Revised 9.11.2023

ST. CHARLES PARISH PUBLIC SCHOOLS

Elementary

Grades 3-5

Science Fair Handbook

2023-2024

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You and I... We are

ST. CHARLES PARISH PUBLIC SCHOOLS

13855 River Road | Luling, LA 70070
985.785.6289
www.stcharles.k12.la.us

Dear Parents/Guardians,

Parental support is a key to a student's success in the development and completion of a Science Fair Project. Please read the Science Fair Handbook with your child and sign the Statement of Compliance found on the last page of the Handbook. Return the Statement of Compliance to your child's science teacher so that the teacher will know that you've reviewed this Science Fair Handbook with your child and understand the expectations for the completion of the Science Fair Project.

As part of the science curriculum, all students in grades 3 through 12 are encouraged to complete a Science Fair Project and participate in their school Science Fair. The Science Fair Project provides an opportunity for students to address life science, environmental science, Earth science, or physical science concepts.

Completing a Science Project can be a valuable experience for your child. Studies show that the completion of a Science Project can boost a child's thinking skills, build self-confidence, increase organizational levels, teach goal-setting, and develop responsibility. The real life experiences provided by a Science Project can also further develop reading, research, writing, speaking, creative thinking, and problem-solving skills.

We ask that you encourage your child and monitor his or her progress as he or she works through the process to complete a Science Fair Project by:

- guiding your child through the project and allowing him/her to assume as much of the responsibility as possible.
- reading and understanding the rules and regulations for completing a Science Fair Project.
- being supportive and encouraging to your child's efforts.
- helping your child to meet deadlines and timetables in completing his/her project.
- providing transportation to the library, research site, and other places (i.e., bringing projects to and from the School Fair and also from the District Fair if eligible).
- asking questions (e.g.Can your child describe his/her project?).
- assisting your child with seeking additional help when needed.
- helping your child obtain the materials needed for his/her project.
- making sure that your child's experimental design and investigation are safe and do not cause any adverse effects for humans, vertebrates, or the environment.

If you have any questions, please do not hesitate to contact your child's science teacher.

Sincerely,

Dr. Ken Oertling
Superintendent

You and I... We are

13855 River Road | Luling, LA 70070
985.785.6289
www.stcharles.k12.la.us

Dear Science Student,

Please read the Science Fair Handbook with your parent/guardian and sign the Statement of Compliance found on the last page of the Handbook. Return the Statement of Compliance to your science teacher so that he or she will know that you and your parent/guardian reviewed this Science Fair Handbook and understood the expectations for the completion of the Science Fair Project.

Completing a Science Project will give you an opportunity to think and work like a scientist. Just like a scientist, you will choose your own scientific question to answer, conduct research to find out what other scientists have learned about your question, form a hypothesis, and design an experiment to test your hypothesis. In the process of completing this project, you will gather and organize data, analyze the data, and make a conclusion. You will collaborate and discuss your experiment and findings with others. You will use skills you have learned from Social Studies, English, Math, Technology, the Arts, the Sciences, and everyday life to help you complete your project.

To think and work like a scientist, you will be expected to:

- pick a topic that you are interested in by asking a research question that can be answered by doing a test, survey, or experiment yet in no way cause danger or harm to any humans, vertebrae, or the environment.
- design and complete a Science Project that uses the scientific method (do research, identify a problem, state a hypothesis, conduct an experiment, and reach a conclusion) to answer a testable scientific question and is a reflection of your own effort and learning.
- read and understand the rules and regulations for completing a Science Project.
- meet all safety guidelines.
- maintain a log book to document your work throughout the Science Project process.
- meet deadlines to complete and turn in tasks (e. g., research plan, forms) set by your science teacher.
- participate in the school Science Fair by displaying work and presenting your findings orally to the judges.

Your teacher and parents/guardians will help guide you as you work on your project but here is your chance to be in charge of your own learning and to think and work with a scientist! Enjoy the journey!

Sincerely,

Dr. Ken Oertling
Superintendent

Science Fair Project Purpose and Goals

Why should I do a science project?

