

# Advanced Senior Seminar: Capstone Project/“APEX Talks”

## What is the Senior Capstone Project, and what is its purpose?

The Senior Capstone Project is designed to provide you with the opportunity to apply all that you have learned and experienced over your four years in the APEX program, as well as other courses and experiences throughout your time here at Walter Johnson, into a project that will extend your learning, stretch your potential, and challenge your abilities. This might include investigating a topic you have always been curious about or choosing something you already know a little about and taking your understanding to a new and challenging level. Regardless, your project should focus on something you are interested in learning about in depth, to extend your own knowledge and ideally benefit others.

You will receive a Student Guide that will detail all project requirements as well as timelines for completing assignments related to the Capstone Project **at the first class meeting on August 31<sup>st</sup> at 6 p.m. in the Student Commons.**

## What are the four major phases of the Senior Capstone Project?

### The Proposal:

You will identify a topic as well as three research questions in a letter of intent that solidifies your topic. This proposal should include why you selected your topic, what research you plan to complete on your topic, and an indication of how you intend to “stretch” yourself while completing this project.

### The Portfolio:

A portfolio provides an ongoing visual representation of all phases of the project. The purpose of the portfolio is to organize and document the process of the Capstone Project in all its dimensions: The Proposal, The Talk, and The Reflection Paper **OR** Product. The Senior Capstone Portfolio should reflect your growth throughout the project. You will be responsible for developing a portfolio that is useful, informative, and well organized. This portfolio should be brought to every APEX seminar meeting (see checklist in project packet).

### The APEX Talk:

You will be delivering an 8-10 minute oral presentation that describes your research and demonstrates your product in order to display mastery of your chosen subject area. This presentation is your chance to demonstrate what you have learned and how your new knowledge can be applied.

Your presentation will be made before an audience of teachers, field experts, parents, and peers near the end of first semester, and it is the culminating element of each APEX student’s Senior Capstone Project (see rubric in project packet).

### The Reflection Paper **OR** Product:

*Paper:* approximately 8-10 pages, reflecting upon your experiences and personal growth throughout the completion of the Capstone Project (see rubric in project packet).

## **OR**

*Product:* physical or electronic evidence of your accomplishments (creativity is encouraged here; possible products could include short public-service videos, informational posters and brochures, invention prototypes, websites, “apps,” etc.; see rubric in project packet).

## Senior Capstone Project Timeline

August 29	First Meeting
September 5	<i>No School: No class meeting</i>
September 12	<i>No School: No class meeting</i>
September 19	Core Values Seminar: What matters to you?
September 26	Project brainstorming/networking (Assignment: TED Talks—email link)
October 3	<i>No School: No class meeting</i>
October 10	TED Talks Seminar; present Letters of Intent
October 17	<i>Individual meetings:</i> Proposal revision/approval; Plagiarism Contracts
October 24	Organization/Interviewing Skills Seminar
October 31	Discussion Seminar: “The Cave” (Assignment: Read “The Metamorphosis”)
November 7	<i>No School: No class meeting</i>
November 14	Discussion seminar: “The Metamorphosis” (Assignment: Begin “Nickel & Dimed”)
November 21	<i>Project work time: Schedule office hours</i>
November 28	<i>Individual meetings: Portfolio review</i>
December 5	Discussion seminar: “Nickel & Dimed” (part 1)
December 12	Discussion seminar: “Nickel & Dimed” (part 2)
December 19	Final meeting/presentation sign-ups
Early January	APEX Talks Presentations

### Selecting a Senior Capstone Project Topic

This is a project that will require a significant amount of time and energy. It should be something that you are passionate and excited about so that you will learn from the experience and have a great time doing it. To begin, brainstorm and write down your ideas as they pop into your mind; DON'T limit yourself at this point.

The following steps are guidelines for brainstorming and selecting an exciting and interesting proposal:

- Think about all of the things you are interested in: things you would like to do, learn, understand, see, improve, create, or experience
- Which of these things do you care most about?
- Narrow your ideas down to three or four that are "do-able," meaning that there will be enough resources and information (particularly primary source materials) available to you to produce a thorough project
- Consider whether your project will maintain your interest for an extended period of time—and will the project stretch your abilities and allow you to grow as a learner?

