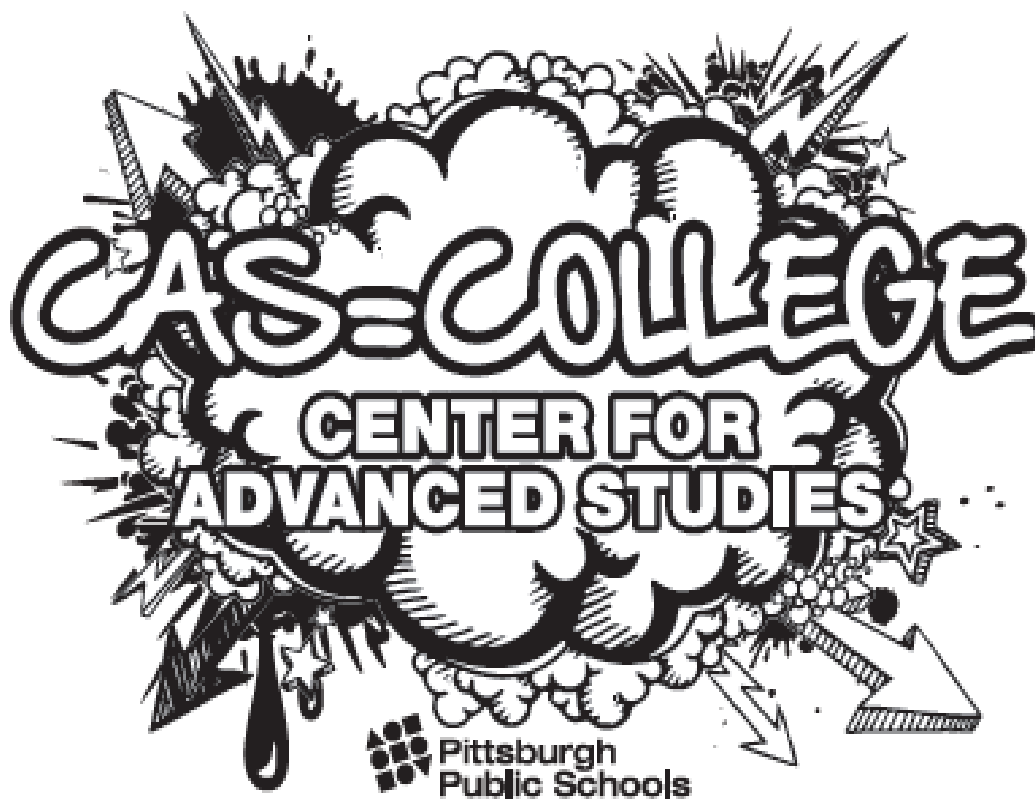


CENTERS FOR ADVANCED STUDY

LONG-TERM PROJECT GUIDE



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LONG TERM PROJECT GUIDE

RATIONALE

The Long-Term Project (LTP) provides the opportunity for students to pursue a focus area of interest according to local and global initiatives aligned to the United Nations Sustainable Development Goals which were adopted by the City of Pittsburgh in 2019. CAS students will challenge their understandings, expand their knowledge, and provide viable evidence-based solutions to address issues impacting the Pittsburgh region and the global community.

THE LTP COMPONENTS AND PROCEDURES

- Students pursuing a CAS seal on their diploma must complete three Long-Term Projects (LTP) and enroll in 8 CAS/AP/IBDP courses to receive the seal on their diploma upon graduation.
- The research includes a 3–5-page written research paper, works cited page, and a 1–2-page reflection.
- Students must include at least 4-6 valid texts or media (books, newspapers articles, research articles, journals/periodicals, interviews, informational videos, etc.).
- The time and date of the presentation are arranged by the teacher. The presentation is 8–10-minutes in length and there are 3-5-minutes for the question/answer session. The total time should not exceed more than 15 minutes in length per group. The project must be presented in the CAS English class. *
- The student **must** review the evaluation criteria prior to starting the LTP
- This will be graded as an assessment calculated in the 4th Quarter, English Grade. **

*9th and 10th grade CAS students completing an LTP but are not enrolled in CAS English must complete the LTP independently in one of the CAS courses the student is enrolled. 11th and 12th grade students pursuing their 3rd LTP must meet select a mentor and gain approval from their CAS Facilitator to complete the LTP. The 11th and 12th grade students will present their LTP to their CAS Facilitator and agreed upon audience.