Doing a science project provides you with an opportunity **to think and work like a scientist.**

Like a scientist, you choose your own scientific question to answer, conduct research to find out what other scientists have learned about your question, form a hypothesis, and design an experiment to test your hypothesis.

Like a scientist, you gather and organize data, analyze the data, and make a conclusion.

Like a scientist, you will collaborate and discuss your experiment and findings with others.

Like a scientist, you will use skills you have learned from Social Studies, English, Math, Technology, the Arts, the Sciences, and everyday life to help you complete your project.

In addition, research shows that working to complete a science project can help you develop thinking skills, build self-confidence, increase organizational levels, teach goal setting, develop responsibility, and improve reading, writing, and speaking skills.

St. Charles Parish Public Schools
Learner Goals

To think and work **like a scientist** to complete a science fair project also helps **you** to gain knowledge and skills that contribute to achievement of the St. Charles Parish Learner Goals:

A KNOWLEDGEABLE, COMPETENT PERSON

Accesses, analyzes and processes information
Acquires new knowledge and skills and applies the learning to various situations
Understands the interrelationships among concepts, principles and skills
Uses technology to gather, analyze, and synthesize information

A CRITICAL THINKER

Identifies, assesses, integrates and utilizes information and resources to solve problems and make decisions
Demonstrates the ability to ask questions in order to continuously improve products, services or processes
Demonstrates adaptability, flexibility and the ability to use a variety of tools to solve problems

A CREATIVE PRODUCER

Uses appropriate resources and technology to create quality products and services
Demonstrates creativity, innovation and flexibility to provide a service, to accomplish a goal or to develop a product
Produces an original product appropriate for its intended use

AN EFFECTIVE COMMUNICATOR

Uses verbal, written and presentation skills effectively
Demonstrates ability to develop and deliver clear, concise key messages
Develops visual representations that communicate key points

Student's Expectations

<u>To think and work like a scientist</u> to complete a science fair project, you are expected to:

- read and understand the rules and regulations for completing a science project.
- complete the Science Fair Statement of Compliance on the back of this booklet and return it to your teacher.
- design and complete a science project that uses the scientific method (do research, identify a problem, state a hypothesis, conduct an experiment, and reach a conclusion) to answer a testable scientific question and is a reflection of your own effort and learning.
- actively participate in all science classroom activities and instruction.
- meet all safety guidelines.
- maintain a data notebook or log book to document your work throughout the science project process.
- complete and turn in tasks (e.g., research plan, forms) as outlined in your teacher's science project timeline.
- display your work at your school's science fair and present your project orally to judges.

Parent's Expectations

<u>To think and work like a scientist</u> to complete a science fair project, your parents can help you by:

- guiding you through your project and allowing you to assume as much of the responsibility as possible.
- reading the rules and regulations for completing a science project and assist you in understanding them.
- being supportive and encouraging to your efforts.
- helping you to meet deadlines and timetables in completing your science project.
- providing you with transportation to the library, research site, and other places (i.e., bringing project to and from the school fair and also to and from the parish fair if eligible).
- asking you questions such as, "Can you describe and explain your science project?"
- helping you obtain the materials you need for your project.

Teacher's Expectations

<u>To think and work like a scientist</u> to complete your science fair project, your teacher will help you learn about science process skills and the science inquiry standards necessary to complete a science project. You will learn how to:

- ask questions, infer, and draw conclusions.
- design and conduct experiments.
- use appropriate equipment and safety procedures to carry out investigations.
- use evidence to make inferences, predict trends, and communicate findings.
- use a variety of sources.
- analyze data.
- construct, use, and interpret graphical representations of data.

Project Timeline

Time management is important for successful completion of the science project. It is suggested that parents and students establish a timeline to complete the steps by the date of the school science fair.

