Research Project

Name:

Green Cove Springs Junior High

| Science | Teacher: | | |
|---------|----------|--|------|
| | | | |

Math Teacher: _____

Social Studies Teacher: _____

Language Arts Teacher: ______

Table of Contents

| Getting Started | |
|---|-------|
| Table of contents | |
| Teacher Communication page | 2 |
| Parent letter and student pledge | 3 |
| Timeline of due dates | 4 |
| Project Selection and Experimental Design | |
| Project Selection and Application | 5 |
| Experimental Design - Part 1 (Problem, Variables, and Hypothesis) | 6 |
| Experimental Design – Part 2 (Materials and Procedures) | 7 |
| Research | |
| Research Planning. | 8 |
| Research Notes | 9-13 |
| Research Works Cited | 14 |
| Research Grading Rubric | 15 |
| Research Paper | |
| Research Paper Outline | 16-17 |
| Research Paper Guide | 18 |
| Research Paper Rough Draft | 19-21 |
| Research Paper Grading Rubric | 22 |
| Data Collection and Analysis | |
| Journal | 23 |
| Data Table | 24 |
| Graphing Your Results | 25 |
| Graph Grading Rubric | 26 |
| Reflection and Journal | |
| Conclusion | 27 |
| Abstract | 28 |
| Science Grading Rubrics | |
| Competition Requirements | 29 |
| Science Fair Packet (Regular)/ Notebook (Advanced only) | 30 |
| Display board (Advanced Only) and Presentation (All) | 31 |

Teacher Communication Page

| Date: | Teacher: | Message: |
|-------|----------|----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Parent Letter

Dear Parents,

During the next few months your child is required to complete a science project which uses the scientific method to solve a real world problem. Science projects are primarily independent study assignments involving experimentation on a topic of individual interest. The educational benefits to the student who completes a project are numerous including developing skills in writing, oral presentation, creative thinking, and problem solving.

In addition to this book; each student will be given instructions during class for the various steps of his/her project. Most assignments for this project will be completed with the student's Science teachers, but others will be completed in Math, Language Arts, and Social Studies. This allows for collaboration between the subject areas and will give the students a comprehensive learning approach to research, writing, investigation, and analysis. The work will be completed at school as well as at home, and students will receive a timeline noting due dates for each part of the project. Be sure to visit the science fair help site at www.gcsjsciencefair.weebly.com for specific tips, links, handouts, etc.

Your child may need you to monitor his/her progress and provide encouragement. Your support is key to a successful project, but please do not allow your involvement to extend any further in order to assure equity and promote student learning! Also, be aware that a prize-winning project can be completed for under \$10.00.

| If you have any questions, do not hesit | tate to contact us. |
|--|--|
| Sincerely, | |
| GCSJH Teachers | |
| | |
| Please sign the space below in acknowledge | nent of the above information: |
| Parent signature: | Date: |
| Student signature: | Date: |
| Student academic integrity pledge: | |
| Fair project and research paper in the time frame is to be completed independently and should expendently an expendently an expendently and should expendently an expendently an expend | nderstand that it is my responsibility to complete a Science me provided by my teachers. I understand that this project express my own original thoughts and ideas. If an idea is not my own, I will cite the source of that information to ngs. |
| Student signature: | Date: |

Individual teachers will give students exact due dates for each section of the phase they are responsible for. The

student must fill in and abide by those dates.

Timeline with Due Dates

| Phase 1: Project Selection-To be completed with science teacher by 9/6/16. Project selection with application | Due | : |
|--|--------------------|----------|
| Predictive hypothesis, independent, dependent, and control variable | Due | : |
| Research planning | Due | : |
| Phase 2: Experimental Design- To be completed with Science teacher by 11/16 simultaneously with Phase 3 & 4) | 6/16 (will be work | ed on |
| Final Hypothesis | Due: | 10/16/16 |
| Materials and procedures | Due: | 11/16/16 |
| Phase 3: Research-To be completed with Social Studies teacher by 10/14/16 | | |
| Research notes 1 | Due: | |
| Research notes 2 | Due: | |
| Research notes 3 | Due: | |
| Research notes 4 | Due: | |
| Research notes 5 | Due: | |
| Phase 4: Research Paper-To be completed with Language Arts teacher | by 12/2/16 | |
| Research paper outline | Due: | |
| Research paper rough draft | Due: | |
| Research paper final draft | Due: | |
| Phase 5: Experimentation -To be completed with Math and Science teachers b | y 12/9/16 | |
| Journal/ logbook | Due: | 12/2/16 |
| Data Table | Due: | |
| Graphing your results | Due: | |
| Phase 6: Experiment Conclusion-To be completed at home by 12/12/16 | | |
| Conclusion | Due:_ | |
| Abstract | Due:_ | |
| Display board (Advanced only) | Due:_ | |
| Notebook (Advanced only) | Due: _ | |

