Science Fair Project: Grade 7th/8th Rubric and Instructions

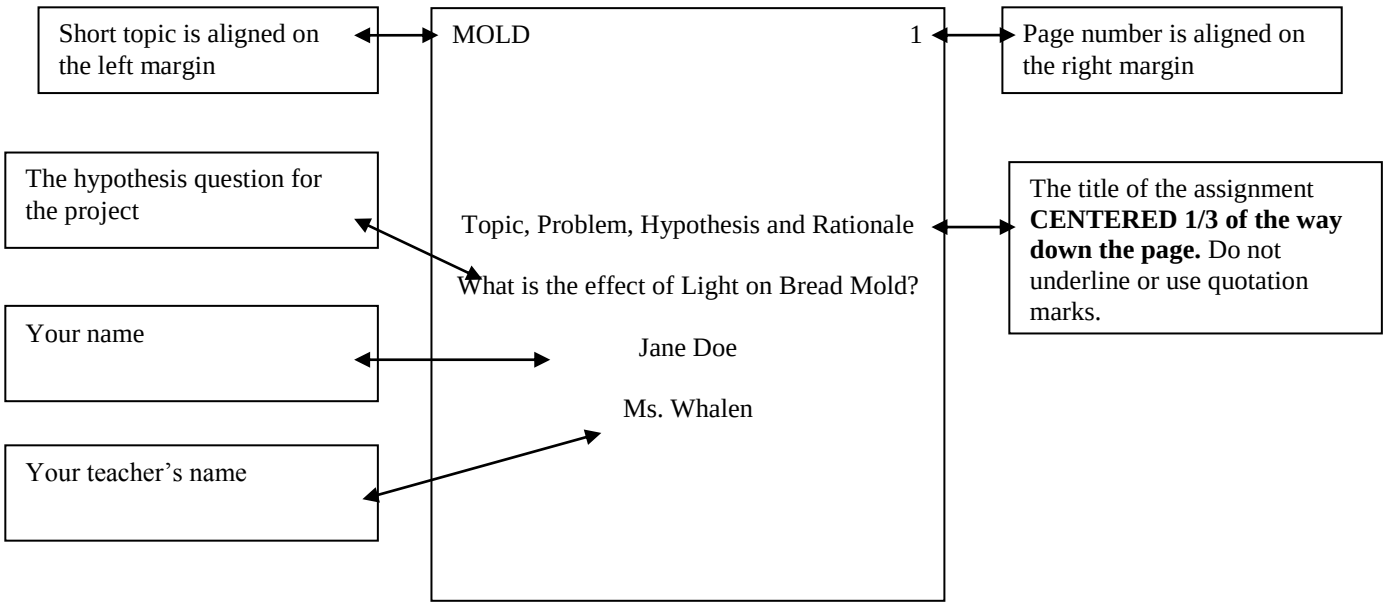
General Guidelines:

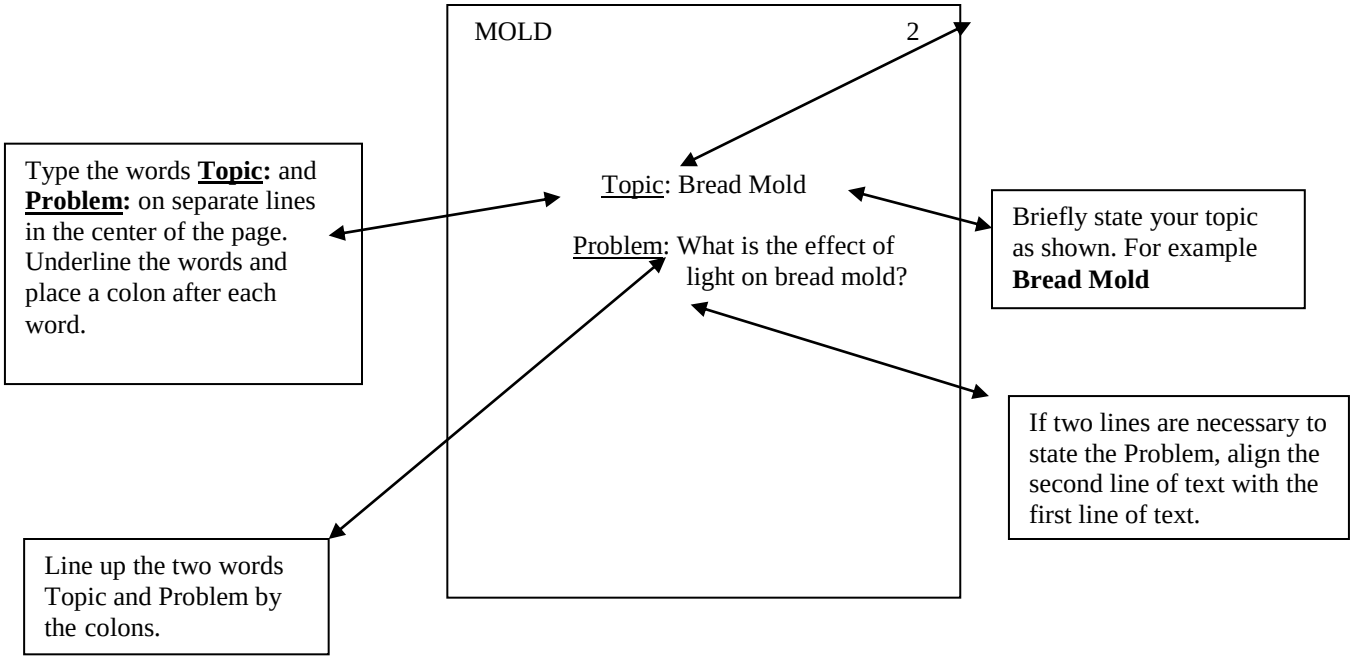
1. Save all work and make a digital copy of your files.
2. Type all the assignments, as well as the Final Report.
3. Write all papers in the **third person**.
4. Use the Times New Roman font, size 12 point—nothing larger or smaller and no fancy lettering.
5. Double-space all assignments, unless stated differently in the instructions.
6. The page margins should be one inch on the sides and top and bottom margins.
7. Complete all assignments on white paper; no colored paper is allowed.
8. Indent five spaces for paragraphs.
9. Include page numbers on all assignments (except those that are only one page). Create a header for all assignments that includes the abbreviated paper title and page number. Refer to the APA Format Guide at the end of this document for the appropriate formatting of the page numbers on the title page and documents.
10. Turn in all assignments promptly on the due dates.
11. Ensure that all assignments are your work; no copying, duplication, or plagiarism is allowed.
12. Meet with a mentor at least two times either in person or via e-mail. Provide evidence of your mentor's input that is signed and dated. Refer any questions on the mentor process to your teacher. Include the mentor's comments in your Final Paper.
13. Use the APA Format Guide for all assignments and for the Final Paper.

Assignment No. 1:	**1. Title Page** **2. Topic and Problem** **3. Hypothesis and Rationale**	**Due Date:** **Gr. 8 October 25** **Gr. 7 October 29**

Instructions:

1. **Title Page:** Create a title page formatted as shown in the example below. **Double-space between all lines**.





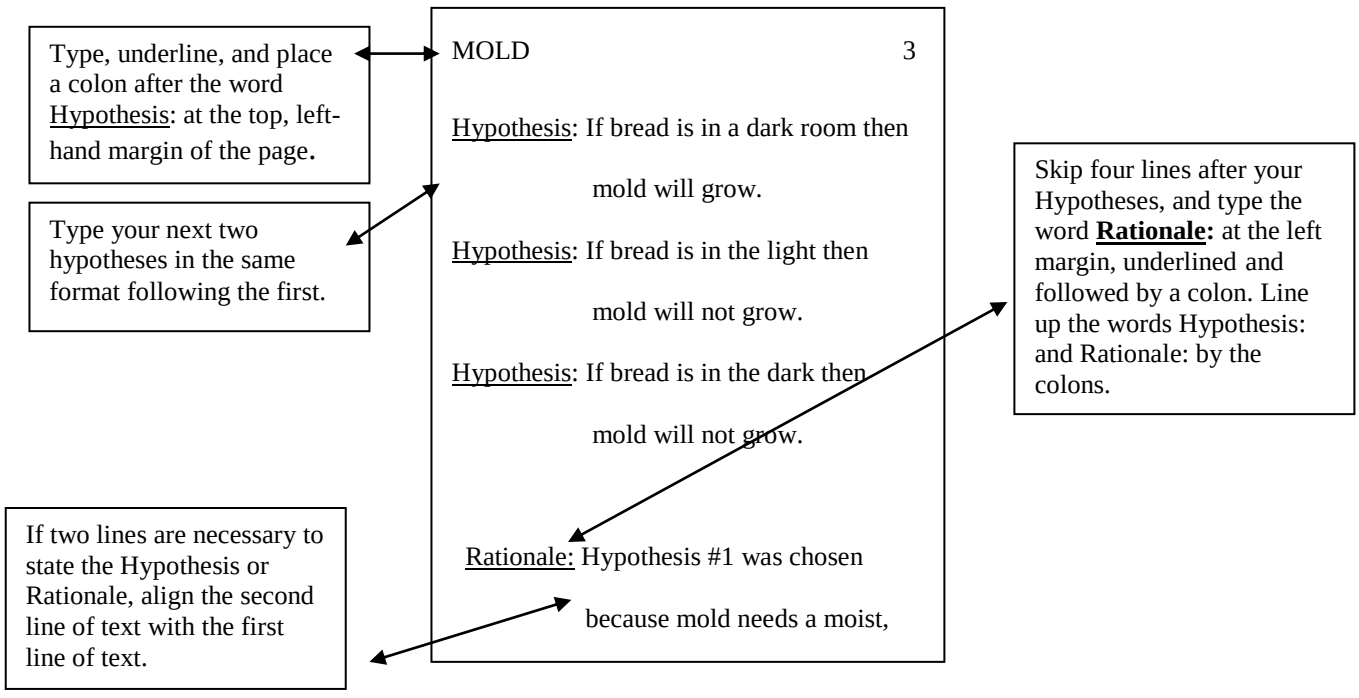
1. **Topic and Problem:** Briefly state your topic and problem formatted as shown in the example below. The problem should be sufficiently limited and clearly stated. The format of the problem should be: **How does the (Independent Variable) affect the (Dependent Variable)? Double-space between the Topic and the Problem.**