Date	Science Fair Component
	Choose topic
	Complete and return Science Fair entry form
	Conduct research/form hypothesis
	Complete and return science project research plan
	Design experiment
	Buy or order equipment
	Conduct experiment
	Draw conclusions
	Create display
	Optional Pocket Folder which may include: ● Safety Checklist ● Abstract ● Log Pages ● Label for back of display board (No names may be visible from the front of the board)
	Bring project to school
	School Science Fair
Monday, January 22, 2024 12:00 - 5:00 PM PLC	Parish Science Fair Set-up for students who placed 1st, 2nd, or 3rd at the school fair.
Tuesday, January 23, 2024	Parish Science Fair ● Judging is from 9:30 AM – 12:00 PM. Students return to their schools as soon as judging is completed. ● The public is invited to view the projects from 5:00-6:00 PM. ● Awards ceremony is at 6:00 PM at the PLC. ● Projects may be removed immediately following the awards ceremony.

ST. CHARLES PARISH PUBLIC SCHOOLS

Science Fair Judging Sheet

Elementary Division: Grades 3 - 5

Circle the Category you are judging.

Biological Sciences	Chemical Sciences	Earth/ Environmental Sciences	Physical Sciences

Project Number/Title: _____

I. Research Question (10%)	**Component Average:**		X	1	=	
• Question is stated clearly and unambiguously to allow a reasonable approach to a solution	4	3	2	1		
• Question can be answered by application of the scientific method	4	3	2	1		
• Project shows depth of study and significant effort	4	3	2	1		
• Specific references to relevant research literature are cited in the project logbook	4	3	2	1		
II. Design and Methodology (15%)	**Component Average:**		X	1.5	=	
• Experiment design is optimized towards obtaining a reasonable solution to the question?	4	3	2	1		
• Independent and dependent variables are correctly identified and defined?	4	3	2	1		
• Were controls necessary and if so, were they recognized and used correctly, else mark 'na'	4	3	2	1		
• The number of trials run and sampling techniques employed were sufficient for solving the problem	4	3	2	1		
• Experiment materials and procedures are appropriate and logical.	4	3	2	1		
III. Execution: Data Collection, Analysis and Interpretation (20%)	**Component Average:**		X	2	=	
• Project incorporates a systematic method of collecting and analyzing data	4	3	2	1		
• Student is able to demonstrate reproducibility of results either mathematically or via multiple trials	4	3	2	1		
• Mathematical/statistical methods suitable for analyzing the data have been employed	4	3	2	1		
• Sufficient data was collected during each run to analyze, interpret and support a conclusion	4	3	2	1		
IV. Creativity (20%)	**Component Average:**		X	2	=	
• Testable question	4	3	2	1		
• Approach to solving the problem	4	3	2	1		
• Analysis of the data	4	3	2	1		
• Interpretation of the data	4	3	2	1		
• Use of equipment	4	3	2	1		
• Construction or design of the experiment and associated apparatus	4	3	2	1		
Va. Presentation Display (10%)	**Component Average:**		X	1	=	
• Display is neat, attractive and contains a mix of charts, graphs and photos	4	3	2	1		
• Display is arranged logically allowing the viewer to follow the project through each significant phase from start to end.	4	3	2	1		
• All relevant parts of the scientific method are represented on the display	4	3	2	1		
• Display is free from spelling and grammar mistakes and any charts, graphs or photos are labeled.	4	3	2	1		
• Project logbook is available and complete	4	3	2	1		
Vb. Presentation Interview (25%)	**Component Average:**		X	2.5	=	
• Student's description of the theory, methodology, procedures demonstrates a clear understanding of the subject	4	3	2	1		
• Conclusion is logical and relevant to the hypothesis, based on the data collected	4	3	2	1		
• Student is able to relate how the science behind this project has impacted or may impact society	4	3	2	1		
• The entirety of the project is student's original work	4	3	2	1		
• Student can demonstrate if further research is warranted	4	3	2	1		
• Student's responses to questions were clear, concise and thoughtful	4	3	2	1		

Judges Comments:	Scoring 4 = Exemplary 3 = Proficient Progressing 2 = Beginning 1 = No Attempt	Total Possible Points=40

Science Research & the Process of Science

Research is a process by which people discover or create new knowledge about the world in which they live. Research projects are designed to provide quantitative data through experimentation followed by analysis and application of that data. Projects that are demonstrations, 'library' research, or informational projects, 'explanation' models or kit building are not appropriate for research based science fairs.

