

Class of 2020 - Capstone Evaluation Rubric

As part of the Process for Evaluation for the class of 2020 capstone project, all districts and schools must evaluate student capstone projects utilizing a common rubric for all projects that will be used to satisfy graduation requirements. Districts and schools may utilize this sample rubric or a locally designed rubric that evaluates all criteria outlined in the capstone guidance document to evaluate capstone projects and/or modify existing criteria for locally defined capstone rubrics.

Criteria Description	Requires Further Development	Required Capstone Standard	Exceeds Expectation	Comments
		Meets Expectation Students are expected to, minimally, meet expectations in all identified areas		
<p>Research and Writing: Purpose, Focus, Organization and Structure</p> <p><i>The student orders information in a consistent pattern.</i></p> <p><i>The student addresses the audience and develops and maintains the main idea of the writing.</i></p>	<p>Demonstrates a minimal command of Ohio’s Learning Standards for English Language Arts.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Introduce and conclude a topic using an uneven progression of ideas with limited supports for each section; ❑ Develop the topic by selecting irrelevant facts, definitions, details, quotations, or other information and examples; ❑ Provide a thesis with lapses in focus and inconsistently supports thesis throughout research paper; ❑ Produce writing that inconsistently organizes complex ideas, concepts and information and does not connect the ideas to create a unified whole; ❑ Use uneven transitional strategies and syntax to link the major sections of the text; ❑ Produce unclear and incohesive relationships among complex ideas and concepts; ❑ Establish and maintain an informal style and demonstrates a lack of command of the norms and conventions of the discipline in which he or she is writing. <p>Student may include the following:</p> <p>Irregular formatting (e.g., headings), graphics (e.g., figures, tables) and multimedia to aid comprehension.</p>	<p>Demonstrates a command of Ohio’s Learning Standards for English Language Arts.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Introduce and conclude a topic by providing a compelling introduction and concluding statement or section that follows and supports the information or explanation presented (for example, articulating implications or the significance of the topic); ❑ Develop the topic thoroughly by selecting significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples; ❑ Provide a focused thesis and fully support the thesis throughout the capstone project; ❑ Produce writing that adequately demonstrates a command of complex ideas and information through the effective selection and analysis of content; ❑ Use appropriate and varied transitions and syntax to link the major sections of the text; ❑ Create cohesion and clarify the relationships among complex ideas and concepts; ❑ Establish and maintain a formal style and objective tone. <p>Student may include the following:</p> <p>Formatting (e.g., headings), graphics (e.g., figures, tables) and multimedia to aid comprehension, if needed.</p>	<p>Demonstrates a strong command of Ohio’s Learning Standards for English Language Arts.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Introduce and conclude a topic by providing a compelling introduction and concluding statement or section that follows and supports the information or explanation presented (for example, articulating implications or the significance of the topic); ❑ Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience’s knowledge of the topic; ❑ Provide a thoroughly sustained and compelling thesis and support the thesis throughout the research paper; ❑ Produce writing that clearly demonstrates a superior command of complex ideas and information through the effective selection and analysis of content; ❑ Use effective and varied transitions and syntax to link the major sections of the text; ❑ Create cohesion and aptly clarify the relationships among complex ideas and concepts; ❑ Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which he or she is writing. <p>Student may include the following:</p> <p>Formatting (e.g., headings), graphics (e.g., figures, tables) and multimedia to aid comprehension, if needed to connect ideas.</p>	

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<p>Research and Writing: Sources and Evidence</p> <p><i>The student selects and integrates relevant texts and references in support of the main idea of the writing.</i></p>	<p>Demonstrates a lack of command of Ohio’s Learning Standards for English Language Arts.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Provide irrelevant evidence from print and digital sources; does not use advanced searches effectively; ❑ Minimally assess the strengths and limitations of each source in terms of the task, purpose and audience; ❑ Minimally integrate information into the text selectively to maintain the flow of ideas; ❑ Inconsistently follow a standard format for citation. 	<p>Demonstrates a command of Ohio’s Learning Standards for English Language Arts.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Provide relevant information from multiple authoritative print and digital sources using advanced searches effectively; ❑ Assess the strengths and limitations of each source in terms of the task, purpose and audience; ❑ Integrate information into the text to maintain the flow of ideas, avoiding plagiarism and over-reliance on any one source; ❑ Follow a standard format for citation. 	<p>Demonstrates a strong command of Ohio’s Learning Standards for English Language Arts.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Provide relevant and compelling information from multiple authoritative print and digital sources using advanced searches effectively; ❑ Assess the strengths and limitations of each source in terms of the task, purpose and audience; ❑ Integrate information into the text selectively to guide the flow of ideas, avoiding plagiarism and over-reliance on any one source; ❑ Follow a standard format for citation. 	
<p>Research and Writing: Grammar, Usage and Mechanics</p> <p><i>The student utilizes rules of language to structure the writing.</i></p>	<p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Demonstrate a lack of command or inappropriate use of the conventions with frequent errors in grade-appropriate, standard English grammar, usage and mechanics. 	<p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Demonstrate a command of the conventions with minor errors in grade-appropriate, standard English grammar, usage and mechanics. 	<p>Student is able to:</p> <ul style="list-style-type: none"> ❑ Demonstrate a strong command of the conventions with no errors in grade-appropriate, standard English grammar, usage and mechanics. 	

