such as: body systems, parts of an animal, should be evaluated in the following manner (see rubric for details):
    - Scientific Objective
    - Accuracy & Completeness
    - Background information
    - Organization
    - Graphics & Labels
    - Workmanship (Attractiveness)

- **Projects that are collections** with identifications such as: bugs, rocks, butterflies, plants, etc. should be evaluated in the following manner
    - Scientific Objective
    - Accuracy & Completeness
    - Background information
    - Organization
    - Graphics & Labels
    - Workmanship (Attractiveness)

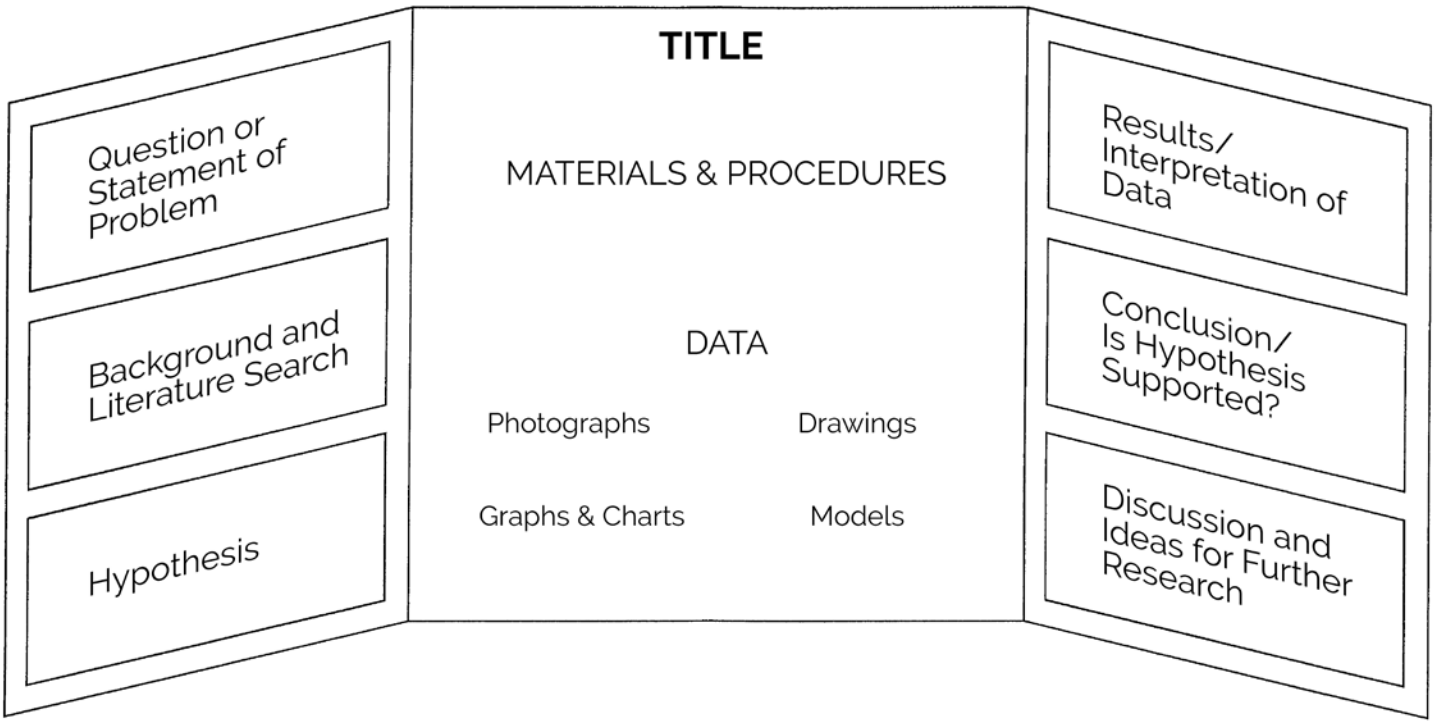
Young children may find demonstrations and collections easier to approach. However, they are not limited to these types. Older students will find using the scientific method with unknown results more intriguing and challenging. They are strongly encouraged to consider projects that incorporate the scientific discovery process.