2. **Hypothesis:** Identify three different hypotheses. Write the Hypothesis as a declarative statement, using the "**if and then**" format. Quantify your prediction, or your Dependent Variable (the "then" part of your Hypothesis). Do not just state that the variable will change, but give the specific degree of change. For example, your experimental group may increase 20% over your control group. If pea plants are grown under red, green, or white lights, then the pea plants grown under the red light will be 20% taller after six weeks than the ones grown under the green or white lights.
Rationale: Choose one hypothesis to test in your experiment and write one or two sentences sufficiently explaining the reasons for your prediction (the "then" part of your Hypothesis). Do not guess or make an arbitrary prediction. Explain why you are making this prediction or "educated guess" using the information needed for your Background Literature paper. **Note that you only need one Rationale that applies to the Hypothesis you choose to test.**

   Then, write a brief outline of the procedure associated with the Hypothesis. Include a copy of the procedure.

   Double-space throughout the document.

   Example:



Assignment No. 2:	**1. Title Page** **2. Research Paper Outline**	**Due Date:** **Gr. 8 November 12** **Gr. 7 November 19**

Instructions:

MOLD 1

Research Paper Outline

Topic

Your Name

Teacher's Name

Your short topic is **CENTERED 1/3 of the way down the page.** Do not underline or use a bold font.

Use this model for outline:

MOLD 2

Topic Question

I Major Point (Word or Phrase)

A.Subtopic (Word or Phrase)

1.Support Statement

2.Support Statement

B.Subtopic (Word or Phrase)

1.Support Statement

2.Support Statement

II Major Point (Word or Phrase)

A.Subtopic (Word or Phrase)

1.Support Statement

2.Support Statement

B.Subtopic (Word or Phrase)

1.Support Statement

2.Support Statement

Major Points and **Subtopics** should be just a **word or phrase.** Write a **sentence** to **support** your topic.

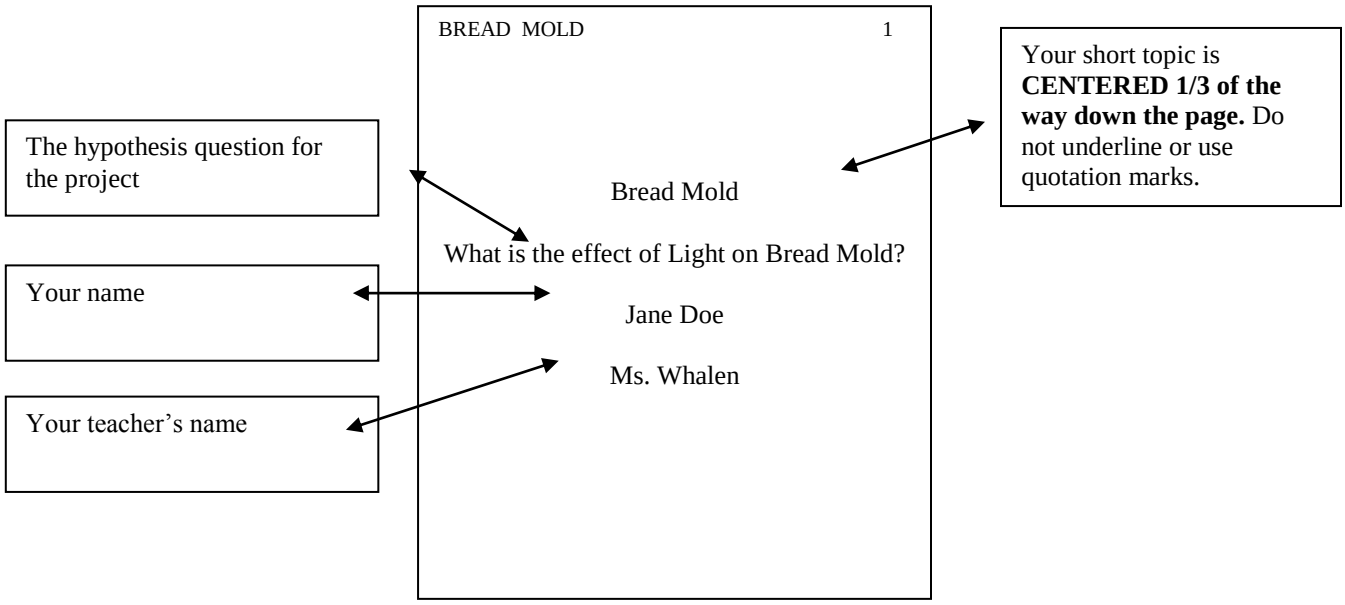
Indent 3 spaces for the subtopic**. Indent 2 spaces** for the support statement. The spacing must be **double spaced** throughout the assignment.

Assignment No. 3:	1. Title Page 2. Background Literature (research paper) 3. Glossary 4. References	Due Date: Gr. 8 November 22 Gr. 7 December 2

Instructions:

1. **Title Page:** Create a title page for your research paper. **Double-space between all lines.**

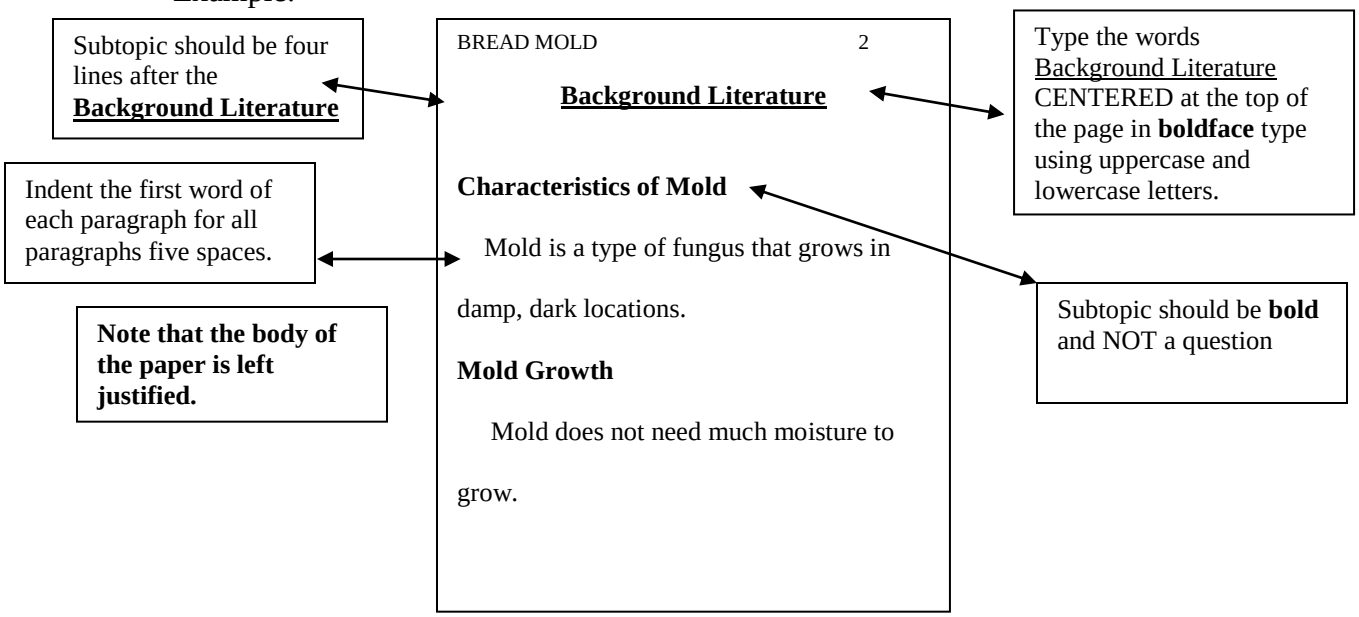
   Example:



2. **Background Literature:**
   a. Present sufficient, relevant, and current information on your topic. Your final paragraph should bring all the information together and set the stage for the experiment.
   b. Use two quotes from scientific literature. Format the quotes in your paper using APA style. Refer to the APA Paper Format Guide at the end of this document for proper formatting. **Do not quote from encyclopedias**. Instead, use quotes from books, magazines, or interviews.
   c. The Background Literature paper must be three pages, 900-1000 words.
   d. Submit two copies to Ms. Whalen. Send or share one electronic copy to pwhalen@sjbosco.org with SF 13 on the subject line. One printed copy must be submitted to Ms. Whalen by the due date.