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<p>Mathematical Skills and Knowledge: Appropriate High School-Level Content</p> <p><i>The student demonstrates tasks within the project that show, as a primary focus, mathematics that align to the high school standards.</i></p>	<p>Demonstrates a minimal command of Ohio’s Learning Standards for high school-level mathematics.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Carry out some procedures to solve straightforward problems; □ Inconsistently compute with familiar numbers; □ Apply a few grade-level and mostly previous grade-level mathematical concepts, terms and properties to the task/problem situation. 	<p>Demonstrates a command of Ohio’s Learning Standards for high school-level mathematics.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Solve routine and straightforward problems accurately; □ Compute accurately and efficiently with familiar numbers; □ Apply many grade-level mathematical concepts, terms and properties appropriately to the task/problem situation. 	<p>Demonstrates a strong command of Ohio’s Learning Standards for high school-level mathematics.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Solve a variety of non-routine, routine and multi-step problems accurately; □ Compute accurately and efficiently; □ Recognize connections between mathematical concepts, terms and properties; □ Use informal and some formal reasoning with symbolic representation. 	
<p>Mathematical Skills and Knowledge: Mathematical Reasoning</p> <p><i>The student makes sense of and perseveres in solving problems using abstract and quantitative reasoning.</i></p>	<p>Demonstrates a minimal command of Ohio’s Learning Standards for high school-level mathematics.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Recognize givens and constraints and needs assistance in developing a solution pathway; □ Use informal reasoning to apply mathematical skills and knowledge to familiar situations; □ Apply reasoning skills that use mathematical concepts from earlier grades. 	<p>Demonstrates a command of Ohio’s Learning Standards for high school-level mathematics.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Analyze givens, constraints, relationships and goals to plan a solution pathway. <p>And at least two of the following:</p> <ul style="list-style-type: none"> □ Use some formal reasoning to apply mathematical skills and content knowledge to a new situation; □ Apply reasoning skills that use some mathematical concepts from earlier grades; □ Analyze situations and recognize counterexamples; □ Distinguish correct logic or reasoning from that which is flawed. 	<p>Demonstrates an exceptional use of mathematical reasoning to solve problems.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Analyze givens, constraints, relationships and goals to plan and implement a solution pathway; □ Abstract a given situation and represent it symbolically and manipulate the representing symbols; □ Use formal reasoning to apply mathematical skills and grade-level content knowledge to a new and unique situation; □ Make conjectures about the form and meaning of the solution; □ Analyze situations, distinguish correct logic or reasoning from that which is flawed, and create counterexamples. 	

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<p>Mathematical Skills and Knowledge: Communicate effectively</p> <p><i>The student constructs viable arguments and critiques the reasoning of others while attending to precision of mathematical language</i></p>	<p>Demonstrates a basic use of mathematical language and visual representation.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Use some mathematical language and correct terms and definitions to support the work; □ Use visual representations (e.g., graphs and diagrams) to communicate information; □ Construct arguments using concrete referents such as objects, drawings, diagrams and actions. 	<p>Demonstrates a command of Ohio’s Learning Standards for high school-level mathematics.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Communicate effectively using appropriate mathematical language, terms and definitions to support the work and conclusions. <p>And at least two of the following:</p> <ul style="list-style-type: none"> □ Use appropriate visual representations (e.g., graphs and diagrams) to communicate information to support the work and conclusions; □ Make conjectures and build a progression of statements to support the solution(s); □ Construct arguments that take into account the context from which the data arose. 	<p>Demonstrates an effective use of mathematical language and visual representation.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Communicate effectively and precisely using appropriate mathematical language, terms and definitions to support the work and conclusions; □ Consistently use appropriate visual representations (e.g., graphs and diagrams) to communicate information to support the work and conclusions; □ Use definitions and previously established results in constructing arguments; □ Make conjectures and build a logical progression of statements to support the solution(s); □ Use definitions and previously established results in constructing plausible arguments that take into account the context from which the data arose and ask useful questions to clarify or improve an argument. 	