Hints on Preparing Your Science Fair Projects:

1. Start early with your planning.
2. Check the library science section for ideas. Check web site: http://www.chicosciencefair.org
    a. Subjects may be taken from any branch of science, including, but not limited to:

Agriculture	Chemistry	Engineering
Animal Behavior	Computers	Genetics
Astronomy	Consumer Science	Geology
Behavioral & Social Science	Earth & Space Science	Human Body
Biology	Ecology	Microbiology
Botany	Electricity	Physics
		Zoology

    b. Analyze the possible project ideas—is it a problem-solving (question–asking) project that calls for some investigating? Is it a model or explanation on how something works? Which one of the three areas would the project idea belong?
    c. Read a lot about your project in order to find out what others have already found out about it.
3. Think of the steps that will be needed before you start your project and display.
4. Be sure to give your project a clear title. Describe the steps and the methods you used. Make charts and graphs that show your facts clearly.
5. Make the title large, clear, and neat. Explanations should be clear and informative.
6. Design your project to “tell a story.” It should be clearly understandable to the viewer.
7. If your project is of the investigation type, make sure you clearly state all steps of the scientific method as defined in the rubric (available at http://www.chicosciencefair.org).
8. If the project is a demonstration or a collection, keep in mind that it, too, should have a scientific objective.
9. Acknowledge all important help, ***including parents and other adults***.
10. Any construction should be durable.
11. Use a wingboard to display your exhibit.
12. Use of photographs is permissible and encouraged.



EXAMPLE WINGBOARD FORMAT FOR STUDENT PROJECTS

Size and display is limited to 2 ½ feet deep by 4 feet wide by 6 feet high for grades 7-12 and projects for K-6 must be limited to 36" high unless it is a classroom project.

These are ***maximum*** sizes. **Exhibitors** are encouraged to **make projects smaller**, if possible.

LOSS or DAMAGE

The CHICO SCIENCE FAIR assumes no responsibility for loss or damage to any project or part thereof. "Do Not Touch" signs will be supplied for each exhibit. Display of valuable or rare items are discouraged (photographs or simulated representations should be substituted in these cases).

Rules for CHICO SCIENCE FAIR:

1. INDIVIDUAL projects are those done by only one student.
2. GROUP projects are those produced by two or more students.
3. CLASSROOM projects are done by the whole class.
4. All exhibits must be of scientific value.
5. **All exhibits must be *researched and built by the student* with parent *supervision* only. This is the honor system, and to be fair to all students, and in order to judge fairly, the work should be done by the student. PLEASE keep this in mind. *If a parent does a large portion of the work, this should be noted on the project.***
6. *Size* of the display is limited to 2 ½ feet deep by 4 feet wide by 6 feet high for grades 7-12 and classroom projects. Grade K-6 must be limited to 36" high unless total classroom project.
7. Dangerous chemicals, open flames, explosives and poisonous animals are not allowed.
8. Experiments causing pain or distress on animals are absolutely prohibited.
9. The use of vertebrate animals in projects is permitted for observations only, not for experimentation.
10. Live animals displays are not allowed (substitute photographs or a model in exhibit).
11. Projects utilizing human subjects must insure the subjects are free from potential physical and psychological risks.
12. Exhibitors are responsible for the care of plants in their exhibits.
13. Electric power (110 volt AC) is available, but exhibitor must indicate this need on the application form. Exhibitor will also need to furnish his/her own extension cord(s).
14. Exhibits must be well constructed and capable of standing alone.

RESEARCH INVOLVING HUMAN PARTICIPANTS:

Carefully think about your project and consider what you will ask participants to do. You want to be sure that everyone who participates in your project is protected from physical and mental discomfort and harm. Ask yourself, "How would I feel if I were participating in this activity?"

Be courteous and respectful to those who participate in your project. Remember that each individual is helping you by participating in your project. Respect a person's freedom to decline to participate. Do not force anyone to be part of your project against their wish.

FAIR SCHEDULE - Silver Dollar Fairgrounds, Commercial Building (Back Entrance)

Check in and Set up Projects:

MONDAY, FEBRUARY 25	12 p.m. – 6 p.m.