Eliminate any topics that:

- Lack an academic stretch
- Could be dangerous or harmful
- Could be costly
- Are illegal

Now test those topics that are left against questions similar to these:

- Is the research topic one that is reflective of your own academic and/or career interests?
- Is the research topic one in which you are interested, but NOT an expert?
- Is the research topic one that is broad enough to allow you to access enough information, yet narrow enough to make the scope of research reasonable?
- Is the research topic one that is challenging to your academic and creative abilities?
- Have you used good judgment to be certain that the topic you chose is appropriate for presentation to a review panel and the general public?

### **You have a topic...now what?**

Once you have a few concrete ideas try to develop **three** central questions that you would like to answer through research on your topic. Possible starting points for research questions might be:

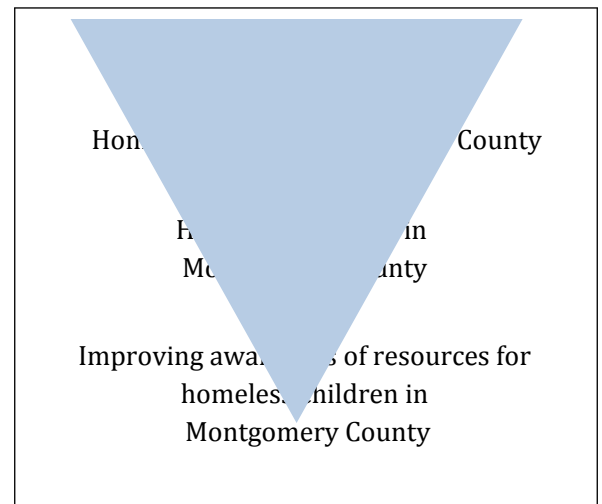
- I would like to improve ...
- I am perplexed by ...
- I am very curious about ...
- I want to learn more about ...
- Something I think would really make a difference is ...
- Something I would like to do to change \_\_\_ is \_\_\_
- Right now, some areas I'm particularly interested in are ...

Now, complete the Proposal/Letter of Intent form that will be submitted to your teacher during a class meeting in September. You will then receive an approval, denial, or request for clarification.

### **Guidelines for completing research for your APEX Talk:**

1. All work must be generated/completed by you.
2. Your research should be related to the area you have already identified in your approved proposal.
3. You must document spending a minimum of twenty (20) hours outside of school on preparing your project presentation. This does NOT include time spent assembling the portfolio or the final presentation itself.
4. You must find at least ONE adult mentor from the outside community (i.e., NOT a Walter Johnson teacher). This person must be a certified expert in the field, or someone who has significant experience in the area of your project's focus. You may have more than one mentor.
5. Research cannot include any illegal, immoral, or unsafe activities.
6. Your research must include at least two interviews with "experts" connected to your topic. These interviewees may NOT be your mentor. The interviews must be videotaped or recorded. You must have all documentation related to the interviews completed and placed in your portfolio.
7. Verification of the 20 hours must include:
  - Required Work Log: The work log is a form that you will use to keep a record of the time and resources used in completing your project. It includes the date and length of time spent, type of work completed, and any resources used.
  - Pictures or Videos: Pictures or videos that demonstrate the progress you have made may be included as a form of verification, and stored in your portfolio.

\*Remember, all forms and other documentation must be included in your portfolio and brought to every meeting with your APEX Seminar teacher.



## The Presentation: "APEX Talks"

The presentation represents the final step in the Senior Capstone Project process. It is a self-evaluation and reflection by each APEX student of all that he or she has accomplished and serves as a synthesis of all research and discoveries made throughout the process. The presentation will be made in a speech of 8 to 10 minutes before an audience of teachers, community members, and other APEX scholars. The presentation describes what has been learned from conducting research and fulfilling the requirements of the project. The presentation should convey your reasons for choosing the topic and why it "matters"; describe whom you contacted and worked with along the way; and explain what worked, what did not work, and how problems were solved. In other words, your presentation should describe what you have learned from the total experience by clearly explaining what you already knew, what you wanted to find out, what happened during the research, and what you learned and concluded. Finally, your presentation should introduce and describe the final product you developed to implement or publicize your findings (if you chose to create a product in lieu of writing the reflection paper).

### Presentation **Minimum** Requirements

Your presentation must:

- Be 8 to 10 minutes in length, including 2 to 3 minutes for a question and answer period.
- Address not only your project research and goals, but also the challenges you faced throughout the process that led to your personal and academic growth.
- Describe how your project topic relates to yourself and your school or the community at large.
- Provide visual aids (PowerPoint slides, photos, video clips, etc.) as needed.
- Be made in front of an audience invited by you.

