

Your Creative Title Here

Your Name
Partners: Your Partners' Names

May 10, 2007

Chemistry
Miss Gurganus
Your hour

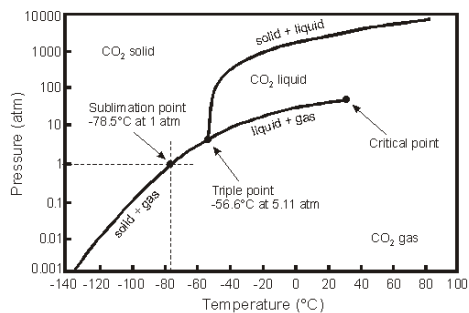
ABSTRACT:

Your abstract should be a summary of your entire report and magic show experience in one or two paragraphs. It should include a **brief** explanation of what your skit was about (and the characters in it), what demonstrations you did, and the main chemical topics you explain in your report.

Your magic show report is to be written using a blend of the traditional scientific research paper style and the creative writing style you have learned in English class. Someone should be able to take your report and recreate your entire project. The report begins by describing your magic show skit and overall presentation, explains how to make all the necessary special effects, and ends with a discussion of the chemistry behind your demonstrations. The discussion section will be the most challenging section to write and should be the longest one. In it, you will teach the reader (me!) as much about the chemistry behind the demonstrations as you can. Start with the most basic ideas and build from there!

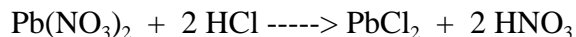
The report is to be a formal, typed paper **at least 10 pages long** but **not** over 15 pages long. The report should be typed, double-spaced, with each paragraph indented one tab. This page is printed using the required format. All margins should be 1 inch as well. Learn to turn off widow and orphan protection! The report should be fully justified (Mac users: see me!). **Do NOT use headings or sections in your report**; use paragraphs and sentences only!!!

Pages may be numbered if you wish (but margins of the typed words should still be one inch). The numbering should start with the second page of typewritten material. The cover page and first page are usually not numbered. Pages are often numbered in the footer or header. Also note that in a double-spaced paper, **an extra line is not added between paragraphs**. Diagrams (4.5" or less in height) should be centered and worked into the text near the information they help explain.



Pressure-Temperature phase diagram for CO₂.

Full-page diagrams will not count toward the total number of report pages. Only type on one side of each piece of paper. Equations (both chemical equations and math) should also be centered on their own lines. Talk to me about how to make an equation part of a sentence, such as



The typed font needs to be easy for me to read. This paper was typed with Times New Roman - size 12. You must choose size 12; your font choices are Courier New, Arial, and Times New Roman. I do NOT like fancy type (including italics and bold)! When in doubt, bring in a printed sample. **DO NOT** use larger letters; if you do, I will assume you did not have enough to write and were trying to pad your report.

Remember that I have to read ninety of these reports!!! You want me to be in a good mood while reading, so write your report in the following order:

Cover Page

A formal title page should include a creative title (“Magic Show Report” is NOT acceptable), your name, the date your report is submitted, course name, teacher name, class hour, and your partners’ names. All this information should be centered between the left and right margins. The example cover page on this handout is the proper format. **Do NOT** include any art work on this page! I know that pictures, clip art, and diagrams are beautiful, but spend your artistic energy on the required diagrams of the report.

Introductory Paragraph

The first paragraph of your report should introduce the reader to your report. It should describe what a magic show is and a few of its requirements. Your introductory paragraph should be an intriguing set of sentences that draws the reader in!

