Sierra View Science Fair 2016

Dear Teachers,

I'm pleased to announce the Sierra View science fair is **on** for this spring! Allow me to introduce myself: I'm Chris Nichols, the coordinator of the SV science fair this year. I have two kids at Sierra View (Samantha in 4th grade and Piper in 2nd grade) and I'm a chemistry professor at Chico State.

The city-wide Chico Science Fair is somewhat earlier this year than in years past, so our own science fair will be a bit earlier as well. Here is the timeline:

- SV Science Fair applications due **Friday, January 29** (to teachers or to the school office; half-page application included in this packet)
- SV Science Fair: **Monday, February 8 – Wednesday, February 10** in the Multi-Purpose Room
    - Monday: Set-up
    - Tuesday: Judging
    - Wednesday during school: Viewing by classes
    - Wednesday evening (pending): Family Viewing time and take-down
- Chico Science Fair applications due (on-line): Monday, February 22
- Chico Science Fair: Monday, February 29 – Thursday, March 3

The Wednesday evening viewing time will be confirmed soon.

I have attached the 2016 Science Fair guidelines for the Chico Science Fair. Note that there is a **separate** on-line application form that must be completed to enter the Chico Science Fair. I understand that there are no restrictions as to how many of our students' projects may be submitted to the Chico Science Fair.

I am happy to come by any class and discuss science and the science fair: as a scientist and a science teacher I hope I can offer your students good ideas and advice on how to approach their projects. Please contact me by e-mail at cjnichols@csuchico.edu or text or call 514-4884 if you'd like me to come to your class to talk to your students and answer their questions. Unfortunately I'm busy Jan. 4-8 but I am free nearly any time of day from Jan. 11-19.

Please also feel free to contact me if you have any other questions about this year's SV science fair. Thanks everyone!

Christopher Nichols cjnichols@csuchico.edu 530-514-4884

Sierra View Science Fair 2016 Application Form

Deadline for application: ***Friday, January 29, 2016.***

First and Last Name(s) _____

Grade _____ Teacher _____

Type of project (select 1): Individual ☐ Group ☐

Exhibit Title _____

Category (select 1)

- ☐ Category I (Scientific Experimentation)
- ☐ Category II (Demos, dissections, models, or displays)
- ☐ Category III (Collections with identification)

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CHICO
SCIENCE FAIR

Chico Science Fair
2016
GUIDELINES

Dear Students:

The CHICO SCIENCE FAIR will be held February 29 - March 3, 2016. Now is the time to be thinking about a science question that you would like to creatively explore. Last year, over 800 curious Chico students investigated some part of our world and entered their projects in this local fair. All received a certificate, ribbon and participation gift. More importantly, they had the satisfaction of knowing that they thoroughly understood their chosen topic.

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, Rebecca Brunelli, and Jane Quan-Bell

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**.

Individual 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 Monday, February 22, 2016**.

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

For Information, questions: CSF – Chico Science Fair
P.O. Box 6832
Chico, California 95927

Or check Web Site Contacts:
http://www.chicosciencefair.org/contact.htm
chico.science.fair@gmail.com

Project Types and Judging Standards:
Projects entered at the CHICO SCIENCE FAIR will be displayed and judged by grade level. Students may enter a project in any one of the areas below.

Projects using the Scientific Method with unknown or unpredictable results. (Problem, Hypothesis, Background Research, Procedure, Results, Conclusion) and **projects with a known result** (replicating an existing experiment) should be evaluated in the following manner. Points are not used in actual judging, but are just given as guidelines.