Inquiry Based Research

Question: Ask a testable question – one in which data is taken and used to find the answer or define a problem. A testable question can further be defined as one in which one or more variables can be identified and tested to see the impact of that variable on the original set of conditions. The question should not merely be an 'information' question where the answer is obtainable through literature research.

Background Research: Review published materials related to your problem or question. This is called background research.

Hypothesis: Evaluate possible solutions and write a hypothesis for what you think will happen.

Experimental Design (procedure): In designing the experiment, it is critical that only one variable – a condition that may affect the results of the experiment – is changed at a time. This makes the experiment a 'controlled' experiment.

Data Collection and Analysis: Challenge and test your hypothesis through your procedure of experimentation (data collection) and analysis of your data. Use graphs to help see patterns in the data.

Conclusions: Draw conclusions based on empirical evidence from the experiment.

Non Inquiry Based Research

Not all areas of study are best served by scientific method based research. Engineers, inventors, mathematicians, theoretical physicists, and computer programmers have different objectives than those of other scientists; they follow a different process in their work. The process that they use to answer a question or solve a problem is different depending on their area of study.

Engineering projects may include the following:

1. Define a need or "How can I make this better?"
2. Develop or establish design criteria (could be more than one)
3. Do background research and search the literature to see what has already been done or what products already exist that fill a similar need? What makes them good and what makes them weak?
4. Prepare preliminary designs and a materials list. Consider costs, manufacturing, and user requirements.
5. Build and test a prototype of your best design. Consider reliability, repair, and servicing.

6. Retest and redesign as necessary.
7. Present results.

CHOOSING A SCIENCE FAIR TOPIC

How do I choose a science Fair Project topic?

Finding ideas for a science project and determining exactly what topic you choose can be challenging and takes some time and thought.

Consider choosing a topic that interests you. For example,

- a hobby that might give you something to investigate,
- an interest in a sport may provide ideas for investigations,
- a science –related magazine or newspaper article may spark your interest and provide the opportunity for experimentation, and
- websites which offer suggestions for science projects or pique your interest and provide possibilities for experimentation.

Science Project Categories

Category	Examples
Biological Sciences	The science that studies living organisms. Examples: ● What type of soil is best to grow petunias? ● How does the color of light affect the growth of plants? ● Which foods do mealworms prefer? **NO MOLD OR BACTERIA PROJECTS ALLOWED**
Chemical Sciences	The science of matter. Examples: ● What freezes the fastest: milk, cola or water? ● What type of battery lasts the longest? ● Which Popsicle melts faster in sunlight: red, orange or purple?
Earth and Environmental Sciences	The study of science related to the planet Earth and of the relations between organisms and their environment. Examples: ● Which conserves more water: showers or baths? ● How is absorption of water affected by the type of soil? ● How accurate is a cricket in predicting temperature?
Physical Sciences	The science of matter and energy and their interactions. Examples: ● Will more air make a basketball bounce higher? ● Does temperature have an effect on a magnet's strength? ● Which lubricant works best on model car wheels?

Determine if the project is feasible. Ask yourself,	YES	NO
Does the project ask a testable question?		
Can I complete the project in the amount of time allowed?		
Do I have enough time to test and retest and redesign if needed?		
Does this project cause any environmental concerns?		
Do I have adequate resources (equipment, materials, special equipment such as microscopes, budget, etc.) to carry out the investigation?		
Is the design of the experiment adequate? Can I measure the effects using quantitative and qualitative data?		
Is the plan for experimentation safe?		
Does the project conform to St. Charles Parish Public Schools Science Fair Rules and Regulations?		