Skit

The next part of your report needs to be a detailed description of your presentation/show. **I do NOT want a script**, but someone should be able to recreate your overall ideas from your description. Describe the main idea of your skit. A general time line is good if it is in sentence form. Explain where each of your special effects belonged in the skit and what you did in front of the audience to activate the demonstrations. It is your option to describe what was planned or what really happened. **You are required to include at least one full-color, labeled diagram of the staging area (including people, props, tables, equipment, and demonstrations).**

Preparation and Hazards

After describing the skit and presentation, you need to give **very specific** directions on how to prepare each of the chemical demonstrations you used. Don't forget to include directions on how

to make every solution and mixture **even if you did not make them!** **Include a detailed, labeled diagram of each demo preparation set-up AND any props you had to build** (and the directions on how to build them). Discuss the hazards of the chemicals (both what you started with and what you created), any problems you encountered, and warnings for anyone who would try to recreate your work. These warnings should also include safety precautions concerning the handling of the chemicals (especially gloves, explosion barriers, and keeping chemicals cold) and the execution of the demonstrations. Most importantly, tell the reader any changes you made from the demonstrations' printed instructions and any special hints or tricks your group learned/figured out along the way to make the demonstrations work better.

Research

The research portion of the report should be the largest section of the paper and will be the most challenging to write. You will need to demonstrate a good understanding of the basic (and some of the advanced) chemistry of your project. Your goal should be to teach me what makes your demonstrations do the cool things they do! Imagine I know very little about chemistry. Tell me how and why your demonstrations work. It is often best to start with the elementary-level chemistry books. Once you have an idea of the beginning concepts, you should move up to middle school- and high school-level explanations. Your textbook is an excellent resource, but there are also many other books in the department. Then you should be ready to move onto freshman-level college chemistry textbooks. If you are still missing some of the concepts move on to the advanced-level reference books.

This section is NOT a collection of copied paragraphs. As you read the different reference materials, it is important to take **NOTES** on what you read. You need to focus on the most important and relevant facts and determine whether they truly relate to your topic/show. Analyze every piece of information! Extract only the information that furthers your understanding of the subject. If it doesn't make sense to you, it won't make sense to the reader. **Put EVERYTHING in your own words!** If you find the same facts in several sources, use the one with the presentation that makes the most sense to you.

You need to be able to use the reactions from your demonstrations to illustrate the different chemistry concepts. It is important that you demonstrate throughout your report that you have an understanding of all the aspects of your demonstrations. You **must** use examples when describing the different concepts, but **they may only be examples from your project.** **You can not use any reactions or chemicals as examples that you did not use in your show.** **Note that you are required to include diagrams to explain concepts related to your demonstrations.**

Chemical Disposal

The project doesn't end when the audience leaves. You will need to clean up any left-over chemicals plus the new chemicals formed during your skit. In your report, include the directions needed to treat ALL the waste (including left-over original chemicals that never got used). You can find directions on cleaning up chemical waste in the Flinn catalog (and even sometimes in your demonstration handouts). Be specific! Don't just list numbers! Even if you did not dispose of it yourself, describe what you would have (or should have) done.

Conclusion

To end your report, describe this learning experience from day one to your report-writing

experience. Discuss your partners, your lab/prep days, your before/after-school appointment(s), the dress rehearsal, and the show itself. Explain any problems encountered along the way and the unique solutions you came up with. Include suggestions for improvements you would make if you could re-do the project. Tell me your honest, factual opinion of the magic show and why! This is your chance to praise or rant! Be honest, **be detailed**, and be critical (of yourself and others)! [I would love to give every student full credit on the conclusion section, but I can't if you don't include **lots of details!**]

Bibliography

You will be required to include a complete bibliography, but you do not have to footnote the paper. The bibliography needs to start on a new page but **is not** considered one of the ten pages of the report (and neither is the cover page). Remember to document web sites, online images, interviews, and diagrams! If you use a book or web site for even a single idea, it should be listed in your bibliography! **Most critical is to document where you found your demonstration handouts.** A "passing" magic show paper will have at least ten sources in its bibliography. Use the bibliography handout for how I would like the bibliography completed. [NOTE: Search engines (like Google, Yahoo, and Ask.com) are not sources. They only lead you to sources. Write down the FULL ADDRESS of any web pages where you find information! Also remember that Internet sources are less likely to be correct than printed sources.]

