CTE CBE Standards & Rubrics
(Last revised Nov. 18, 2020)

Discipline Specific Graduation Competency 1: Skilled Professional
Career-ready individuals can demonstrate industry related skills needed within the specific career pathway or industry. Student consistently uses knowledge and skills acquired to make connections between academic concepts and real world applications.

1A	Implement workplace and product safety standards such as OSHA, EPA, ISO, GMP, ServSafe, UL and content related safety requirements
1B	Demonstrate knowledge required to meet industry standards or certification where applicable
1C	Follow correct procedures for use of tools, technology, and equipment and follows the correct maintenance protocol

Discipline Specific Graduation Competency 2: Creative Communicator
Career-ready individuals communicate thoughts, ideas and action plans with clarity. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome. Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

2A	Choose the appropriate medium or tools for meeting and have the ability to publish or present original content for the desired objectives.
2B	Communicate complex ideas clearly and effectively, including the use of a variety of digital objects such as visualizations, models or simulations that are original
2C	Skilled at interacting with others; they are active listeners and speak clearly and with purpose.

Discipline Specific Graduation Competency 3: Innovative Designer
Career-ready individuals regularly think of ideas that solve problems by using a variety of technologies within a design process to identify and solve problems. They take action on their ideas and understand how to bring innovation to an organization.

3A	Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.
3B	Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts to address authentic problems while understanding the criteria and constraints.
3C	Develop, test and refine possible solutions as part of a cyclical design process

Discipline Specific Graduation Competency 4: Computational Thinker

Career-ready individuals readily recognize problems in the workplace, develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

4A	Formulate problem definitions suited for technology assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.
4B	Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

Discipline Specific Graduation Competency 5: Model integrity, ethical leadership and effective management.

Career-ready individuals consistently act in ways that align to personal and community-held ideals and principles while employing strategies to positively influence others in the workplace.

5A	Demonstrate that actions and attitudes can have on productivity, morale, and school or workplace culture.

Graduation Competencies, Performance Standards and Scoring Criteria

Discipline Specific Graduation Competency 1: Skilled Professional
Career-ready individuals can demonstrate industry related skills needed within the specific career pathway or industry. Student consistently uses knowledge and skills acquired to make connections between academic concepts and real world applications.

1A	Implement workplace and product safety standards such as OSHA, EPA, ISO, GMP, ServSafe, UL and content related safety requirements
1B	Demonstrate knowledge required to meet industry standards or certification where applicable
1C	Follow correct procedures for use of tools, technology, and equipment and follows the correct maintenance protocol

Performance Standards Scoring Criteria for Competency 1				
Performance Standards	**1 - Emergent**	**2 - Approaching**	**3 - Proficient**	**4 - Exemplary**
1A Implement workplace and product safety standards such as OSHA, EPA, ISO, GMP, ServSafe, UL and content related safety requirements ● **Safety**	The student identifies workplace and product safety within industry and perform standard safety procedures in a lab setting.	The student explains safety standards found in the workplace as well as the lab.	The student evaluates the workplace or lab for proper application of safety standards.and successfully obtains appropriate industry certifications relative to safety standards.	The student critiques the safety of the workplace or lab and makes recommendations to correct unsafe procedures or practices.
1B Demonstrate knowledge required to meet industry standards or certification where applicable ● **Industry Knowledge**	The student identifies where to access content knowledge needed to meet industry standards or earn industry certifications and can complete tasks with support.	The student explains content knowledge needed to meet industry standards or earn industry certifications and can complete tasks with limited support.	The student applies the knowledge required to perform industry standards or skills required to earn industry certification (where applicable) and applies that knowledge to work based situations.	The student achieves mastery of industry standards or skills required to earn industry certification (where applicable) and can effectively communicate their analysis of the situation and why those particular skills were performed.
1C Follow correct procedures for use of tools, technology, and equipment and follows the correct maintenance protocol ● **Utilization of Tools** ● **Digital Citizenship**	The student lists proper tools, technology, and equipment for a specified task, perform routine procedures, and maintenance protocol	The student identifies and determines the proper use of tools, technology, and equipment for a specified task and can explain proper maintenance protocol	The student demonstrates the proper use of tools, technology, and equipment to solve problems in the workplace or the lab and is able to troubleshoot any issues with the equipment.	The student critiques a given task, then determines and implements a course of action using tools, technology, and equipment independently and effectively in the workplace or the lab.