Websites to help you choose a topic

There are a myriad of websites available that can assist you in choosing a topic for your science fair project. A few websites are:

- Science Buddies
  http://www.sciencebuddies.org/science-fair-projects/project_ideas.shtml
- Fact Monster
  www.factmonster.com
- How Stuff Works: Science
  http://science.howstuffworks.com/
- NASA
  www.nasa.gov
- Education.com
  http://www.education.com/science-fair/
- NEED (National Energy Education Development Project)
  http://www.need.org/sciencefair
- Science Fair Central
  https://sciencefaircentral.com/

Rules and Regulations

These rules were developed to facilitate the following:

- Protect the rights and welfare of the student researcher and human subjects
- Protect the health and well-being of animals
- Follow federal regulations governing research
- Offer guidance to affiliated fairs
- Ensure use of safe laboratory practices
- Address environmental concerns

1. No bacteria, mold, weapons, or firearms science projects will be allowed.

2. Only individual projects are allowed.

3. A project journal is optional. The journal can be a Google Doc that you link in your presentation and upload, or you or your teacher can scan and upload a PDF of a handwritten journal. The journal may contain dated entries for the following:
    - Topic or question investigated
    - Background research
    - Hypothesis or prediction
    - Materials, procedures, safety precautions
    - Experimental results – both in graphical and written form
    - Conclusions/analysis
    - Bibliography

4. The school entry form must be turned in to the teacher on the assigned due date.

5. All projects must meet Science Fair Display and Safety Guidelines. You must complete the Science Fair Display and Safety Guidelines Checklist. You and your parent/guardian must sign and date the checklist. Do NOT attach the Checklist to your display board, but display it with your project.

Steps to a Successful Science Project

Since the science projects in grades 3, 4 and 5 are to be completed at home, the following steps may help in the completion of a successful project.

Step 1: Brainstorm a list of things you liked from past assignments and subjects in your science project notebook or science project log (Remember to date your entry). This list is your starting point.

Step 2: Make a list of the resources (things or knowledge) you already have in your science project notebook or science project log (Remember to date your entry).

Step 3: Decide if you want to do an investigation or an invention.

- In an **investigation**, you will come up with a question. Learn as much as you can about it. Then, design and run an experiment that answers the question.
- In an **invention project**, you will identify a real-world problem. You will invent a gadget to solve the problem. Then, you will test the invention to see how well it works.

Step 4: Check the following places for more science ideas to add to your list from step 1 in your science project notebook or science project log:

- science books in the library
- science articles in magazines (e.g., National Geographic, Popular Mechanics, Discover)
- science articles in the newspaper
- science television shows (e.g., Discovery, the Science Channel, Animal Planet)
- science websites

Step 5: Look at all of the things that interest you and choose an idea for your science project. Write your science project topic/problem in your science project notebook or science project log. Before beginning any work on your project, see if you can answer yes to the following questions:

- **Question:** Does my topic have a specific answer or solution? Is there a reasonable way to find that answer or solution?
- **Time:** Do I have enough time? Can I finish the work before the science project is due?
- **Materials:** Can I get or make the materials I need? Can I afford them?
- **Safety:** Is my project safe? Is it ethical?
- **Level:** Do I really understand the topic? Can I find resources that aren't too advanced?
- **Originality:** Is my topic interesting or original in some way? Will anyone else care about my topic?
- **Interest:** Am I truly interested in this topic?

Step 6: Research is a process by which people discover or create new knowledge about the world in which they live.

- Research with your problem/question in mind.
- Use different resources (books, articles, the Internet, and reference materials) to update information about your problem/question.
- Learn more about your problem/question to help you understand and design your experiment.

Step 7: Write your hypothesis – this is simply the answer to your question or problem.

Step 8: Design your experiment. Include the following:

- **Title** (Title of your project)
- **Problem** (Your question)
- **Hypothesis** (States what you will prove or disprove)
- **Materials** (A list of things needed for your experiment.)
- **Procedure** (A list of steps for your experiment.)

Step 9: Submit your science project research plan to your science teacher for approval. (See the form section at the end of this document for the science project research plan)

Step 10: Conduct your experiment. Record observations (data) from your experiment into your science data book or science log book. Make tables and/or charts and graphs to organize your observations (data). After you have finished your tables, charts, and graphs, examine them carefully to answer your problem or question.

- Remember to take pictures of your experiment as you go through the steps.

Step 11: Write your conclusion. Include in your conclusion whether your hypothesis is proven or disproven and why (state your evidence from the experiment). Also, include how you would improve your experiment. Include the new ideas gained from doing the experiment.
Explain the real-world uses or applications of your research.

