

ENVIRONMENTAL SCIENCE FINAL PROJECT

SUMMARY FROM SYLLABUS

The final project is designed to synthesize concepts learned in both lab and lecture throughout the quarter, as well as to build your skills and experience in writing scientific research reports. You will get to choose the topic for your final project, a **5-6 page paper in APA format** (excluding title, figures, and references), which ties together the subjects covered in this class. There will be several small assignments building up to the final project, which will be included in the **20%** of your course grade attributed to the project.

CHOOSING YOUR SUBJECT

You will be allowed to choose your own subject for your final research project. Your subject can be about any solution or innovation that will help improve and environmental problem or concern, but it cannot be too general, and so I will need to check in with you about your theme.

PROJECT PHASES

You must receive credit for each phase before you can move on to the next step!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

Thursday, March 22nd – Topic Outline (10 pts)

Thursday, March 22nd – Five Sources in a Bibliography (10 pts) – You are welcome to add more later.

Thursday April 12th – Research Notes/Outline (30 pts)

Tuesday, May 1st – **Complete** Draft including References and Appropriate **Citations** (30 pts)

Tuesday, May 1st – Review (10 pts) – Draft Organization Worksheet

Tuesday, May 15th - Final Draft (80 pts)

Tuesday & Thursday May 15th & 17th – Research presentation (30 pts)

Break down your subject. You should have 4 to 7 subcategories that you will need to address as you take on your paper, you also need to think about the appropriate order in which you will want to address these subcategories within your subject.

Subject: The potential removal of the Klamath River dams and the fate of its fisheries.

Topic Outline:

Introduction – general introduction of subject or issue

- I. The setting: The Klamath River
- II. The river's fisheries
- III. The dams
- IV. The dams' effect on fisheries
- V. The dams' other influences
- VI. Benefits of dam removal – Hydrology
- VII. Benefits of dam removal - Habitat
- VIII. Drawbacks of removing the dam
- IX. Why the dams should be removed
- X. Conclusion – Summary of main ideas

FIVE SOURCES – See example at the back of the packet.**Tips on searching for appropriate sources:**

- On library database, narrow your search to look in periodicals (ex. *Scientific American*, *National Geographic*, *Discover*, etc.), which will have an appropriate level of detail.
- When searching on the web, try putting in a search term with a reputable organization, ex. Hawaii volcanoes and USGS
- Use google scholar in addition to google: <http://scholar.google.com/>

Collecting Research Materials

You will be required to use a **minimum of 5 sources** for your research assignment, but I would recommend using more. Wikipedia is great and I would strongly recommend that you read it, but **IT CANNOT BE ONE OF YOUR SOURCES**. In addition to using multiple sources you will be required to use **at least one** source from each of the following categories:

1. Academic, peer-reviewed, journal article

A peer-reviewed journal is a journal that is written by a researcher or professional in the field and then reviewed by a panel of other professionals to ensure the integrity of the research and information before it is published. These days, most academic articles are published online. FRC has access to many scientific journals. You can locate these sources by going on the library website (www.frc.edu/library), under Electronic Databases, and clicking on the **Academic Search Premier** database. I believe this will be the most helpful database, but you can check out others as well, ex. greenFILE. *National Geographic Magazine* and *Scientific American* are NOT peer-reviewed journals. They may be helpful, good sources for you to use as a reference for your paper, but will not count towards your peer-reviewed journal requirement. Academic journals are usually called *Journal of Geophysics*, etc.

2. Book

Go to the library and find an old-school, hardcopy book or an e-book. We have a decent selection in the FRC library. I have some good books in my office and at home as well, if you are not able to find something relevant in the library. I can also try to order more books for our library if you can't find something relevant for your topic.