Discipline Specific Graduation Competency 2: Creative Communicator
Career-ready individuals communicate thoughts, ideas and action plans with clarity. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome. Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

2A	Choose the appropriate medium or tools for meeting and have the ability to publish or present original content for the desired objectives.
2B	Communicate complex ideas clearly and effectively
2C	Skilled at interacting with others; they are active listeners and speak clearly and with purpose.

Performance Standards Scoring Criteria for Competency 2

Performance Standards	1 - Emergent	2 - Approaching	3 - Proficient	4 - Exemplary
2A Choose the appropriate medium or tools for meeting and have the ability to publish or present original content for the desired objectives. • **Utilize tools to motivate an audience**	The student is aware of the available platforms and tools and able to identify their target audience.	The student utilizes the platforms and tools to create an communication message that is relevant to the the intended audience.	The student applies appropriate platforms and tools that is personalized information for the target audience.	The student explores various platforms and tools to extend their expertise through personal investigation and research which enhances their exclusive message to the intended audience.
2B Communicate complex ideas clearly and effectively. • **Develop unique and personalized work.**	The student is aware of the audience for their communication, conscious of the digital tools necessary to produce a clear message, and aware how to access digital resources.	The student is able to gather the facts necessary to develop a competent message and utilizes the digital resources to transform the research to make it original	The student incorporates a variety of multimedia tools that engage the audience and enhance the communication of new, personalized information shared.	The student analyzes a variety of multimedia tools to incorporate those that best engage the audience and enhance the communication of information shared in an exclusive unique way.
2C Skilled at interacting with others; they are active listeners and speak clearly and with purpose. • **Oral communication skills.**	The student is conscious about their strengths and weaknesses as an effective communicator.	The student can distinguish how listening helps build relationships, solve problems, ensure understanding and effective communication enhances the clarity of the message.	The student demonstrates active listening and is often a unifying force in individual and group settings.	The student transmits and receives messages clearly and reflects upon how communication could be enhanced.

Discipline Specific Graduation Competency 3: Innovative Designer

Career-ready individuals regularly think of ideas that solve problems by using a variety of technologies within a design process to identify and solve problems. They take action on their ideas and understand how to bring innovation to an organization.

3A	Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems. (Creativity)
3B	Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts to address authentic problems while understanding the criteria and constraints.
3C	Develop, test, redesign and refine prototypes as part of a cyclical design process.

Performance Standards Scoring Criteria for Competency 3

Performance Standards	1 - Emergent	2 - Approaching	3 - Proficient	4 - Exemplary
3A Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems. (Creativity)	The student can define the problem.	The student can brainstorm multiple possible solutions that might meet the design constraints of a problem.	The student can test multiple ideas and use the results to narrow down possible solutions.	The student can evaluate multiple solutions, select the one most likely to solve the problem, and defend their choice.
3B Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts to address authentic problems while understanding the criteria and constraints.	The student can define a problem and its design criteria and constraints.	The student can investigate a problem, including researching users and solutions that already exist.	The student can propose multiple new solutions to a problem and demonstrate how each might meet user needs and design constraints.	The student can create a plan to prototype and test the most promising solutions to a problem.
3C Develop, redesign, and refine solutions as part of a cyclical design process.	The student starts the design process with a preferred solution, generates only one solution, or does not test the solution in order to improve it.	The student tests solutions, but does not refine them in response to test results.	The student tests multiple solutions and can explain how and why they selected or refined solutions based on testing.	The student iterates on a solution with a cycle of testing, redesigning, and retesting.

Discipline Specific Graduation Competency 4: Computational Thinker - Career-ready individuals readily recognize problems in the workplace, develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions. They will develop thought processes involved in expressing solutions as computational steps or algorithms that can be carried out by a computer.

4A	Formulate problem definitions suited for technology assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.
4B	Break problems into component parts, extract key information, and develop descriptive or computational models to understand complex systems or facilitate problem-solving.

Performance Standards Scoring Criteria for Competency 4

Performance Standards	1 - Emergent	2 - Approaching	3 - Proficient	4 - Exemplary
4A Formulate problem definitions suited for technology assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.	The student can tabulate data and how it paints a picture of an existing situation in contrast to a desired result.	The student interprets data through methods that fit the situation such as surveys, test results, and investigations.	The student organizes and sorts the appropriate data necessary for developing a simulation that assists formulating a hypothesis or prediction.	The student systematically analyzes data through the use of models and/or algorithmic thinking to investigate and explore innovative solutions .
4B Break problems into component parts, extract key information, and develop descriptive or computational models to understand complex systems or facilitate problem-solving.	The student identifies component parts or key information that would facilitate problem-solving.	The student determines the component parts and key information that would contribute to problem-solving.	The student uses the component parts and key information to facilitate problem-solving.	The student can explain how the component parts and key information to facilitate accurate problem-solving.