Step 12: Make your display.

Step 13: Write your abstract. An abstract is a summary of your entire project and should include the following:

- Title (this should be the same as what is on your display)
- Purpose (why you did this project, what you thought would happen)
- Procedure (the materials you used, how you conducted your experiment)
- Data (details about observations made, data collected)
- Conclusions (your project results, the evidence that supports your hypothesis)

The abstract cannot be longer than 250 words and must be typed.

Abstract Writing Tips

Elementary abstracts must be between **100 - 250** words and should be displayed with the project. Below is a Sample Abstract Template – Elementary Level which outlines the specific parts of the abstract. This may help you learn to frame an abstract while informing judges and the public about the project.

Title:
School:

Purpose of project / experiment:
- "I wanted to find out…"

Summarize procedures, emphasizing the key points or steps:
- "I studied this by doing…"

Detail observations/data/results (VERY BRIEF!):
- "I observed that…"

State conclusions and applications:
- "I found out that…"

Sample Written Abstract (186 words)

> No More Brown Apples
> Bayou Elementary
>
> Purpose:
> I wanted to find out what kept apples from browning the most and thought that apples dipped in lemon juice in the refrigerator would do this.
>
> Procedure:
> I bought apples, Fruit Fresh, apple juice and lemon juice. I dipped 2 slices of apples in each and had four plain slices of apple. I put each in a Ziploc bag and two plain ones just on a plate. One half of the apples were set in the refrigerator and the other half was left at room temperature. I checked for any browning every 30 minutes or so and logged it.
>
> Data: I observed the apples with Fruit Fresh had the least browning. The apples with lemon juice were second and with apple juice were third. Plain apples in plastic bag were fourth. The plain apples on a plate browned quickest and most.
>
> Conclusion and Application: I found out my hypothesis was not supported by my data. Apples with lemon juice got second place in both tests. Fruit Fresh kept the apples from browning the most, knowing this will help keep apple slices for our lunch from browning.

Display

Do I have to have a display board?

- All students must prepare a display board to communicate his/her work to others.

What should my display look like?

- The science project may not exceed 76 centimeters (30 inches) in depth (front to back), 122 centimeters (48 inches) in width (side to side), and 183 centimeters (108 inches) from the table top in height.

- Your name, your school and grade, and your teacher's name must be clearly printed on the back left flap of the display board. Use a black Sharpie pen or permanent marker to print the information.

- If electricity is needed, you must supply a UL approved extension cord of at least 9-feet in length.

- Your display may include your
    - research plan
    - log book
    - abstract
    - completed and signed Science Fair Display and Safety Guidelines Checklist (do not attach to display board)

- You can include an interesting artifact to enhance your display as long as it is not prohibited or irreplaceable.

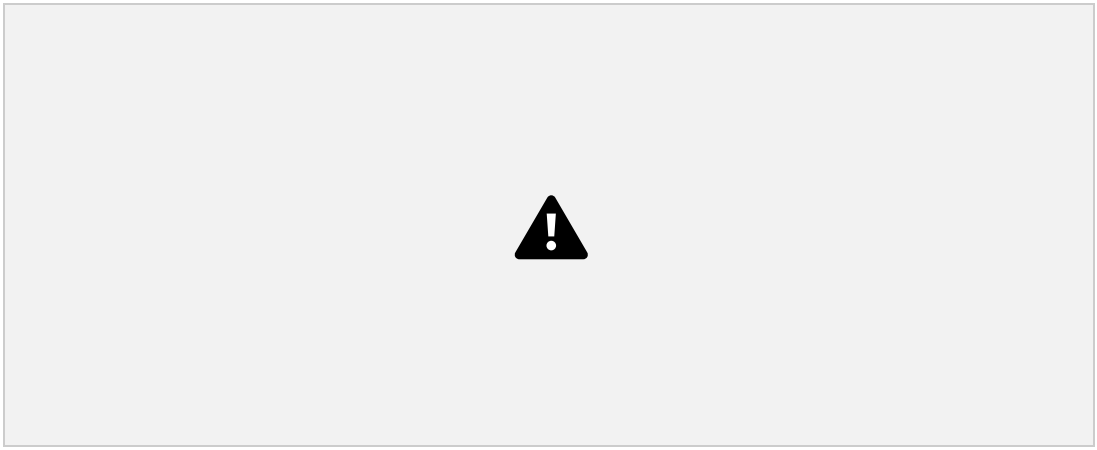
Photos/Images

Any photograph/visual image/chart/table and/or graph is allowed if:

- It is not deemed offensive or inappropriate (which includes images/photographs showing invertebrate or vertebrate animals/humans in surgical, necrotizing or dissection situations) by the Scientific Review Committee, the Display & Safety Committee, or Society for Science & the Public.

- It has a credit line of origin ("Photograph taken by..." or "Image taken from..." or "Graph/Chart/Table taken from…"). If all images, etc. displayed were created by the finalist or are from the same source, one credit line prominently and vertically displayed on the backboard/ poster or tabletop is sufficient. All images MUST BE properly cited. This includes photographs and/or visual depictions of the finalist or photographs and/or visual depictions of others for which a signed photo/video release form is in a notebook or logbook at the project booth. These signed consent forms must be available upon request during set-up and the inspection process, but may not be displayed c. Sample release text: "I consent to the use of visual images (photos, videos, etc.) involving my participation/my child's participation in this research."

- Finalists using any presentation or demonstration outside of a project board must be prepared to show the entire presentation to the Display & Safety Inspectors before the project is approved. All aforementioned rules apply to this presentation and the presentation may not be altered in any way after the final Display & Safety inspection. Examples of presentations that require approval include, but are not limited to PowerPoint, Prezi, Keynote, YouTube, software program/simulation and other images and/or graphics displayed on a computer screen or other non-print delivery method.



Display Checklist

My display... (Google Slides)	YES	NO
● Is neat, colorful and eye-catching		
● Has a catchy title		
● Has no spelling or grammatical errors		
● Provides good information about my project by simply looking at it		
● Includes all necessary parts and is clearly labeled		
● Purpose statement/problem/question		
● Hypothesis		
● Procedure ○ written in clear sequential order		
● Data/results charts and graphs ○ shows that I conducted repeated trials and used adequate sample size ○ identifies my independent, dependent, and control variables		
● Analysis ○ has the correct type of graph that displays my data along with a written explanation		
● Conclusion ○ answers my original question/problem supported with data		
● Has clear photographs/graphs/charts/tables that enhance my display and help to explain my project		
● LInked or uploaded - Pocket Folder or Binder that includes: ○ Research plan ○ Log book ○ Abstract		

Websites that can help you with your display

http://www.biologyjunction.com/diplay_board.htm
http://www.stevespanglerscience.com/blog/science-fair-secrets/science-fair-911-display-boards/
http://www.sciencebuddies.org/science-fair-projects/project_display_board.shtml

Presentation

Do I have to make a presentation?

All science fair participants are required to make a 2-3 minute presentation before the school's science fair judges and then respond to questions.

Be confident. You have worked like a scientist and part of being a scientist is being able to communicate to others about the work you have done, what you have learned, and what conclusions you have made.

Hints to Prepare for your Presentation

- Practice.
- Smile, relax, stand straight, and speak loudly enough to be heard clearly. (Don't chew gum.)
- Introduce yourself and tell your age and grade.
- Give the title of your project.
- Explain the purpose of your project and tell why you chose this topic.
- Explain your hypothesis and procedure.
- Show your results using your graphs, charts, and log book.
- Explain how you interpreted your data and the conclusion you have made.
- If you have encountered errors or problems, talk about them and explain what you did or could do to correct them.
- Tell the judges what you would do differently or what you would like to do next concerning your topic.
- Ask the judges if they have any questions. Answer questions with confidence. If the judges ask a question, you don't know, don't panic! You might say, "I'm not certain, but I think it might be…" or "That was not a part of my research or experimental plan but I will certainly look into finding the answer."
- Thank the judges for their time and attention.

Website that can help you in preparing for your presentation:

http://www.sciencebuddies.org/science-fair-projects/project_judging.shtml

Science Fair Project Required Forms

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Science Fair Project

Statement of Compliance

I have reviewed the Science Fair Handbook and understand the rules and regulations regarding science projects.