Format: Skip four lines and begin your paper

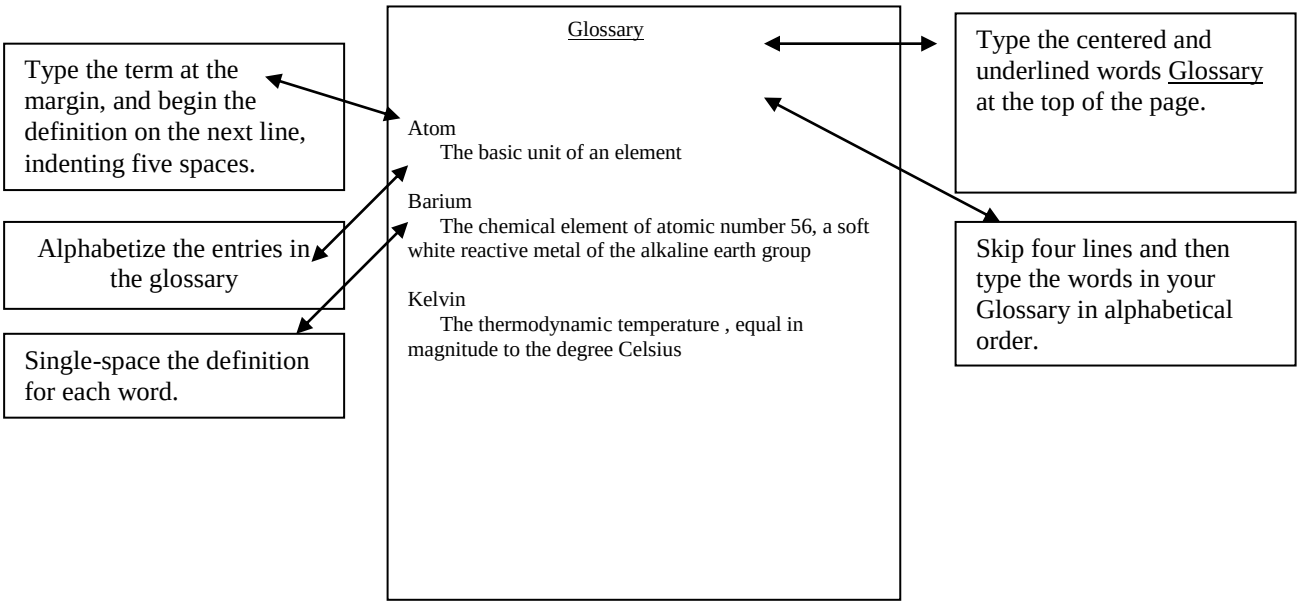
Example:



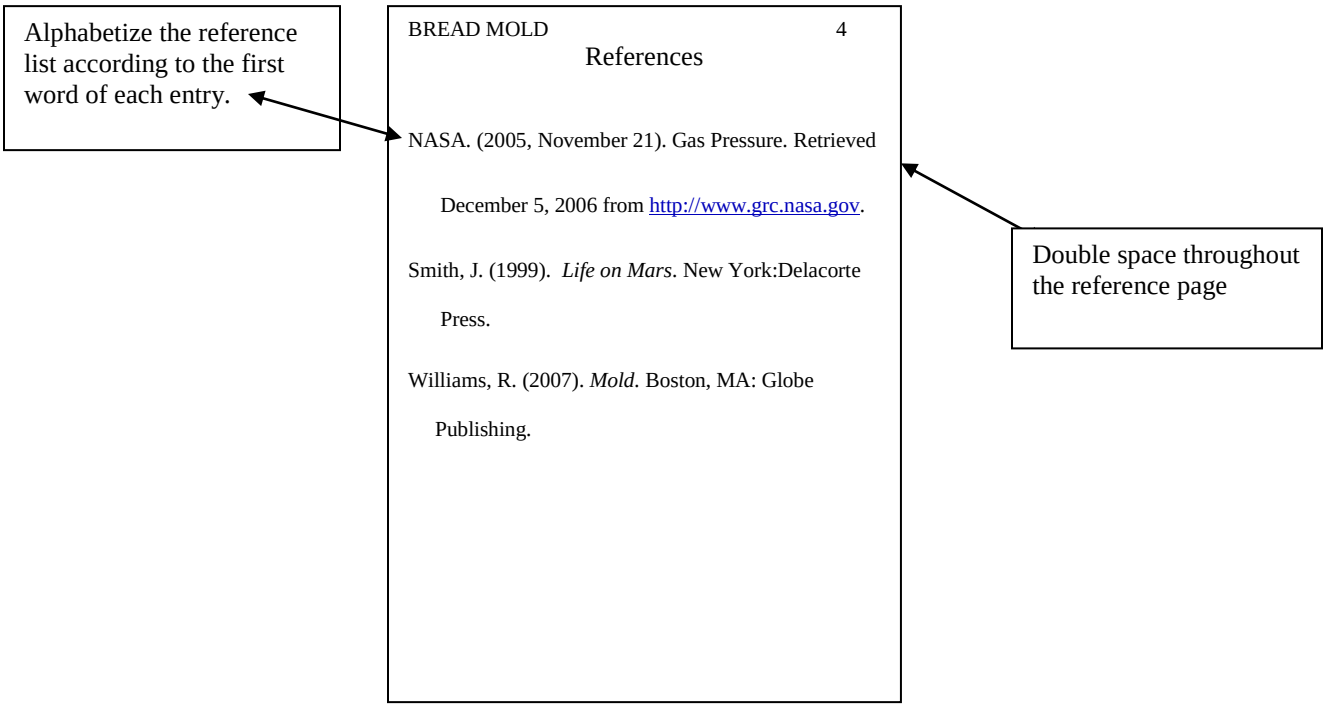
4. Glossary: The glossary should contain the terms that are necessary for the reader to understand your project. Include as many terms as necessary, but you are expected to have at least five terms.

Format: Single-space the definition for each word, but **double-space** between each word entry in the Glossary.

Example:



3. **References:** Create a Reference List for your Background Literature paper, using at least **five** sources. Include two books in your Reference List and do not use encyclopedias. Refer to the **APA Format Guide** at the end of this document for a full explanation of Reference List formatting. **Note that the sources must have a stated author; Wikipedia, Ask Jeeves, Google.com, Yahoo.com, etc., are <u>not</u> acceptable sources.**

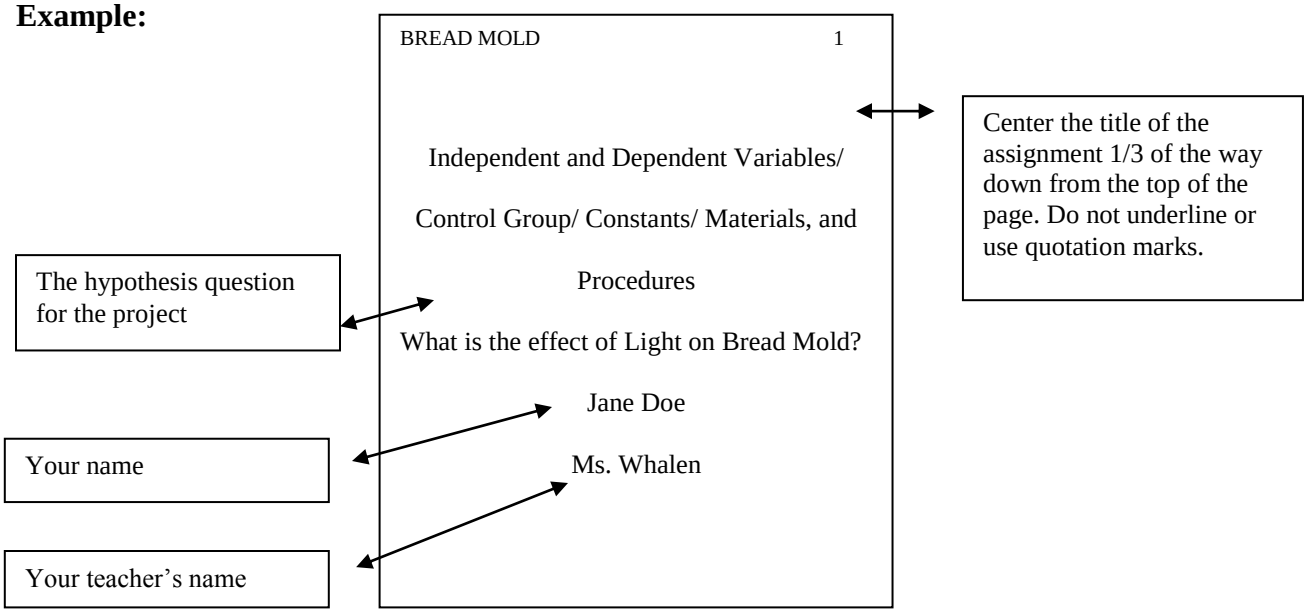


Assignment No. 4:	**1. Title Page** **2. Independent and Dependent Variables/ /Control Group/Constants** **3. Materials** **4. Procedures**	**Due Date:** **Gr. 8 December 6** **Gr. 7 December 13**

Instructions:

1. **Title Page:** Create a single title page for the three assignments listed above. **Double space between all lines.**

Example:



2. **Independent and Dependent Variables/Control Group/Constants**:

   Write a sentence describing the **Independent Variable,** which is the variable that you are changing in your experiment. Example: The independent variable is the amount of light the bread is exposed to.