3. Online Source**ALL ONLINE SOURCES MUST BE .GOV OR .EDU CITES. NO WIKIPEDIA ALLOWED.**

These days, there is so much information on the web, that it can be difficult to sort out what information has high scientific value. One method to filter information is to limit your sources to those published by academic institution or by the federal, state, and local governments. Sites like Wikipedia, are a great place to start, to get a general sense of your topic, and in the references for the Wikipedia article, you may locate sources that you can use for your research project. However, the one online source that you are required to use, and the others that you may choose to use to get up to your minimum of five sources **must** be from a academic research institution (end in xxx.edu) or a government site (end in xxx.gov, state governments will appear xxx.ca.gov or xxx.wr.gov). The USGS (US Geologic Survey) may be the best source, and it has lots of educational info online. Other organizations such as NOAA (National Oceanic and Atmospheric Association) or the BLM (Bureau of Land Management) may have good info published online as well.

Five Sources - To Turn In - At this point you will need to turn in a bibliography, citing the five (minimum) sources that you will read to research your subject.

“How do I cite my sources?”

“Good Question!”

We will use APA (American Psychological Association) formatting guide lines, which are fairly standard for scientific disciplines. I have provided examples below, but there is much more info available at the Purdue Online Writing Lab (<http://owl.english.purdue.edu/owl/resource/560/05/>)

Basic Formatting Info:

- Alphabetical Order by last name of author, or organization if not personal author is listed. If a specific person is listed, they should always be credited.
- Reverse indentation (second and subsequent lines are indented with respect to the first line)
- Every source must have an author. An author is NEVER a url, but may be an organization, ex. USGS.

Basic Format Journals

APA style dictates that authors are named last name followed by initials; publication year goes between parentheses, followed by a period. The title of the article is in sentence-case, meaning only the first word and proper nouns in the title are capitalized. The periodical title is run in title case, and is followed by the volume number which, with the title, is also italicized. **See an example at the back of this packet.**

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. *Title of Periodical*, volume number (issue number), pages.

Scruton, R. (1996). The eclipse of listening. *The New Criterion*, 15(3), 5-13.

Basic Format for Books

Author, A. A. (Year of publication). *Title of work: Capital letter also for subtitle*. Location: Publisher.

Note: For "Location," you should always list the city and the state using the two letter postal abbreviation without periods (New York, NY).

Calfee, R. C., & Valencia, R. R. (1991). *APA guide to preparing manuscripts for journal publication*. Washington, DC: American Psychological Association.

Edited Book, No Author

Duncan, G. J., & Brooks-Gunn, J. (Eds.). (1997). *Consequences of growing up poor*. New York, NY: Russell Sage Foundation.

E-book

De Huff, E. W. (n.d.). *Taytay's tales: Traditional Pueblo Indian tales*. Retrieved from <http://digital.library.upenn.edu/women/dehuff/taytay/taytay.html>

Basic Web Document, Web Page, or Report

List as much of the following information as possible (you sometimes have to hunt around to find the information; don't be lazy. If there is a page like <http://www.somesite.com/somepage.htm>, and [somepage.htm](http://www.somesite.com/somepage.htm) doesn't have the information you're looking for, move up the URL to <http://www.somesite.com/>):

Author, A. A., & Author, B. B. (Date of publication). Title of document. Retrieved from <http://Web address>

Angeli, E., Wagner, J., Lawrick, E., Moore, K., Anderson, M., Soderland, L., & Brizee, A. (2010, May 5). General format. Retrieved from <http://owl.english.purdue.edu/owl/resource/560/01/>

NOTE: When an Internet document is more than one web page, provide a URL that links to the home page or entry page for the document. Also, if there isn't a date available for the document, use (n.d.) for no date.

Example:

- **As required, this bibliography includes a minimum of five sources including: one book, one government (.gov) or academic (.edu) website, and one peer-reviewed journal article.**
- **Entries are in alphabetical order.**
- **Entries are in APA format.**
- **Entries are formatted with reverse indentation. Meaning second line in each entry is indented.**

Hawaii Center for Volcanoes. Formation of the Hawaiian Islands. (2005, April 5). The formation of the Hawaiian Islands. Retrieved from http://www.soest.hawaii.edu/GG/HCV/haw_formation.htm 1

Hawaii Volcanoes National Park, NPS. (2012, November 8). What's going on with the volcano? Retrieved from <http://www.nps.gov/havo/planyourvisit/lava2.htm>

Hawaii Volcano Observatory, USGS. (1997, May 9). Kilauea- perhaps the world's most active volcano. Retrieved from <http://hvo.wr.usgs.gov/kilauea>

Moore, E.M., & Twiss, R.J. (1995) *Tectonics*. New York, NY: W.H. Freeman and Company.

