

LIBERTY TREE ACADEMY



Senior Capstone Project



The Liberty Tree Academy Capstone Project is designed to capture the students' passions and creativeness while fostering their ability to be self-directed and independent learners.

The Senior Capstone Project will also serve as a culmination of students' high school career by demonstrating the knowledge and skills they have cultivated through the design, implementation and presentation of student-driven projects.

Every year, we are astonished at how quickly high school goes by. As a school, we have watched many of the students' class grow into young adults. At Liberty Tree Academy, we strive to prepare our students to become leaders, lifelong learners, and caring citizens. Toward this goal, one of the important learning experiences that all students who graduate from Liberty Tree Academy have in common is the opportunity to complete a senior project.

This year, we have created the paperwork and the process to provide students with support and structure to help them successfully complete a senior capstone project. These activities, deadlines, and documents will guide students, one step at a time, as they envision, plan, and carry out a project that is unique to their interests and talents.

The first step in the process is a letter of intent which will require each student to explain their project. Students will create ways to communicate and celebrate their projects with the wider school community. Finally, they will present their project. Their final summative assessment will be a presentation to a panel of evaluators. The panel will be made up of teachers and other school officials who will use a standard rubric to evaluate each student's project.

A successful Senior Capstone Project journey involves parental, community, and teacher support as well as student initiative and self-discipline.

In a few short months, these students will become high school graduates. Having gained knowledge, skills, and habits that will continuously be drawn upon going forward to succeed in careers, communities and family lives. It is our hope that this senior capstone project becomes one of those experiences to look back upon and celebrate how much was learned.

Respectfully,

The Administration Team at Liberty Tree Academy

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Senior Capstone Project Overview

The purpose of the Senior Project is to give students a chance to choose an area of study, to combine different disciplines, to explore new avenues in a productive manner, and, at the same time, to help others and contribute to the community. Each student needs to address a challenging issue that will stretch his/her intellectual and personal growth. The project will provide a significant learning outcome. It should be relevant to the community at large and/or give insight into a field that the student may want to pursue as a career. This project guidelines are subject to change as the program grows and develops.

Benefits of the Senior Project

Once the graduating senior has completed the Senior Capstone Project, a portfolio will have been attained that has brought maturity, organization, service, learning, and public speaking skills to fruition. It is also important to note that students will be creating and completing these types of projects in their post-high school careers as well. Any student planning to attend a college or university usually completes major projects like this as a part of the university experience. Students will have experience in real-world tasks.

These projects can, and should be, creative and unique. There is no limit to what students can do to challenge themselves, to learn and help others in the process.

Any of the projects described show that the student has used a host of skills that will set them apart from other seniors.

Senior Capstone Project can earn you up to 3 credits towards graduation. Students can earn 1.5 credit if they complete at least 150 documented hours of work on the project, which is the minimum that one can gain from a Capstone. If a student was interested in obtaining the full 3 credits the student must show a minimum of 405 documented hours of work on the project. All projects must be completed by May 1st to allow time to fully be graded by the student advisor in time for graduation. This may take 1 semester for the 1.5 credit and both semesters for the 3 credits.

Steps of the Senior Capstone Project Process for both 1.5 credit and/or 3 credit options

1. Write and submit a letter of intent for approval by Capstone advisor
2. Create project map
3. Develop a project timeline, including checkpoints and deadlines
4. Document work through daily/weekly reflections
5. Practice presentation to peers
6. Develop a cover letter and resume that will become part of student portfolio
7. Complete project, including creating project product/artifacts
8. Present project and demonstrate learning outcomes to panel of evaluators

Senior Capstone Project Guidelines

The Senior Capstone Project is different from most other forms of research because it directs students away from books and out into the world for hands-on experience. The Senior Capstone Project must demonstrate learning outcomes. It should push the student to develop new talents and abilities, within a field of interest. The Senior Capstone Project cannot be something previously attempted. The student must have an end product! If the purpose of research is to apply the knowledge in a personal way, then the projects will be as diverse, unique, and varied as the students who design them.