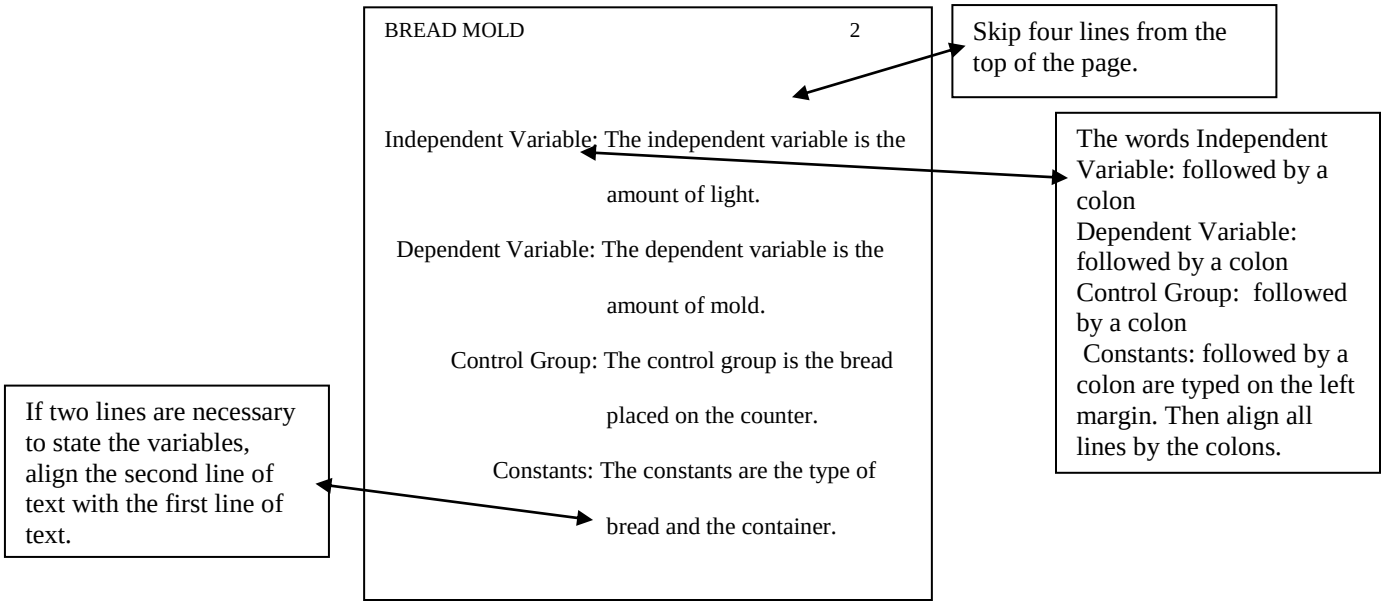
   Next, write a sentence describing your **Dependent Variable**, which is the factor/variable that gets changed as a result of your experiment. For example, the amount of mold created. The Dependent Variable is the variable that is measured in your experiment.

   Identify the **Control Group** in your experiment. The Control Group is the sample/group that remains constant in your experiment. The Control Group serves as the basis for comparison to your experimental group. For example, the Control Group in the bread mold experiment is the bread set on the counter. The Experimental Groups consist of the bread set in the closet or under a light.

   The **Constants** in your experiment are the factors that you kept the same throughout the experiment. For example, the constants in the bread mold experiment would be the type of bread and the container used.

   Format: Double space between all lines

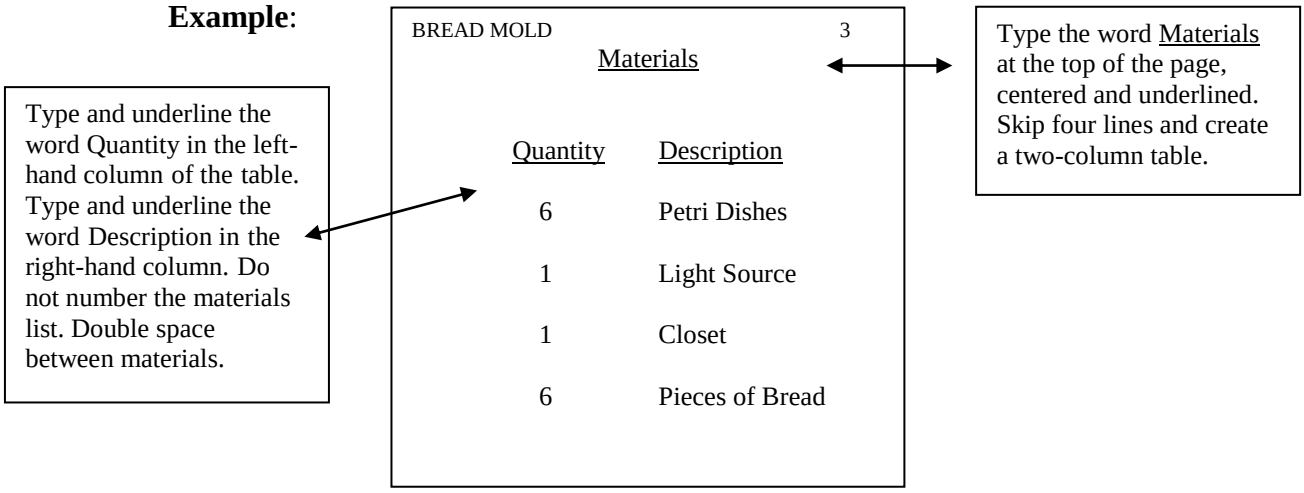
Example:



3. **Materials:** List the materials used in your experiment in a two-column table. Measure all quantities in metrics and ensure that you have a sufficient quantity of your materials to repeat your experiment five times. Be specific in the material descriptions and include sizes when necessary. Ensure that you include everything utilized in performing your experiment. For example, if you use a ramp for your experiment, you must include the materials used to make the ramp. If human subjects are used, include the gender and age of each subject.

   Format: Double-space between entries.

   Example:



4. **Procedures:** Create a numbered list of the specific steps necessary to complete your experiment. The steps should be sufficiently specific so that you could hand your procedures to someone and they could complete the experiment independently. If you

had to make something to use during your experiment, you must include these procedures too. **For example, if you built a ramp or launch pad for your experiment, you must include the procedures for building the ramp.**

Use exact **metric** measurements throughout your procedures. Write each procedure as an imperative sentence. Your first sentence should be "Gather all materials." **Repeat your trials five times.** Use the sentence "Record the results" throughout the procedures where necessary. End the procedures with the sentences "Analyze and graph the results" and "Compare the results."

Format: Double-space between entries.

Example:

BREAD MOLD 4

Procedures

1. Gather all materials.
2. Xxxxxxxxxxx
3. Xxxxxxxxx
4. Xxxxxxxxxxxxxxx
5. Record the results.
6. Analyze and graph the results.
7. Compare the results.

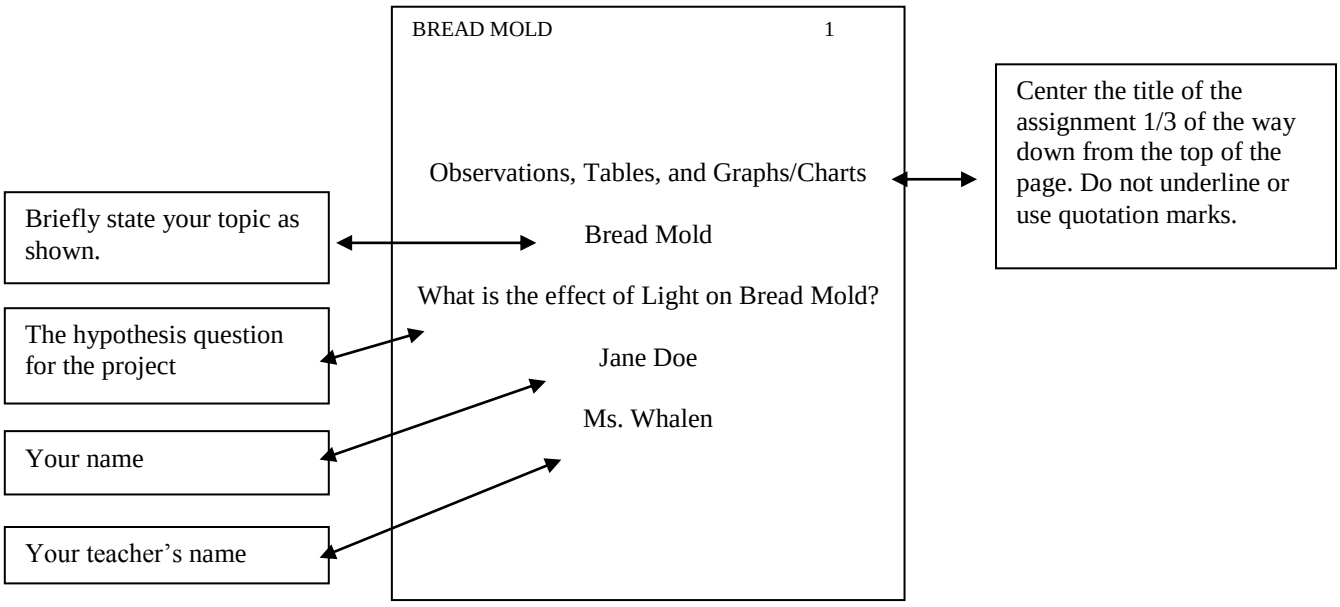
Type the word Procedures at the top of the page, centered and underlined. **Skip four lines** and begin your numbered list.