Phase 7: Presentations-To be completed in class by 12/16/16

***Your teachers may alter dates for individual assignments.

Keep in mind that in order to move on in each class, you must keep up with the pace of this project.

Project Selection with Application

List 3 different projects that you would be interested in using for your science fair project. Remember to choose projects that you find interesting and that your parents also agree with.

- 1-3- Briefly describe each project so that your teacher can understand what it entails.
- A-C: Include 3 ways this project can impact, help, affect society (consumers, students, science, etc.) If this project does not have **applications** rethink it or find another one.
- Rate each of the 3 projects on a scale of 1-3, one being the project you like the most and 3 being the project you like the least.

| 1. | Problem: | Rank: |
|----|--------------|-------|
| | Description: | |
| | | |
| | | |
| | a | |
| | b | |
| | c | |
| | | |
| 2. | Problem: | Rank: |
| | Description: | |
| | | |
| | | |
| | | |
| | a | |
| | b c | |
| | | |
| 3. | Problem: | Rank: |
| | Description: | |
| | | |
| | | |
| | | |
| | a | |
| | b | |
| | c. | |

Experiment Design Part 1- Phase 1

| Problem Question/Thesis: (Be specific) |
|---|
| Independent Variable (What am I changing in the experiment?): |
| How will it be measured? |
| Dependent Variable (What data are you measuring/collecting in the experiment?): |
| How will it be measured? |
| Predicted Hypothesis: If this is done (look at your independent variable), then this will happen (look a your dependent variable) because (why do you think this will happen). |
| Write your hypothesis in If, then because format. |
| • No 1 st person |
| |
| |
| Controlled Variables (What are you controlling/ keeping the same in the experiment?): |
| |
| |
| Final Hypothesis: To be done AFTER research is completed (Use above format. The because portio could be changed based on the research) |
| |
| |
| |
| |

Experimental Design Part 2- Phase 3

Materials (list all materials used in the experiment, make sure you list quantities/amounts):

| <u>Material</u> | Quantity | <u>Material</u> | Quantity |
|-----------------|-----------------|-----------------|-----------------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| 1 | | | |

Procedures (list all procedures on your experiment in order, be specific! You may add more steps if needed):

| 1 | |
|-----|--|
| 2 | |
| 3 | |
| 4 | |
| 5. | |
| 6. | |
| 7 | |
| | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12. | |
| 13. | |
| 14 | |
| 15 | |

Use the space below to plan what key <u>words/phrases/ideas</u> you might want to research so you can find information to write each section of your paper. Use the guiding questions within each block on the left to help you. There are specific questions you need to answer for the application section. Remember, this section requires

| Problem Question/Thesis (page 6) | |
|--|--|
| Science- What are the scientific principles/laws you should know about? What are some key vocabulary words that scientists would use for this project? | |
| History- Background information such as time of invention, inventor, designer of the principle, how has it been used throughout history, what changes have been made | |
| Application- This is the reason this project is important to society. How can the information you find out help other people? How can it lead scientists to new experiments to help the world? | What professionals, companies, and/or consumers, in the work field/field of study, could benefit from the scientific findings of your research and/or the eventual finding of your experiment? How is your research and data going to assist them? Look up an interesting statistic (and cite where you found it) about how many professionals/companies/consumers could benefit from your findings. What problems could your findings solve? |

| Website/Book Title &Page NumberAuthor:Author: | |
|---|--|

| What important facts can I learn from this document? | How can I use this information in my essay? |
|--|---|
| 1.1 | Sci |
| | Hist |
| | Арр |
| 1.2 | Sci |
| | Hist |
| | App |
| 1.3 | Sci |
| | Hist |
| | Арр |
| 1.4 | Sci |
| | Hist |
| | Арр |
| 1.5 | Sci |
| | Hist |
| | App |