A project will:

- Demonstrate a learning outcome through a well-designed project
- Demonstrate competency in English or Mathematics through identified alignment with the Colorado academic standards.
- Develop and demonstrate the essential skills identified for all Colorado graduates, including:
 - Personal skills (self-awareness, personal responsibility, etc.)
 - Entrepreneurial skills (critical thinking, creativity, etc.)
 - Civic/interpersonal skills (collaboration, communication, etc.)
 - Professional skills (time management, information literacy, etc.)
- Require evidence (artifact or physical product) of capstone project

Note To Students Who Want the Easy Way Out:

Some students think that it is a cinch to choose what they think is an easy project. They think to themselves, “I will just choose something that will not take much time or effort, just to get it done. I will take my C and see you later.” Without exception, the students who have done this found several things to be true: 1) Easy wasn’t true because there was not much to the project in the first place. 2) There was no challenge or risk; therefore, the whole experience was unsatisfying. 3) They did not feel proud of their accomplishment because there was none. 4) They wasted their time

SENIOR CAPSTONE GRADING

SUMMATIVE

1. Letter of Intent
2. Class Presentation 3-4 min
3. Project Blueprint/Timeline
4. Progress Reports/journals
5. Portfolio: Cover Letter/Resume
9. Final Product Presentation

FORMATIVE

1. Self-Assessment & Reflections

- a. Minimum 3 per week for 15 weeks for 1.5 credit or 5 per week for 15 weeks for 3.0 credits
- b. 45 plus (for 1.5 credits) 60 plus for 3.0 credits =A
- c. 30-45 (for 1.5 credits) 45-60 (for 3.0 credits) = B
- d. 25-29 (for 1.5 credits) 39-44 (for 3.0 credits) = C
- e. Less than 25 (for 1.5 credits) less than 39 (for 3.0 credits) receives an F (cannot receive an A on the final project)

Topic Selection

Points to Consider Concerning Senior Project

1. Which project will I be able to use after senior year?
2. Which choice will challenge me the most and provide a learning outcome
3. Which area will enable me to find the most resources?
4. Do I have a person who is willing to serve as my advisor?
5. Which project is realistic in terms of time for me, a busy senior?
6. What are my talents?
7. Is there an area that a college admissions representative or an employer will look at with interest?
8. Is there a budget concern for me?
9. Is there a concern about transportation?

Senior Capstone Project Communication Requirements

This assignment is an opportunity to publicize the Senior Project to other students and staff. These 3–4-minute presentations will be completed during an SA period to make others aware of your goals. This will be a public display of your commitment to and your interest in your project topics. You are asked to adhere to the following guidelines to produce professional, understandable, brief communication with others.

Materials

- Computer generated slide show (must be approved prior to showing in class)
- Be creative, but remember school appropriateness and following LTA expectations/mission.

Organization:

- Must be neat, clear, and legible. Lettering that is cluttered or hard to read from a distance is unacceptable
- Information must be understandable and easy to follow and must be between 3 and 4 min when you present it to the class

Design:

- Be creative. Make a presentation that is a unique, artistic reflection of your topic.
- Take pride in your work
- Use color and design to highlight your topic in an eye- catching and attractive manner.

Capstone Project Presentation Self Evaluation Form

- | | |
|--|--------|
| 1. Presentation contains the student's name | YES/NO |
| 2. Presentation is correct length of time (3-4min) | YES/NO |
| 3. Presentation includes student's project title | YES/NO |
| 4. Presentation describes physical and project / fieldwork | YES/NO |
| 5. The presentation has effective graphics | YES/NO |
| 6. The presentation is error free, correct spelling, etc. | YES/NO |
| 7. Presentation has acceptable organization, creativity, and understandable | YES/NO |
| 8. When presenting to class was your presentation clear and understood by others | YES/NO |

(Tip do not power point read to class as students can read, but make sure to ADD to slides as they are just a direction for you to talk about)

Final Presentation Guidelines

The presentation represents the ultimate step in the process. It is a self-evaluation and presentation of all that the student has accomplished and serves as a synthesis of all learning. All presentations will be given before a panel of judges.