I understand that the science fair is optional and that I am choosing to complete an individual project and present my project to a team of judges at the school science fair.

Teacher's Name: _____

Grade: _____

Printed Student Name: _____

Student's Signature: _____ **Date:** _____

Parent/ Guardian Signature: _____ **Date:** _____

Parent/ Guardian Phone Number(s): _____

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ST. CHARLES PARISH SCIENCE FAIR

ELEMENTARY DIVISION
Grades 3-5

Entry Form

(rev. 08.16.18)

PLEASE PRINT ALL INFORMATION

Name: _____ Grade:_____

School: _____

Teacher's Name: _____

Category: (Check One)

____ **Biological Sciences** (Plants, Animals, Senses, Human Body) No mold or bacteria

____ **Earth/Environmental Sciences** (Geology, Space, Ocean, Rocks and Fossils, Ecology)

____ **Physical Sciences** (Machines, Magnets, Electricity)

____ **Chemical Science** (Acids, Bases, Detergents, Starch, Food)

Title of Project: _____

Brief description of the project:_____

_____

_____

_____ _____

Participant's Signature Parent's signature

_____

Date

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Science Fair Project Research Plan

A. My question or problem is

_____

_____

B. My hypothesis or goal is

_____

_____

C. The following is a description (in detail) of the procedure or method I will follow.

Steps to my experiment:	How I will collect and analyze data:

D. Bibliography: List at least three (3) major references (e.g., science journal articles, books, internet sites) from your literature review.

1

2.

3.

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Science Fair Display and Safety Guidelines Checklist

(rev.8-20-21)

- **All projects MUST adhere to the Science Fair Display and Safety Guidelines listed below. Failure to comply will result in disqualification.**
- **This completed and signed form must be included with your display DO not attach the form to your display board.**

_____1. Exhibit Size – W 48" x D 30" x H 108" maximum (floor to top)

_____2. Student's name, school, grade, and teacher's name are printed clearly using a Sharpie or permanent marker on the left back of the self-supporting display board/exhibit.

_____3. Science Project folder/binder that contains a log book (grades 3-5) or Science project log/book (grades 6-12) is displayed with the project board/exhibit.

_____4. Photography/visual images/charts/tables and/or graphs adhere to guidelines found in the students' science handbook.

_____5. Three (3) copies of abstract and required forms are displayed with the project board/exhibit. (grades 6-12 only)

_____6. UL approved extension cords with grounded plug, all connections soldered; no uninsulated wire, nails, or tacks

_____7. No quarantined substances

_____8. No living organisms (e.g., plants, animals, microbes)

_____9. No plant materials (living, dead, or processed). Exception: Manufactured materials used to build display

____10. No microbial cultures and fungi, live or dead, including unknown specimens objects, or other objects dangerous to public safety

____11. No taxidermy specimens or parts

____12. No preserved vertebrate or invertebrate animals (includes embryos)

____13. No human or animal food

____14. No human/animal parts or body fluids (e.g., blood, urine) (Exceptions with SRC approval: teeth, hair, nails, dried animal bones, histological dry mount sections, and wet mount tissue slides)

____15. No soil, sand, rocks or waste samples unless encased in an acrylic slab

____16. No laboratory chemicals including water

____17. No liquid or solid gasses (this includes water)

____18. No poisons, drugs, controlled substances, hazardous substances or devices (e.g., firearms, weapons, ammunition, reloading devices, gunpowder)

____19. No dry ice or sublimating solids

____20. No sharp items (e.g., syringes, needles, pipettes, knives, scalpels)

____21. No flames open or concealed, no explosives, no noxious fumes

____22. No highly flammable display materials

____23. No batteries with open top cells

____24. No glass, including containers, test tubes, thermometers, etc. (exception: computer screen)

____25. No empty tanks that previously contained combustibles, liquids or gasses, unless purged with carbon dioxide

My science project meets all the display and safety guidelines listed above.

_____	_____	_____
Student Signature	Parent/Guardian Signature	Date