Oskin, Becky (October 13, 2014). Kilauea Volcano's Ashen Footprints Point to Explosive Future. Retrieved from <http://www.livescience.com/48270-hawaii-volcano-deadly-history.html>

Smithsonian Institute, National Museum of Natural History. (2013). Global Volcanism Project: Kilauea. Retrieved from <http://volcano.si.edu/volcano.cfm?vn=332010&vtab=Eruptions>

Swanson, D.A., Zolkos, S.P., & Haravith, B. (2012), Ballistic blocks around the kilauea caldera: Their vent locations and eruptions in the 18th century. *Journal of Volcanism & Geothermal Resources*, 1, 231-232.

Volcano World, Oregon State University. (2015). What are the active volcanoes in Hawaii and what is their status? Retrieved from <http://volcano.oregonstate.edu/what-are-active-volcanoes-hawaii-and-what-their-status>

ANNOTATION OF SOURCES

After each source write a short paragraph about the source. This guarantees that you have looked at the source in enough detail to determine if it will be helpful and/or understandable to you. Your annotation should at minimum include info about source type, source length, overall source depth and quality, whether the info seems a repeat of info in other sources or seems to cover new subtopics, etc.

Example:

Hawaii Volcano Observatory, USGS. (1997, May 9). Kilauea- perhaps the world's most active volcano.

Retrieved from <http://hvo.wr.usgs.gov/kilauea>

This source is a website published by a government agency USGS. It talks about the Kilauea Volcano. It is a fairly short website, which focuses on the general activity and eruptions of the volcano in the past and in current times.

RESEARCH NOTES/ OUTLINE – See example at the back of packet.

This is probably to most time consuming part of writing a paper. Collecting and organizing information is a time consuming process, but it is a critical skill that you need to have in many professions. Your outline will probably be as long, or longer, than your final paper. You can hand write your notes or type them, but I will need to see your notes and how the facts you have taken down will be organized. **We will talk more about this in class and you can see the example at the back of this packet. Your outline will be double-spaced five pages minimum if typed and seven pages minimum if hand-written.**

- **Your outline must include facts ORGANIZED BY TOPIC (from topic outline) – see example in handouts section.**
- **You must have a source associated with EVERY SINGLE fact that you have listed.**
- **Facts in the outline MUST be in your own words.**

Example Research Notes/Outline Format**Topic: Kilauea Volcano, Hawaii****Background - Topic Outline**

General Intro – Kilauea, what is it?

Hotspot Volcanoes

Hawaiian Islands

Big Island Formation

Kilauea formation

Current Activity

Future

Notes – Organized by Topic Outline Subjects - I STARTED, BUT I NEED MORE INFO!!!!

Your “outline” or research notes should be longer than your paper. I will required you to submit five pages minimum if typed or seven, single-spaced pages if hand-written.

Notice:

- **I am recording facts IN MY OWN WORDS!!!**
- **I am keeping track of the source of the info ex. (HVO = the website put up by the Hawaii Volcanoes Observatory).**
- **I have sub topics without adequate info→ ex. I need more info about the future or the formation of Kilauea.**

General Intro – Kilauea, what is it?