Presentation Requirements: The speech must:

- Be 7-10 minutes in length
- Be prepared for multiple deliveries; students will be expected to perform their presentation for a large group of school/community members and to a panel of evaluators possibly made up of faculty, staff, school board members, and members of the community
- Demonstrate knowledge and knowledge of skills through speech, physical product/field work, and portfolio.
- Be accompanied by a visual aid; video or audio cannot be longer than two minutes
- Any PowerPoint presentation must include images on slides of work

The speaker must:

- Be on time
- Wear “business casual” attire or uniform appropriate to capstone
- Answer questions regarding capstone asked by the panel of evaluators
- Exhibit appropriate courtesies to judges, fellow students, and participants
- Be responsible for organizing, using, storing, removing all visual aids
- Equipment, materials needed for a successful presentation
- Provide any technical devices necessary for the presentation beyond school capabilities
- Confirm technology prerequisites with the assigned presentation room *before* the day of the presentations

Letter of Intent: Outline

May 4, 2022 (Today's date)

Ms. Jane Doe (Advisor's Name)

8579 Eastonville Rd. (School address)

Falcon, CO 80831

Dear Ms. Doe:

Paragraph I: Topic Proposal: What is your proposed topic? What is your proposed fieldwork? What is your final product? How will your project address the Colorado academic standards, specifically in English or Mathematics? Which specific English or Mathematics standards will align with your project? Be sure to include how you will show knowledge in each content area.

Paragraph II: Interest in Project: Explain your interest and any previous experience you have in this field. Why do I want to do this? What value will the project hold for me, the school, and/ or the community at large?

Paragraph III: Which advisor are you utilizing? (Please put both Mrs. Stewart and Mrs. Kocab) as they are the current advisors.

Paragraph IV: Learning Outcome: What will I learn during this project, particularly how will I challenge myself to stretch beyond my usual limits? Please also give a detailed time frame of this ie.. I will work 2 hours every weekend with the farmer and journal 10 min after each work session, I will like to present my speech to my SA class on or near this date and my final learning objective will be met on such date.

Sincerely,

(Student's Name)

(LTA /Grade)

Portfolio Requirements

The portfolio reflects your learning process over the entirety of the Senior Project. It provides essential documentation of your project for the panel of judges. Remember this will be their first impression of you and your project.

Portfolio contents will be presented digitally or in a three-ring binder with a front-view cover. Portfolio documentation is to be typed except where applicable forms utilize hand-written responses. Photo documentation is to be captioned.

Important Note: Incomplete, un-typed, or otherwise partial portfolios will not be evaluated. A complete portfolio will contain the following items, in this order:

1. Decorative Front Cover (including title of project and student name)
2. Table of Contents (and clearly labeled Section Dividers throughout portfolio)
3. Letter of Intent that states learning outcomes
4. Topic Advisor Verification Form
5. Project Blueprint/ Timeline
6. Letter of Request to Advisor, if necessary
7. Fieldwork Journal, images
8. Internship Verification Form, if necessary
9. Weekly Progress Report Reflections
10. Cover Letter
10. Resume
11. Artifacts: Include samples of physical product or fieldwork (i.e., photos, plans, illustrations,
12. Designs and other evidence

Progress Tracking Journal - Internships/Fieldwork

During the physical product/fieldwork phase of the Senior Capstone Project, you must keep an up-to-date record of the effort, results, and time you have spent working on your physical product/fieldwork. The fieldwork journal is important for several reasons. First, it keeps you on task and focused by requiring you to write down all that you have accomplished so far and what you still need to complete. Second, it helps keep a record of the time spent on the physical product/fieldwork. Finally, the physical product/ fieldwork journal allows the advisor and the evaluation panel to realize the effort, thought, and learning outcome you have reached. It will give them a clearer idea of the scope of your physical product/fieldwork.