### **Reflection Paper** (*optional in lieu of Product*)

Reflect on the Capstone experience by writing a reflective essay addressing all of the questions listed below. The essay should be at least **eight pages** long, double-spaced with one-inch margins, and in 12-point plain text font.

1. How and why did you choose your topic and your mentor?
2. What were the total hours spent working on your project? Discuss your experiences as you worked on it.
3. What were some of your experiences when conducting research and writing the paper?
4. What were some of the biggest problems that you encountered as you worked on the project from beginning to end?
5. Were your original goals for your project carried out by the time you finished? If not, how and why did they change along the way?
6. In completing your project, what did you learn about your subject? Your skill set? Your values? How is your project relevant to you, your school, and/or the community-at-large?
7. What caused you to "stretch" the most along the way? How did you challenge yourself through the project you picked? Was there a risk? How did you face any fears and overcome obstacles?
8. What would you like people to know about your project that might help them understand more about what you have accomplished?
9. How do you plan to continue your involvement with this issue in the future?
10. Bibliography: A minimum of ten print/online sources that you referred to in completing your project (proper formatting required).

## The Portfolio

The Capstone Project Portfolio is a collection of all required forms, research documentation, and reflection neatly maintained and presented in a binder or case of some sort. The Senior Capstone Project Portfolio documents the Capstone Project journey. All students should begin keeping a folder of all documents starting with this handout, then all items listed below. As you work through the process for each phase of the Capstone Project, all relevant papers, plans, notes, interviews, photos, or videos should be added to the portfolio. In other words, keep track of your work and make it easy to prove what you did along the way by documenting EVERYTHING!

The portfolio will be evaluated on a 4/3/2/1 scale using the following criteria: inclusion of all necessary elements, organization, and professional appearance.

What to include in your final portfolio:

- 1- Cover Page (student generated)
- 2- Table of Contents (student generated)
- 3- Plagiarism/Misrepresentation Contract (see following pages)
- 4- Project Proposal Letter (see following pages)
- 5- Project Approval Form (see following pages)
- 6- Work/Time Log (see following pages)
- 7- Mentor Agreement (see following pages)
- 8- Interview Documentation/Release Forms (see following pages)
- 9- Documentation of Progress – pictures, artifacts, etc. (student generated)
- 10- Research Materials – articles, charts, graphs, etc. (student generated)
- 11- Reflection Paper (*if chosen in lieu of product*; student generated)
- 12- Project Bibliography (student generated—**ALL students must provide a bibliography of at least 10 sources regardless of their choice of Paper or Product option**)
- 13- APEX Talks Rubric (see following pages)
- 14- Reflection Rubric OR Product Rubric (see following pages)
- 15- Any other papers distributed throughout the course

Note: Any duplicate/additional forms necessary may be printed from the electronic copy of this document available on Classroom.

## Plagiarism and Misrepresentation

Academic honesty is essential to quality learning. Though cheating may be tempting as stress mounts, your teachers, mentors and other adults who care about you have high expectations for your ethical behavior and academic responsibility as you complete the Capstone Project. Do not cheat, plagiarize or otherwise misrepresent yourself or your efforts in any way. Academic integrity and honesty is YOUR RESPONSIBILITY. Should you ignore or dismiss your personal responsibility to academic integrity, the consequences are severe, including but not limited to failure of any part or parts of the project or failure of the project as a whole. Should you fail the project, you will not be permitted to graduate with APEX honors status and may face additional academic and disciplinary consequences.

What constitutes plagiarism?

1. Directly copying (more than three words) from another source without using quotation marks and/or without giving credit to the author.
2. Incorrectly citing or failing to cite your sources at appropriate times.
3. Not paraphrasing the information completely or correctly.
4. Using another person's work, in part or as a whole, as your own.
5. Using work that you have completed for another teacher without approval. (You may expand upon previous research, but you must have approval and submit a copy of the original research first.)
6. An incomplete or missing Bibliography that does not provide enough information for source verification.
7. Passing on your work to another student in another class and/or in another school.

What is misrepresentation?

1. Claiming you have no previous experience or knowledge in a given area when you actually do.
2. Falsifying documents, signatures, or assignments.
3. Allowing other people to complete portions of your assignments.
4. Committing any other breach of the project assignment requirements.

