



2010 S.C.A. SCIENCE FAIR!

THURSDAY, JANUARY 21, 2010



October 15, 2009

Dear Parents,

S.C.A. is gearing up for our annual SCIENCE FAIR to be held on *Thursday, January 21st*. The purpose of the Science Fair is twofold: (a) to expand **our students'** scientific knowledge and (b) to peek their interest in the area of science and scientific research. The science project is intended to be an independent assignment and will count as a *portion* of the 2nd quarter Science grade. This year only 3rd-8th graders will be required to complete a science project; *however*, N3-2nd grade students are encouraged to complete a science project as an extra credit assignment and to develop a greater interest in scientific discovery.

On *Tuesday, January 19th*, 3rd-8th grade students will present their projects in their classrooms. The students with the top three (3) scores in each class will present their projects in the gym on *Thursday, January 21st* for our guest judges. The top three (3) winners in each grade level, in addition to the top three (3) school-wide winners will be acknowledged by administration in chapel (*date to be announced*).

Please begin assisting your child in the selection of a topic. When choosing a topic, please keep in mind that the topic should be interesting to your child and one that your child understands and can explain. Each 3rd-8th grade student is required to submit two (2) science project proposals (see attached) to his/her teacher by *Wednesday, November 4, 2009*. The proposals should include the topic, the purpose, and the hypothesis for each proposed project. **The internet, your local library, and teachers' stores are great sources for ideas, as well as our own school library.**

Please see the attached project timeline for important project due dates. *A complete S.C.A. Science Fair project includes the following:*



- A project display board (see attached requirements)
- A 5 to 7 minute memorized oral presentation (see enclosed script) including being able to answer questions pertaining to the project with knowledge and understanding
- A typed project research paper as outlined in the attached model

We anticipate an exciting Science Fair season so please begin working with your child now. Please note that display boards/supplies can be purchased from a local teachers' store. Refer to the display board requirements for a list of needed items. **If you have any questions, please contact your child's teacher or Ms. L. Bell (Dean of Students) through the school office at (773) 928-0145.**

Sincerely,

Dr. Marguerite Jackson
Principal

3RD-8TH GRADE S.C.A. SCIENCE FAIR PROJECT TIMELINE

| STEP | WHAT STUDENTS SHOULD BE WORKING ON | DUE DATE |
|------|---|---|
| 1 | <p align="center"><u>Project Proposals</u></p> <ul style="list-style-type: none"> Submit <u>two (2)</u> science fair project proposals to your teacher. Complete the form correctly. | <u>Wednesday, November 4, 2009</u> |
| 2 | <p align="center"><u>Time To Start Your Experiment!</u></p> <ul style="list-style-type: none"> Gather and organize all the materials you need for your experiment. Make sure you have everything ready <u>BEFORE</u> you start. Conduct/start your experiment. Keep careful records of the process and your results in a notebook. Record the day/time you make your observations. Be specific about amounts, sizes, and types of materials used for your project. |  <p align="center"><i>Work, work, work!!!</i></p> |
| 3 | <p align="center"><u>Research Paper—First Draft</u></p> <ul style="list-style-type: none"> Submit the <i>first draft</i> of your <u>research paper</u> to your teacher. Make sure that you used the S.C.A. format. <u>Don't forget your paper must be typed.</u> | <u>Friday, December 4, 2009</u> |
| 4 | <p align="center"><u>Project Display Board</u></p> <ul style="list-style-type: none"> Go to a local teachers' store and purchase your science fair display board, header, title cards, etc. Purchase other supplies if needed. Carefully and neatly mount your <u>typed purpose, hypothesis, list of materials, procedure, results, and conclusion</u> on your <u>3-panel display board</u>. In addition, you can also mount any charts, graphs, photos, or illustrations that relate to your project. <u>Don't forget your title cards!</u> |  <p align="center"><i>Work, work, work!!!</i></p> |
| 5 | <p align="center"><u>Research Paper—Final Draft</u></p> <ul style="list-style-type: none"> Submit the <i>final draft</i> of your <u>research paper</u> to your teacher. Make sure that you used the S.C.A. format. <u>Don't forget your paper must be typed.</u> Start to practice for your oral presentation. Make sure you can answer questions about your project! | <u>Tuesday, January 5, 2010</u> |
| 6 | <p align="center"><u>Project Evaluation</u></p> <ul style="list-style-type: none"> Bring in your completed display board for your classroom presentation. Be prepared to give your oral presentation and answer detailed questions. | <u>Tuesday, January 19, 2010</u> |