| Website/Book Title & Page Number: | Author: |
|-----------------------------------|---------|
| 0 | |

| What important facts can I learn from this document? | How can I use this information in my essay? |
|--|---|
| 2.1 | Sci |
| | Hist |
| | App |
| 2.2 | Sci |
| | Hist |
| | App |
| 2.3 | Sci |
| | Hist |
| | App |
| 2.4 | Sci |
| | Hist |
| | App |
| 2.5 | Sci |
| | Hist |
| | App |

| Website/ Book Title & Page Number: | Author: |
|------------------------------------|---------|
| - | |

| What important facts can I learn from this document? | How can I use this information in my essay? |
|--|---|
| 3.1 | Sci |
| | Hist |
| | App |
| 3.2 | Sci |
| | Hist |
| | App |
| 3.3 | Sci |
| | Hist |
| | App |
| 3.4 | Sci |
| | Hist |
| | App |
| 3.5 | Sci |
| | Hist |
| | App |

| Website/Book Title & Page Number: | Author | • |
|-----------------------------------|--------|---|
| · · | | |

| What important facts can I learn from this document? | How can I use this information in my essay? |
|--|---|
| 4.1 | Sci |
| | Hist |
| | App |
| 4.2 | Sci |
| | Hist |
| | App |
| 4.3 | Sci |
| | Hist |
| | App |
| 4.4 | Sci |
| | Hist |
| | App |
| 4.5 | Sci |
| | Hist |
| | Арр |

| Website/ Book Title & Page Number: | Author: | |
|------------------------------------|---------|--|
| | | |

| What important facts can I learn from this document? | How can I use this information in my essay? |
|--|---|
| 5.1 | Sci |
| | Hist |
| | Арр |
| 5.2 | Sci |
| | Hist |
| | Арр |
| 5.3 | Sci |
| | Hist |
| | Арр |
| 5.4 | Sci |
| | Hist |
| | Арр |
| 5.5 | Sci |
| | Hist |
| | Арр |

Research Paper Works Cited- Phase 3

Please fill out as much of the following information as possible for each resource

| | These notes are from (Circle One): A Book | A Magazine | A Website | A Newspaper |
|--------|---|------------|-----------|-------------|
| | Title: | | | |
| Source | Magazine or website name): | | | |
| 1 | Author(s) full name: | | | |
| Pg 9 | Copyright date OR the date you visited the website: _ | | | |
| | Publisher of book OR sponsor of web site: | | | |
| | Place of publication OR full website address: | | | |
| | These notes are from (Circle One): A Book | A Magazine | A Website | A Newspaper |
| | Title: | | | |
| Source | Magazine or website name): | | | |
| 2 | Author(s) full name: | | | |
| Pg 10 | Copyright date OR the date you visited the website: _ | | | |
| | Publisher of book OR sponsor of web site: | | | |
| | Place of publication OR full website address: | | | |
| | These notes are from (Circle One): A Book | A Magazine | A Website | A Newspaper |
| | Title: | | | |
| Source | Magazine or website name): | | | |
| 3 | Author(s) full name: | | | |
| Pg 11 | Copyright date OR the date you visited the website: _ | | | |
| | Publisher of book OR sponsor of web site: | | | |
| | Place of publication OR full website address: | | | |
| | These notes are from (Circle One): A Book | A Magazine | A Website | A Newspaper |
| _ | Title: | | | |
| Source | Magazine or website name): | | | |
| 4 | Author(s) full name: | | | |
| Pg 12 | Copyright date OR the date you visited the website: _ | | | |
| | Publisher of book OR sponsor of web site: | | | |
| | Place of publication OR full website address: | | | |
| | These notes are from (Circle One): A Book | A Magazine | A Website | A Newspaper |
| | Title: | | | |
| Source | Magazine or website name): | | | |
| 5 | Author(s) full name: | | | |
| Pg 13 | Copyright date OR the date you visited the website: _ | | | |
| | Publisher of book OR sponsor of web site: | | | |
| | Place of publication OR full website address: | | | |