Assignment No. 5:	**1. Title Page** **2. Observations** **3. Tables and Graphs/Charts**	**Due Date:** **Gr. 8 January 15** **Gr. 7 January 22**

Instructions:

1. **Title Page:** Create a title page for the two assignments listed above.

   Format: Double-space between all lines.



2. **Observations:** Record your **daily observations** for your experiment. **Make sure the observations are written in the <u>third person</u>.** The daily observations should include 2-3 sentences for Day 1, Day 2, Day 3, Day 4, etc., of your experiment. If your trials are completed in one day, record your observations for each step of the experiment, e.g., Step1, Step 2, Step 3, etc. Do not restate the whole procedure, summarize each day of the experiment.

   Format: Type the centered and underlined words <u>Observations</u> at the top of the page. Skip four lines and begin your paragraph, indenting five spaces. Double-space the paper.

3. **Tables and Graphs/Charts:** Create at least two tables/charts showing the results of your experiments. For example, the first table could show the results of the actual data from all of the trials or tests, and the second table <u>could</u> show the <u>average</u> of the trials or tests for each of your groups, i.e., the Experimental and Control Groups. Or, depending on your experiment, your second table could show an entirely different set of data.

Then, **write a paragraph for each graph/chart** that explains your data. Begin each paragraph with the sentence, "On the following page . . . ."

Then, create a graph/chart for each table. Each graph **must** have a corresponding table that represents the data on the graph. Place the table first, followed by the graph it is associated with. **The initial tables/graphs for your rough draft must be hand drawn in class on graph paper (bring data to class for this graph); the Final Paper may contain the tables/graphs done in Excel.** The data should be organized and complete, and should show the units used (**metric**) in the experiment. Draw your graphs/charts using a ruler. No sloppy lines will be accepted. Do not limit the graphs to bar graphs. Depending on the data, create a variety of graphs including line graph, bar graph, pie chart, or scatter plot graph.

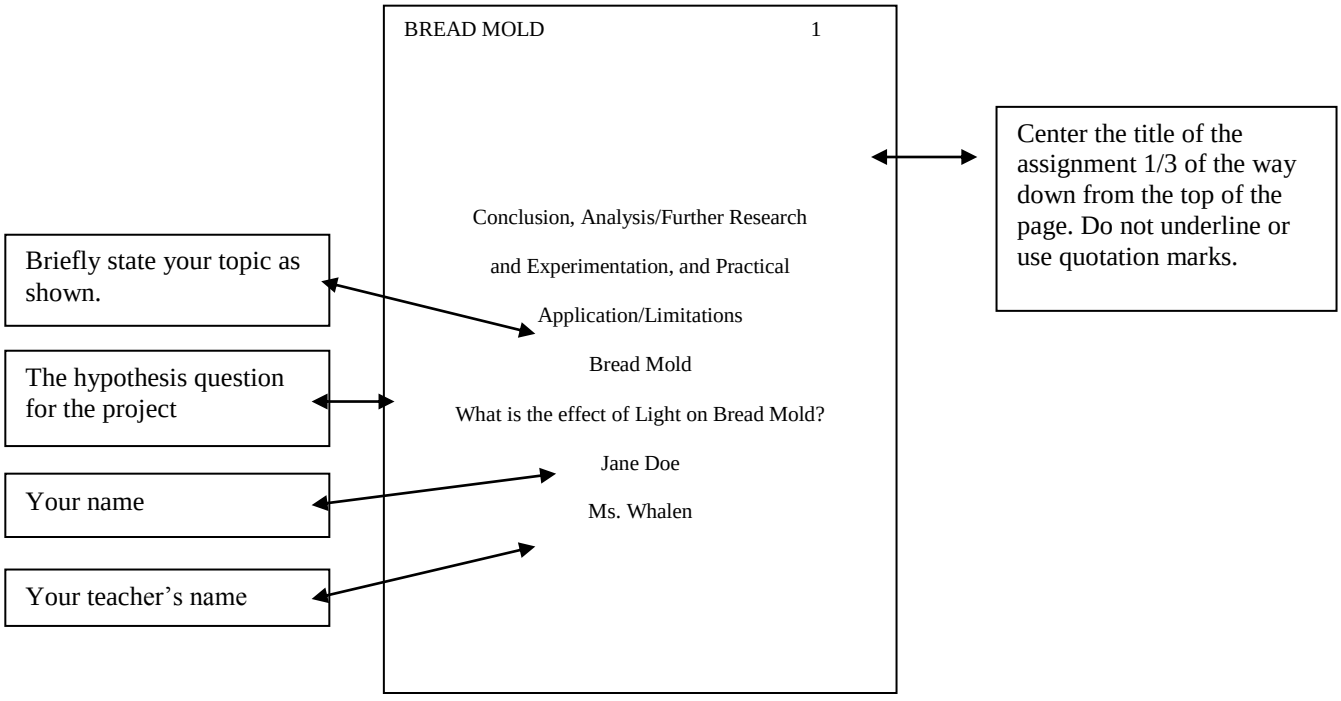
Place the Independent Variable on the X axis (bottom) and the Dependent Variable on the Y axis (left). Ensure that your tables and graphs/charts are dated, properly labeled on all sides, and have appropriate titles that explain the contents of the graph/chart, e.g., "The Effect of Colored Lights on Plant Growth."

Assignment No. 6:	**1. Title Page** **2. Conclusion** **3. Analysis/Further Research and Experimentation** **4. Practical Applications/Limitations**	**Due Date:** **Gr.8 January 29** **Gr. 7 February 1**

Instructions:

1. **Title Page:** Create a title page for the three assignments listed above.

   Format: Double-space between all lines.

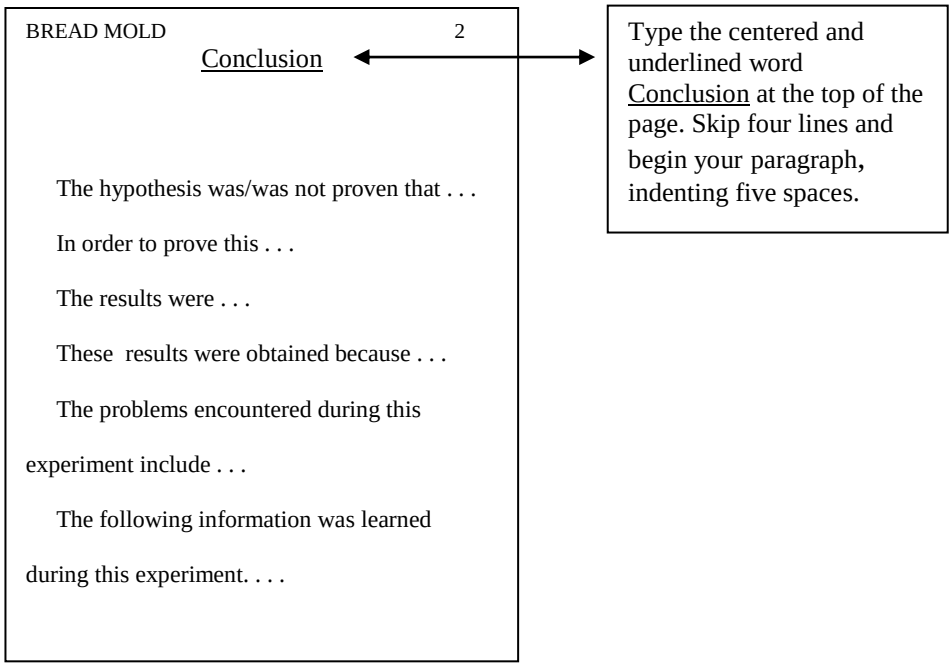


2. **Conclusion:** Restate the hypothesis, giving a clear answer in the third person point of view. Then, write a paragraph of 3-5 sentences for each sentence listed below:

   "The hypothesis was/was not proven that . . . ."
   "In order to prove this, . . ."
   "The results were . . ."
   "These results were obtained because . . ."
   "The problems encountered during this experiment include . . ."
   "The following information was learned during this experiment . . ."

   Format: Double-space the paper.