Tips on how to write a research paper

My research books and Ms. Maxwell's library will be available many days both before and after school. It is advisable to check with us before you plan on staying on a specific day. None of the books may be removed from either room by students. We are both willing to copy any pages you need. The first 10 pages are free, but you must donate (to the LHS science department) 10 cents per page for every page after that.

Before you begin the actual writing, take some time to review all the facts. Try to determine a few themes (main topics) that tie the material (and demonstrations) together. As you do this some sub-topics should also become apparent. Use **outlines** to help you organize what you want to say in your paper. Remember that each paragraph should have only one main topic, but there may be many details and sub-topics. Paragraphs are not equal to sentences! Once you have the information organized in outline form it will be much easier to write it in your own words. Remember the paper is not simply a bunch of facts strung together. You need to have an educated interpretation of the facts that tie your research to your project.

EACH PERSON IS TO WRITE HIS/HER OWN REPORT.

THIS IS NOT A GROUP REPORT!!!!

****For each section copied/similar, BOTH/ALL students will receive NO CREDIT.****

DO NOT "HELP" YOUR PARTNERS ON THE REPORT!

Formatting requirements

- The report **MUST BE TYPED, DOUBLE SPACED!!**
- each paragraph indented a tab (or, for less credit, 5 spaces)
- use sentences, paragraphs, equations/math, and diagrams/pictures only (no lists)
- fully justified margins
- one-inch margins on all sides ****I will be using a ruler to check!****
 - [Note to MS Word users: Word is set to 1.25" margins; **YOU MUST CHANGE THEM!**]
- length: 10 (minimum) to 15 (maximum) typed pages; if you have more to say, put the diagrams at the end of the paper (as pages with more than 4.5" of diagram don't count in the total). I will only read 15 typed pages! More than that will be ripped off and thrown away!
- font options: Times New Roman (shortens paper), Arial, or Courier New (lengthens)
- font size: 12
- two spaces between sentences
- **DON'T CAPITALIZE NAMES OF CHEMICALS!!!!**
- no headings (like Research, Disposal, or Skit)
- equations (math and reactions) should be centered on their own lines
- subscript on many programs: CTRL =
- superscript on many programs: CTRL SHIFT =
- degree symbol: ALT 248 (on number pad)
- turn off widow and orphan protection!
- no extra line between paragraphs
- diagrams, charts, and graphs should be worked into the text. If you can't figure out how to do that, have separate pages at the end of your report labeled "Figure 1," "Figure 2," etc.
- **DO NOT USE THE WORDS 'YOU' or 'YOUR.'**
- **DO NOT USE COMMANDS! Tell the reader what YOU did!**
- **Use the past tense!**
- staple the pages of your report together with a single staple in the top, left-hand corner
- no report covers!
- report due on May 10, 2007 during your class hour (or earlier! ☺)
- 5 points off if turned in later that day; 10 points off for each school day late
- send the report in with a friend if you can't make it to school the day it is due

NOTES: No printer/computer/disk/ink/paper/CD/typing/etc. excuses will be accepted.

Options:

- E-mail me your report (gurganus@gw.lincoln.k12.mi.us)
- Bring it in on disk/CD/thumb drive
- **DON'T bring in the computer!** (Yes, it has been done before.)

I am willing to print reports!

- If you want me to print your report, save it in RTF (Rich Text Format)
- **DON'T SAVE YOUR REPORT AS A MICROSOFT WORKS FILE!**

Don't have your mom/dad/guardian call or write a note to make excuses for you. I've heard it all before. Just get the report done and turn it in on time!

