



STELLARXPLORERS



STELLARXPLORERS Communications Summary

In 2002, I was asked to develop a 4-year high school Aerospace Engineering Magnet Program Curriculum, from scratch, over a 4-year period. I told my students that engineers solve problems using Math, Science, and Technology by working together as a team and then communicate their results. The communications piece, in my view, is one of the most important skills required of an engineer. No matter how good an engineer's solution may be, if the engineer cannot communicate it to others, no one will know about it. Around this same time, most universities started adding an Engineering Communication Course requirement because many companies were finding newly graduated engineers were technically skilled to solve problems but often were unable to communicate effectively with others, including their own team. Therefore, during all four years, I required my students to write a short 5-paragraph report twice each semester and then give an Oral Report on the topic. For four years, I told students that no matter what career path they followed, if they could solve problems as a team and communicate their results through writing and speaking, they would be highly successful in that career.

What follows are the tools I used to "teach" writing and speaking skills. For both writing and speaking, I provided a Grading Criteria and the Scoring Rubric I used. For writing, I emphasized the first task was to organize your thoughts using the Written Report Outline Notes format and this was turned in with the Written Report and counted as 15% of their final score.



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Written Report Grading Criteria

Purpose: The goal of these written reports is for students to summarize information in a brief, professional written report format.

Written Report Format: The written report **MUST** be **TYPED, DOUBLE SPACED**, using **12-POINT TIMES NEW ROMAN FONT** with **ONE INCH MARGINS**. The report must be a minimum of 5 total paragraphs in length, which includes an introductory paragraph, 3 Main Ideas paragraph, and a summary paragraph. At the end of the report, you must cite your sources using the CBE style of documentation, shown below.

WRITTEN REPORT GRADING CRITERIA (100 points): Grading Rubric is attached.

1. Spelling, grammar, and paragraph (20 points): Make sure you are writing in the proper format (see above) in complete sentences using proper English grammar and spelling. Do you have a minimum of 5 paragraphs, each of proper length? Do you use proper transitions between paragraphs?

2. Main Ideas (35 points): Does your report include 3 Main Idea paragraphs which adequately summarize the main ideas of your topic? Each Main Ideas paragraph should correspond to a Main Idea from your Outline Notes and include the supporting facts and ideas.

3. Introductory and Summary Paragraphs (15 points): The first paragraph (introductory) should introduce the reader to the topic and allow the reader to know what Main Topics you will be writing about. This paragraph should be general in nature and not include specific facts. The last paragraph (summary) should summarize the Main Ideas from the report and include specific information given in the main idea paragraphs. There should be no new information included in the Summary paragraph. Does the first paragraph introduce the reader to the topic, capture their attention, and give a preview of the main ideas to be covered? Does the last paragraph summarize the information and provide some specific information about each of the Main Ideas?

4. Source(s) of information (15 points): Include where you found your information, using the proper format. Listed below are two common examples of required documentation. You **MAY NOT** use Wikipedia as an Internet source.

Internet: [Author], [Title or brief description of topic], [Website], [Date]

Example: Derian JD. Cyber-deterrence. <http://www.wired.com/Etext/index.html>. October 15, 1999

5. Outline Notes (15 points): Do you have **one** Summary Statement which conveys to the reader the main topic of your report? Do you have 3 Main Ideas? Does each Main Idea have a minimum of three supporting facts and ideas, written as phrases?

IMPORTANT INFORMATION ABOUT PLAGARISM

You are expected to write about this topic using your **own words**. DO NOT "cut-and-paste" from an Internet site or write a paragraph using any source and just changing a few words. Plagiarism will result in a grade of 0 and subject you to district disciplinary action.