Expectations: 25 entries minimum for 1.5 credits and 45 entries minimum for 3 credits

1. The journal should describe what you do at one time in specific detail. The day you do it. You should not wait until the end of the week, for example, to write several entries or to try too many activities in one log entry. Either way, you would be too general.
2. The journal must include contacts you make with your advisor(s) and others who assist you along the way.
3. The journal should report successes, surprises, disappointments, and changes.
4. The journal **must be typed**--remember that both your advisor and judges will read it--but it need not have the serious tone that a research paper does.
5. The date of each activity should be included at the top of each entry.
6. The number of minutes/hours spent on that day's activity should be reported at the end of the entry in parentheses. That number should be reasonable. Going to the library to pick up a book would not take three hours, for example.

Internship Verification Form

(Required for students who have opted to do an internship)

Student Name: _____

Physical Product/Fieldwork: _____

Dear Advisor:

You have been chosen to verify this student's effort on his/her physical product/fieldwork. Since most of the time spent on the product phase of the assignment has been outside of the classroom, verification of the student's efforts is necessary. Please answer the following questions to help us evaluate his/her physical product/fieldwork. This form and your verification refer to the actual physical product/fieldwork.

Can you verify that the student spent at least 60 hours (1.5 credit value) or 90 hours (3 credit value) creating this physical product/fieldwork? Yes No

Comments: _____

Have you seen the physical product/fieldwork at different stages of completion, and not just the final phase? Yes No

Comments: _____

What problems specifically did the student encounter and overcome?

Has the student demonstrated an outcome in learning?

Internship Verification Form(cont)

How did the student experience a departure from his or her comfort zone? _____

What success have you seen this student achieve? _____

Advisor Signature: _____ Date: _____

Advisor Print name: _____

Phone: _____

Thank you for your help and cooperation. Your time and effort are truly appreciated!

Student, please attach daily hours signed by internship onsite advisor with what was completed on daily basis.

Senior Capstone Project Fieldwork Journal Sample

****Note:** You must have at least one entry per day of activities for the duration of your project. You must also have any adult that oversees this work sign off on said work.

Name: _____

Project Title: _____

Senior Capstone Project

Date/Time Spent	Activities	Reflection
Directions: In this column, write the date and the amount of hours/minutes you spent working on your project.	Directions: In this column, you must describe what you do in specific detail. You should include contacts made with advisor and other people who assist you along the way, and the location of activities.	Directions: In this column, report your successes, surprises, disappointments, difficulties, and changes. Include details about the latest information you have learned. Provide a narrative of your personal growth throughout the project process.
Example: Jan. 14 (2 hr. 20 min.)	Example: Met with engineer at the recording studio to discuss mixing of background tracks.	Example: This was more difficult than I imagined. It was very frustrating try to explain my vision of the song to the engineer. After hours of effort, however, we were on the same page and recorded two sample tracks.

Suggested Outline - Senior Capstone Project Speech

- I. Introduction: Who you are, and what you hoped to achieve
 - A. Hook: Use a story, personal experience, background info, a joke, a quote...create a "hook" to catch the audience's attention.
 - B. Introduce yourself.
 - C. State your purpose and goal (from Letter of Intent)
- II. Body: The "Lesson": What was your project? Discuss process of accomplishing project. Show outcome gains
- III. Application of learning
 - D. Background of interest in project
 - i. Prior knowledge
 - ii. Reasons for choosing project
 - E. Describe project design, product, and fieldwork
 - iii. Explain how you went about completing your project
 - iv. Discuss problems of the project and their solutions
 - v. Discuss time and costs involved and how to meet those demands
 - F. Explain one key aspect or key skill from your project: show the judges how you applied your learning.
- IV. Conclusion: Reflect on your project
 - G. Review the learning outcome
 - H. Evaluate your product in terms of your goal
 - I. Close with overall reflection and personal insight

Words of Advice for Your Speech

Public speaking is prepared and often scripted speech- it is quite different from conversation and extemporaneous speech.

Organize your speech so that basic ideas are repeated. Make sure your speech has a BEGINNING, MIDDLE, and an END.

Review your previous documentation (letter to the judges, your letter of intent, and the Senior Project handbook). Make sure your speech has a major idea that your listeners will remember after you are finished talking.

Practice

Practice many times until the speech seems natural. Practice in front of many audiences: the mirror, your pets, your parents, your siblings, your friends, and your advisor! Don't just pick positive audiences. Ask your audience for advice on how to improve.