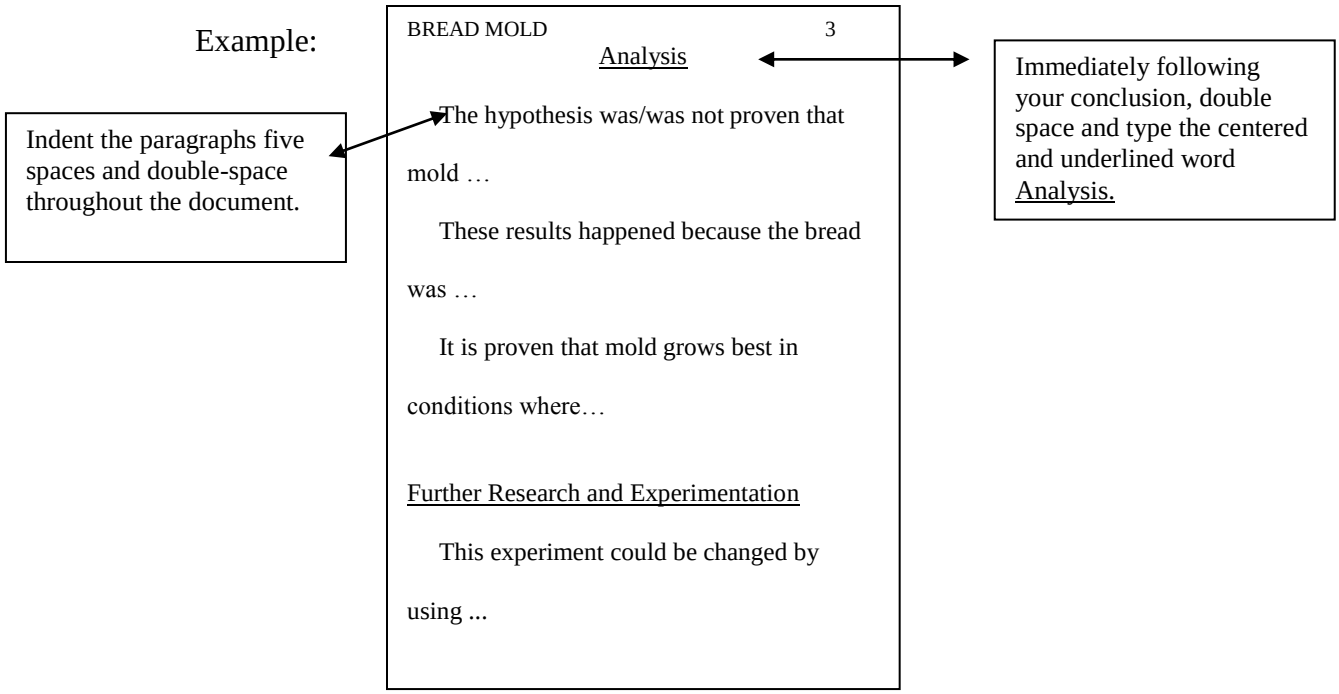
   Example:



3. **Analysis/Further Research and Experimentation (two paragraphs):** Write a paragraph in the third person point of view, analyzing the results of the experiment by explaining what happened and why. Define what steps could be done differently. For example, you may need to use a different sample group or a different variable. Relate the analysis to the introductory research material. Questions that should be answered: Why did the results happen? Refer back to the research. What caused the result to happen as it did? How does the background information relate to the results? Then, write a second paragraph suggesting ways that could further expand or build upon the project. Provide ideas for further experimentation.

Format: double-space the paper.

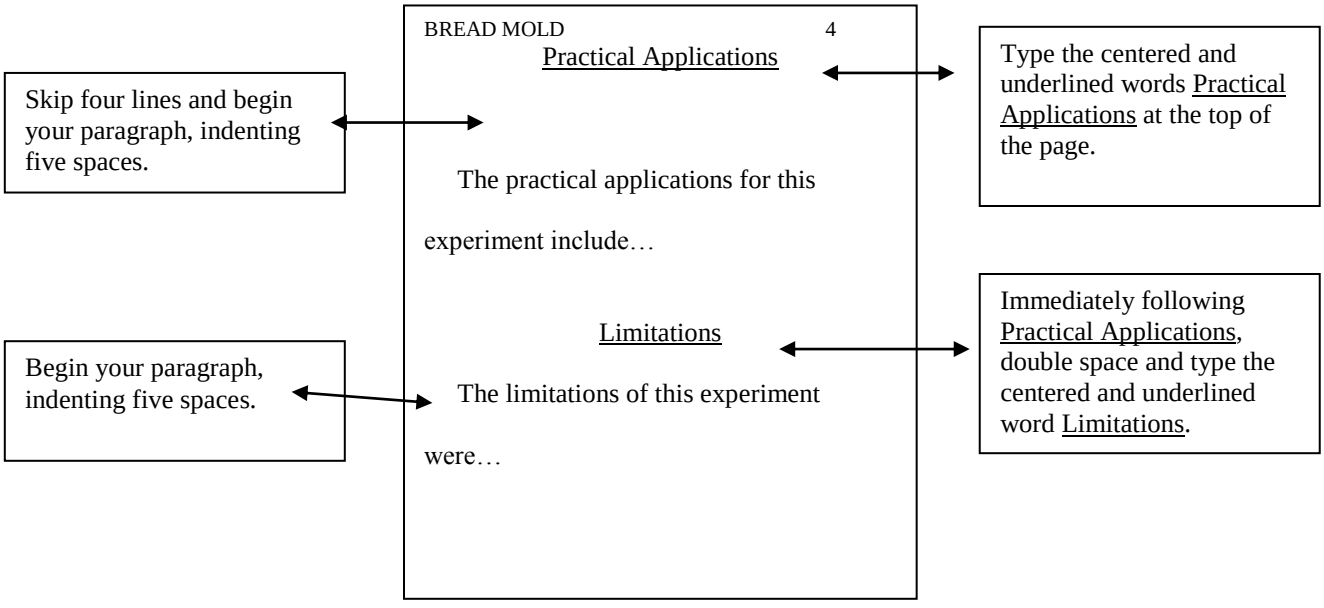
Example:



4. **Practical Applications/Limitations (two paragraphs):** Write a paragraph discussing ways in which the research could have some positive, practical value for people or the environment. If you cannot find any practical use for your experiment, state this. Perhaps the only practical application for your project is that you personally benefited from completing this project in some way. Next, write a paragraph that describes what the limitations of your experiment.

   Format: Double-space throughout the paper.

   Example:



Instructions for Final Paper:

Organize your Final Paper. Place the sections in the order listed below. **Update all the previous assignments with any changes required by your teacher. Do not turn in drafts with the teacher comments. Make the corrections and reprint the assignment.**

Assignment No. 7:	**Final Paper:** **1.** Title Page **2.** Table of Contents **3.** Abstract **4.** Outline **5.** Research Paper (include a separate title page for the Research Paper) **6.** Topic/Problem/Hypothesis/Rationale **7.** Independent and Dependent Variables/ /Control Group/Constants **8.** Materials/Procedures (can be on the same page in Final Paper) **9.** Observations **10.** Tables and Graphs/Charts **11.** Conclusion **12.** Analysis/Further Research and Experimentation **13.** Practical Applications/Limitations **14.** Glossary **15.** Acknowledgements **16.** Mentor's signed and dated comments **17.** References with Annotations	**Due Date:** **Gr 8 February 4** **Gr. 7 February 4**

Add the following assignments to your Final Paper, organizing them in the order listed above:

1. Title Page:

BREAD MOLD 1

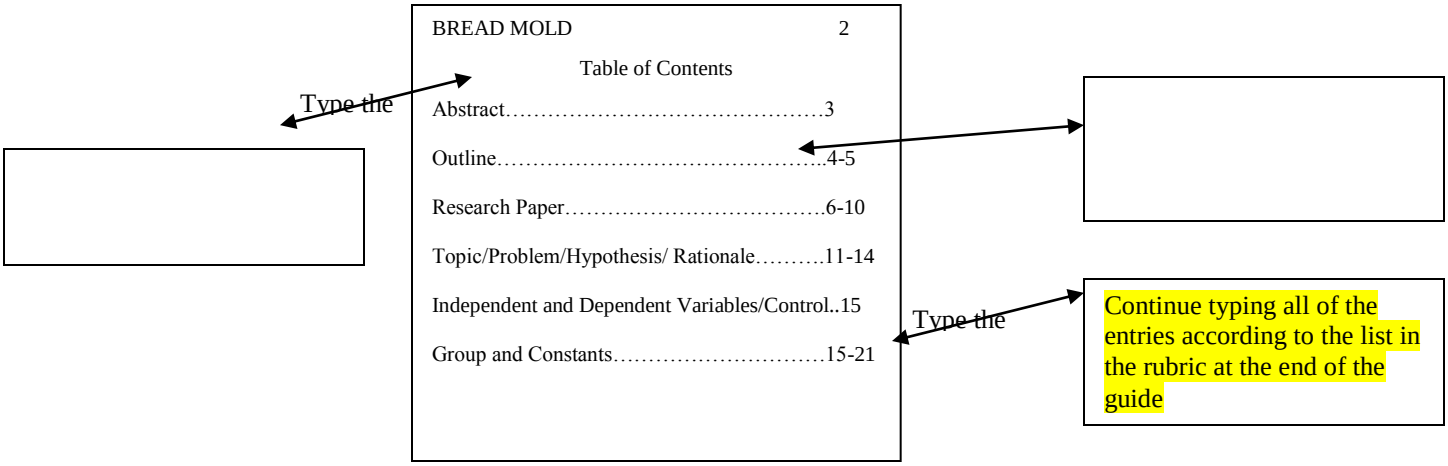
Bread Mold

What is the effect of Light on Bread Mold?

Jane Doe

Ms. Whalen

2. Table of Contents: Create a Table of Contents, listing all of the assignments in the Final Paper and their corresponding page number. Type the title Table of Contents at the top of the page, double-space and type your first entry. Double-space throughout the table of contents. Right justify all page numbers. Utilize leader dots (. . . . . .) between the table of contents entry and the page number. Indent any subheadings in the list five spaces.



3. Abstract: Write a one-page/150 word abstract for your paper. Include one paragraph summarizing your research and one paragraph summarizing the experiment. Type the word Abstract centered at the top of the page. Begin your paragraph on the next line, double spaced and remember to indent 5 spaces for each paragraph.