Is one of the most active volcanoes on the earth (HCV)

Kilauea is the youngest and most southeastern volcano on Hawaii (HVO)

Bulge on SE slope of Mauna Loa (HVO)

Originally thought to be a side vent of Mauna Loa, now we know it is an independent volcano (HVO)

The Hawaiian name Kilauea means spewing or much spreading. (HVO)

Hotspot Volcanoes

The Pacific plate is a tectonic (lithospheric plate), which is moving over the underlying asthenosphere. (HCV)
 Pac Plate moves 5 to 10 cm/yr (HCV)

Period of volcanic activity is long (100s of 1000s of years), and persists for a while after the hotspot has moved on, for ex. Haleakala on Maui, erupted 200 years ago, at which point big island volcanoes had already long been established (HCV)

Convection plumes rising through the mantle for “hot spots” in the earth’s crust, or weak zones in the plates that lead to volcanic activity (Moore, p. 228)

Plumes are fixed with respect to a fixed place in the mantle (Moore, p. 231)

As a lithospheric plate moves over hotspots, magma extrudes and igneous rocks build up on the surface and create islands. Some may be the water (Moore, p. 232)

Hawaiian Islands

The Hawaiian islands are the tops on large shield volcanoes that extend under the sea. There are 18 islands (HCV)

They were all formed over the Hawaiian hotspot, which currently lies under the big island (HCV)

Each island is formed from at least one primary volcano, though in some cases, such as on the big island, there is more than one volcano present (HCV)

Hawaiian volcanoes contain basaltic lava which has low viscosity and so can flow easily, this leads to lots of flowing lava and the shield formation that is characteristic of all Hawaiian volcanoes (HCV)

Older volcanoes which were previously formed over the Hawaiian hotspot, have eroded and are now under water, they make up the emperor seamounts (HCV)

Volcanoes were erupting on Oahu over a million years ago (HCV)

Big Island Formation

Made up of 5 volcanoes (Mauna Loa, Kilauea, Loihi, Mauna Kea, Hualalai) (HCV)

All three active Hawaiian volcanoes (Mauna Loa, Kilauea and Loihi) share the same hot spot (HCV)

Mauna Loa erupted in 1975 (lasted 1 day) and 1984 (lasted three weeks), but not since (Volcano World)

Loihi is still underwater – 970 meters below sea level (Volcano World)

Loihi will likely reach the surface after 10,000 years (Volcano World)

Hualalai last erupted in 1801 (Volcano World)

Kilauea formation

Basaltic Shield Volcano (Smithsonian)

First sub aerial eruptions 50,000 to 100,000 years ago. First eruptions 300,000 to 600,000 years ago. (HVO)

Currently 4008 feet tall. (Smithsonian)

Long-term lava lake activity lasted until 1924 at Halemaumau crater, within the summit caldera, a 3 x 5 km caldera that was formed in several stages about 1500 years ago (Smithsonian)

During 1700s eruptions came out of lengthy East and SW rift zones, which extends to the sea on both sides of the volcano (Smithsonian)

90% of the surface of the basaltic shield volcano is formed of lava flows less than about 1100 years old (Smithsonian)

70% of the volcano's surface is younger than 600 years (Smithsonian)

A long-term eruption from the East rift zone that began in 1983 has

The caldera was the site of nearly continuous activity during the 19th century (HVO)
61 historical eruptions on record (aka over the past 245 year) (Volcano World)
Since 1952, there have been nearly 32 eruptions (HVO)
Since 1983, continuous eruptive activity along the eastern rift zone (HVO)
Current eruption is called the Pu'u' O'o eruption it can broken down into many episodes that last for periods from hours to years (HCV)
Current Eruption produced lava flows covering more than 100 sq km, destroying nearly 200 houses and adding new coastline (Smithsonian)
There is a 520 ft (160m) wide active vent in Halema'uma'u Crater that is emitting a gas and steam plume (NPS)

Future

One location on Kilauea captures footprints, these are believed to be from people who got caught in the 1790 phreatic (eruptions with ash plumes and rocks, vs. standard lava flow) eruption. This could indicate the possibility for this kind of eruption to occur again (Live Science).

COMPLETE DRAFT**Tips for Writing:**

- Make sure each paragraph has a purpose and check that all info within that paragraph fits into the intended purpose.
- Organize paragraphs and info within paragraphs both chronologically and then with the info that is more broad or introductory first and with the most specific details at the end.
- Scientific writing should be formal and lack casual commentary that may be appropriate in other types of writing.