Don't try to dazzle. Just try to be sincere.

Use Visual Aids

Use pictures, charts, graphs, costumes, tools, video, samples, etc. (Remember: One of the lessons you may have learned during the whole process is asking for help. Ask for ideas for useful visual aids from your teacher or advisor.) The visual aid must be integrated in your speech. These are props; they can help you get over nervousness if necessary. Make sure they are big enough for your audience and the judges to see.

Remember, you are responsible for the technical preparations for your presentation! If your technical presentation does not work the day of the panel presentation, you **must** have another alternative.

... AND then practice again! You won't be as nervous if you are well prepared and have practiced.

REMEMBER that you are acting as a representative of both yourself and LTA when presenting your project.

Brainstorming Sheet for Students

Contemplate all the areas of interest in your life. Where do you see yourself in ten years?
Where do you see your project in relationship to one or any of the ideas listed below?

1. Social Studies (historical study, cultural study)
 2. Space (exploration, extraterrestrial theory)
 3. Specialized Hobbies or Collections (coins, cars, dolls)
 4. Philosophy (comparative studies, certain theorists, or leaders)
 5. Art (producing the school's art show, painting, designing a stained-glass window)
 6. Education (working with elementary students, working with a high school teacher on a topic, working with the county to fight illiteracy)
 7. Technology (wood, metal, cars, computers, graphics, electronics)
 8. Family and Consumer Sciences (designing and sewing costumes for a play, musical, or homecoming; catering a special event)
 9. Writing and/or Literature (writing and illustrating a children's book in English or a foreign language, compiling a poetry book)
 13. Math and Science (exploring certain math theories, starting a tutoring program after school, pursuing an ozone study, or starting a recycling program)
 14. Photography/Film (making a movie, taping, and editing school events, showing photographs)
 15. Social Concerns (homelessness in the Springs or the Front Range, aging, youth violence)
 16. Career Path (journalist, doctors, physical therapists, researchers)
 17. Volunteer/Community Service Extension (volunteer project at a local hospital)
 18. Travel (languages, working during a break in a foreign land)
 19. Health and Fitness (physical program for youth, teaching/ coaching others)
 20. Performing Arts (music, dance, drama)
-
18. Business (trends, stocks, computers)
 19. Sports-Related Project (teaching children a new sport skill, volunteering at the YMCA)
 20. Certification in an Area (like CPR and help host a health fair)

Senior Project Ideas

This is not a definitive list of all project topics. It is not intended to limit student creativity or initiative. This list is provided to promote student formulation of meaningful, personal choice that reflects the philosophy of the project. Just remember the project should align with LTA virtues and mission.

Brainstorming Sheet for Students (cont.)

Students may not use a project that will count as a class credit. They can, however, create an extension of a class project for which they received credit.

Students may present their final project in many forms including, but not limited to:

- a portfolio/work sample
- a video
- a prototype/model

Some projects may naturally lend themselves to a unique final product that may be acceptable on a case-by-case basis.

School Service Projects

- Develop and execute a tutoring program
- Write a computer program for the school or an instructor
- Design and publish a newsletter for a school organization
- Design and publish brochures about school programs
- Work with elementary classes to reinforce wellness, interpret poetry, etc.
- Develop and implement an intramural program
- Research a current school policy and make recommendations for improvements
- Organize and execute a school clean up
- Design and create a piece of art for public display
- Plan a school-wide art show
- Plan and organize a major-school wide event
- Work with a sports team and collect and produce video clips of the season's best, funniest, most exciting plays and moments, etc.

Brainstorming Sheet for Students (cont.)