Discipline Specific Graduation Competency 5: Model integrity, ethical leadership and effective management.

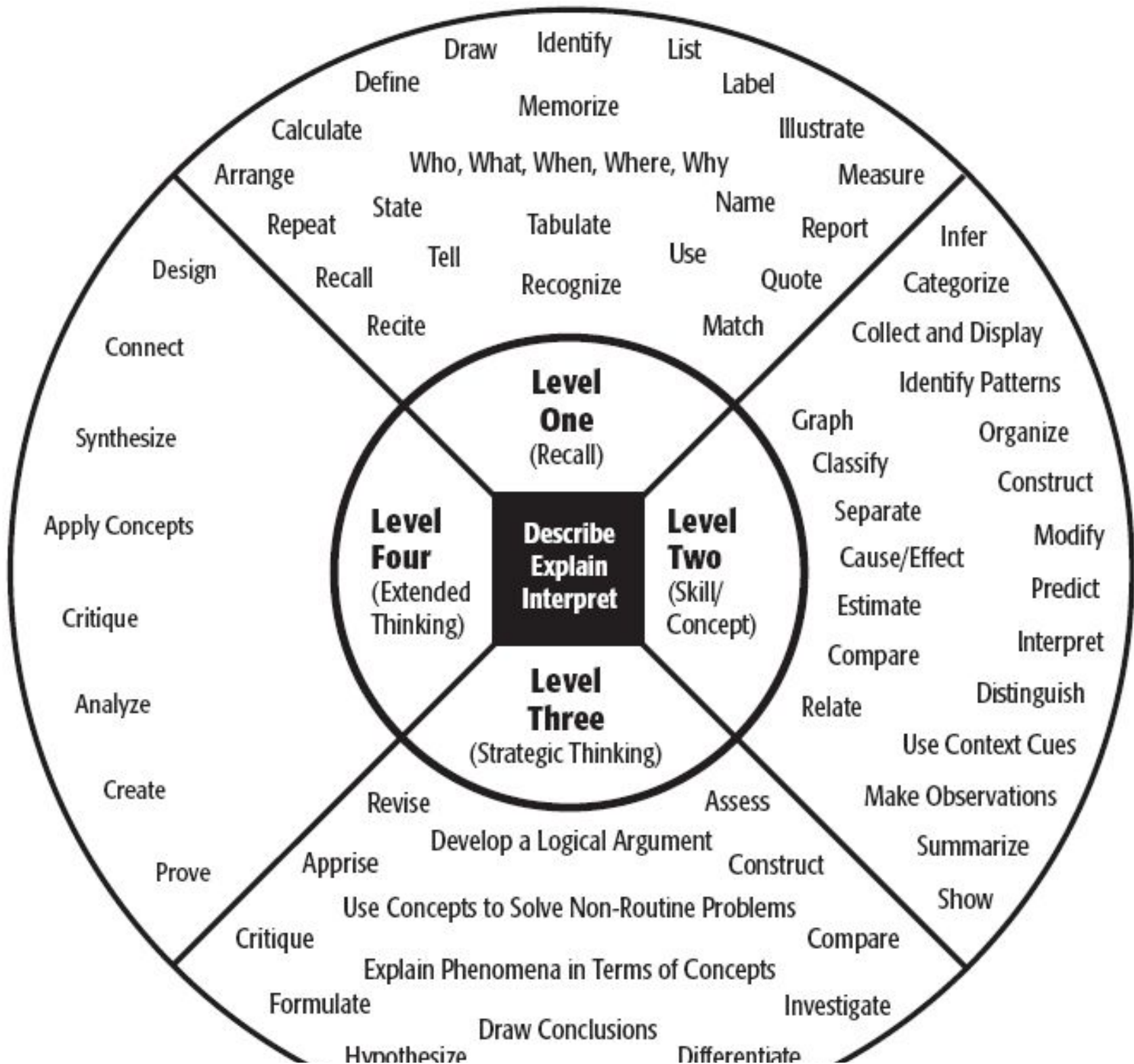| Career-ready individuals consistently act in ways that align to personal and community-held ideals and principles while employing strategies to positively influence others in the workplace.	
5A	Demonstrate that actions and attitudes can have on productivity, morale, and school or workplace culture.