Judging, closed to public

TUESDAY, February 26	CLOSED TO PUBLIC

Open to public, (including field trips by schools)

WEDNESDAY, FEBRUARY 27	10 a.m. – 7 p.m. (closed 1-3pm)
THURSDAY, FEBRUARY 28	10 a.m. – 7 p.m. (closed 1-3pm)

AWARDS Ceremony

THURSDAY Evening, FEBRUARY 28	6 p.m. – 7 p.m.

Projects may be removed

THURSDAY Evening, FEBRUARY 28	7 p.m. – 8 p.m.

Pick up remaining projects

FRIDAY, MARCH 1	8 am. – 10 a.m.

PROJECTS MAY NOT BE REMOVED UNTIL DESIGNATED TIME. **THE CHICO SCIENCE FAIR SPONSORS WILL NOT BE RESPONSIBLE FOR ANY EXHIBIT AFTER 10:00 A.M., FRIDAY, MARCH 1.**

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Catherine and Randy Miller
Donna Murrill
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Robertson Erickson Civil Engineers & Surveyors
Roots Catering
Round Table Pizza
Sierra Nevada Brewery

2019 Chico Science Fair Evaluation Rubric - Scientific Investigation **Project # _____**

Area of Assessment	Advanced (4)	Proficient (3)	Approaching Proficiency (2)	Beginning (1)
A) Testable Question	**Clear**, focused, testable using scientific method	**Adequate** but may not be fully testable	**Not clearly stated or not testable**	**Absent or vague**
B) Background Information	**Thorough** background that **clearly** supports project	**Adequate** background	**Unrelated** background	**Missing** background
C) Hypothesis	**Very clear and thoroughly** developed	**Understandable and adequately** developed	**Partially** developed	**Missing or unclearly** developed
D) Materials & Procedure	**Complete list with details** so others could replicate investigation	**Complete list but with insufficient detail** for others to replicate investigation	**Incomplete list but clear** how materials support project	**Incomplete list and unclear** how materials support project
E) Design of Experiment	**1. Variables specified** **2. Control group present** **3. Multiple trials** **4. Adequate sample size** **5. Steps well sequenced**	4 of 5 done well (1 missing or lacking detail)	3 of 5 done well (2 missing or lacking detail)	1 or 2 of 5 done well (3 or 4 missing or lacking detail)
F) Results	Summary of results **clear** with **correctly labeled** graphics	Summary of results & graphics **adequate**	Summary of results **fair** or graphics may be **missing or unclear**	M**inimal or missing** results or graphics
G) Conclusions	Conclusions **clearly** relate to hypothesis	Conclusions **adequately** relate to hypothesis, or **simplified** conclusion	Conclusions relate to hypothesis with **minimal** explanation	Conclusions **missing or vaguely** relate to hypothesis
H) Display of Project	**Neat; visually engaging; grabs attention**	**Neat; visually engaging OR grabs attention (not both)**	Display elements **need work**	**Little attention** to display elements

COMMENTS:

This was well done on the project:_____

This might help improve the project:_____

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Project # _____

2019 Chico Science Fair Evaluation Rubric – Model, Collection, or Demonstration

Area of Assessment	Advanced (4)	Proficient (3)	Approaching Proficiency (2)	Beginning (1)
A) Scientific Objective	**Clearly** stated objective or rationale	**Adequately** stated objective or rationale	**Vaguely** stated objective or rationale	**Minimal or missing** objective or rationale
B) Accuracy & Completeness	**Complete and correct** content	**Simplified and correct** content	**Simplified and mostly correct** content	**Minimal or incorrect** content
C) Explanation & Background Information	**Thorough** background that **clearly** shows understanding of scientific concepts	**Adequate** background that shows understanding of scientific concepts	**Some minimal background** that shows v**ague** understanding of scientific concepts	**No** background information or **incorrect** or **unrelated**
D) Organization of Elements	**Logical** organization of display elements	**Fair** organization (somewhat difficult to follow)	**Little** organization (difficult to follow)	**Unclear** organization
E) Graphics and Labels	**Clear** labels or graphics	**Minor errors** in graphics or labels	**Significant errors** in graphics or labels	**Missing** graphics or labels
F) Display of Project	**Neat; visually engaging; grabs attention**	**Neat; visually engaging OR grabs attention (not both)**	**Display elements need work**	**Little attention to display elements**

COMMENTS:

This was well done on the project:_____

This might help improve the project:_____

180216