Community Improvement/ Involvement Projects

- Coordinate a service project for a nonprofit organization
- Perform a service project for the elderly
- Perform a service for a senior citizen community
- Volunteer on a regular basis at a homeless shelter
- Volunteer at a local hospital or nursing home
- Plan, organize, and execute environmental improvement project
- Build or renovate a house as a service project
- Design and build a fitness trail
- Organize a community festival (i.e., arts, music, foods, multicultural heritage, etc.)
- Plan and supervise an elementary school bicycle safety program
- Coach a community sports team
- Teach a religious instruction class
- Work with and for a political candidate during a primary or general election campaign

Fine Arts and Creative Projects

- Compose and perform a piece of music for a senior citizen home
- Organize a student concert
- Organize a student art show
- Edit and produce a magazine for a school/community organization
- Edit and produce a school newspaper
- Write and publish a short story or book of poems
- Direct a school play or dramatic performance
- Design and paint a mural for display somewhere in the community
- Plan and conduct a showing of your personal artwork or writings
- Write and illustrate a children's book in English or a foreign language

- Make a video for public service announcements

Brainstorming Sheet for Students (cont.)

Entrepreneur Projects

- Set up a small business, keeping financial records and managing time and materials
- Create a company and then develop and produce a product that helps someone or a group
- Organize a fundraising activity for a nonprofit cause
- Establish a teen coffeehouse as a way to share poetry.

Internship or Career-Related Projects

- Intern with an elementary teacher or subject area teacher
- Intern in a health-related field and share that with a health class
- Intern with a government or legal entity and design a lesson
- Intern with a newspaper or publishing entity and design a lesson
- Intern with a design or advertising firm and create a design or marketing plan
- Intern at a daycare center and create lesson plans
- Intern with a film, theater, or drama entity and share that with the church drama club
- Intern with a general contractor and design something for the school grounds.
- Intern with a skilled tradesman and donate work to a worthy cause
- Restore a car or other transportation for someone in the American Association of Retired Persons

Practical Arts Projects

- Build a piece of furniture and donate it to a charity auction
- Cater a social function for the community, local firemen etc...
- Design and create an original clothing design for a production such as the spring musical or fall play
- Demonstrate carpentry skills by remodeling or enhancing an area in the community
- Design and redecorate a room for a women's shelter

Brainstorming Sheet for Students (cont.)

- Create and paint a design for someone's home/workplace/community center
- Create an appropriate animated movie for a class/elementary school.
- Write, direct, and perform a children's theater production
- Create an elementary drama production
- Design puppets and produce a puppet show for younger kids
- Develop public relations or marketing materials for a theater
- Host a band festival

Other Suggestions

- Help train others for a marathon or related sporting event
- Work with a veterinary hospital staff member
- Research how the brain, skeletal, or other system in the body works and produce a video or visual for display for a science/ health teacher
- Work with the Humane Society or the Denver Zoo on a project
- Work with children with disabilities (i.e., design sports activities for them)
- Create and follow through with a recycling program for a semester
- Conduct mock trials
- Sponsor and administer a voter registration drive
- Organize a model similar to the United Nations
- Organize a forensics tournament
- Complete a community improvement project (park or playground)
- Organize a spring extravaganza for a senior citizens center
- Teach younger kids a sport
- Design a cultural display case for a local business
- Establish a correspondence program with a school in a foreign country or local school with guidance from a teacher
- Complete a foreign foods program

Brainstorming Sheet for Students (cont.)

- Organize a traveling art show
- Organize a foreign language tutoring time for the language of your choice
- Develop audiotapes of novels and short stories for teachers
- Establish an environmental monitoring project
- Complete a Students Against Destructive Decisions (SADD) project
- Complete a foreign exchange opportunity
- Form a band to play music at a dance or school-sponsored event
- Develop an ethnographic extension for a social studies teacher
- Conduct a peer-tutoring project over the summer
- Produce a highlight film for any sports team, musical, or related event.
- Establish a homework help system

Projects to Avoid

- Painting murals on the walls
- Creating art on canvases and donating to the school

EXCEPTION: Painting on the walls of a teacher's classroom.

- Sports camps for kids
- Organizational/traditional fundraisers (i.e. "plug and play" fundraisers)

EXAMPLE: Kills for the Cure, collection boxes in classrooms

EXCEPTION: If a student has a significant/intricate/pivotal role in designing and implementing the fundraiser

- School "improvement" projects

EXCEPTION: Director approval, and if the advisor is willing to actively supervise ALL aspects of the project.