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<p>Mathematical Skills and Knowledge: Modeling with Mathematics</p> <p><i>The student applies the mathematics he or she knows to solve problems arising in everyday life, society and the workplace and uses appropriate tools to support the modeling.</i></p>	<p>Demonstrates a basic application of mathematical models and tools to solve simple problems.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Use basic strategies and mathematical models to understand and solve simple problems drawn from real-world situations; □ Use basic mathematics tools in the problem-solving process; □ Interpret the results in the context of the situation. 	<p>Demonstrates an appropriate application of mathematical models and tools to solve new problems.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Interpret and reflect on the results in the context of the situation. <p>And at least two of the following:</p> <ul style="list-style-type: none"> □ Use appropriate strategies and mathematical models to understand and solve routine problems drawn from real-world situations; □ Make assumptions and approximations to simplify a complicated situation, realizing these may need revision later; □ Use mathematics tools and technology appropriately in the problem-solving process; □ Use technology for varying assumptions, exploring consequences and comparing predictions with data. 	<p>Demonstrates a strong application of mathematical models and tools to solve new and unique problems.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Use sophisticated strategies and mathematical models to understand and solve non-routine problems drawn from real-world situations; □ Make assumptions and approximations to simplify a complicated situation, realizing these may need revision later; □ Use mathematics tools efficiently and technology appropriately and with proficiency in the problem-solving process; □ Use technology for varying assumptions, exploring consequences and comparing predictions with data; □ Routinely interpret and reflect on the results in the context of the situation and use mathematics and/or statistics to analyze situations to understand them better and improve decisions. 	

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<p>Technology Skills and Knowledge: Appropriate High School-Level Content</p> <p><i>The student applies knowledge and skills aligning to high school standards when planning, implementing and reflecting upon the capstone experience. This includes both a rich understanding of technology and its effective use and role in the student's world — a perspective needed to become a technology-literate citizen.</i></p>	<p>Demonstrates a basic command of Ohio's Learning Standards for high school-level technology.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Use advanced search techniques with digital tools and media resources to locate information. □ Select digital tools and media resources to gather information and data on a practical task. □ Identify a problem then apply an engineering design process to a product or process to solve the problem. Construct a model/prototypes to see if it meets the requirements necessary to solve the problem, then suggest improvements. <p>And at least two of the following:</p> <ul style="list-style-type: none"> □ Recognize that the changes caused by the introduction and use of a new technology can range from gradual or rapid, as well as big or small; □ Explain how the development of tools has influenced and advanced society; □ Analyze cultural, environmental, ethical, economic and/or political changes that may be triggered by the introduction of a specific technology into a society. 	<p>Demonstrates an appropriate application of mathematical models and tools to solve new problems.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Use advanced search techniques with digital tools and media resources to locate information and check credibility and expertise of sources; □ Select digital tools and media resources to gather information and data on a practical task and justify choices based on the tools' efficiency and effectiveness for a given purpose; □ Identify a problem then apply an engineering design process to a product or process to solve the problem. Construct and test several models/prototypes to determine which one best meets the requirements necessary to solve the problem. <p>And at least two of the following:</p> <ul style="list-style-type: none"> □ Recognize that the changes caused by the introduction and use of a new technology can range from gradual to rapid and from subtle to obvious and can change over time; □ Explain how the evolution of tools and materials have played essential roles in the development and advancement of cities and industrial societies; □ Analyze cultural, environmental, ethical, economic and/or political changes that may be triggered by the transfer of a specific technology from one society to another. 	<p>Demonstrates a strong command of Ohio's Learning Standards for Technology.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Use advanced search techniques with digital tools and media resources to locate different kinds of information and check credibility and expertise of different types of sources; □ Select digital tools and media resources to gather information and data on a practical task, justify choices based on the tools' efficiency and effectiveness for a given purpose, and advise others on which tools and resources would best meet their needs; □ Identify a problem then apply an engineering design process to a product or process to solve the problem. Construct and test several models/prototypes to see if they meet the requirements of the problem. The student then combines features from several models/prototypes to achieve the best solution. <p>And at least two of the following:</p> <ul style="list-style-type: none"> □ Recognize that the changes caused by the introduction and use of a new technology can range from gradual to rapid and from subtle to obvious and can change over time and that these changes may vary from society to society as a result of differences in a society's economy, politics or culture; □ Explain how the evolution of tools and materials have played essential roles in the advancement of civilization, from the establishment of cities and industrial societies to today's global trade and commerce networks; □ Analyze cultural, environmental, ethical, economic and/or political changes that may be triggered by the transfer of a specific technology from one society to another, including anticipated and unanticipated effects. 	