Research Rubric- Phase 3

| Items Required | 0 Points | 1 Point | 2 Points | 3 Points | 4 Points | 5 Points |
|---|-------------------|---|---|--|-------------------------------------|---|
| Sources Completed | None | 1 out of 5 | 2 out of 5 | 3 out of 5 | 4 out of 5 | 5 out of 5 |
| Information for category covered (Science, History, Application) | None | Not Applicable | Not Applicable | 1 of 3 | 2 of 3 | 3 of 3 |
| Source Information (copyright, author, title, etc.) | None | 1 of 5 complete | 2 of 5 complete | 3 of 5 complete | 4 of 5 complete | 5 of 5 complete |
| Information is: | No information | Not complete, poor quality, few usable | Poor to fair quality, some usable | Over half complete, most are reliable, over half usable | Most complete, most usable | All complete, reliable, all usable |

Score Received (max 20 pts) :_____

| nypothesis? |
|--|
| |
| |
| |
| 2. What part of your research would have the greatest impact on society if everyone were to reacyour research paper? (For example: what would make them want to change their lifestyle if they knew about this from your project?) |
| |
| |
| |

Research Paper Outline- Phase 4

| ntroduction: | | |
|--|---------|-------------|
| Hook – Interest the reader in your problem: | | |
| Transitional statement to problem/thesis: | | |
| State the problem question/thesis (find this on page) | | |
| ction 1- Circle the theme of this section: History Support from research note: | Science | Application |
| Support from research note: | | |
| Support from research note:: | | |
| Support from research note:: | | |
| ction 2- Circle the theme of this section: History Support from research note: | Science | Application |
| Support from research note:: | | |
| Support from research note:: | | |

• Support from research note

Research Paper Outline- Phase 4

| n 3- Circle the theme | of this section. Thistory | Science | Application |
|---|-------------------------------|-----------------------------------|------------------|
| Support from research | ch note: | | |
| Support from research | ch note: | | |
| | ch note: | | |
| Support from research | ch note: | | |
| | | | |
| | a of each section of the pape | r and explain how those io | deas lead to the |
| Restate the main ide hypothesis: a. Section 1: | a of each section of the pape | | |
| Restate the main ide hypothesis: a. Section 1: | · · | | |
| hypothesis: a. Section 1: b. Section 2: | | | |
| Restate the main ide hypothesis: a. Section 1: b. Section 2: c. Section 3: | | | |
| Restate the main ide hypothesis: a. Section 1: b. Section 2: c. Section 3: | | | |

Work Cited

- Enter the citation information from page # 14 into Easybib.com.
- Copy and paste it into the end of your final paper.

Congratulations, you just did your outline for your research paper.

Research Paper Guidelines- Phase 4

Introduction:

- This should be a paragraph that introduces the reader to your topic.
- An interesting fact can be used to start this introduction, such as, "Did you know..."
- Be sure not to state too much information in the introduction. Leave your facts for your body paragraphs.
- The introduction can be vague as long as you develop your ideas in the body paragraphs.
- It must include your problem question /thesis statement (page 6).

Body: You must have AT LEAST 3 body paragraphs.

- Introduce the main point or idea of your body paragraph.
- Support that main idea with evidence or facts that you have found in your research.
- Everything that you did not already know from personal experience before writing this paper should be cited with the <u>in-text and parenthetical citations</u> from your research.
- Use transitions to tie each of your facts/evidence together. DO NOT JUST STATE FACT AFTER FACT!!!
- Each paragraph should end with a summarization or conclusion sentence to end the paragraph.

Conclusion:

- Your conclusion paragraph should briefly (as in one sentence each) summarize the main point of your paper and each of your body paragraphs.
- End with a statement that will make your reader either continue to think about your topic or make them feel accomplished.
 - Example: With this new information, maybe you will be able to make a healthier choice next time you are selecting a shoe style.

Works Cited:

- It is expected that you use EasyBib to generate your works cited page (http://www.easybib.com/).
- There is a step by step guide to using EasyBib on the Green Cove Springs Junior High Science Fair website if you need help!
- List your citations in alphabetical order.
- You must have at least 5 citations.

All final papers will be typed:

- ✓ It is expected that all students visit the Green Cove Springs Junior High Science Fair website for the final research paper formatting template.
- ✓ The length of the paper should include:
 - o 1 title page
 - o 2 pages for research paper (minimum).
 - o 1 works cited page
- ✓ **NEVER** use the words **I or me** in your paper.
- ✓ Only use the metric system when writing about anything that includes measurements.

