

Science Fair Log Book

Name: _____

Grade: _____

School: _____

Date: _____

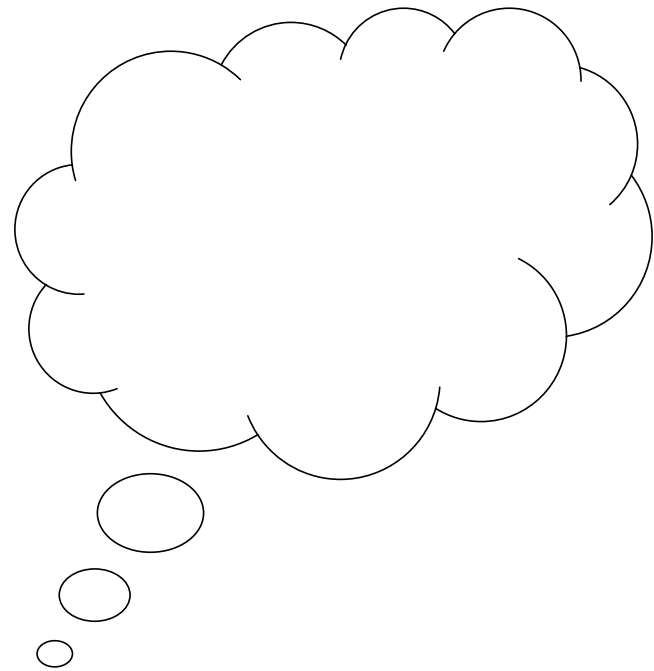