Annotations should be added to the references. Underneath each source entry on your References List, single spaced and indent five spaces. **Write a short description (annotation) of how and where you used each source in you project**.

Example of an annotated entry:

Scott, N. (2007). Composting: An Easy Household Guide. White River Junction, VT:

Houghton Mifflin Publishing Company.

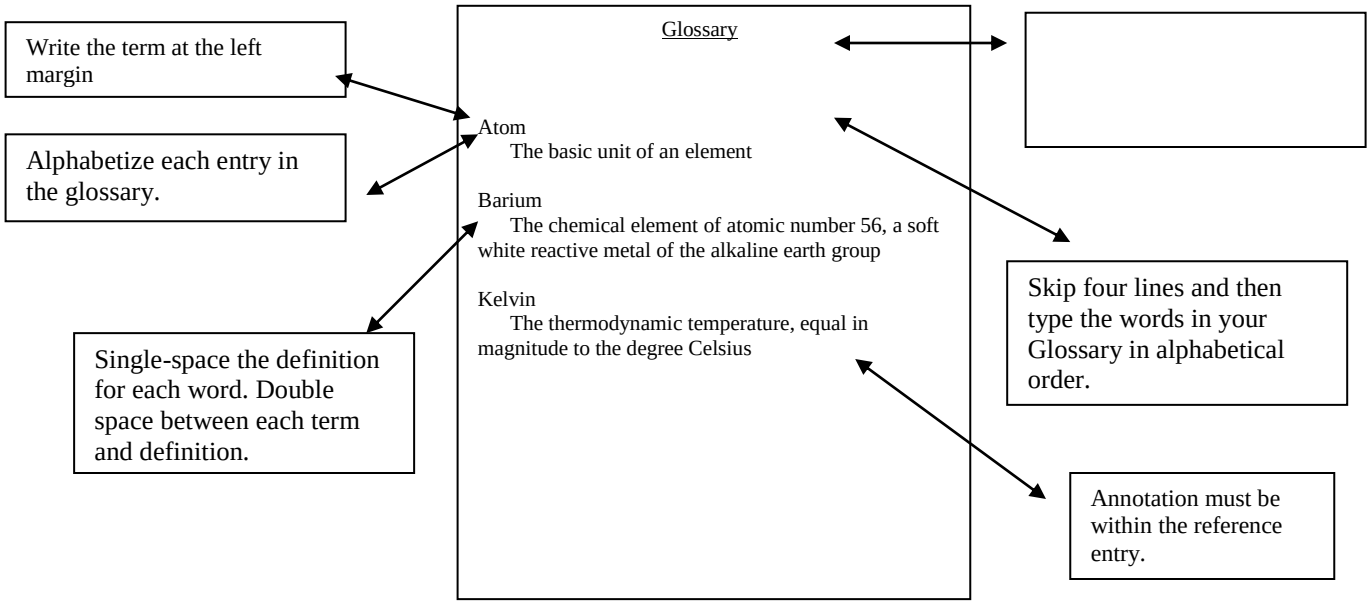
This was one of the best sources, because it explained what materials are best for composting, how to properly put them together, and how long it takes for them to decompose. It talked about the important "browns" and "greens" categories the most.

Items 4-13 Correct all previous assignments and place the corrected assignments in the order they are listed in the rubric.

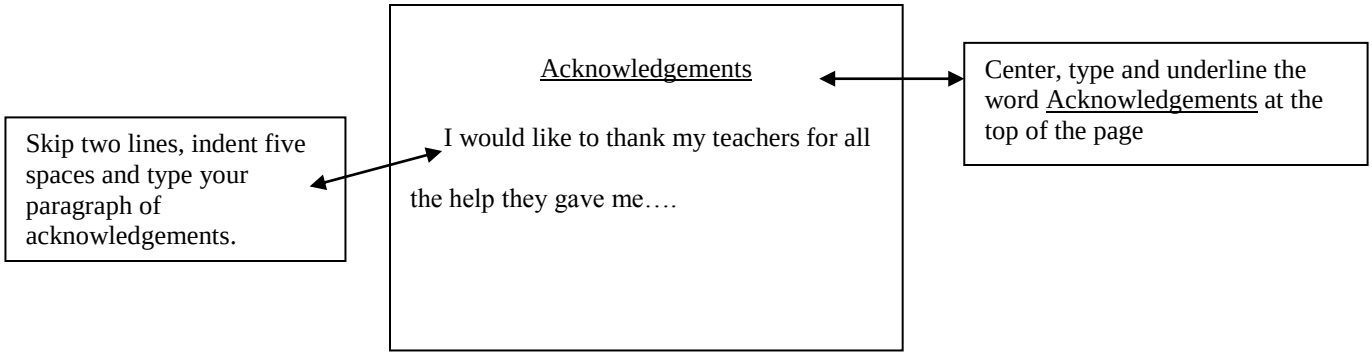
14. Glossary: The glossary should contain the terms that are necessary for the reader to understand your project. Include as many terms as necessary, but you are expected to have at least five terms.

Format: Single-space the definition for each word, but **double-space** between each word entry in the Glossary.

Example:



15. Acknowledgements: Type a short paragraph acknowledging all of the people who helped you with your project, including librarians, teachers, parents, experts, etc. Skip two lines and indent five spaces.
Example:



16. References: You must have a minimum of five sources, including two books. You will use your research paper's references and any additional sources you used for your experiment. This should be the last page of this assignment.
Refer to the **APA Style Guide** at the end of this document for instructions on formatting the References page, including the specific format guidelines for books, magazines, interviews, etc. Underneath each source entry on your References List, single space and indent five spaces and **write a short description (annotation) of how and where you used each source in you project**.

Assignment No. 8:	**Display Board**	**Due Date:** **Gr. 7 and Gr. 8- February 4**

Instructions:

1. **Display all the following documents from your project on the Display Board: Topic/Problem, Hypothesis, Materials, Procedures (abbreviated if necessary), Graphs/Charts, and Conclusion.**
2. Your Display Board should be a standard size, three-panel display that unfolds to be 36 inches tall by 48 inches wide.
3. Create an appropriate title for your Display Board that will not only accurately reflect your project, but will also grab the observers' attention.
4. Each step in the scientific method needs to be separately and clearly labeled on your Display Board (i.e., Topic/Problem, Hypothesis, Materials, Procedures, Graphs/Charts, and Conclusion).
5. Summarize all the different steps of the scientific method to display on the board. Do not display the actual documents included in your Final Paper, but rather create summaries of these documents. For example, you will need to shorten and summarize your Procedures in order to display them on the board.
6. Utilize photographs to document the various phases of your projects. Do not include photos of human test subjects unless you have informed consent from the participants. Do not include any photos of yourself. Refer any questions on the appropriateness of your photos to your teacher.
7. Your visual display must be neat, creative, use an attractive and consistent color scheme, have an organized layout, and utilize correct grammar and spelling on all documents. Once again, any corrections by your teacher to previous assignments must be included in the documents displayed on your board.

   When laying out your Display Board, try to organize the elements so they are attractive, colorful, informative, and easy to read so that the judges and spectators can easily assess your project. Efficiently organize the space on the Display Board by making headings stand out and displaying Graphs/Charts that are clear, concise, and correctly labeled. Label all the following elements on your board: Topic/Problem, Hypothesis, Materials, Procedures (abbreviated if necessary), Graphs/Charts, and Conclusion. Any observer should be able to easily understand and follow your experiment without any further explanation.

APA Style Guide

APA (***American Psychological Association***): Style of writing research reports that is most often used for Science and Social Studies reports.

Remember*:* Check with your teacher for any special instructions he/she may have for the assigned research report. They may have made some modifications to the APA style.

APA Paper Format should include:

1. **Title Page**: The title should begin approximately 1/3 of the way down from the top of your page, centered, and double-spaced (right click on paragraph to change the line spacing, choose *double***,** and then click OK). The title page will be the first page and will include:
   a. Your paper's topic on the first line
   b. Your hypothesis question on the second line
   c. Your name on the third line
   d. Your teacher's name on the fourth line
2. **Abstract**: On the second page of your research paper write an abstract--a 100 to 150 word paragraph-summarizing your research paper. Center the word *Abstract* approximately one inch from the top of the page. ***This is only needed for assignment # 6, your final paper.***
3. **Body of the Paper (Research Paper):**
   a. **Margins**: One inch all around. To change the margins go to FILE, click on PAGE SETUP, adjust each margin TOP, BOTTOM, RIGHT and LEFT to one inch.
   b. **Spacing:** Your entire research paper should be double-spaced.
   c. **Title:** Center and underline the words Background Literature at the top of the page. Skip four lines and begin your paper, indenting five spaces for each paragraph.
   d. **Subtopics:** Each subtopic is bold typed with uppercase and lowercase letters on the left margin.
   e. **Page Headers:** The page header is the area at the top of the page. Every page should have the short title of the paper on the left and the page number on the right. The short title should only be a few words long in ALL CAPITAL LETTERS. For example MOLD.

4. Citations:

a. In APA style you must give credit to an author for his/her words or ideas. This process is called citing sources. Each time you use an author's ideas or words in the body of the text you must include the author's last name and date of source, either within the sentence or in parentheses. Refer to the examples below.

Examples:

According to a 2003 article by Jane Adanster, an aquifer is an underground water supply.