** 9th and 10th grade CAS students not enrolled in CAS English will have their LTP grade calculated in the CAS course the student presents.

CENTERS FOR ADVANCED STUDY CAS LONG-TERM PROJECT STUDENT GUIDE

Planning Process

- The CAS English teacher defines the project components and creates a timeline for project completion, including several checkpoints to guide group progress.
- The student engages in mini-research activities in each quarter to develop the student's capacity to successfully complete components of the LTP process with their group members.
- The students engage and review the United Nations (UN) Sustainable Development Goals. Students then submit their top 2-3 goals of interest to their CAS English teacher. The CAS English teacher will establish balanced student groups based on topics of interest.
- Each student, with their group members, completes the CAS LTP Planning and Reflection Guide.

Written Component

- Cover page, 3-5-page written research paper, 1-2-page written reflection, and work cited page. **Must** be typed, doubled-spaced, 12-point font, 1-inch margins.
- Works Cited page **required**; must follow MLA/APA/CMS format.
- Research must use a **minimum** of 4-6 valid texts or media sources (books, newspaper articles, research articles, journals/periodicals, interviews, informational videos, etc.).

Product

- Product cannot be a PowerPoint presentation. The student and group members should reference sample products provided. **(A PowerPoint can be used for the presentation but is not considered the product for the LTP.)**

Presentation

- The time and date are arranged by the teacher. The presentation is 8–10 minutes in length and there is 3-5-minutes for the question-and-answer session.
- The total time should not exceed more than 15 minutes in length per group.
- The project must be presented in the CAS English class. (Students not enrolled in 9th and 10th grade CAS English or in 11th and 12th grade AP/IBDP please read the information in the LTP Components and Procedures.)

Things to Consider

The Written Component, Presentation, and Question and Answer “Things to Consider” section is adapted from the College Board’s AP Capstone course which engages students in an in-depth research process over two years.

Planning Process

- Get to know your team members. Learn something about each other’s learning styles, preferred methods of communication, schedules, expectations for each other, excitement for the topic, etc.
- Communicate effectively. Establish the communication method for the group and utilize the *Accountable Talk* strategies you have learned.
- Set deadlines and goals. Stick to them! When deadlines and goals are not met, gather the team and reflect on what has worked and not worked and make adjustments for success. Utilize your communication skills learned from *Restorative Practice*.
- Share responsibilities. No one person should carry the load for everyone.
- Establish a research question and continue to revisit and revise the research question as you gather new sources.
- Apply the research methods learned in class.
- Do not wait to the last minute to consult with your teacher and/or peers.

Written Component

- Compose a research question with group members. Your question must relate to the United Nations Sustainability Goal for your group.
- Identify and evaluate multiple perspectives and consider and develop your research question and argument.
- Gather information from various sources-books, interviews, podcasts, documentaries, articles, journals, newspapers, artifacts, pieces of art, music.
- Analyze, evaluate, and synthesize evidence from sources.
- Interpret the evidence to develop a well-reasoned argument that answers the research question and conveys your perspective.
- Throughout your research, continually revisit and refine your original research question to ensure that the evidence you gather addresses your purpose and focus.
- Meet with your peers for feedback. Engage in peer feedback continually throughout the process.
- Clearly define a solution and/or recommendation to the problem or issue.
- Honestly reflect upon your LTP experience. Capture what went well, what did not go well, what you learned, what you would do differently, and share any insights gained.

Product

- Create a product that supports the research and captures the attention of the audience.
- Review the product chart below for suggested ideas.
- The product should enhance the research and presentation.
- Plan and organize the needed resources.

Presentation

- Teach other team members what you learned so that all team members understand all perspectives presented. (Do this throughout the planning and research phases.)
- Develop and prepare a group presentation that will convey your argument and solution/recommendations to a non-expert audience. The presentation must incorporate the product.
- Narrow down the information you choose for your presentation by focusing on key points you want your audience to understand.
- Include supporting visual/audio components in your presentation and consider the audience, context, and purpose.
- Intentionally engage your audience using appropriate strategies (e.g., eye contact, vocal variety, expressive gestures, movement).
- Prepare notecards and study the notecards well in advance of your presentation. Have a clear understanding of each other's roles, the order of speakers, technology responsibilities, etc.
- Practice your presentation several times and make the appropriate adjustments needed. Make sure you time your presentation so that it meets the 8–10-minute requirement.