3RD-8TH GRADE S.C.A. SCIENCE FAIR PROPOSAL

Name: _____ Teacher: _____

Project Title: _____

Topic: _____

Purpose (*what do you want to find out*): _____

Hypothesis (*what you think will happen*): _____

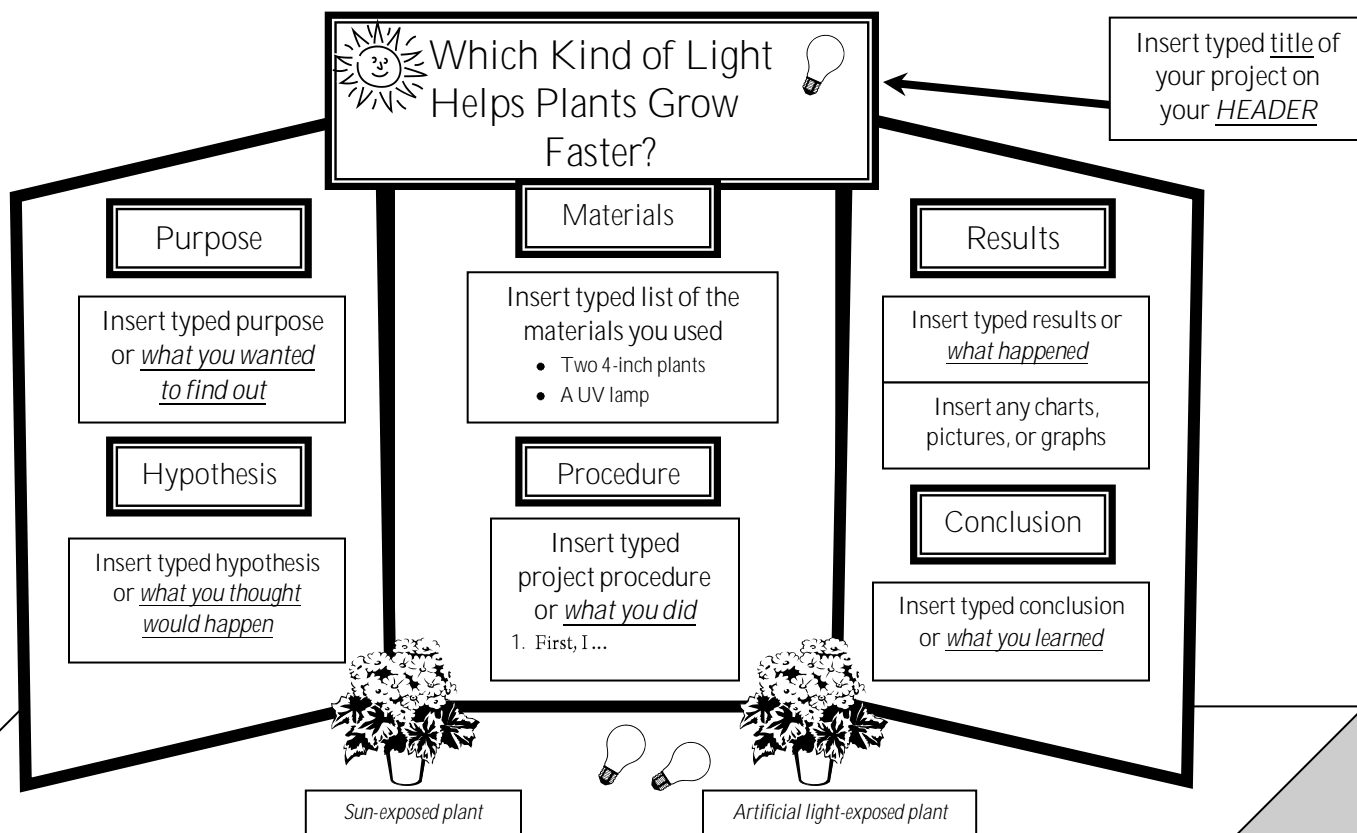
Student Signature: _____ Date: _____

Parent Signature: _____ Date: _____

Approved _____ Not Approved _____

Teacher Signature: _____ Date: _____

3RD-8TH GRADE S.C.A. SCIENCE FAIR DISPLAY BOARD



HOW TO ORGANIZE AN S.C.A. SCIENCE FAIR DISPLAY BOARD

Use the illustration above as a model for making your own display board. *Remember, your display board presentation is a significant part of your science fair project grade so make sure that you carefully and neatly mount your typed purpose, hypothesis, list of materials, procedure, results, and conclusion on a large 3-panel display board. In addition, you can also add any charts, graphs, photos, or illustrations that relate to your project—don't forget your title cards!*

The following is a list of needed items for making an S.C.A. Science Fair Display Board:

- A full-size (36" tall by 48" wide) 3-panel cardboard display board of any color
- A detachable Header
- Title cards e.g., *Purpose, Hypothesis, Materials*, etc.
- Typed explanations of each portion of your project
- Glue, scissors, etc.
- Construction paper and borders (optional)

PRESENTING MY DISPLAY BOARD/ORAL PRESENTATION

When you bring your display board to school for your oral presentation, you may bring in any *important* items that were used in your experiment to help illustrate what you did. For example, the project above is about which kind of light helps a plant grow faster. This student brought in the two (2) plants used in the experiment *and* the kind of light bulbs that were used in the experiment.

Practice, practice, practice!!! Make sure you practice the *Oral Presentation Script* (see attached)! Being prepared will help you to express your thoughts clearly. Also, make sure you have your family ask you questions about your experiment—this will also help you to be prepared.

3RD-8TH GRADE S.C.A. SCIENCE FAIR ORAL PRESENTATION



Here are some questions you may be asked?

1. What did you learn from your project/experiment?
2. Did you have fun doing this project?
3. Show me how it works.