Research Paper Rough Draft- Phase 4

Research Paper Rough Draft- Phase 4

Research Paper Rough Draft- Phase 4

Research Paper Rubric- Phase 4

Research Title/Topic

RESEARCH REPORT RUBRIC Max CRITERIA LEVELS **Points** COMMENTS Pts. **Earned In-Text Citations/ Parenthetical Documentation** 20 -The report includes the correct, appropriate, and consistent use of parenthetical citations in MLA Format (typed in the text of the report). -Citations are properly formed. -There can be no websites or URL addresses used as parenthetical citations. Works Cited Page (aka. Bibliography) – The entries are alphabetized. 15 -The Works Cited page is based on MLA format, giving credit to authors of the sources used in the composition of the report. Entries are not numbered. Problem Question/ Thesis (A statement after the hook, at the end of the 10 first paragraph, that details what the report will remain focused upon throughout) -The report has a thesis statement supported throughout (Problem Question) 15 -The body consists of 3 main sections: (1) History (2) Science (3) Application -Introduction and conclusion are fully planned -Minimum of 5 notes over 3 sections; at least 1 citation per section Research Report Content: Facts/Details/Examples/Organization 25 -The report demonstrates excellent use of facts, examples, and details, giving depth to the paper. -The report is focused upon the thesis, and continually adheres to the planning outline from start to finish. -The report includes a clear introduction, body and conclusion -Each paragraph must have a topic sentence, body, and a conclusion. -The report includes mature vocabulary, transitional words, devices, and phrases to show relationships among ideas, and maintains coherence within, and between paragraphs. -All typing is double-spaced in 12 font (Times Roman). -Research reports are **not** to be written from the first person. Grammar/ Usage/ Sentence Structure/Mechanics/Conventions 10 -There are few errors in grammar, usage, and sentence structure. -There are few spelling, capitalization, or punctuation errors. Planning Outline (Prepared according to teacher's instructions) 5 -Information in the outline should be in the same order as the facts, details, and examples, presented in the research report. -The number of Roman numerals in the outline determines the number of paragraphs that the report will consist of. Regular Classes Only- Completion Grade **100** (Received if paper is turned in on or before deadline) SUBTOTAL POINTS 200 **Final Grade** Final Grade=Total number of points earned

rhy/ Revised 5-2010

Journal – Phase 5

To be completed the day(s) you work on your experiment. Make sure you describe what happens, what is going well and what is going wrong and any other observation you make. If you make any changes/adjustments, you need to describe those as well. You should describe **everything** that you do for the experiment from start to finish in this journal.

| Date & Time | Details of what happened |
|-------------|--------------------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Data Table- Phase 5

Fill in the data table that will allow you to accurately record the observations you make during your experiment. If the data table does not work for your experiment, use the back side of this page to create/glue in your own.

Your data table should represent the variables and hypothesis you determined on page 6.

| 11110. |
|--------|
|--------|

| Explanation/group | <u>Trial 1</u> | <u>Trial 2</u> | <u>Trial 3</u> | Average/ Mean |
|---------------------------------|----------------|----------------|----------------|------------------|
| Control Group (if you have one) | | | | |
| Test Group 1 | | | | |
| Test Group 2 | | | | |
| Test Group 3 | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Graphing your Results- Phase 5

| ☐ Bar Graph: My data compares and contrasts two or more items. | ☐ Line Graph: My data shows changes over time/distance/mass/etc. | ☐ Pie Graph: My data shows percentages of a whole. |
|--|--|--|
| Descriptive title of graph: | | Key if needed: |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| X-axis label | | |

Graphing your Results- Phase 5

Science Fair Graph Rubric

| This is for your completed graph in your science fair project. Each section has its own max points that can be earned for a total of 100 points. | : |
|--|---|
| 1. Correct Display – 30 points The student chose the correct graph based on the purpose and results of the data. | |
| 2. Number Intervals Spaced Appropriately – 20 points The numbers are spaced correctly and there are no weird gaps or skips in the numbering. | |
| 3. Labeled Correctly – 15 points All the parts of the graph are labeled correctly and it has an appropriate title. | |
| 4. Key - 15 points The key is displayed, easy to read and understand, and all parts are explained. | |
| 5. Neat and Easy to Read – 10 points The entire graph is neat, easy to read and understand. | |
| 6. Appealing/Attention Grabbing – 10 points The graph is interesting, attractive, and attention grabbing. | |
| Total Points | |