Or:

According to a recent article by Jane Adanster (2003) an aquifer is an underground water supply.

Or:

According to a recent article (Adanster, 2003), an aquifer is an underground water supply.

b. If you quote the work directly, you must include page numbers.

Example: Consumerism has become a "national obsession" (Jones, 2004, p.12).

c. If you have more than one author and less than five authors of one book, list authors' names with the last name separated by a comma and the last one listed separated by an ampersand (&).

Example: Kyudo is the Zen martial art of archery (Dunkirk & Jenkins, 2001).

Example: No English dictionary was around when Shakespeare wrote his plays (Bask, Walsh, Wenchester, & Zonk, 1997).

d. If you have more than five authors of one book, list the first author's last name followed by et al.

Example: Some farmers bury special gypsum blocks in the soil (Nesser et al., 2005).

Note: Each citation must match with one of the entries in the alphabetized list of *References* at the end of your paper.

5. **References:** Credit for the sources you cited in your research paper on a page entitled *References* (not *Bibliography*).

   a. Page Numbers: Continue the numbering of the pages as you did from the title page and throughout the body of the paper.
   b. Title: Place the word *References* centered, approximately one inch from the top of the page.
   c. Entries: List the entries alphabetically by author's last name. If no author is given, list the entry by the title of the article (disregarding the *A*, *An*, or *The*).
      1) Double-space between all lines (including between the title, *References*, and the first citation).
      2) Type only one space after each punctuation mark.
      3) Begin each entry at the left margin and indent any additional lines five spaces.
      4) Titles of books and periodicals must be underlined or put in italics (check with your teacher for his/her preference).
      5) Electronic entries must include the complete URL web address: http://www.srl.caltech.edu/personnel/krubal/rainforest/Edit560s6/www/where.html.

Formats and examples of sources for reference list:

Format for a Book Entry:

Author's last name, Initials. (year). *Book title*. Location: Publisher.

Note: For the location, include the city followed by a comma and then the state (e.g., Chandler, AZ: Bosco Publishers).

Example:

Bode, J. (1999). *Life on Mars.* New York: Delacorte Press.

Example for a Book Entry with more than one author:

Monroe, J.G. & Williamson, R. (1998). *First Houses: Native American Homes and Sacred Structures.* Tempe, Arizona: Houghton.

Format for a Periodical Entry:

Author's last name, Initials. (year, Month day). Article title. *Periodical Title*, vol. No., pages.

Example:

Hodges, G. (2005, January 18). Robert Koch and the Hunt for Anthrax. *Odyssey*, 17, 6-13.

Format for an Online Source:

Author's last name, Initials. (year, Month day). Article title. *Periodical title*, vol. no., pages. Retrieved Month day, year of retrieval from the complete URL

Note: The most reliable electronic source has an author. If your electronic source does not have an author, start the entry with site sponsor, or title of the article. If a source has none of the above, it is considered unreliable and should not be used.

Example:

Carter, D.L. (2004, April) . A nation embraces capitalism. Economic Perspectives Retrieved October 6, 2005 from ftp://342.323.342.1 EconomicPerspectives /2004.6/95.6.18.capitalism.14.carter<.txt

Example of electronic source without an author:

Site sponsor. (Year, Month day). Title of article. Retrieved Month day, year from the complete url.

NASA. (2005, November 21). Gas Pressure. Retrieved December 5, 2006 from http://www.grc.nasa.gov/WWW/K-12/airplane/pressure.html

Note: In place of the unknown author the sponsor of the site was listed – NASA and as always the complete URL.

Science Fair Project: Grade 7/8 Rubric

8th Grade Oct. 25 **7th Grade Oct. 29**	❖ **Topic/Problem and Hypothesis/Rationale**: Topic/Problem is sufficiently limited and clearly stated. Hypothesis question is included on the title page. Hypothesis is in the proper format (if…then). You must have three hypotheses. Choose one to test. The Rationale must be sufficiently explained. **Include a copy of the procedure.**	0	1	2	3	4	5
8th Grade Nov. 12 **7th Grade Nov 19**	❖ **Outline for Research Paper:** Must have Problem Question, Major Point, Subtopics and Support Statements. Follow directions given in class.	0	2	4	6	8	10
8th Grade Nov. 22 **7th Grade Dec. 2**	❖ **Research:** Relevant/current information is presented. Outline must be included with research paper.	0	1	2	3	4	5
	❖ **Two quotes**: Quotes must be from scientific literature; must be properly formatted.	0	1	2	3	4	5
	❖ **References**: Proper format is used. Five sources minimum; two encyclopedias maximum.	0					
	❖ **3 pages, 900-1000 words:** Sufficient information on the topic is included.	0	2	4	6	8	10
	❖ **Include paragraph in to bring it all together**	0	1	2	3	4	5
	❖ **APA Guidelines Followed**	0	1	2	3	4	5
	❖ **Glossary included**	0	1	2	3	4	5
	❖ **Two copies must be submitted**. One copy must be electronically submitted by sharing the Google document with Ms. Whalen, typing **SF 13** in the subject line. One print copy must be submitted to Ms. Whalen.						
8th Grade Dec. 6 **7th Grade Dec. 13**	❖ **Variables**: Independent/Dependent Variables in complete sentences. Constants and Control Group are clearly identified. State the variables in sentence form. Ex: The independent variable in the mold experiment is…	0 0	1 1	2 2	3 3	4 4	5 5
	Materials: Metrics used, and all amounts specified. Ensure there are enough materials to repeat your experiment five times; descriptions of the materials must be specific.	0	1	2	3	4	5
	Procedures: Clear, specific instructions in **numbered steps**, including replication of the experiment, and sufficient planning of data. ♦ **Include the question and topic as part of the heading**	0	1	2	3	4	5

8th Grade Jan. 15 **7th Grade Jan. 22**	❖ **Observation/Data**: One paragraph describing what happened in your experiment. Do not restate every step, summarize.	0	1	2	3	4	5
	-A second paragraph that explains the graphs/chart, using the starter sentence "On the following page…"	0	1	2	3	4	5
	-Data will be brought to class to create a handwritten graph.	0	1	2	3	4	5
	❖ **Graphs/Charts**:						
	-Charts are set up correctly, labeled (with the same title as the graph it represent), and formatted.	0	1	2	3	4	5
	-Two complete graphs (properly and neatly done), appropriate titles and labels, including metric units. Data is organized and complete.	0	1	2	3	4	5
	- Include hand drawn graph	0	1	2	3	4	5
	♦ **Include the questions and topic as part of the heading**						
	❖ **Conclusion**: ***Optional, but recommended for input***						
	#1Restate the Hypothesis providing a clear answer.						
	#2"The hypothesis was/was not proven that…"	0	1	2	3	4	5
	#3 "In order to prove this, …"	0	1	2	3	4	5
	#4 "The results were…"(summarize the results)						
	#5 "These results were obtained because…" (explain why)	0	1	2	3	4	5
	#6 "The problems encountered during this experiment include…						
	#7"During this experiment the following information was learned	0	1	2	3	4	5
8th Grade Jan. 29 **7th Grade Feb. 1**	❖ **Analysis/Further Experimentation**: The **Analysis** explains the experiment and answers the questions proposed in your project. How does the background information relate to your results Why did the results happen? Refer back to research.	0	2	4	6	8	10
	❖ **Further Experimentation** paragraph lists ways you could expand or build upon your project.	0	1	2	3	4	5
	❖ **Practical Applications/Limitations:** Write one paragraph in which the experiments' limitations are adequately recognized, and one paragraph describing the practical applications of your experiment.	0	1	2	3	4	5
	♦ **Include the questions and topic as part of the heading**	0	1	2	3	4	5

8th Grade Feb. 6 **7th Grade Feb. 6**	❖ **Final Paper Title Page/Table of Contents/Abstrac**t: Use proper APA format for each assignment. Ensure the Abstract is 150 words and describes the project completely.	0	1	2	3	4	5
	❖ **References**: Proper format is used. Five sources minimum; two encyclopedias maximum.	0	1	2	3	4	5
	❖ **Annotations (of References)**: For each source on your References page, explain where it was used and how it helped your project.	0	1	2	3	4	5
	❖ **Grammar, punctuation, spelling, usage, proper format** including margins, font, etc.	0	1	2	3	4	5
	❖ **Acknowledgements/Glossary**: Paragraph(s) giving credit for any and all assistance (includes correct grammar and spelling). Glossary must have **minimum** of five terms.	0	1	2	3	4	5
8th Grade Feb 6 **7th Grade Feb 6**	❖ **Display Board**: The visual presentation must display creativity, neatness, attractive color scheme, and proper layout (includes correct grammar and spelling).	0	1	2	3	4	5
	❖ All **steps in the scientific method clearly displayed separately** and labeled -Topic/Problem, Hypothesis, Materials, Procedures, Charts/Graphs, and Conclusion (see next bullet)	0	1	2	3	4	5
	❖ All **steps in the scientific method are summarized** in order to display them on the board.	0	1	2	3	4	5
	❖ **Corrections** from all previous assignments are incorporated into the Final Paper.	0	1	2	3	4	5
	❖ **Evidence signed and dated by mentor must be submitted with Final Paper.** Meet with a mentor: Each student must meet two times with a professional mentor either in person or via e-mail.	0	1	2	3	4	5
Total Points Earned:							
Total Possible Points: 210							
Final Grade:							