This is **NOT AN OUTLINE**. This is a complete, **proof-read, spell-checked draft**, with an introduction, a conclusion, the body of research, a bibliography, and including **proper citation**.

“What is proper citation?”

“Good Questions!”

When writing informational, non-fiction essays or papers, **you must cite your sources**. This is done differently in different disciplines. In science, we usually do this by referencing the author and date in parentheses after you include a fact, number, date, or particular opinion or concept that is written in your source, but is not common knowledge about the subject.

Facts not requiring citation:

Volcanoes are cool landscape features that many people like to visit. They spew hot lava that can be very beautiful.

Facts requiring citation:

Mg-rich olivine has a density of 3200 kg/m³ (Middlemost, 1985). Liquid magmas are less dense than the solid rocks that they replace, and consequently they experience buoyant rise towards the surface of the earth. The rate of segregation of crystals and liquids in a onset magmas of 30% liquid is 6500 greater than a mush composed of only 2% liquid (Middlemost, 1985).

Notice the middle sentence does not require citation, because that information is general knowledge that any geology student should know.

Your rough as well as your final draft should be in APA formatting. Visit the Owl at Purdue website and/or the sample paper I have posted on Canvastto see what APA formatting looks like.

(<https://owl.english.purdue.edu/owl/resource/560/01/>).

Research Paper Draft Worksheet

Complete this form and submit it with your rough draft.

Ipsa scientia potestas est - Knowledge itself is power

-Sir Francis Bacon (1597)

Knowledge will forever govern ignorance, and a people who mean to be their own Governors must arm themselves with the power knowledge gives.

-James Madison (1788)

We have long appreciated that knowledge and information is power. However, what is often overlooked is that information alone is useless unless we have the power to organize and communicate that information to others. Once you finish your draft, you will need to complete this exercise to ensure that you have organized and communicated your research information in the best way possible.

Read through each paragraph and then in one, short sentence identify and summarize the main purpose of the paragraph. Ask yourself: what does this paragraph communicate to readers? Then identify any information in the paragraph that does not fit with the purpose of the section and ask yourself: is there a better place in the paper to include this/these facts?

Example:

The area now known as Lassen Volcanic National Park represents the lowest portion of the Cascade Range, and has a vast history dating back to the last Ice Age. Lassen Peak exists in a region that has been volcanically active for more than 3 million years (Coburn, 1922). Mount Maidu, which was located approximately 10 miles southwest of the current location of Lassen National Park, spanned the Pliocene-Pleistocene boundary, 1.8 million years ago (Coburn, 1992). By 1.3 Ma it towered one vertical mile above the present-day location of Mineral, California (Coburn, 1992). Later, Mount Tehama grew up to the east of Mineral (Coburn 1922). Between 1.8 and 1.2 Ma large quantities of rhyolite and dacite lava erupted from the mountain, accumulating more than 8 cubic miles of volcanic rock and ash (USGS, 2006). Mount Maidu was eventually eroded by glaciers and water from Battle Creek (Coburn 1922).

Adapted from *The Eruptive History of the Lassen Volcanic Center*, Lloyd Cash, *Geology* 102, 2013.

Paragraph #	Summary	Information that does not fit with the theme.	Where can I move this information, to locate it more appropriately?
1	Eruptive history of Mount Maidu, a Lassen precursor, 3 to 1.2 Ma.	Location of Mt. Tehema	Following paragraph, with information about Tehema, 600,000 to 300,000 years ago.

Draft Review Worksheet to Complete and Submit with Draft

Paragraph #	Summary	Information that does not fit with the theme.	Where can I move this information, to locate it more appropriately?

FINAL REPORT

Your final draft must be turned in **along with your edited draft**.

Your paper will need to include all the elements required of an APA paper, including:

- Properly formatted body of paper (ex. 12 pt font, 1” margins, double-spaced) – 5 pages minimum
- Properly formatted title page
- Running header with page numbers
- Abstract
- Proper in-text citation
- Paper sections (*optional*)
- Properly formatted work cited page

Remember that you can see an example of APA formatting on the OWL at Pursue website or by looking at the sample paper posted on our Canvas site.