Written Report Grading Rubric

	Level 5 Excellent	Level 4 Proficient	Level 3 Adequate	Level 2 Inadequate	Level 1 Unacceptable
Format, Spelling, Grammar, Paragraphs (20 points)	18-20 pts 1-2 minor errors.	16-17 pts Several minor errors.	14-15 pts One major error.	12-13 pts Multiple major errors.	0-11 pts The report is nearly unreadable.
Main Ideas (35 points)	32-35 pts Accurately summarizes topic.	28-31 pts A few errors or unrelated information.	25-27 pts Several errors or unrelated information.	21-24 pts Major errors or unrelated information.	0-20 pts Information is unrelated.
Introductory and Summary Paragraphs (15 points)	14-15 pts Both paragraphs meet criteria.	12-13 pts Two paragraphs but minor errors.	11 pts Only one paragraph or several minor errors.	9-10 pts Major errors.	0-8 pts Paragraphs do not meet criteria.
Source(s) of Information (15 points)	15 pts Source(s) correctly cited.		9-13 pts Minor errors in citing source(s)		0 pts No sources of information
Outline Notes (15 points)	14-15 pts Excellent Summary Statement. Proper Main Ideas and Facts.	12-13 pts Adequate Summary Statement or some Poor Main Ideas and Facts.	11 pts Poor Summary Statement or missing some Main Ideas and Facts.	9-10 pts Missing Summary Statement or multiple Main Ideas and Facts.	0-8 pts Missing Summary Statement and Main Ideas and Facts.



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Written Report Outline Notes

Directions: Write a one sentence summary statement which conveys to the reader the main topic of this report. Determine the 3 main ideas you will write about in your written report and include a minimum of three supporting facts and ideas, written as phrases, about each main idea.

Summary Statement: _____

Main Idea	Main Idea	Main Idea
Supporting Facts or Ideas	Supporting Facts or Ideas	Supporting Facts or Ideas



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Oral Report Grading Criteria

Purpose: The goal of the oral reports is for students to summarize the assigned topic in a brief, professional oral report format. You must have at least two Power Point slides.

ORAL REPORT GRADING CRITERIA (100 points): Grading Rubric is attached.

- 1. Topic (20 points):** Do you summarize the information about your assigned topic? Do you appear to understand the topic and can answer questions about it?
- 2. Organization (20 points):** Does your oral report contain an introduction, a summary of the main ideas, and a conclusion? Can the audience easily follow your presentation and understand the main ideas covered? Do you use transition phrases between the introduction, main ideas, and conclusion?
- 3. Delivery (20 points):** You may *occasionally* refer to notes or the Power Point slide(s) during the report. Do you make effective eye contact with the audience (i.e. not looking at slides or notes)? Does your delivery properly combine projection of voice, tone, pace, and gestures? Do you deliver the information in a smooth manner indicating you understand the topic and have practiced the oral report?
- 5. Power Point (20 points):** At least two Power Point slides are used. Every Power Point slide should include some kind of picture to capture the audience's attention but be related to the information being reported. The words should be summary in nature and not include sentences and large sections of the written report.
- 6. Overall Effectiveness (20 points):** Does the speaker show enthusiasm for the topic, maintain audience attention, and capture the audience's attention?



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Oral Report Grading Rubric

	Level 5 Excellent	Level 4 Proficient	Level 3 Adequate	Level 2 Inadequate	Level 1 Unacceptable
Topic (20 points)	18-20 pts Excellent topic summary.	16-17 pts	14-15 pts Some topic summary errors	12-13	0-11 pts Does not summarize topic
Organization (20 points)	18-20 pts Clearly and logically organized with appropriate transitions.	16-17 pts Clearly organized. Some transitions.	14-15 pts Inconsistent organization. Few or poor transitions.	12-13 pts Inconsistent organization. No transitions.	0-11 pts Unorganized. No transitions.
Delivery (20 points)	18-20 pts Effective eye contact. Excellent delivery.	16-17 pts Proper eye contact and delivery techniques but lacks smoothness of Level 5.	14-15 pts Ineffective eye contact. Some delivery deficiencies.	12-13 pts Minimal eye contact. Many delivery deficiencies.	0-11 pts No eye contact. Delivery deficiencies make it difficult to follow.
Power Point Slide(s) (20 points)	18-20 pts Excellent slides which capture audience's attention and enhances the report.	16-17 pts Slide(s) meets criteria but not as effective as Level 5.	14-15 pts Slides meet minimum criteria but do not enhance report.	12-13 pts Slides do not meet criteria but are related to the report.	0-11 pts No slides, unrelated slides, or slides detract from report.
Overall Effectiveness 20 points)	18-20 pts Enthusiastic speaker captures audience attention and excellently conveys information.	16-17 pts Speaker gets audience attention and conveys information but not as well as Level 5.	14-15 pts Speaker conveys information but with little enthusiasm and/or does not capture audience's attention.	12-13 pts Speaker shows no enthusiasm and/or no interaction with audience.	0-11 pts Speaker does not convey information as well as Level 2 effectiveness.