

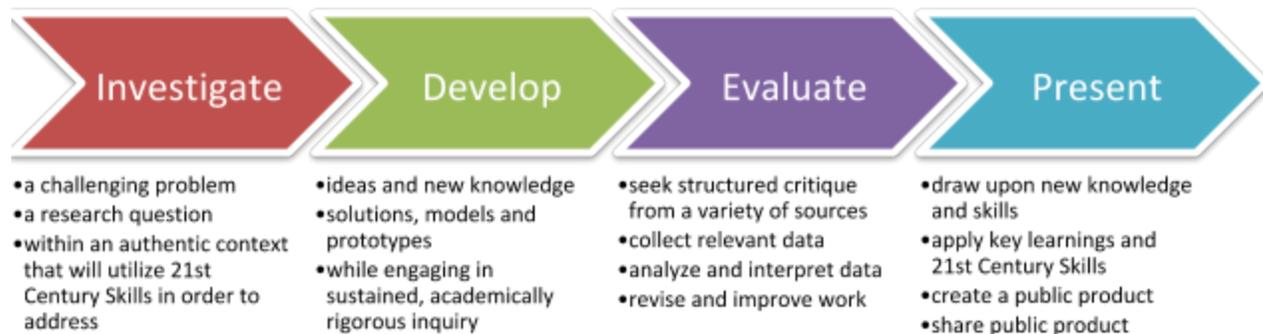
Capstone Project Definition

A **Capstone Project** is a multifaceted body of work that serves as a culminating academic and intellectual experience for students. Capstone projects could:

- present findings from an independent research based project;
- feature a set of experiments or prototypes organized around a central problem; and/or
- showcase a community service project or learning activity.

Capstone Project Design Elements

- **Investigate** a Challenging Problem or Question in an Authentic context
- **Develop** Ideas or Solutions through Sustained Inquiry
- **Evaluate** structured Critique or Data and use feedback to Revise and Improve work
- **Present** a Public Product showcasing Key Learnings



Capstone Project Types

- **Focus Program**
- **Independent Study**

Focus Program

Focus Program capstone projects are developed by high school Design Teams so that students are able to demonstrate the culminating benchmarks of their district-approved Focus Program. The Focus Program capstone may be embedded within a semester or year-long course, or as a stand-alone project supported by an onsite focus program advisor. Focus Program capstone project utilize their own rubrics and scoring criteria as developed by their onsite Design Team. Focus Program capstones meet and/or exceed the district Capstone Project Design Elements and district Capstone Project Independent Study Rubric. Focus Program capstone projects meet the Colorado Menu of college and career-ready demonstrations in English and Math.

Independent Study

Independent Study capstone projects are initiated by students in order to meet the Colorado Menu of college and career-ready demonstrations in English and Math. Independent Study capstones may be embedded within a semester or year-long course, or as a stand-alone project supported by an onsite independent study advisor. Independent Study capstones use the district Capstone Project Design Elements and district Capstone Project Independent Study Rubric. Independent Study capstones are focused

on a central problem or question which may include rigorous academic research, experiments and prototyping, and/or community service.

Capstone Project Rubric

	Advanced	Proficient	In Progress
Investigate	<ul style="list-style-type: none"> The project is focused on a challenging and unique central problem or question The project has an authentic context, involves real-world tasks, tools; makes a real impact on the world and/or speaks to the student's personal concerns and interests The central problem or question is framed by a driving question for the project which is: <ul style="list-style-type: none"> Open-ended; it allows student to develop more than one reasonable answer Understandable and inspiring to student Aligned with 21st Century Skills; in order to complete project student will apply multiple skills in each domain 	<ul style="list-style-type: none"> The project is focused on a clear central problem or question The project has an authentic context, involves real-world tasks, tools and/or speaks to the student's personal concerns and interests The central problem or question is framed by a driving question for the project which is: <ul style="list-style-type: none"> Open-ended; it allows student to develop more than one reasonable answer Understandable and inspiring to student Aligned with 21st Century Skills; in order to complete project student will apply multiple skills in each domain 	<ul style="list-style-type: none"> The project is not focused on a clear central problem or question The project resembles "school work" with a lack of real-world context, predetermined findings or lack of personal interest The central problem or question is seriously flawed or leads to: <ul style="list-style-type: none"> A single or simple answer Student apathy or loss of interest Few 21st Century Skills developed in each domain
Develop	<ul style="list-style-type: none"> Inquiry is sustained over time and academically rigorous using multiple sources to access information Student poses questions, gathers and interprets data, develops and evaluates solutions or builds evidence for answers and asks further questions Inquiry is driven by student-generated questions throughout the project New ideas, multiple solutions and prototypes emerge from the sustained academically rigorous inquiry 	<ul style="list-style-type: none"> Inquiry is sustained over time using multiple sources to access information Student poses questions, gathers and interprets data, develops and evaluates solutions or builds evidence for answers and asks further questions Inquiry is driven by student-generated questions throughout the project New ideas, solutions and prototypes emerge from the sustained inquiry 	<ul style="list-style-type: none"> The project is more like a long series of activities rather than an extended process of inquiry Student may pose questions, but gathers little data that affects the path of the project Generated ideas are expected and commonplace
Evaluate	<ul style="list-style-type: none"> Student orchestrates regular, structured opportunities to access critical feedback about product quality from a wide range of key sources Student uses feedback to revise and improve product systematically 	<ul style="list-style-type: none"> Student accesses feedback about product quality from multiple sources Student uses feedback to revise and improve product 	<ul style="list-style-type: none"> Student receives limited or irregular feedback about product, and only from teachers Student does not demonstrate how feedback is used to revise or improve work