Sample Questions for Q&A

Below are some sample questions your peers can ask after your LTP presentation. Your peers are not limited to the sample questions below. Review the questions and practice with your team members in advance of your presentation.

Reflection on the Research Process

1. How did some of the information gathered from your sources develop your research question and refine your research?
2. What evidence from sources did you gather that is in your written component but not included in your presentation? Why did the group choose to exclude this information?
3. Did you experience challenges locating sources? How did you overcome the challenge?
4. How did the focus of your research change/evolve throughout the process?
5. Did your research go in a different direction than you originally expected?
6. How did you approach and synthesize the differing perspectives in order to reach a conclusion?

Extended Learning & Development

1. Reflecting on your research experience and new learning, what further questions/wonderings does the group have about the topic?
2. What impact did the research have on you individually?
3. What are the implications of your findings to your community?
4. How did you use the research gathered from other to expand your knowledge and advance your understanding?

Product

Please review the product list below. As you are engaging in the planning process think about the mode in which you can connect your research with your audience. You are not limited to the list below. Please note, a PowerPoint does not suffice as a product.

Products				
Visual/Artistic	Spoken	Written	Leadership	3D Models/ Blueprints
➤ Short film ➤ Advertisement/ propaganda exhibit ➤ Photo exhibit ➤ Mural ➤ Sculpture ➤ Political cartoons ➤ Mosaic ➤ Painting ➤ Web page ➤ Museum exhibit ➤ Blueprints ➤ Set design ➤ Musical performance ➤ Documentary	➤ Morning show ➤ Debate ➤ Podcast ➤ Spoken word ➤ Story telling ➤ Newscast ➤ Mock trial ➤ Song ➤ Simulation ➤ Panel discussion ➤ Guided tour ➤ Book Talk ➤ Forum ➤ Town hall	➤ Children's book ➤ Letter to the editor ➤ Newspaper article ➤ Brochure ➤ Poetry ➤ Comic book ➤ Story board ➤ Epic ➤ Family tree ➤ Flow chart ➤ Folktales ➤ Amendments	➤ Fundraising ➤ Grants ➤ Organize a campaign ➤ Join or establish an organization ➤ Service-learning project	➤ Inventions ➤ Vehicles ➤ Urban renewal ➤ Machine ➤ Robots ➤ Dioramas ➤ Computer program ➤ Scale models ➤ 3D Figures ➤ Analytical graphs ➤ Scientific instruments

Planning Process

Directions: Please use the Planning Tool below to guide the development of your Long-Term Project. All group members are responsible for completing their own tool and meeting the responsibilities identified by the teacher and team members.

Long-Term Project		
Student Name		
Project Title		
Research Question(s)		
UN Sustainable Development Goal		
Start Date		Due Date

Team Members	
Member #1	
Member #2	
Member #3	

Check Point #1 Date:		
My responsibilities leading up to check point #1.	Task	Complete
	1.	Yes No
	2.	Yes No
	3.	Yes No
	4.	Yes No
Resources I need	1.	
	2.	
	3.	
	4.	
Source Type (e.g. books, interviews, podcast, documentaries, articles, journals, newspapers, artifacts, pieces of art, music)	Source Title	Source Type
	1.	
	2.	
	3.	
	4.	
	5.	
Complete the Cornell Note Taker		

Check-in feedback (teacher-student; student-student)	
Next steps	1. _____ 2. _____ 3. _____
My thoughts/insights so far...	

Check Point #2 Date:		
My responsibilities leading up to check point #2.	Task	Complete
	1. _____	Yes No
	2. _____	Yes No
	3. _____	Yes No
	4. _____	Yes No
Resources I need	1. _____	
	2. _____	
	3. _____	
	4. _____	
Source Type (e.g. books, interviews, podcast, documentaries, articles, journals, newspapers, artifacts, pieces of art, music)	Source Title	Source Type
	1. _____	
	2. _____	
	3. _____	
	4. _____	
	5. _____	
Complete the Cornell Note Taker		
Check-In feedback		

Next steps	1.
	2.
	3.
	4.
My thoughts/insights so far...	