Conclusion- Phase 6

Your conclusion should summarize how your results support and/or contradict your final hypothesis (page 6).

| 1. | Summarize your results in 1-2 sentences. |
|----|--|
| | |
| | |
| 2. | State whether your results support or contradict your hypothesis. |
| | |
| 3. | Summarize your experimental procedure making comments about its success and effectiveness. |
| | |
| | |
| | |
| 4. | Suggest changes in the experimental procedure (or design) and/ or possibilities for further study (Examples: use different materials, switch steps around, allow more time, control more variables, etc.). |
| | |
| | |
| | |

Advanced students: You will combine these four points into one conclusion paragraph.

This should be no longer than ONE paragraph and will be on your board and in your notebook.

Abstract- Phase 6

This is a paragraph (<u>7-10 sentences long</u>) that will grab the judges and public's attention. This is NOT a full report about EVERYTHING that happened in your project, just a summary of the whole thing. Your abstract should include <u>1-2 sentences</u> summarizing each of the topics listed below.

| 1. | Introduction: Motivate the reader to be interested in your project. Explain why you did this project (what was its purpose) and what importance does your project have to them or society (application: page 5). |
|----|--|
| | |
| 2. | Hypothesis: State your final hypothesis (page 6: IF,THEN BECAUSE). |
| 3. | Procedures: How did you do this experiment? Do not go into full detail; just explain what is important for the reader to know in order to understand what you did and how you did it. |
| _ | |
| 4. | Results: What did you find out? Be specific with your results, use real data and numbers and do not use vague terms like most, some, a few, and a lot. |
| | |
| | |
| | |
| 5. | Conclusions: Was your project successful? Did everything go according to plan? What would you have changed or would you do everything the same? |
| | |
| | |
| | |
| A | Advanced students: Combine these 5 points into 1 paragraph. You will need this abstract printed |

out on your board and in your notebook on the official abstract form.

Competition Requirements- Phase 6

The following are additional requirement for all advanced students and any students wanting to compete in the school science fair (you must compete in the school science fair to have the chance to compete at the county science fair).

Phase 2- Experimental Design

- Additional forms must be completed before you begin your experiment go to the website http://ssefflorida.com/rulesforms.html to select download and the print the correct forms
 - Form 1- Adult Sponsor/Safety Assessment
 - o Form 1A- Students Checklist
 - A Research Plan must be completed if you want to compete at the county level
 - o Form 1B- Approval Form
 - o Form 3- Risk Assessment if there is any type of risk, including using tools
 - o Form 4- Human Participant- if you have any people other than yourself participating in the experiment or you are using their information for a survey/questionnaire
 - Informed Consent Forms- must be filled out a signed by each person in the experiment and by the parent if the participant is under 18 years old
 - o Form 7- Continuation Project- anyone continuing a research project from last year

The title of your projects must match exactly on each form and your backboard

Phase 3 & 4- Research

- You must review the rules and regulations and site the following in your bibliography as part of your research https://member.societyforscience.org/
- Include a copy of your research paper in you data notebook

Phase 5- Experimentation

- You must keep accurate records for in your journal/log book
- A computer generated graph for your board and notebook

Phase 6 & 7- Experimentation and Presentation

- Conclusion paragraphs- you must this out in paragraph form. Use page 27 as a guide.
- Abstract Form- go to the link and type an abstract on the official abstract form. Save and print a
 few copies for you notebook and backboard.
 http://www.ssefflorida.com/uploads/3/6/1/3/3613458/2016 state abstract.pdf
- Data notebook with printed copies of your papers, pictures, graphs, tables, etc. (use the **notebook rubric on page 30** to guide you)
- Presentation Board- it must have all of the information found on the **rubric on page 31**. Each piece has a specific place on the board it must follow the rubric as closely as possible.

Completing all of these requirements does not guarantee that you will compete at the school or county science fairs, but it is a requirement for your project in order to have the chance to compete in both fairs.