Need help formatting in Word?

General Formatting Info

Paper should be in 11 or 12 pt font Times New Roman (recommended by APA). It should be double spaced and include 1” margins.

Title Page

Type your **title** in upper and lowercase letters centered in the upper half of the page. APA recommends that your title be no more than 12 words in length and that it should not contain abbreviations or words that serve no purpose. Your title may take up one or two lines. All text on the title page, and throughout your paper, should be double-spaced.

Beneath the title, type the **author's name**: first name, middle initial(s), and last name. Do not use titles (Dr.) or degrees (PhD).

Beneath the author's name, type the **institutional affiliation**, which should indicate the location where the author(s) conducted the research (or in our case, attends school).

Running Head and Page Numbers

In Microsoft Word* choose *Insert, Header & Footer, Header*. There are several formats to choose from, choose the first, titled *blank*. You can now type “THE TITLE OF YOUR PAPER” where it says *type text*. Next, tab over to the right side of your header and then find the icon labeled *Page Numbers* at the top in the top left menu. Then select *Current Position, Simple-Plain number*. A page number should appear automatically.

Double-click on the main body of the text to get out of header area.

*which is on the computers in the library, computer lab, and learning resource center, if not on your personal computer

Abstract

An abstract should be the second page of your paper. It should have a running head and should also have the title:

Abstract

Centered at the top of the page.

The abstract should be a summary of the main facts and points of your paper. For a five page paper, it should be three to five sentences long and should clue your reader into what your paper is about.

There should be no indentations on your abstract.

You may include a section of keywords at the bottom of your abstract. If you do include this section, unlike the main body of the abstract, it should be indented.

Keywords: (italicized) lowercase topic, lower case topic two

Citations

Citations should be in parentheses at the end of sentences, inside periods (Tracy 2011). They should include an author and a year. The author may be an organization if no individual is credited (Feather River College 2013). If no year is listed on a website, use date information was retrieved.

Paper sections

In longer APA papers, authors usually choose to separate out the paper into titled sections. You are welcome, but not required to do this in your paper. If you do choose to do so the section titles should be bold and centered.

References/Bibliography/WorkCited (these are all synonyms)

These should appear on the separate page at the back of your paper. They should have a running head and should also have a title:

References

Centered at the top of the page.

Joshua M. Paiz, Elizabeth Angeli, Jodi Wagner, Elena Lawrick, Kristen Moore, Michael Anderson, Lars Soderlund, Allen Brizee, Russell Keck (2013-03-01). *General Format*. Retrieved from: <https://owl.english.purdue.edu/owl/resource/560/01/>

Environmental Science: Final Research Paper Rubric**Paper Total** _____ **/80****1. Content (_____/40)**

Unacceptable < 25	Acceptable 25 - 30	Good 30 - 35	Excellent 36 -40
Lacks information to properly discuss topic. Includes information which is not on topic. Does not touch on management solution.	Includes some information appropriate to topic, but needs more. Includes some information which is off topic. Provides background and touches on a management solution.	Includes appropriate, relevant, current information to educate reader about subject. Provides solid background and touches a preferred management solution.	Includes appropriate, relevant, current information to thoroughly educate reader about subject. Provides clear background, thoroughly discusses appropriate management solution.

2. Organization (_____/8)

Inadequate <5	Acceptable 5-6	Good 7	Excellent 8
Information is not organized. Information is difficult to follow and understand.	Paper appears to have a general outline, but does jump around some.	Paper is organized, but some information seems out of place.	Information is well organized and is easy to follow and understand.

3. Writing (_____/8)

Inadequate <5	Acceptable 5-6	Good 7	Excellent 8
Writing is choppy and hard to follow. Many grammatical and typographical errors.	Writing has a few awkward or unclear passages. Occasional grammatical and typographical errors.	Writing has minimal awkwardness. Writing is formal and lacks passive voice. Rare grammatical and typographical errors.	Writing is scientific and clear. Writing is formal and lacks passive voice. Paper is free of grammatical and typographical errors.