4. What interested you most about your topic?
5. Why do think that happens when you did that?
6. Were your results expected or unexpected?
7. If you had to do your experiment over, what would you do differently?

Here's a helpful hint:

If you're asked a question that you're not sure about, be honest and say, "I don't know the answer, but I'm going to find out. Thank You."



Directions: Fill in the blanks with information specific to your project then use this script to help you practice for your oral presentation.

Hello, my name is _____

The title of my project is ...

The purpose of my study was to see how/what happens when/why ...

I hypothesized that ...

The materials I used were ...

My procedure was to ...

First, _____

Then I _____

Then I _____

My results were ...

My conclusion was (*state whether your hypothesis was proven correct/incorrect*) ...

May I answer any questions you may have? (*give your answers*)

Thank you for your time.

3RD-8TH GRADE S.C.A. SCIENCE PROJECT

THE SCIENTIFIC METHOD

The scientific method must be evident in your project—no exceptions!

1. PURPOSE—What I want to know written in the form of a question
Example: *Which kind of light helps plants grow faster?*
2. HYPOTHESIS—*The Educated Guess*—what you think the answer will be to your question based on prior knowledge/experience
Example: *I hypothesize that the plant placed in sunlight will grow faster.*
3. MATERIALS—Supplies needed to complete the experiment
Example: *Two plants of the same height, a ruler, a lamp, water, etc.*
4. PROCEDURE—The steps followed to complete the experiment
Example: *First, I measured the plants to see if they were the same height. Then, I placed one plant on the windowsill to get sunlight and one plant underneath a UV lighted lamp. Next, I...*
5. RESULTS—What happened—Report only what you see. **GIVE NO EXPLANATION!**
Example: *The plant that grew in the windowsill started at 4 inches in height and ended up being 8 inches in height after one (1) month. The plant that grew under the lamp started at 4 inches in height and...*
6. CONCLUSION—Was your hypothesis correct? It is here where you explain why your hypothesis was correct or why it wasn't correct.
Example: *The results of my experiment indicate that my hypothesis was incorrect because...*