P r e s e n t	<ul style="list-style-type: none"> ● Student applies 21st Century Skills to create a product that is made public by presenting and offering it to people beyond the classroom ● Student publically explains the reasoning behind the choices made, the inquiry process, the 21st Century skills employed and what was learned 	<ul style="list-style-type: none"> ● Student applies 21st Century Skills to create a product that is made public via presentation ● Student publically explains the reasoning behind the choices made, the inquiry process, the 21st Century skills employed and what was learned 	<ul style="list-style-type: none"> ● Student applies few 21st Century Skills to develop a product ● Student does not make their work public beyond the classroom
--	---	---	---

Adapted from the Buck Institute for Education Project Design Rubric - bie.org

Colorado Department of Education Graduation Guidelines Work Group Reports and Recommendations on 21st Century Skills

Critical Thinking and Reasoning may include (but are not limited to) these behaviors:

- Apply logical reasoning and analytical skills
- Collect and analyze quantitative and qualitative data and research
- Conduct research using acceptable research methods
- Construct clear, coherent, and persuasive arguments using research and text evidence
- Distinguish between correlation and causation of events
- Employ deductive and inductive reasoning
- Identify and define problems/conflicts and devise creative, rational, logical solutions
- Respond critically, pose higher-order investigative questions, and personally reflect
- Weigh different research approaches to determine appropriate application

Information Literacy may include (but are not limited to) these behaviors:

- Access informational texts in all academic disciplines
- Adhere to the ethical uses of information including appropriate citations
- Analyze primary and secondary sources
- Communicate sound reasoning using texts, graphics, and speech
- Curate information from multiple resources
- Evaluate and validate the credibility and relevance of information
- Explore divergent thinking and diverse points of view
- Integrate and apply appropriate technology to access and evaluate new information
- Interpret information critically to detect bias and/or purpose for a target audience
- Synthesize/converge evidence from multiple sources to strengthens arguments

Collaboration may include (but are not limited to) these behaviors:

- Balance individual agendas with the interests of the group
- Demonstrate leadership skills and the ability to work within a team
- Engage in productive debate related to content using research, text evidence, and opinion
- Foster a safe environment for discourse between and among your peers
- Plan and organize complex and multifaceted group projects
- Provide constructive feedback to peers
- Recognize the value of cooperation for a common purpose/goal
- Respect the diversity of individuals, groups, and cultures
- Solve problems collectively and mediate conflicts
- Speak and listen to support understanding in the exchange of diverse ideas/perspectives
- Work effectively with others in a variety of groupings (e.g., one-on-one, small group, large groups)

Self-Direction may include (but are not limited to) these behaviors:

- Balance self-advocacy with the consideration of others
- Behave honestly and ethically
- Demonstrate persistence/perseverance
- Engage in self-discovery and life planning through exploration of college and career options
- Evince ownership of personal learning in a variety of ways (e.g., generate questions, design investigations, show pride in work, reflect on choices, evaluate outcomes, adapt/revise to foster growth)

- Increase self-efficacy to complete familiar and unfamiliar tasks
- Initiate learning and follow through independently
- Manage time effectively and plan, prioritize, and evaluate progress toward personal goals

Invention may include (but are not limited to) these behaviors:

- Create original works within and across disciplines (e.g., Mathematical models, Scientific Investigations, Visual/Perform Arts)
- Deconstruct, re-purpose, and integrate ideas or practices
- Demonstrate an openness to “thinking outside the box” Employ creativity and innovation
- Generate, implement, and evaluate new ideas and novel approaches
- Reinvent, redefine, and recreate existing designs, practices, and/or beliefs
- Take risks and learn from successes and failures