Notebook/Packet Rubric- Phase 7

<u>Science Fair Notebook:</u> Separate Folder must only be completed if you are an advanced science student.

| Advanced Notebook Contents | Earned Points | Regular Packet |
|-----------------------------------|------------------|---------------------------|
| Title Page | / 5 | Parent Letter Signed |
| Abstract | / 5 | Abstract |
| Table of Contents | /5 | Research Plan (page 7) |
| Divider 1: "Experimental | | |
| Design" | | |
| Problem, Variables, Hypothesis | / 10 | Problem, Variables, |
| | | Hypothesis (pg 6) |
| Materials and Equipment | / 10 | Materials and Equipment |
| Design and Procedures | / 10 | Design and Procedures |
| Divider 2: "Results" | | |
| Observations and Data/Pictures | / 10 | Observations/Data/Picture |
| Results and Graphs | / 10 | Results and Graphs |
| Conclusion Statement | / 10 | Conclusion Statement |
| Divider 3: "Background" | | |
| Research Paper (clean copy) | / 10 | Research Paper |
| with attached Works Cited | | |
| Divider 4: "Appendix" | | |
| Project Approval Form | / 5 | Project Approval Form |
| MSDS Sheets - only if needed | | MSDS Sheets - only if |
| | | needed |
| Informed consent forms - only if | | Informed consent forms - |
| needed | | only if needed |
| Forms 1, 1A, 1B, and research | | All completed and signed |
| plan | | forms |
| Separate but with Notebook: | / 10 | Journal |
| Science Fair Book with | | |
| completed Journal | | |
| | | |
| Final Grade→ | /100 | ← Final Grade |

Teacher Comments:

Presentation Rubrics- Phase 7

Display board grading rubric:

This is for advanced students only. Board will be graded on both content and neatness of display. Content must be present, neat, and placed correctly to receive all available points.

| | Title of yo | | |
|-------------------|---------------------------------------|-------------------------|-------------------|
| <u>Problem</u> | / | Results/Table | |
| •••• | <u>Procedures</u> | Materials | ••••• |
| / 5 pts | 1 2 3 / 5 pts | 1 2 3 / 5 pts | / 10 pts |
| <u>Hypothesis</u> | Variables (Independent and dependent) | Controlled Variables | <u>Conclusion</u> |
| / 10 pts | | | ••••• |
| Allerance | / 5 pts | / 5 pts | /10 .4. |
| <u>Abstract</u> | <u>Da</u> Pictures | Graph(s) | / 10 pts |
| / 20 pts | Color Pict Color Gra Computer | Application | |
| / 20 pts | / 5pts | / 5 pts | / 10 pts |

| Comments: | | | |
|----------------|-------|------|--|
| | | | |
| | | | |
| Board Total: _ | / 100 | | |

<u>Presentation grading rubric:</u> All students will present their projects to their classmates.

| to their ci | lassmates. | | | | |
|---|---|--|--|--|--|
| CATEGORY | 10 | 7 | 4 | | 1 |
| Content | Student shows a full understanding of the scientific method and describes their experiment with details. | Student shows a good understanding of the scientific method and/or describes their experiment well. | Student sho good understa of parts of scientific experiment a describes to experiment s | anding the c nd/or neir | Student does not seem to understand the scientific method very well and/or gives little information about their project. |
| Time-Limit | Presentation is 4 minutes long. | Presentation is 3 minutes long. | Presentation minutes lo | | Presentation is less than 2 minutes OR more than 4 minutes. |
| Posture and Eye Contact | Student stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the presentation. | ht, looks seed and fident. straight and establishes eye contact with everyone in the during the during the stands up straight and does not always establish eye contact with everyone in the room during the presentation. | | raight not blish with the the | Student slouches and/or does not look at people during the presentation. |
| Speaks Clearly | Student speaks clearly all of the time, and has good volume. | Student speaks clearly all of the time and/or is hard to hear at times. | Student spe clearly most of time and/or is to hear. | of the hard | Student often mumbles or cannot be understood. |
| Presentatio n Order and Relevance | Entire presentation relates to the scientific method/experiment and their presentation follows the proper sequential order. | Most of the presentation relates to the scientific method/experimen t and/or order of presentation is not in proper sequence. | Little of th presentation r to the scien method/exper and/or the ord the presentat jumbled | elates tific iment der of ion is | Very little of the presentation relates to the scientific method/experiment and/or no order is evident. |
| comments | | | Total po | ints ea | arned out of 50: |
| | | | Grade: | | |