3rd grade SCIENCE FAIR PROJECT PLANNER/TIME LINE

DUE DATE	TASKS
Your teacher will assign the due dates.	**Project Question Form Due:** Choose **3** possible topics and write a project question—write one or more sentences explaining what you have chosen to do your research on--turn into your teacher for approval.
	Project Research Forms Due: Research your topic. Write science terms and a paragraph. Include a reference list or basic bibliography—a list of the books, websites, etc. that you used to do your research.
	Project Hypothesis Form Due: Based on your research, make a "good guess" as to what you think the answer to your question will be. Use an If I..then…because statement.
	Design Experiment: Variables/Materials/Procedure Forms Due: Design your experiment—list all variables, list all materials, and write the procedure.
	Begin Experiment: Conduct your experiment at least 3 times—record observations and data
	Observations/Data/Project Results Forms Due: Include a table/chart/graph of the data and write paragraph
	Project Conclusions Form Due: Draw conclusions. Explain how you would improve your experiment.
	Project Display and Abstract Due: Students will present their project reports and display boards to their classmates.
	Pre-elimination: Students will learn who is participating in Science Fair Jan. 18
January 15, 2021	**Science Fair**

Science Fair Requirements:

Question/Purpose: Students will need to create a question that they can submit that is a testable question.

Good Example	Bad Example
What Brand of Sponges Absorbs the most water?	"All About Sponges"
Which brand of paper towel holds the most weight?	"Brawny Vs. HEB Brand Paper Towels"

Hypothesis: The students will need predict the answer to the problem before they test out their question. Another term for hypothesis would an "educated guess." This would be written in a declarative sentence. Most statements usually state "If I (do something) then (this will occur)" or "I believe name of item will what is it going to do.

- Example: I believe Purina Cat Food will be eaten the most first by litter of 8 kittens.

Material List: The students will need to write down their Material list of all the items need to complete their science fair experiment.

Procedures: The students will need to write down the step by step process of how they completed their experiment.

Data: Students will need to create a set of data that shows the student's hypothesis was tested and scientifically measured. This is generically done using a chart.

	Height that a Basketball Player jumped wearing running shoes	Height that a Basketball Player jumped wearing basketball shoes
Jump 1	32 in	35 in
Jump 2	33 in	39 in
Jump 3	31 in	43 in

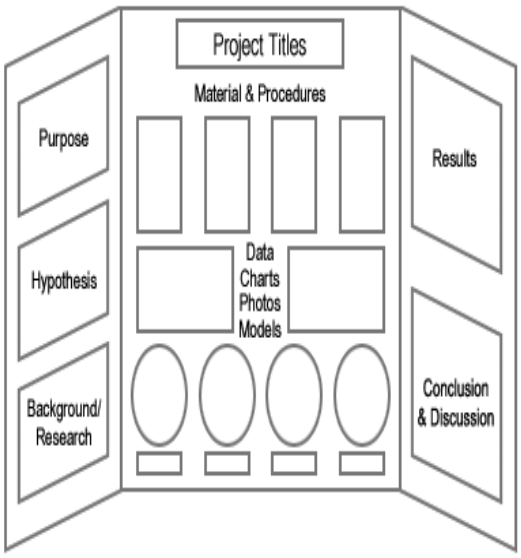
Results: Create a statement that accurately describes the results found in this science experiment.

Conclusion: Students will need to review their data and see if the data truly reflects the hypothesis presented.

Written Report Including Bibliography: Students will need to create a report that details the background of why they choose this project. They will need to include how they created this project and the results that they concluded from doing the experiment. The report will need to also reflect any prior research did to begin this experiment in order to be ready and proficient to start the project.

Completed Project: The students will need to turn in a display board with the following components:

1. Purpose (Question)
2. Hypothesis
3. Background Research
4. Materials and Procedures
5. Data
6. Results
7. Charts
8. Conclusion



Oral Presentation: The students will be required to do a short 3-5 minute presentation during class. The students will be asked to explain their project and how they carried it out to complete the project.

Project Question

Name_____

Directions:

Write 3 possible questions you would like to test. Make sure that your question is something that can be measured and answered by following the scientific process. You may use the project question for your project title or come up with an eye catching title.

Question 1:

Question 2:

Question 3:

Teacher/Parent approved question:

Parent signature _____ date _____

Project Research Part 1

Name_____

Directions:

Spend some time learning more about your topic. Use reliable internet sources, books, your science book, or other resources. Not only do you want to be an expert on your topic, but you want to teach others about your topic.

Science Terms: Locate at 3 key words related to your topic. Make sure the words you choose are directly relates to your topic. Provide a definition of each key word, IN YOUR OWN WORDS

Term	Definition

Project Research Part 2

Name_____

Directions: Write a paragraph describing the science behind your project; after you have completed your research give us, your audience, some background research information on your topic in complete and well written paragraphs. Give us specific, rather than general information. Use the space provided to write a draft. You will edit a final copy to place on your display board.

Bibliography of your sources:

Project Hypothesis

Name_____

Directions: Based on your research, decide what you think the outcome of the project will be and make a good guess as to what you think the answer to your question will be. Also explain Why you think that will be the outcome. Use an If I _____, then____, because ____ statement. Remember it is ok if you don't have the right answer; that is how scientists make discoveries. Start by listing some possible outcomes or answers to your questions.

Possible solutions:

Use the mostly likely outcome to write your hypothesis.