Chemistry - Magic Show Presentation
Scoring Rubric

Name: _____

Hour: _____

Total Score = _____ % = _____
40 points

| Chemistry - Magic Show Presentation | | | | | | |
|-------------------------------------|---------------------------------|---------------------------------|-----------------------------------|---------------------------|----------------------------------|---------------------------|
| | 100% | 90% | 80% | 70% | 60% | 50% - 0% |
| | Excellent job! | Good job! | A few problems | Needs work | Some serious problems | Major problems or missing |
| Props: | 10 | 9 | 8 | 7 | 6 | 0 |
| | Fit the skit and well made | Well made but not well arranged | Good but not arranged well | Needed some more work | Almost no props | Missing |
| Skit: | 10 | 9 | 8 | 7 | 6 | 0 |
| | Great idea! Well done! | Good but a few minor problems | OK but a few major problems | OK but needed more work | Just did the demos | Boring! |
| Dialogue: | 20 | 18 | 16 | 14 | 12 | 0 |
| | Excellent words and volume | Excellent words OR volume | OK words and volume | OK words OR volume | Couldn't hear you AND poor words | Said nothing |
| Safety: | 10 | 9 | 8 | 7 | 6 | 0 |
| | No safety problems! | Almost perfect safety | Small, minor problems | Needed to use the barrier | No goggles OR no apron | No goggles AND no apron! |
| Demos: | 15 | 13.5 | 12 | 10.5 | 9 | 0 |
| | All worked | A few minor problems | Most worked | Some worked | Most didn't work | None worked |
| OH-WOW Factor: | 30 | 27 | 24 | 21 | 18 | 0 |
| | Amazing! | | Just OK | | Better luck next time | NO-WOW |
| Set-up/Clean-up: | 5 | 4.5 | 4 | 3.5 | 3 | 0 |
| | Complete; worked the whole time | | Complete; worked most of the time | | Complete; did very little | Not completed |

Chemistry - Magic Show Report
Scoring Rubric

Name: _____

Hour: _____

Total Score = _____ = _____ %
100

| Chemistry - Magic Show Report | | | | | |
|--|---------------------------------------|-----|---|----------------------|---------|
| Cover (Title) page: | 2 | 1.6 | 1.4 | 1.2 | 0 |
| Complete & proper format | Incomplete or improper format | | | | Missing |
| Abstract: | 4 | 3.2 | 2.8 | 2.4 | 0 |
| Complete and brief summary | Too wordy or incomplete | | | | Missing |
| Introductory paragraph: | 2 | 1.6 | 1.4 | 1.2 | 0 |
| Describes purpose of report | Incomplete or not interesting | | | | Missing |
| Inviting to reader | | | | | |
| Skit (description): | 5 | 4 | 3.5 | 3 | 0 |
| Complete & detailed description of skit | Incomplete | | | Missing many details | |
| Skit (full-color diagram[s]): | 5 | 4 | 3.5 | 3 | 0 |
| Neat and complete | Incomplete/messy/not colorful | | | | Missing |
| Preparation Description (solutions/mixtures/chemicals/masses/formulas/props): | 7 | 5.6 | 4.9 | 4.2 | 0 |
| Complete and detailed | Incomplete description | | | No | |
| Includes diagrams | Some diagrams | | diagrams | | Missing |
| Preparation Description (warnings/hazards/safety/tips): | 3 | 2.4 | 2.1 | 1.8 | 0 |
| Complete and detailed | Incomplete/not detailed | | | | Missing |
| Research (general description of the chemistry - definitions, concepts, calculations): | 20 | 16 | 14 | 12 | 0 |
| Complete and detailed | Incomplete/brief | | | | Missing |
| Research (reaction equations and use of only your demos/chemicals as examples): | 15 | 12 | 10.5 | 9 | 0 |
| All equations complete, correct | Some equations correct | | | | |
| Excellent use of your demos | Incomplete/poor examples | | | | Missing |
| Research (diagrams explaining your research): | 5 | 4 | 3.5 | 3 | 0 |
| Detailed; helped the explanation | Messy/incomplete | | | | Missing |
| Research (demonstrated understanding of demos' chemistry): | 5 | 4 | 3.5 | 3 | 0 |
| Excellent understanding | Missing some detail | | No understanding demonstrated | | |
| Chemical Disposal: | 5 | 4 | 3.5 | 3 | 0 |
| Complete directions | Incomplete or some incorrect | | No correct directions | | |
| Conclusion: | 8 | 6.4 | 5.6 | 4.8 | 0 |
| Complete, detailed, lengthy | Incomplete/brief | | | | Missing |
| Bibliography: | 4 | 3.2 | 2.8 | 2.4 | 0 |
| Complete and proper format | Incomplete or improper format | | | | Missing |
| Overall format and quality of the writing: | 10 | 8 | 7 | 6 | 0 |
| Proper report format/length | Some format/length problems | | Many format/length problems | | |
| Proper grammar, spelling | Full sentences but writing needs work | | Poor spelling, grammar, and punctuation | | |
| Good flow and style | | | | | |