A. Scientific Method.....50
- Problem clearly defined
- Hypothesis
- Procedures
- Observations
- Results
- Conclusions

B. Originality.....20
C. Completeness.....10
D. Workmanship (Attractiveness).....10
E. Self Explanatory.....10
100 points possible

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:

A. Accuracy.....40
B. Completeness.....20
C. Workmanship (Attractiveness).....20
D. Scientific Objective.....10
E. Explanatory Narrative.....10
100 points possible

Projects that are collections with identifications such as: bugs, rocks, butterflies, plants, etc. should be evaluated in the following manner

A. Accuracy.....40
B. Workmanship (Attractiveness).....30
C. Self Explanatory.....20
(must include background information)
D. Scientific Objective.....10
100 points possible

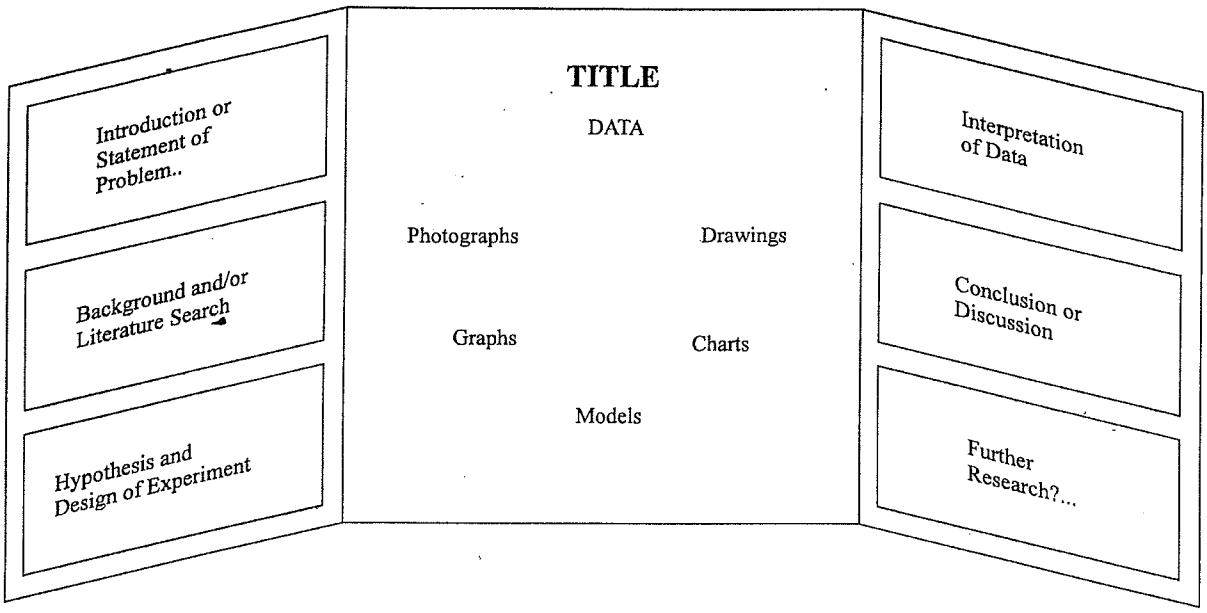
Young children will find demonstrations and collections easier to approach. However, they are not limited to these types. Older students will find using the scientific method with unknown results more intriguing and challenging. They are strongly encouraged to consider projects that incorporate the scientific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

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

   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 visitor.
7. If your project is of the investigation type, make sure you clearly state the scientific method as defined earlier in these guidelines.
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.
10. Any construction should be durable.
11. Consider a wingboard for displaying your exhibit.
12. Use of photographs is permissible.



SUGGESTED 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 should be of scientific value and should be ***done by the student*** with parent *supervision* only.
5. *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.
6. Information to accompany each exhibit:
    a. For K-6 student, a brief explanation of the project, procedure, and data.
    b. For students in grades 7-12, a more comprehensive explanation.
7. Dangerous chemicals, open flames, explosives, poisonous reptiles, starvation and pain causing experiments on animals will not be allowed.
8. The use of vertebrae animals in projects is permitted for observations, but not for experimentation.
9. Live animals displays are not allowed (substitute photographs or a model in exhibit).
10. Projects utilizing human subjects must insure the subjects are free from potential physical and psychological risks.
11. Exhibitors are responsible for the care of plants in their exhibits.
12. 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).
13. 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. A good question to ask yourself is, "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

Check in and Set up Projects: Silver Dollar Fairgrounds, Commercial Building (Back Entrance)
MONDAY, FEBRUARY 29 — 12 p.m. – 6 p.m.