If I

_____

_____,

then

_____

_____,

because_____

_____.

Project Experiment Part 1

Name_____

Design your experiment

Directions: Clearly write out the procedure you are going to follow. Remember that your experiment needs to follow the scientific process and you need to have one variable you are going to change, this is the part you are testing (independent variable).

There are three parts in a scientific experiment, the independent, dependent, and the controlled variables.

The independent variable is the one you will change; it's the thing you are testing.

The dependent variables are those being observed and measured throughout the experiment.

The controlled variables are those that remain constant and allow you to understand how the experiment would react under normal circumstances.

Independent Variable:

Dependent Variable:

Controlled Variables:

Project Experiment Part 2

Name_____

Directions: List all materials needed to complete the experiment. Be specific about the type, size, and brand, etc.

Materials:

Project Experiment Part 3

Name_____

Directions: Write out each step of your experiment. Remember to number each step and clearly explain what to do. Other scientists should be able to follow the same steps and get similar results.

Project Experiment Part 4

Name_____

Conduct the experiment

Scientists conduct an experiment many times in order to get the most accurate data, so make sure you also conduct your experiment at least three times. Three trials can be done at the same time in some cases. During your experiment you need to collect data and make observations. You will record these in your log book.

In your log book you will need to:

Collect data: You will need to collect numerical data; that means you need to take measurements during the experiment. Measurements can be temperature, distance, height, speed, etc. Creating a chart is a helpful way to organize your data. You will analyze the data later to determine the results of your experiment.

Make observations: As you conduct your experiment you will use your senses (sight, smell, touch, etc.) and write down any observations you make during the process.

Observations/Chart/Data:

Project Results Part 1

Name_____

Determine the Results: Now it is time to review your data and observations to find out what happened during the experiment. Think about the best way to show your data: bar graph, line graph, chart, etc. and then create a table or graph below. This visual will help you analyze your data for trends.

Graph or chart:

Project Results Part 2

Name_____

Explain the Results: You will also write out the results of each test in the experiment in paragraph form using complete sentences. Make sure that you include the numerical data (measurements) as well as any other important observations.

Project Conclusions

Name_____

Draw Conclusions: Analyze the results and determine how the results help you answer the project question. Write your answer in a complete sentence using the question to begin your answer. You will also need to tell whether your hypothesis was supported or if the results contradict the hypothesis. If it was not supported, explain why you think so. End this paragraph by saying how you would change or improve your experiment in the future.

Answer to your project question:

Did the results support or contradict the hypothesis? Explain.

How would you improve or change the experiment?

Abstract

Name_____

Directions: The abstract is a summary of your entire project. It is the last thing you write and the first thing everyone will read. The abstract should start with the hypothesis statement. From there make sure to include a brief explanation of your experimental procedure, your results and your conclusion. NO background information is included.

When you are writing your abstract make sure to sure the past tense, or passive voice. Never use "I" or "we". Write "The mint plants were watered for two weeks." NOT "I watered the mint plants for two weeks."

This is a brief 250 word or less, summary or your project. It will wrap up the entire project. Your abstract is like the cover to a book. When it looks and sounds interesting, the reader will be enticed to read the book.

Oral Presentation

To prepare for an oral presentation, students should first write brief outlines about their science projects. The outlines should include the following sections:

1. Heading- Name, grade, school, and project title
2. Question
3. Hypothesis
4. Materials
5. Procedure
6. Results
7. Conclusion
8. References

Complete the oral presentation outline and remember to practice at home either with an adult or in front of the mirror.

Speaking Tips

- **Speak clearly and slowly**
- **Look to around the room and address people**
- **It may help to look above the audience members eyes, at their forehead.**
- **Hold up visual aids.**
- **Use a pointer to call attention to diagrams**

Oral Presentation Outline

Name_____

Directions: Complete the following outline to help guide your oral presentation.

Heading: My Name is _____. I am in the _____ grade. My project title is_____.

Question: My science project question was,

_____.

Hypothesis: My hypothesis was,

_____

_____

_____

_____

Procedure: I tested my hypothesis by,

_____

_____

_____

_____

_____

_____

Results: The results of my investigation were,

_____

_____

_____

_____

_____

Conclusion: Based on my experimental results, I concluded that,

_____

_____

_____

_____

_____

Science Fair Reflection

Name_____

1. What went well with your science fair project?

2. What didn't go so well with your science fair project?

3. How well did you stay on task to meet deadlines?

4. What would you do differently if you were to do your science fair project over again?

Helpful Websites

Science Buddies http://www.sciencebuddies.org/

This site has it all! Find a project idea by doing a short survey. They also have a project guide that breaks down the steps for a successful science fair project.

Internet Public Library http://www.ipl.org/div/projectguide/

Are you looking for some help with a science fair project? If so, then you have come to the right place. The IPL will guide you to a variety of web site resources, leading you through the necessary steps to successfully complete a science experiment.

Try Science http://tryscience.com/

Science resource for home that gives you labs to try and 400 helpful links all related to science. The

Gateway to Educational Materials:
http://members.ozemail.com.au/~macinnis/scifun/projects.html

The Gateway to Educational Materials provides an extensive and detailed step-by-step guide to doing a science fair project.

Science Fair Primer http://users.rcn.com/tedrowan/primer.html

A site to help students get started and run a science fair project.

Neuroscience for Kids: Successful Science Fair Projects
http://faculty.washington.edu/chudler/fair.html

Site made by Lynne Bleeker a former science teacher, science fair organizer, and judge. She gives a thorough and detailed description of the steps to a successful science fair project.