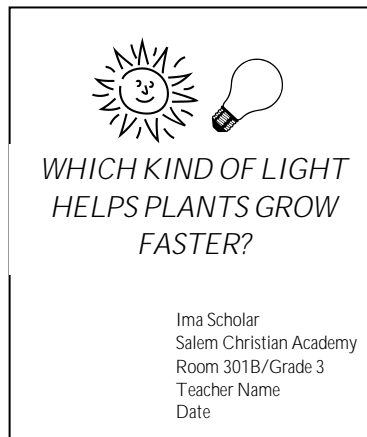
3RD-8TH GRADE S.C.A. SCIENCE PROJECT

RESEARCH PAPER FORMAT

All 3rd-8th students must adhere to the following format when completing their research paper (rough draft/final draft). Papers must be typed, double-spaced, and in 12-point Times/Times New Roman font. Failure to adhere to the format and/or excessive spelling/grammatical errors will result in a lowered grade. Please note that a plastic report cover is optional. Questions about this format should be directed to the classroom teacher.

1. TITLE PAGE—The title of the project should be centered on the page—graphics pertaining to the project may be used. The student name, school name, room#/grade level, teacher name, and date should be right justified at the bottom of the page.

Example:



2. TABLE OF CONTENTS—Under the heading “TABLE OF CONTENTS” in all caps, students list the section headings and page numbers for the beginning of each section.

Example:

| <u>TABLE OF CONTENTS</u> | |
|------------------------------------|---|
| Acknowledgments... .. | 3 |
| Project Research... .. | 4 |
| Project Purpose & Hypothesis... .. | 5 |
| Materials... .. | 6 |
| Procedure... .. | 6 |
| Results... .. | 7 |
| Conclusion... .. | 7 |
| Bibliography... .. | 8 |

3. ACKNOWLEDGEMENTS PAGE—Under the heading “**ACKNOWLEDGEMENTS**” in all caps, students should thank anyone who helped them with their project.

Example: *I would like to thank my Mom and Dad for helping me with my science project. They bought all the materials and made sure that I learned all I needed to know...*

4. PROJECT RESEARCH—Students must research their topic. All students must cite at least three (3) sources in their research paper bibliography. One (1) source can be the book/website used for selecting the science project idea. The other two (2) sources must provide students with the necessary background information needed to conduct their experiment, understand the major concepts of their topic, and speak about their topic intelligently.

3rd-5th GRADE REQUIREMENTS:

Under the heading “PROJECT RESEARCH” in all caps, *3rd-5th grade students* should share their research findings in at least three (3) paragraphs (5-6 sentences). Students should provide relevant information and/or define major concepts related to their topic in their own words. Students are only allowed to quote definitions.

Example: *Scientists started to experiment with the use of artificial light for growing plants in 1945. Dr. John McDingleberry was the first scientist to successfully grow plants using ultraviolet rays or UV light. Ultraviolet light is “radiation lying in the ultraviolet range or wave lengths shorter than light but longer than X rays.”*

6th-8th GRADE REQUIREMENTS:

Under the heading “PROJECT RESEARCH” in all caps, *6th-8th grade students* should share their research findings in at least five (5) paragraphs (5-6 sentences). Students should provide relevant information and/or define major concepts related to their topic in their own words. Students are only allowed to quote definitions.

Example: *Scientists started to experiment with the use of artificial light for growing plants in 1945. Dr. John McDingleberry was the first scientist to successfully grow plants using ultraviolet rays or UV light. Ultraviolet light is “radiation lying in the ultraviolet range or wave lengths shorter than light but longer than X rays.”*

5. PROJECT PURPOSE & HYPOTHESIS—Under the heading “PROJECT PURPOSE AND HYPOTHESIS” in all caps, *3rd-5th grade students* should write at least two (2) paragraphs (5-6 sentences) explaining why they were interested in their topic, what the purpose of their study was, and what their project hypothesis was. Students must also include any background information that supports the project (*see example on next page*).

6th-8th GRADE REQUIREMENTS:

Under the heading “**PROJECT PURPOSE AND HYPOTHESIS**” in all caps, *6th-8th grade students* should write at least three (3) paragraphs (5-6 sentences) explaining why they were interested in their topic, what the purpose of their study was, and what their project hypothesis was. Students must also include any background information that supports the project (*see example on next page*).