Check Point #3 Date:		
My responsibilities leading up to check point #3.	Task	Complete
	1.	Yes No
	2.	Yes No
	3.	Yes No
	4.	Yes No
Resources I need	1.	
	2.	
	3.	
	4.	
Source Type (e.g. books, interviews, podcast, documentaries, articles, journals, newspapers, artifacts, pieces of art, music)	Source Title	Source Type
	1.	
	2.	
	3.	
	4.	
	5.	
Complete the Cornell Note Taker		
Check-In feedback		

Next steps	1.
	2.
	3.
My thoughts/insights so far...	

Cornell Note Taker

Cornell Notes: <https://www.youtube.com/watch?v=ErSjc1PEGKE>

Research Question(s)		
Project Title		
Source Citations		
Questions/Terms/Main Ideas	Notes/Cited Information	My Thoughts/Comments

[illegible]

Product	
Product Description	
How does the product connect to your research?	
Purpose of the Product?	
What are the materials, resources, technology needed for the product?	
Potential resources to help with the development of the product? (website, YouTube, books, podcast, people, etc.)	
Rough outline of product development process.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.

Presentation Organizer	
Target Audience	
Main Message/Takeaway(s)	
Mode(s) of Delivery	

Material/Resources/ Technology Needed			
Team Members roles during presentation	Team Member #1		
	Team Member #2		
	Team Member 33		
Practice Date		Presentation Date	

Reflection Tool

Directions: Use the tool below to guide the development of your reflection. The completed reflection should follow the guidelines listed at the beginning of the document.

Self-Reflection	
Student Name	
Project Title	
Driving Question(s)	
What were the most important phases of planning?	
About Yourself	
What is the most important thing you learned in this project?	
What do you wish you had spent more time on or done differently?	
What are your proudest moments of the project?	
What learning will you continue to explore after the project?	
About the Long-Term Project	
What was the most enjoyable part of this project?	
What was the least enjoyable part of this project?	
What additional support tools do you think you need?	

CENTERS FOR ADVANCED STUDY LONG-TERM PROJECT RUBRICS

GROUP PLANNING PROCESS

Adapted from: The Buck Institute for Education-Creativity & Innovation Rubric for PBL

<i>Creativity & Innovation Opportunity at Phases of a Project</i>	Not Attempted 0	Needs Improvement 1-2	Approaching Expectations 3-4	Met Expectation 5-6
<i>Launching the Project</i> Define Expectations	“CAS LTP Project Planning Guide” not submitted.	Lack of understandings of the expectations for the planning process using the “CAS LTP Project Planning Guide.”	Demonstrated somewhat clear understandings of the expectations for the planning process using the “CAS LTP Project Planning Guide” (e.g., met some checkpoints, some fields not fully developed).	- Demonstrated clear understanding of the expectations for the planning process using the “CAS LTP Project Planning Guide.” - Effectively understands the roles and responsibility of the group.
<i>Building Knowledge, Understanding, and Skills</i> Identify Sources of Information	“CAS LTP Project Planning Guide” not submitted.	Uses only typical sources of information (website, book, article).	Finds only one source of information that is not typical.	In addition to typical sources, finds unusual ways or places to get information (adult expert, community member, business or organization, literature).
<i>Developing and Revising Ideas and Products</i> Generate, Reflect,	“CAS LTP Project Planning Guide” not submitted.	Rarely evaluates the quality of sources and occasionally identify the needed sources. This evident in the “Cornell	Inconsistently evaluates the quality of sources and occasionally identify the needed sources. This	Carefully evaluates the quality of sources and continues to identify needed sources. This evident in the

and Revise Ideas		Notetaker Tool.” • Rarely asks new questions, takes different perspectives to elaborate and improve on the research question. This is evident in the “Cornell Note Taker Tool” and “Checkpoints.” • Rarely seeks out and uses feedback and critique to revise planning to better meet the goals for the project. Evident in the “Checkpoint.” • Rarely uses idea-generating techniques to develop several original ideas for research, product(s), and the presentation.	evident in the “Cornell Notetaker Tool.” • Occasionally asks new questions, takes different perspectives to elaborate and improve on the research question. This is evident in the “Cornell Note Taker Tool” and “Checkpoints.” • Occasionally seeks out and uses feedback and critique to revise planning to better meet the goals for the project. Evident in the “Checkpoint.” • Occasionally uses idea-generating techniques to develop several original ideas for research, product(s), and the presentation.	“Cornell Notetaker Tool.” • Asks new questions, takes different perspectives to elaborate and improve on the research question. This is evident in the “Cornell Note Taker Tool” and “Checkpoints.” • Seeks out and uses feedback and critique to revise planning to better meet the goals for the project. Evident in the “Checkpoint.” • Uses idea-generating techniques to develop several original ideas for research, product(s), and the presentation.
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GROUP PRODUCT