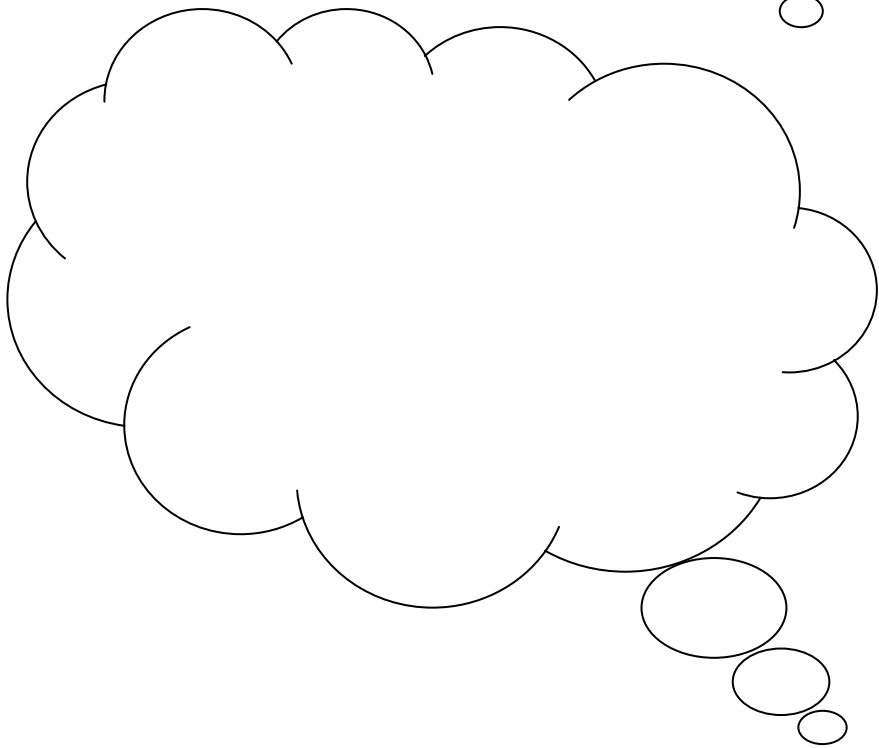
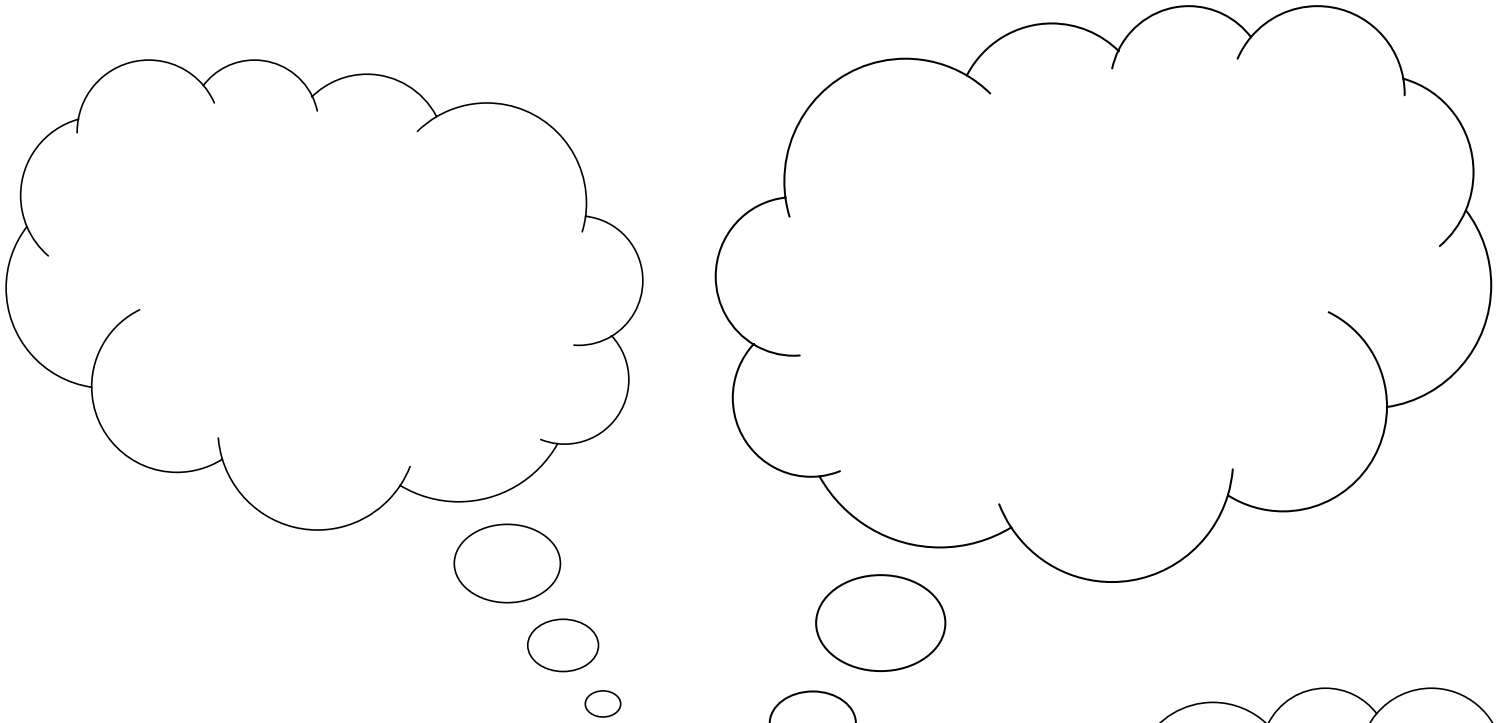
Instructions to Students:

Fill out this log book as you work on your project. Not all pages in this log book may apply to your project. The order of pages in this log book is a logical, suggested sequence of steps to help you complete your project. You must date your book for each step. This will help to show the progression of your work.

If you are working in a team, every member must keep her/his own log book.

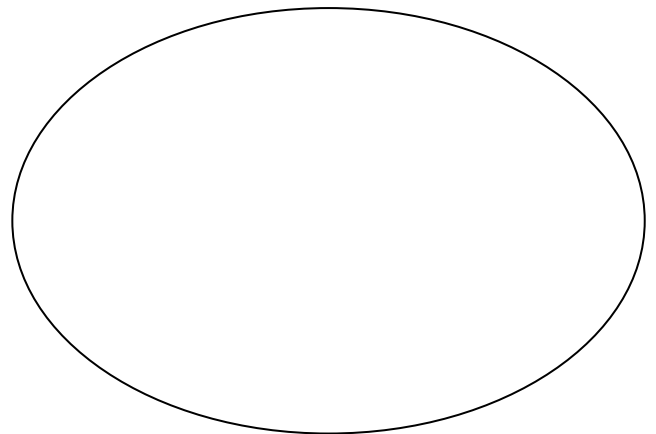
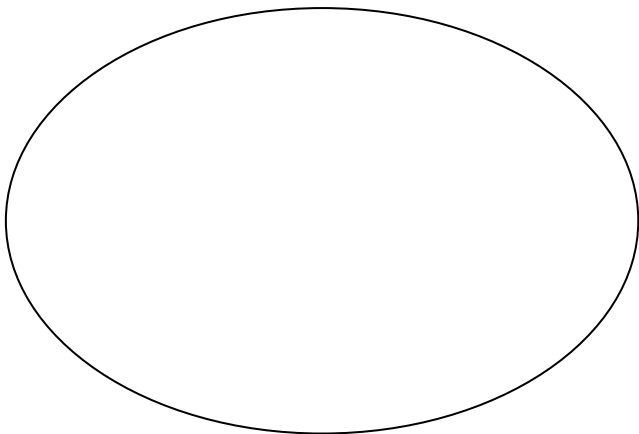
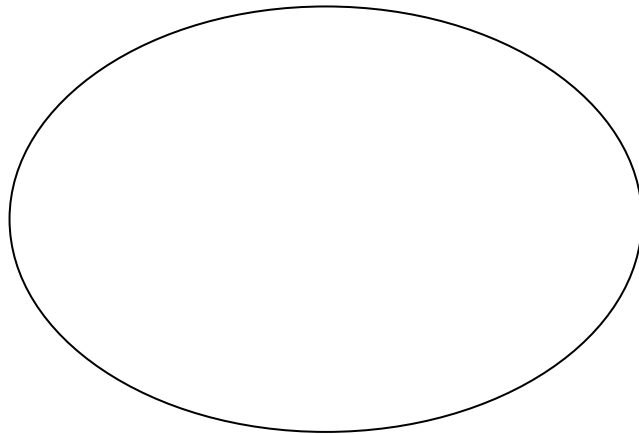
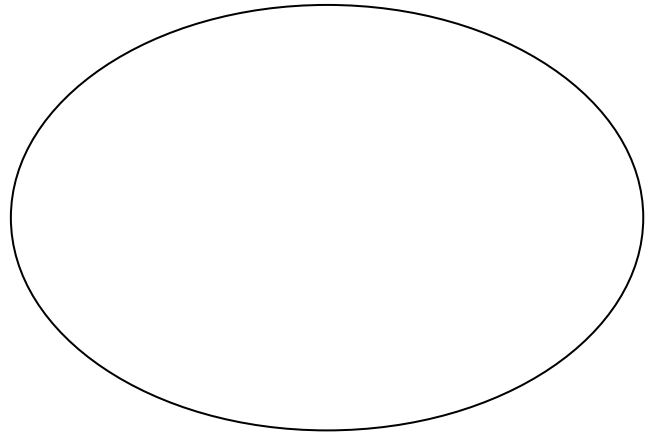
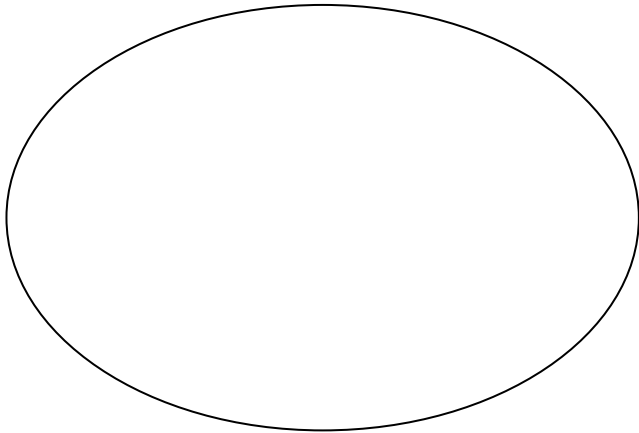
Project Planning and Brainstorming Date: _____

Here are some of my first ideas about my project possibilities:



Project Planning and Brainstorming Date: _____

Here's what I might have to do or learn about before I begin my project:



Research #1

Date: _____

Any good project begins by learning as much as I can about my topic. Here is some research I discovered. I am including this

in my own words.

(circle one)

directly from the source.

Source of my research:

Research #2

Date: _____

Any good project begins by learning as much as I can about my topic. Here is some research I discovered. I am including this

in my own words.