Performance Standards Scoring Criteria for Competency 5

Performance Standards	1 - Emergent	2 - Approaching	3 - Proficient	4 - Exemplary
5A Demonstrate that actions and attitudes can affect productivity, morale, and school or workplace culture. ● **Community or workplace norms**	The student can describe norms or routines that positively impact school and workplace culture.	The student can follow norms or routines that promote attitudes and actions that positively impact school and workplace culture that overcome obstacles and meets deadlines.	The student can implement norms or routines that promote attitudes and actions that positively impact school and workplace culture that overcomes obstacles and meets deadlines.	The student can implement or create norms or routines that promote attitudes and actions that positively impact school and workplace culture that overcomes obstacles, meets deadlines, and make adjustments as necessary.

Resources
- Sample State Standards: http://greatschoolspartnership.org/proficiency-based-learning/state-local-standards/
- ISTE 2016 Standards :https://drive.google.com/a/fcps.org/file/d/OBwBMEqbWtQzENmNpMO8xRXkxZXc/view?usp=sharing

Level One (Recall)

Draw · Identify · List · Define · Label · Memorize · Illustrate · Calculate · Who, What, When, Where, Why · Measure · Arrange · State · Name · Repeat · Tabulate · Report · Tell · Use · Recall · Recognize · Quote · Recite · Match

Level Two (Skill/Concept)

Infer · Categorize · Collect and Display · Identify Patterns · Graph · Organize · Classify · Construct · Separate · Modify · Cause/Effect · Predict · Estimate · Interpret · Compare · Distinguish · Relate · Use Context Cues · Make Observations · Summarize · Show · Compare · Investigate

Level Three (Strategic Thinking)

Revise · Assess · Develop a Logical Argument · Apprise · Construct · Critique · Use Concepts to Solve Non-Routine Problems · Compare · Formulate · Explain Phenomena in Terms of Concepts · Investigate · Draw Conclusions · Hypothesize · Differentiate

Level Four (Extended Thinking)

Design · Connect · Synthesize · Apply Concepts · Critique · Analyze · Create · Prove

Describe · Explain · Interpret

CTE Rubric - Five Major Competencies - 2020 Version

1. Discipline Specific Graduation Competency 1: Skilled Professional
Career-ready individuals can demonstrate industry related skills needed within the specific career pathway or industry. Student consistently uses knowledge and skills acquired to make connections between academic concepts and real world applications.

2. Discipline Specific Graduation Competency 2: Creative Communicator
Career-ready individuals communicate thoughts, ideas and action plans with clarity. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome. Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

3. Discipline Specific Graduation Competency 3: Innovative Designer
Career-ready individuals regularly think of ideas that solve problems by using a variety of technologies within a design process to identify and solve problems. They take action on their ideas and understand how to bring innovation to an organization.

4. Discipline Specific Graduation Competency 4: Computational Thinker
Career-ready individuals readily recognize problems in the workplace, develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

5. Discipline Specific Graduation Competency 5: Model integrity, ethical leadership and effective management.
Career-ready individuals consistently act in ways that align to personal and community-held ideals and principles while employing strategies to positively influence others in the workplace.

CTE Rubric - Six Major Competencies - 2014 Version

1. **Act as a responsible and contributing citizen and employee**
Student consistently contributes effort as a responsible member of the classroom.

2. **Apply appropriate academic and technical skills.**
Student consistently uses knowledge and skills acquired to make connections between abstract concepts and real world applications.

3. **Communicate clearly, effectively and with reason.**
   Student consistently communicates (written, verbal, visual) with clarity, conciseness, correctness, and purpose. Student is consistently
      an active listener.

4. **Demonstrate creativity and innovation.**
Student consistently seeks new and different ways to solve problems, determines which will work best, and applies their ideas.

5. **Utilize critical thinking to make sense of problems and persevere in solving them.**
Student consistently recognizes the problem, investigates the root cause of the problem, carefully considers options, devises a plan, and then
   takes action. Student follows through to ensure the problem is solved.

6. **Model integrity, ethical leadership and effective management.**
Student consistently uses integrity to guide decisions in order to effectively complete the task. Student consistently uses strategies that
positively influence others in the classroom.