Judging, closed to public
TUESDAY, MARCH 1

Open to public, (including field trips by schools)
WEDNESDAY, MARCH 2 — 10 a.m. – 8 p.m.
THURSDAY, MARCH 3 — 10 a.m. – 8 p.m.

AWARDS Ceremony
THURSDAY Evening, MARCH 4 — 6 p.m. – 7 p.m.

Projects may be removed
THURSDAY, MARCH 4 — 7 p.m. – 8 p.m.

Pick up remaining projects
FRIDAY, MARCH 5 — 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 5.

Sponsored by:

Allergy Associates
Butte Creek Foundation
Richard and Marian Baldy
Chico Unified School District
Gateway Science Museum
MPM/Engineering
Roger Lederer and Carol Burr
Soroptimist International of Chico
Bestway Painters, Inc.
California Water Service Co.
Chico Science Fair Foundation
Gary and Nancy Arnet
J.M. Smucker Company
PG&E, Inc.
Sierra Nevada Brewery

Science Fair – Ideas and Suggestions

What types of Science can I do my project on?

Most people think about the "big" ones:
Biology (Life!)
Chemistry (Atoms and Molecules!)
Earth and Space Science!
Physics (Forces, Motion, Energy!)

But there are others too…
Mathematics
Computer Science
Psychology (Human Behavior)

What types of projects are there?

- Category I: **Experiments**: Using the Scientific Method to figure out an unknown or unpredictable result (or replicating an experiment with a known result)
- Category II: **Demonstrations**: like "How a computer works", "Building a generator", "Parts of a flowering plant", "How earthquakes happen"
- Category III: **Collections** (from nature) with everything identified: seashells, leaves, etc.

What kind things make an OK science fair project great?

	OK	Great
Run your experiments more than once!	My golf ball bounced higher than my baseball	I tested 10 different golf balls and 10 different baseballs; 9 out of 10 golf balls bounced higher than all of the baseballs.
If something can be measured, measure it!	The plant getting "Miracle-Gro" grew more than the one getting just water	Over 18 days, the plant getting "Miracle-Gro" grew 4.5 cm while the plant getting water grew only 2.2 cm.
Organize your data into graphs and tables!	The 10-pound terrier ate 325 g of dog food each day. The 25-pound cocker spaniel ate 525 g of dog food each day…	<table><tr><td>Dog</td><td>Weight of dog</td><td>Food per day</td></tr><tr><td>Terrier</td><td>10 lbs</td><td>325 g</td></tr><tr><td>Cocker Spaniel</td><td>25 lbs</td><td>525 g</td></tr><tr><td>Golden Retreiver</td><td>55 lbs</td><td>800 g</td></tr><tr><td>Labrador</td><td>80 lbs</td><td>1150 g</td></tr></table>
Don't just state a conclusion – try to explain it!	The arrows with feathers flew straighter than the arrows without feathers	The arrows with feathers flew straighter <u>because</u> the feathers made the arrows spin in flight
Double-check your spelling please!	"Dooing this siense fare projicts wuz loots of fun."	"Doing this science fair project was lots of fun!"

<u>What should I do myself? And what can my parents help with?</u>

<u>Do yourself</u>
Coming up with an idea
Planning and running the experiment
Trying to explain your results
Writing (or typing) up the report

<u>Parents can help with</u>
Making sure the idea will be doable
Working with dangerous things (like fire)
Looking up things in books or on the internet
Checking spelling on the report
Taking/printing pictures for the report
Paying for things ($$)