Adapted from: The Buck Institute for Education-Creativity & Innovation Rubric for PBL

	Not Attempted	Needs Improvement	Approaching Expectations	Met Expectation
	0	1-2	3-4	5-6

Originality	No evidence/inaccurate understanding of the task.	- The product relies on existing models, ideas, or directions; it is not new or unique. - The product follows rules and conventions; uses materials and ideas in typical ways.	- The product has some new ideas or improvements, but some ideas are predictable. - The product may show a tentative attempt to step outside rules and conventions or find new uses for common materials or ideas.	- The product is new, unique, surprising; shows a personal touch. - The product may successfully break rules and conventions, or use common materials or ideas in new, clever, and surprising ways.
Style	No evidence/inaccurate understanding of the task.	- The product lacks risk, is ordinary, made in a conventional style. - The product is safe and school appropriate. - The product has several elements that do not fit together; it is a mish-mash.	- The product has some interesting touches but lacks a distinct style. - The product is safe and school appropriate. - The product has some elements that may be excessive or do not fit together well.	- The product is well-crafted, striking, designed with a distinct style but still appropriate for the purpose. - The product is safe and school appropriate. - The product combines different elements into a coherent whole.
Alignment to Research	No evidence/inaccurate understanding of the task.	The product is evident but there is no alignment to the research.	The product attempts to connect elements in the research and is somewhat used to engage the audience during the presentation.	The product connects to elements in the research and is used to engage the audience throughout the presentation.

GROUP PRESENTATION

Adapted from: The College Board AP Seminar Performance Task 2 Scoring Guidelines Multimedia Presentation Rubric

	Not Attempted	Needs Improvement	Approaching Expectations	Met Expectation
	0	1-2	3-4	5-6

Establish Research Question and Context	The presentation is not delivered.	- The presentation identifies a problem or issue but the research question is not developed and offers little to no explanation of how it is connected to the regional and global context. - The presentation summarizes information instead of offering an argument. - The presentation's design does little to effectively convey the information. There is little evidence of purposeful selection or emphasis of information to suit the appropriate audience (e.g. too much of the essay is included on slides).	- The presentation makes general statements about the context of the research question, including how it is connected the regional and global context. - The presentation connects evidence and claims. The argument is mostly clear and organized, but at times the reasoning may be faulty OR the reasoning may be logical but not well organized. - The presentation's design aligns with the information and selects and emphasizes key information. The presentation somewhat is designed for the appropriate audience.	- The presentation clearly explains the relevance of the research question and situates the perspective within a regional and global context. - The presentation is logically organized, well-reasoned, and complex. It persuasively connects the evidence to claims to clearly and convincingly establish an argument. - The presentation's design aligns well with and effectively contextualizes the information. The presentation, including its selection and emphasis of information and is designed for the appropriate audience.
Selection of Evidence for the Argument	No supporting evidence for the development of the argument and no resolutions, conclusions, and/or solutions were provided	The presentation incorporates evidence from a minimal range of perspectives OR information is provided but not used as evidence to support the argument.	- The presentation incorporates evidence from various perspectives to develop and support the argument. - The presentation offers specific resolutions, conclusions, and/or	- The presentation incorporates and synthesizes relevant evidence from various perspectives to develop and support the argument. - The presentation offers detailed, plausible

		The presentation offers information without offering specific resolutions, conclusions, and/or solutions OR they are unsubstantiated or oversimplified.	solutions that at least partially address the research question.	resolutions, conclusions and/or solutions, and considers the limitations and implications of any suggested solutions.
Engage Audience	None of the team members applied effective presentation techniques OR participated in the Q&A session.	- Few of the team members apply effective presentation techniques (e.g., eye contact, vocal variety, movement, energy). - The presentation was 3 or minutes overtime OR 3 or more minutes less than the required time. - Few of the group members participated in the Q&A session OR the group members were unable to demonstrate an understanding of their topic.	- Majority of the team members apply effective presentation techniques (e.g., eye contact, vocal variety, movement, energy). - The presentation was 1-2 minutes overtime OR 1-2 minutes less than the required time. - The majority of the group members participated in the Q&A session and were able to demonstrate an understanding of their topic.	- All of the team members apply effective presentation techniques (e.g., eye contact, vocal variety, movement, energy). - The presentation met the time requirements. - All group members participated in the Q&A session and the group demonstrated a deep understanding of their topic.