Chemistry Magic Show
Lab Journal Rubrics

Name: _____

Hour: _____

Total Score = _____ = _____ %
30

| Lab Journal #1 | | | | |
|--|-----|--|------------------|------------------------|
| Demonstration Name/Source: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete and clear | | Incomplete, not specific | | Missing |
| Materials: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete, proper format | | Incomplete, missing items, wrong format | | Missing |
| Hazards: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete and detailed | | Incomplete, in sentence fragments | | Missing |
| Disposal: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete, detailed Includes disposal of reactants and products | | Incomplete, lacks details Only has disposal of reactants OR products | | Missing |
| Procedure: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Either says "follow handout" or gives detailed procedure | | Says "follow handout" but should list a procedure | | Missing |
| Data: | | | | |
| 4 | 3.2 | 2.8 | 2.4 | 0 |
| Complete, detailed Includes words, measurements, sketches | | Incomplete, lacks details Not descriptive | | Missing |
| Housekeeping and Signatures: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete | | Missing a signature | | Missing all signatures |
| TOTAL - Lab Journal #1 | | | out of 10 points | |

| Lab Journal #2 | | | | |
|---|-----|--|------------------|------------------------|
| Demonstration Name/Source: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete and clear | | Incomplete, not specific | | Missing |
| Materials: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete, proper format | | Incomplete, missing items, wrong format | | Missing |
| Hazards: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete and detailed | | Incomplete, in sentence fragments | | |
| Disposal: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete, detailed | | Incomplete, lacks details | | |
| Includes disposal of reactants and products | | Only has disposal of reactants OR products | | Missing |
| Procedure: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Clean-up signature, your signature, and partner's signature present | | Missing clean-up, your signature, or partner's signature | | No signatures |
| Data: | | | | |
| 4 | 3.2 | 2.8 | 2.4 | 0 |
| Complete, detailed | | Incomplete, lacks details | | |
| Includes words, measurements, sketches | | Not descriptive | | Missing |
| Housekeeping and Signatures: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete | | Missing a signature | | Missing all signatures |
| TOTAL - Lab Journal #2 | | | out of 10 points | |

| Lab Journal #3 | | | | |
|---|-----|--|------------------|------------------------|
| Demonstration Name/Source: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete and clear | | Incomplete, not specific | | Missing |
| Materials: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete, proper format | | Incomplete, missing items, wrong format | | Missing |
| Hazards: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete and detailed | | Incomplete, in sentence fragments | | |
| Disposal: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete, detailed | | Incomplete, lacks details | | |
| Includes disposal of reactants and products | | Only has disposal of reactants OR products | | Missing |
| Procedure: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Clean-up signature, your signature, and partner's signature present | | Missing clean-up, your signature, or partner's signature | | No signatures |
| Data: | | | | |
| 4 | 3.2 | 2.8 | 2.4 | 0 |
| Complete, detailed | | Incomplete, lacks details | | |
| Includes words, measurements, sketches | | Not descriptive | | Missing |
| Housekeeping and Signatures: | | | | |
| 1 | 0.8 | 0.7 | 0.6 | 0 |
| Complete | | Missing a signature | | Missing all signatures |
| TOTAL - Lab Journal #3 | | | out of 10 points | |