Example (*Project Purpose & Hypothesis*):

I have always been very interested in plants and nature in general. My mother plants a garden every summer. Each summer, I help her take care of the plants. We water them, pull out the weeds, and make sure they are planted in lots of sunlight. Last winter, my mother decided to try growing an herb garden under a UV lamp in the house. I didn't think her idea would work, but it did!

It seemed as if the plants grew overnight. They were huge! Bigger than the plants we grew in our outside garden that summer. This piqued my interest so I decided to do some research on the internet. The information I found was fascinating but I decided to do my own experiment. The purpose of my project is to find out which kind of light will make a plant grow faster, sunlight or artificial light.

The research I found about the subject was somewhat confusing. Some information stated that sunlight was the best form of light to grow plants in while other information said that artificial light was the best. From my own experience, it seemed as if the plants grown during the winter under the artificial light grew bigger. Therefore, I hypothesize that after twenty-one (21) days, the plant grown under the UV lamp will grow faster and bigger than the plant grown in sunlight.

6. MATERIALS—Under the heading “MATERIALS” in all caps, students should list in detail all the items that were needed to conduct their experiment in sentence form. Example: *The materials I used for my experiment were two 4-inch in height (2) rosemary plants, a ruler, a UV lamp, water, a Pyrex measuring cup, a notepad, and a pencil.*

PROCEDURE—On the same page, under the heading “PROCEDURE” in all caps, students should write in detail the procedure they used for conducting their experiment (*use complete sentences*).

Example: *First, I bought two (2) 4-inch tall rosemary plants. I placed one plant on the windowsill in my room and the other plant under a UV lamp on my desk that stayed on all day. I watered each plant with 1 cup of water every three days. I measured...*

7. RESULTS—Under the heading “RESULTS” in all caps, students should write 1-2 paragraphs (5-6 sentences) explaining what happened. Students should only write what they saw. NO EXPLANATION SHOULD BE GIVEN.

Example: *After the first three days, I measured the growth of each plant. Plant A (or the plant exposed to sunlight) had grown ½ inch. Plant B...*

CONCLUSION—On the same page, under the heading “CONCLUSION” in all caps, 3rd-5th grade students should write at least two (2) paragraphs (5-6 sentences) stating whether their hypothesis was *correct* or *incorrect* and why. Students should also express what they learned from their project.

Example: *My hypothesis was correct. At first, the plants were growing at the same rate; however, in week three, Plant B (or the plant exposed to the UV rays) began to outgrow Plant A (or the plant exposed to sunlight)...*

6th-8th GRADE REQUIREMENTS:

On the same page, under the heading "CONCLUSION" in all caps, 6th-8th grade students should write at least four (4) paragraphs (5-6 sentences) stating whether their hypothesis was *correct* or *incorrect* and why. Students should also express what they learned from their project.

Example: *My hypothesis was correct. At first, the plants were growing at the same rate; however, in week three, Plant B (or the plant exposed to the UV rays) began to outgrow Plant A (or the plant exposed to sunlight)...* Begin to explain why. Give a detailed explanation!

8. **BIBLIOGRAPHY**—A bibliography is a list of sources used in the completion of a written document. If sources are used but not listed in a bibliography, it is considered *plagiarism*. Plagiarism is the **use of someone else's work as your own**. When writing the research paper, students are required to use at least three (3) sources (see "**Project Research**"). The bibliography is where students are to list the sources they used. The correct way to cite a book, website, newspaper/magazine article, and encyclopedia article is provided below.

*Under the heading "**BIBLIOGRAPHY**" in all caps, students should list their three (3) resources.*

For a book:

Author's last name, first name. Title of book. Place of publication: Publisher, copyright year.

For a newspaper/magazine article:

Author's last name, first name. "Title or headline of article." Name of magazine or newspaper. Date of magazine or newspaper, page(s).

For an Internet website:

Author's last name, first name. "Title of item." [Online] Available <http://address/filename>, Date of document or download.

For an unsigned encyclopedia article:

"Title of article." Name of encyclopedia. Copyright year. Volume number, page(s).

For a signed encyclopedia article:

Author's last name, first name. "Title of article." Name of encyclopedia. Copyright year. Volume number, page(s).