## Plagiarism and Misrepresentation Contract

Student Name \_\_\_\_\_  
(printed)

I have read the plagiarism and misrepresentation policy. I understand that if I am caught cheating in any way during my completion of the Capstone Project, I will receive zeros for part of or all parts of the project, thus jeopardizing my grade in this class and my status as an APEX Scholar. I understand that my grade may be changed if I am found guilty at a later date. I also understand that the Advanced Senior Seminar is a requirement for graduation as an APEX Scholar, and if I fail, I may not graduate with my classmates as a member of the APEX cohort. I give my word that I will be honest during the entire process.

Student Signature & Date \_\_\_\_\_

Parent/Guardian Signature & Date \_\_\_\_\_

APEX Seminar Teacher Signature & Date \_\_\_\_\_

**THIS FORM MUST BE SIGNED AND SUBMITTED TO YOUR**

**SUPERVISING TEACHER BY THE DATE SPECIFIED IN CLASS.**

## Letter of Intent with Project Proposal

After you have selected a topic and a mentor, you must write a business letter to your Capstone Project seminar teacher identifying your topic, your reasons for choosing your topic, your level of familiarity with your topic, your research methods, and your initial product idea. You must also state your awareness of the consequences of plagiarism and misrepresentation.

### FORMAT:

- Full block style business letter
- 2" top margin
- 1" side and bottom margin
- Single space the body
- Double space between paragraphs

### CONTENT:

- Research topic
- Current level of expertise on your topic
- Learning stretch: What do you intend to learn and why?
- How and where will you find information necessary to your research?
- General description of the product you intend to create to demonstrate your learning
- Statement of academic integrity and understanding of the consequences of plagiarism and misrepresentation

**A correctly formatted sample Letter of Intent appears on the next page including all content elements. Use this sample as a guideline only. Your letter should be unique to you and your project.**

**IMPORTANT NOTE: PRINT TWO COPIES OF YOUR LETTER OF INTENT. ONE WILL BE GIVEN TO YOUR SEMINAR TEACHER; THE OTHER WILL BE KEPT IN YOUR PORTFOLIO**



# Sample Letter of Intent

4812 Main Street  
Bethesda, MD 20814

September 22, 2015

Nathan Schwartz/David Uhler  
APEX Advanced Senior Seminar  
Walter Johnson High School  
6400 Rock Spring Drive  
Bethesda, MD 20814

Dear Mr. Schwartz/Mr. Uhler:

Last year I had to go through two weeks of testing for leukemia. Fortunately, the test results were normal, but during this time I became extremely interested in oncology research and treatment. For my Capstone Project I have chosen to focus on oncology treatment and its effects on leukemia patients. Since the time I had to undergo testing, I have wanted to work with cancer patients, for I can relate to their experiences because I have been there myself.

In my research I will explore the history of leukemia research and treatment as well as the physical and emotional effects on patients. I will also investigate career options in this field; I intend to use the Internet, videos, print materials, as well as interviews with local oncologists.

For my product, I will become a volunteer at the National Institutes of Health, working with leukemia patients involved in a medical trial. During my training and service at NIH, I will produce a video to be used for recruiting and training future volunteers.

I understand the definition and consequences of plagiarism. I intend to be accurate and honest in all phases of the Capstone Project, demonstrating academic honesty and integrity.

Sincerely

Susan M. Jones

# Advanced Senior Seminar Capstone Project

## Project Approval Form

Student: \_\_\_\_\_

Supervising  
Teacher: \_\_\_\_\_

Your Capstone Project proposal is:

\_\_\_\_\_ ACCEPTED

Comments:

\_\_\_\_\_ CONDITIONALLY ACCEPTED

Reason:

\_\_\_\_\_ Letter needs revision or correction:

\_\_\_\_\_ Other:

\_\_\_\_\_ NOT APPROVED

Reason:

\_\_\_\_\_ There is no apparent "learning stretch" for you in this project.

\_\_\_\_\_ This project closely resembles one that is already part of the high school curriculum and is a project that has already been completed by many students.

\_\_\_\_\_ This proposal includes elements that violate school district policy.

\_\_\_\_\_ This project has potentially dangerous elements.

\_\_\_\_\_ This project involves too much expense.