INDIVIDUAL RESEARCH ESSAY

Modeled and adapted from: The International Baccalaureate Programme Extended Essay Guide

	Not Attempted 0	Needs Improvement 1-2	Approaching Expectations 3-4	Met Expectation 5-6
Research Focus	The research paper was not submitted	The research question is too broad and has limited alignment to the UN Sustainable Development Goals. The intent of the research question is understood but the focus of the research has not been clearly expressed in alignment to the research question. The source(s) and/or method(s) to be used are limited in range given the topic and research question. There is limited evidence that their selection was informed. The essay meets few of the stated written component requirements: research essay, reflection, work cited page.	The research question is clear but the discussion in the essay is only partially focused and connected to the research question and the UN Sustainable Development Goals. Identification and explanation of the research topic is communicated; the purpose and focus of the research is adequately clear, but only partially appropriate. The source(s) and/or method(s) to be used are generally relevant and appropriate given the topic and research question. There is some evidence that their selection(s) was informed. The essay meets most of the stated written component requirements: research essay, reflection, work cited page.	The research question is clear and addresses an issue of research aligned to the UN Sustainable Development Goals. Identification and explanation of the research topic is effectively communicated; the purpose and focus of the research is clear and appropriate. An appropriate range of relevant source(s) and/or method(s) have been applied in relation to the topic and research question. There is evidence of effective and informed selection of sources and/or methods. The essay meets all stated written component requirements: research essay, reflection, work cited page.

	The research paper was not submitted	The selection of source material has limited relevance and is only partially appropriate to the research question. Four or more errors in the proper use of written citation and application of sources within the essay. Subject-specific terminology and/or concepts are either missing or inaccurate, demonstrating limited knowledge and understanding	The selection of source material is mostly relevant and appropriate to the research question. Two or three errors in the proper use of written citation and application of sources within the essay. The use of subject-specific terminology and concepts is mostly accurate, demonstrating an appropriate level of knowledge and understanding.	The selection of source materials is clearly relevant and appropriate to the research question. There is evidence of effective proper written citation and application of sources within the essay (e.g. quotations, The use of subject-specific terminology and concepts is accurate and consistent, demonstrating effective knowledge and understanding.
	The research paper was not submitted	There is limited analysis. There are conclusions to individual points of analysis and these are limited and not consistent with the evidence. Any conclusions to individual points of analysis are only partially supported by the evidence. An argument is outlined but this is limited, incomplete, descriptive or narrative in nature OR The construction of an argument is unclear and/or incoherent in structure	The research is analyzed in a way that is clearly relevant to the research question; the inclusion of less relevant research rarely detracts from the quality of the overall analysis. Plausible resolutions, conclusions and/or solutions, address some individual points of analysis and are supported by the evidence but there are some minor inconsistencies. A reasoned argument is clearly structured and coherent and	The research is analyzed effectively and clearly focused on the research question; the inclusion of less relevant research does not significantly detract from the quality of the overall analysis. Plausible resolutions, conclusions and/or solutions, address individual points of analysis and are effectively supported by the evidence. A reasoned argument is well structured and coherent; any minor inconsistencies do not

		hindering understanding. There is an attempt to evaluate the research, but this is superficial.	supported by a final or summative conclusion; minor inconsistencies may hinder the strength of the overall argument. The research has been evaluated partially.	hinder the strength of the overall argument or the final or summative conclusion. The research has been critically evaluated.
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CENTERS FOR ADVANCED STUDY
LONG -TERM PROJECT PRESENTATION EVALUATION SHEET FOR TEACHERS

Student: _____ Class: _____ Period: _____ Date: _____

Title of Project: _____ Teacher Issuing Grade: _____

Long-Term Project Components (LTP)	Points	Teacher Feedback/Notes
I. Planning process (25%)	/__	
II. Written component (25%)	/__	
III. Product (25%)	/__	
IV. Presentation (25%)	/__	