(circle one)

directly from the source.

Source of my research:

Research #3

Date: _____

Any good project begins by learning as much as I can about my topic. Here is some research I discovered. I am including this

in my own words.

(circle one)

directly from the source.

Source of my research:

Optional Additional Research

Date: _____

Any good project begins by learning as much as I can about my topic. Here is some research I discovered. I am including this

in my own words.

(circle one)

directly from the source.

Source of my research:

Problem and Hypothesis

Date: _____

After researching my topic, a problem or question I would like to answer through my Science Fair project is (choose one):

_____ I wonder what would happen if _____
_____?

or
_____ What is the effect of _____ on
_____?

Based upon everything I have learned about my topic, I have formed my best guess, or ***hypothesis***, about the outcome of my project. It is:

My project is going to be

_____ An experimental project – a project which will test for variables and outcomes

_____ An engineering project – a project in which I will create a real – not imaginary -- invention or modified prototype to solve a real problem.

I. Variable

A variable is the “thing” you change on purpose in an experiment. It is best to have a single variable during your experiment.

My variable in my experiment is:

II. Constants

Constants are factors that do not change throughout an experiment.

My constants during my experiment will be:

III. Control

The control is a trial done without changing the original factors. If the experiment does not have a control, it should be noted in the procedure. If there is none, you will need to explain why it was not appropriate to have one for your experiment.

Choose one to complete:

_____ My control trial for my experiment will be:

_____ It is not appropriate to have a control for my experiment because:

Procedure

Date: _____

Here are the *detailed* steps I took, in order, to execute my Science Fair project:

3 Controls

(For experimental projects only.)

Date: _____

Here are descriptions of my 3 control experiments. My controls are 3 sets of my experiments that will exist under “normal” conditions, without any variables.

For my project, my “normal” condition is:

Here are photos or illustrations of my 3 control experiments:

Control #1

Control #2

Control #3

**Notes and observations
about my control experiments:**

Data: 3 Controls

(For experimental projects only.)

Date: _____

Here is the measurable data for each of my control experiments. I measured using _____ in the metric system:

Raw Data Control #1

Raw Data Control #2

Raw Data Control #3

3+ Trials


Date: _____

(For experimental projects only; copy this page for **EACH** variable observed for the project.)

Here are descriptions of my trial experiments. My trials are at least 3 sets of my experiments for **each** variable I use for my experiments.

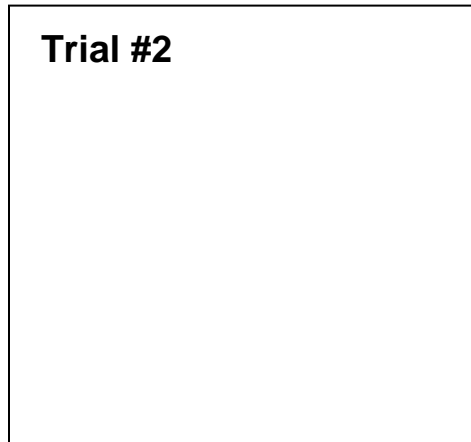
Here are photos or illustrations of my 3 control experiments:

Trial #1



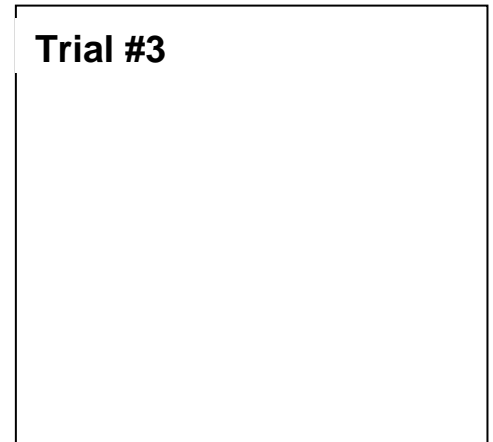
Notes and observations about trial #1:

Trial #2



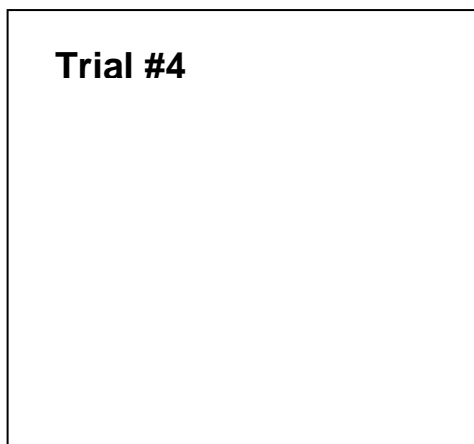
Notes and observations about trial #2:

Trial #3



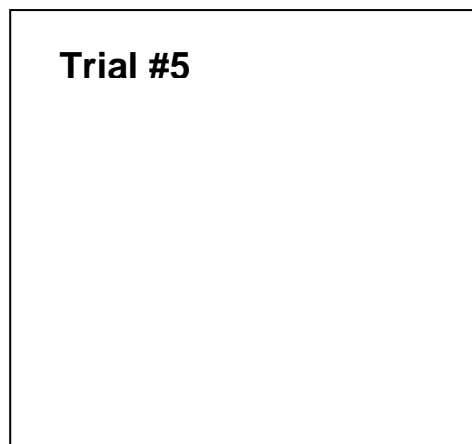
Notes and observations about trial #3:

Trial #4



Notes and observations about trial #4:

Trial #5



Notes and observations about trial #5:

Data: 3+ Trials

Date: _____

(For experimental projects only. Copy this page for EACH variable used in the project.)

Here is the measurable data for each of my trial experiments. I measured using _____ in the metric system:

Raw Data Trial #1

Raw Data Trial #2

Raw Data Trial #3

Raw Data Trial #4

Raw Data Trial #5

Invention or Prototype Design

Date: _____

(For engineering projects only. Check the small box of the idea you chose for your project.)

Idea #1

Why it might work:

Idea #2

Why it might work:

Idea #3

Why it might work:

Results

Date: _____

After

performing my experiment
continuing my research
creating my invention or prototype
(circle those that apply)

here are my results:

Results

Date: _____

Here are my results in the form of a chart, table, or graph:

Conclusion and Applications

Date: _____

Based upon my results, here is/are the conclusion(s) I have reached from my Science Fair project:

My conclusion(s) **supported** **did not support** my hypothesis.
(circle one)

Here is one way that scientists, inventors, or my family and I could use what I learned from my Science Fair project:

Many times, results and conclusions may suggest other ways in which your project could be expanded or further explored in the future. Explain how this might apply to your project:

Bibliography Forms

Below are some common forms to correctly cite a source. For online help visit www.citationmachine.com. This site will format your entry for you. Just select the type of source you are using and enter the information requested.

For Books:

Author's last name, First initial (publication year). Book Title Underlined or *Italicized*, City of Publication: Publisher.

Example:

Taylor, T. (1969). The Cay. New York: Avon Books.

For Periodicals:

Author's last name, First Initial (date of periodical). Title of article. *Periodical title italicized* Volume Number (Issue Number), page numbers.

Example:

Levin, D. (7 Oct 1985). A new wave of California dreamin'. *Sports Illustrated* 63 (16), pp. 24-5.

For Encyclopedias:

"Name of article", Name of Encyclopedia, Volume, Publisher, Date, pages used

Example:

"John Adams," The World Book Encyclopedia, Volume A, World Book, Inc., 1982, pages 30-35

For Information from the Internet:

Walt Disney. Retrieved on October 31, 2009 from [www. wikipedia.com](http://www.wikipedia.com).

***All bibliography entries must be alphabetized by the first word in each entry.**

Project Abstract

Your display board **MUST** contain an **ABSTRACT** of your project.
An abstract is a summary of what you did during your project.

Your **ABSTRACT** must have the following components.
Complete this table to help you compose your **ABSTRACT**:

<p>PROJECT NAME IN ALL CAPITAL LETTERS</p>	
<p>Your Name</p>	
<p>Paragraph #1 Tell about your purpose and hypothesis</p>	
<p>Paragraph #2 Tell about the procedure in narrative form. Do not number steps.</p>	
<p>Paragraph #3 Tell about the conclusion(s) you reached from your experiment.</p>	
<p>Bibliography You must list at least three research sources you used to find out about your project <i>before</i> you began it.</p>	

Your **ABSTRACT** should be written or typed in paragraph form
and posted on the bottom left side of your display board.
ABSTRACTS are requirements of all projects.