4. Formatting (_____/8)

Inadequate <5	Acceptable 5-6	Good 7	Excellent 8
Does not follow APA formatting.	Errors in APA formatting and style are noticeable. Missing one major component such as title page or abstract.	Errors in APA are rare.	No Errors in APA formatting. Appears scholarly.

5. Citation (_____/8)

Inadequate <5	Acceptable 5-6	Good 7	Excellent 8
Information is not cited. Citation formatting does not follow APA.	Some citations are provided, but more citation is required. Citations are improperly formatted.	Very few references are missing. Very few citations are improperly formatted.	Paper is properly cited.

6. References (_____/8)

Inadequate <5	Acceptable 5-6	Good 7	Excellent 8
References do not meet standards outlined in project assignment. Does not follow APA.	APA format is generally followed. All sources have authors. Missing no more than one required source type.	APA format is generally followed. All sources have authors. Missing no required source types.	All sources meet standards and are properly formatted.

PRESENTATION

In the final week of class, everyone will be required to present on the subject of their research papers to help educate the class about what you have learned and to practice your verbal communication skills.

Your presentation should be a 5 to 10 minute summary of the information you have learned during the process of writing your research paper. You are welcome to create a Powerpoint presentation with figures and information, but this is NOT required. Pictures and presentations can help illustrate concepts and events and can help guide you, but can also distract you from preparing what you are going to say, which is the most important part of a successful presentation.

If you plan to make a Powerpoint presentation.

What to do:

- Prepare by making notes or an outline for yourself.
- Be sure your information is well organized.
- Look out at your audience.
- PRACTICE, PRACTICE, PRACTICE. You should run through your whole presentation **out loud at least three times** before you stand up in front of the class, preferably in front of other people.

What not to do:

- Read your paper. **You will not get credit for a presentation if you stand up and read your paper.**
 - **To make sure this doesn't happen, you are welcome to get up with note cards or one page of notes, but you cannot bring a paper up there with you.**
- Read from your notes or from the screen. This is a TALK not a READ.
- Tips if you make a Powerpoint presentation:
 - Write on your slide in a font size smaller than 24 point.
 - Write in a color that does not clearly contrast with the back ground.
 - Have more slides than minutes in your presentation.
 - Turn around and face the screen, instead of your audience.
 - Rather than copying and pasting pictures in to your presentation, save pictures then add them by selecting *Insert, Picture*, and navigating to the picture. This minimizes picture formatting problems.

Presentation Rubric**Presentation Total _____/30****1. Content (_____ / 16)**

Inadequate <10	Acceptable 10-12	Good 13-14	Excellent 15-16
Presentation lacks information needed to educate audience about subject matter.	Presentation provides some background and a limited amount of information specific to the subject. Presentation is limited in its discussion of solutions.	Presentation provides background and discusses information about the specific subject of research. Presentation provides discussion of solutions.	Presentation provides a thorough background and discusses information specific to the subject. The presentation focuses on the management solutions.

2. Organization (_____ /4)

Inadequate 2.5	Acceptable 2.5-3	Good 3.5	Excellent 4
Information is not organized. Information is difficult to follow and understand.	Presentation appears to have a general outline, but does jump around some.	Presentation is organized, but some information seems out of place.	Information is well organized and is easy to follow and understand.

3. Clarity of Communication (_____ /10)

Inadequate <6	Acceptable 6-7	Good 8-9	Excellent 10
Presentation is hard to follow. Presenter is not prepared and cannot communicate about their subject.	Presenter is prepared, but presentation is still choppy. Presenter mumbles and is difficult to understand. Presenter does not look at the audience.	Presenter is prepared and information is clearly conveyed to audience. If visual aids are included, they complement the subject. However, presenter does not look at the audience, or speaks too quickly.	Presenter is well prepared. Presenter speaks clearly and looks at the audience. Presenter demonstrates interest and enthusiasm about the subject. If visual aids are included, they are used to increase understanding of subject.

4. Additional Comments