\_\_\_\_\_ Other:

*(Note: If your project proposal is not approved, a revised version of the letter of intent must be submitted along with another copy of this form by the following date: \_\_\_\_\_)*

## Advanced Senior Seminar Capstone Project

### Work/Time Log

Week Of:	Dates/Hours Worked:	Activities/Accomplishments:	Questions/Follow-up Items:

Advanced Senior Seminar Capstone Project

Work/Time Log

Week Of:	Dates/Hours Worked:	Activities/Accomplishments:	Questions/Follow-up Items:

Advanced Senior Seminar Capstone Project

Work/Time Log

Week Of:	Dates/Hours Worked:	Activities/Accomplishments:	Questions/Follow-up Items:

Advanced Senior Seminar Capstone Project

Work/Time Log

Week Of:	Dates/Hours Worked:	Activities/Accomplishments:	Questions/Follow-up Items:



# Advanced Senior Seminar Capstone Project

## Mentor Agreement Sheet

Student Name \_\_\_\_\_

Student Address \_\_\_\_\_

Student Cell Phone \_\_\_\_\_

Parent/Guardian Name \_\_\_\_\_

Parent/Guardian Cell Phone \_\_\_\_\_

Student Email Address \_\_\_\_\_

School Address:

Walter Johnson High School  
6400 Rock Spring Drive  
Bethesda, MD 20814  
School Phone: (301) 803-7100  
Fax:(301) 571-6986

School Website: [www.walterjohnson.com](http://www.walterjohnson.com)

Supervising Teacher (circle one):

Nathan Schwartz  
nathan.schwartz@walterjohnson.com

David Uhler  
david.uhler@walterjohnson.com

Proposed Research Topic \_\_\_\_\_

Proposed Final Product \_\_\_\_\_

Mentor Name/Title \_\_\_\_\_

Mentor Phone: \_\_\_\_\_

Mentor Email: \_\_\_\_\_

Proposed Mentor Meeting Times \_\_\_\_\_

Mentor Signature \_\_\_\_\_

*(Signature indicates agreement to serve as mentor to the above student for the duration of the semester-long Capstone Project.)*

*Make a copy of this completed sheet.  
Leave one with your mentor, keep one in your portfolio binder.*



## Interview Documentation/Release Form

Student Name \_\_\_\_\_

Project Topic \_\_\_\_\_

Interviewee's Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

Interviewee's Connection to Student Research Topic:

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1. Did the student arrive on time for the interview? \_\_\_\_\_ Yes \_\_\_\_\_ No

2. Was the student dressed appropriately? \_\_\_\_\_ Yes \_\_\_\_\_ No

3. Was the student prepared with questions? \_\_\_\_\_ Yes \_\_\_\_\_ No

4. How long did the interview last? \_\_\_\_\_

5. Did you feel the interview was valuable? \_\_\_\_\_ Yes \_\_\_\_\_ No

Comments:

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Interviewee's Signature: \_\_\_\_\_

*(Note: Signature indicates interviewee's permission for quotes or recorded video footage from interview to be used and presented by the student in his or her final Capstone Project presentation, and made available electronically to the general public.)*

## Interview Documentation/Release Form

Student Name \_\_\_\_\_

Project Topic \_\_\_\_\_

Interviewee's Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

Interviewee's Connection to Student Research Topic:

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1. Did the student arrive on time for the interview? \_\_\_\_\_ Yes \_\_\_\_\_ No

2. Was the student dressed appropriately? \_\_\_\_\_ Yes \_\_\_\_\_ No

3. Was the student prepared with questions? \_\_\_\_\_ Yes \_\_\_\_\_ No

4. How long did the interview last? \_\_\_\_\_

5. Did you feel the interview was valuable? \_\_\_\_\_ Yes \_\_\_\_\_ No

Comments:

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Interviewee's Signature: \_\_\_\_\_

*(Note: Signature indicates interviewee's permission for quotes or recorded video footage from interview to be used and presented by the student in his or her final Capstone Project presentation, and made available electronically to the general public.)*

# Advanced Senior Seminar Capstone Project

## Sample Reflection Paper Rubric

### Score Point 4

The Reflection Paper contains a thesis that the writer expands upon through sophisticated research evidence and effective elaboration. The content of the paper demonstrates synthesis of information to convey the student argument convincingly. The paper is logically organized and coherent. It reflects fluent use of specific and sophisticated language, exhibiting virtually error-free use of Standard American English. Sources (at least ten) are correctly and appropriately documented in current MLA format. There is a strong sense of audience.