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<p>Technology Skills and Knowledge: Data Analysis</p> <p><i>The student collects and analyzes data during the capstone experience and uses digital learning tools and resources to construct knowledge and communicate information.</i></p>	<p>Demonstrates a basic use of data analysis techniques</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Analyze data collected by the student or retrieved from a variety of digital tools and resources to determine if patterns or trends are present; □ Select data visualization formats in order to present data; □ Demonstrate the appropriate selection and use of digital tools and resources to support data collection and data analysis, sometimes with assistance. 	<p>Demonstrates an appropriate use of data analysis techniques</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Analyze relationships and forecast outcomes using data collected by the student or retrieved from a variety of digital tools and resources. The conclusions and recommendations are clearly communicated and easy to understand; □ Select data visualization formats in order to present the data in ways that are easy for the audience to understand the information; □ Demonstrate the appropriate selection and use of digital tools and resources to support data collection and data analysis. 	<p>Demonstrates a strong command of data analysis techniques.</p> <p>Student is able to:</p> <ul style="list-style-type: none"> □ Analyze relationships and forecast outcomes using data collected by the student or retrieved from a variety of digital tools and resources. The analysis is insightful, and the conclusions and recommendations are clear; □ Select data visualization formats in order to present the data in ways that are easy for the audience to understand the information; □ Demonstrate the appropriate selection and use of digital tools and resources to support data collection and data analysis. The student can justify choices based on the tools' efficiency and effectiveness for a given purpose. 	
<p>Critical Thinking/ Problem-Solving</p> <p><i>The student exercises strong decision-making skills, analyzes issues effectively and thinks creatively to overcome problems.</i></p>	<p>Student is able to:</p> <ul style="list-style-type: none"> □ With coaching, examines problems, considers risks and identifies solutions. Needs assistance to anticipate issues and navigate challenging situations. May propose solutions to identified problems. Requires close guidance in examining problems and considering the consequences of recommended solutions. 	<p>Student is able to:</p> <ul style="list-style-type: none"> □ Identifies and examines problems, considers risks and proposes solutions. May need assistance to anticipate issues and navigate challenging situations. 	<p>Student is able to:</p> <ul style="list-style-type: none"> □ Thoughtfully identifies and examines problems, analyzes risks and implements chosen solution. Anticipates potential issues. Can navigate challenging situations independently and with teams. 	
<p>Creativity/Innovation</p> <p><i>The student is original and inventive. He or she communicates new ideas to others, drawing on knowledge from different fields to find solutions.</i></p>	<p>Student is able to:</p> <ul style="list-style-type: none"> □ Occasionally generates original ideas and communicates them to others. Contributes to thinking differently. Participates in idea creation within a team to find solutions. Needs prompting to generate ideas and coaching to think differently. Supports idea creation within a team to find solutions. 	<p>Student is able to:</p> <ul style="list-style-type: none"> □ Generates and communicates original ideas. Demonstrates ability to think differently. Contributes energy and ideas within a team to find solutions. 	<p>Student is able to:</p> <ul style="list-style-type: none"> □ Draws upon knowledge from different experiences to generate and communicate original ideas. Consistently demonstrates ability to think differently. Is sought out for ability to create energy and draw out ideas from others. 	

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Overall Project Coherence <i>The student presents a clear, logical and organized capstone project.</i>	Student is able to: <input type="checkbox"/> Demonstrate inconsistent clarity, logic and organization throughout the capstone project.	Student is able to: <input type="checkbox"/> Present a clear, logical and organized capstone project.	Student is able to: <input type="checkbox"/> Present a clear, logical and organized capstone project that includes complex ideas, themes, arguments and demonstrations throughout the project.	
Locally Determined Evaluation Criteria				
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