**Score Point 3** The Reflection Paper contains a thesis that the writer expands upon with elaborated research evidence. The content of the paper demonstrates synthesis of information, although there may be some unevenness of development of the student argument. The paper is logically organized and coherent, although minor lapses may occur. It reflects fluent language use, although some passages may contain slightly vague, ambiguous, or more simplistic language. The paper demonstrates a reasonable command of Standard American English with only occasional, minor flaws. Sources (at least ten) are correctly and appropriately documented with only minor flaws, if any. There is a reasonable sense of audience.

**Score Point 2** The Reflection Paper contains a thesis that the writer attempts to expand upon, through references to research. There is evidence that the writer has gained knowledge from the research, but the ideas may not be elaborated. The synthesis of the ideas may lack clarity and logic. The use of language may be inadequate to convey specific ideas. The paper may exhibit only marginal control of Standard American English. At least five to seven sources are documented, but documentation may be incomplete or inaccurate. There may be little sense of audience.

**Score Point 1** The Reflection Paper may lack a clear thesis for the research. The paper may contain little evidence that the writer has acquired knowledge from the research. There may be little or no synthesis of information. The use of language may interfere with the conveyance of clear ideas. The essay may exhibit little, if any, control of Standard American English. Sources may lack documentation, or the documentation may be inaccurate. The paper may lack a sense of audience.

**Score Point 0** The student did not submit a paper or the paper is **not** the work of the student.

# Advanced Senior Seminar Capstone Project

## Sample APEX Talks Rubric

STUDENT NAME \_\_\_\_\_

Use the yes/no checklist as a guide to help you evaluate the presentation. Then circle the grade that you feel best represents the quality of the student's overall presentation. Please note that this is not a pass/fail grade. The expectation is that students excel in all areas of the presentation. Please provide comments.

### Content and Organization

### Comments:

#### **Introduction**

Hooks the audience, addresses the panel, states purpose of speech Y N

#### **Body**

Main points covered—research paper, mentor, product, learning stretch; student is knowledgeable in all aspects of Capstone Project Y N

#### **Conclusion**

Engages the audience and wraps up the speech; prompts question and answer session Y N

#### **Question/Answer**

Student listens to questions and answers them intelligently Y N

### Delivery

### Comments:

#### **Volume/Eye Contact**

Student projects clearly around the room and does not read from note cards or PowerPoint Y N

#### **Time/Rate**

5-7 minute length of speech; 3-5 minute question/answer; speech delivered smoothly without unnecessary pauses or gaps or excessive speed Y N

#### **Language**

Student uses Standard American English, appropriate word choice and defines technical terms Y N

#### **Visual Aids**

Visual aids are high quality and add value to the presentation Y N

Appearance  
Student is dressed professionally Y N

GRADE (circle one):

A B C D E

Overall Comments:

# Advanced Senior Seminar Capstone Project

## Sample Product Rubric

### Score Point 4

The product is an appropriate and logical outgrowth/extension of the APEX Talk research. It demonstrates application of acquired knowledge from the research and maintains attention to the thesis or focus. The product illustrates inventiveness/creativity in its concept(s). The student-generated product demonstrates care and attention to detail in its design. Aesthetically pleasing, the product conveys a sense of completeness.

### Score Point 3

The product is an appropriate and logical outgrowth/extension of the acquisition of knowledge from the APEX Talk research in most aspects. Although it demonstrates application of acquired knowledge from the research, there may be minor deviations from the thesis or focus. There is evidence of inventiveness/creativity, although some aspects of the product may lack imagination. The student-generated product demonstrates care and attention to detail in its design, although some minor flaws may exist. The product is predominantly aesthetically pleasing and conveys a sense of almost total completeness.

### Score Point 2

The product is an outgrowth/extension of the APEX Talk research, but there may be a limited connection to the thesis or focus of the essay. The product may exhibit marginal inventiveness/creativity. Although there is evidence that the student has gained some knowledge from the research, the product may lack depth and imagination. The product may be flawed in its aesthetic appeal and may lack a sense of completeness.

### Score Point 1

The product may be an outgrowth/extension of the research or may be marginally related. The product may fail to exhibit inventiveness/creativity. The product may exhibit little care and attention to detail. It may show little or no evidence that the student has gained knowledge from the research. The design/format of the product may detract from its overall effectiveness and may lack a sense of completeness.

### Score Point 0

The product shows no student effort, design, or creativity and may be merely a copy of existing drafts, charts, photos, or illustrations. Or, the student did not submit a product.