Guiding Principles, Framework, and Options for DPAS II

Career & Technical Education (CTE) Measure C Growth Goals

Delaware Department of Education

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Guiding Principles and Framework for DPAS II CTE Measure C Growth Goals

Guiding Principles for CTE Measure C Growth Goals

The DPAS II Guide for Teachers and DPAS II Measure C Growth Goals framework are developed by educators and vetted by the Delaware Department of Education (DDOE) and school system leaders to address specific content areas and teacher job assignments. This document outlines the guiding principles and common framework that will inform Career and Technical Education (CTE) Measure C Growth Goals.

CTE Measure C Growth Goals:

The development of Measure C Growth Goals for CTE is designed to complement the instructional program and align with programmatic evaluation criteria at the school and school system levels. Measure C Growth Goals are to be developed cooperatively between the educator and his/her school administration and should:

1. Align to school and school system-level accountability measures for CTE performance indicators required under the Carl D. Perkins Career and Technical Education Improvement Act of 2006 - Public Law 109-270 (Perkins). The six (6) high school performance indicators are listed below. Please note that these measures may be adjusted to support middle school CTE programs as deemed appropriate by the educators and his/her administrator; however baseline data or data reported for accountability purposes is not available for middle school programs.
   - 1S1: Academic Attainment in Reading/Language Arts;
   - 1S2: Academic Attainment in Mathematics;
   - 2S1: Technical Skill Attainment;
   - 3S1: Secondary School Completion;
   - 4S1: Student Graduation Rate;
   - 5S1: Secondary Placement;
   - 6S1: Nontraditional Participation; and
   - 6S2: Nontraditional Completion.
2. Connect educator and student learning for a specific CTE program of study or middle school program. Growth Goals link program curriculum, instruction, and student achievement. Growth goal activities are not developed in addition to the existing program's curriculum, instructional sequence, or student activities – although local curricula may be updated to ensure relevant growth goal implementation.
3. Assess instruction at two points within the CTE program of study, typically occurring within the instructional year, that are essential for student understanding. Growth Goal baseline measurement, target setting, and outcomes may be conducted at different times throughout the school year.

Measure C Growth Goal Format:

Measure C Growth Goals should align to the following design principles:

- Written in the "S.M.A.R.T." format (Specific, Measurable, Achievable, Relevant and Time-bound);

- Align to performance indicators required under Perkins, areas of improvement at the school or school system level, or align with programmatic/student needs at the middle school level;
- Align to defined academic and/or technical content standards;
- Focus on student outcomes/performance;
- Measure pre-/post- or at the beginning and end of a time period – and that time period must be within an academic year, however, the timeframe is flexible within the academic year; and be
- Negotiated between the educator and his/her evaluator – where the evaluator retains the discretion to approve all goals and targets.

Framework for CTE Measure C Growth Goals

Measure C Growth Goals for CTE teachers are designed around the career pathway and should be specific to the approved program of study or middle school program. High school growth goals should address performance indicators under Perkins legislation. Middle school growth goals should reflect programmatic and student needs. Student growth goals must be aligned to the program of study and may include both academic and technical content and/or other measures of student success within an occupational area such as employability skills or student access/equity.

Student performance measures for Measure C Growth Goals may be similar across career pathways and at the program of study level; but should be tailored to the specific technical and employability skills essential to each individual program of study or middle school program. In general, student growth goals should address the following performance indicators:

- 1S1: Academic Attainment in Reading/Language Arts where the student growth goal is aligned to Common Core Standards for Science and Technical Subjects;
- 1S2: Academic Attainment in Mathematics where the student growth goal is aligned to the Common Core Standards for Mathematical Practice;
- 2S1: Technical Skill Attainment where the student growth goal is aligned to an industry recognized certificate or credential which holds value at the professional or postsecondary level (must be an approved credential within the CTE program application);
- 3S1: Secondary School Completion where the student growth goal is aligned to student matriculation through the CTE program of study; with emphasis on a diverse student population that is reflective of the overall school population (e.g., gender, race/ethnicity, and special populations);
- 4S1: Student Graduation Rate where the student growth goal is aligned to student completion of the CTE program of study and attainment of a high school diploma; with emphasis on a diverse student population that is reflective of the overall school population (e.g. gender, race/ethnicity, and special populations);
- 5S1: Secondary Placement where the student growth goal is aligned to student transition beyond high school into competitive employment and/or continuing education;
- 6S1: Nontraditional Participation where the student growth goal is aligned to student access to the CTE program of study; with emphasis on underserved student populations for the career area (e.g. gender, race/ethnicity, and special populations);

- 6S2: Nontraditional Completion where the student growth goal is aligned to student completion of the CTE program of study; with emphasis on underserved student populations for the career area (e.g. gender, race/ethnicity, and special populations); and
- Employability Skills are included within each CTE program of study and are aligned with the Career Ready Practices and the Employability Skills Framework; additional information on employability skills can be found at:
  1. Applied Knowledge
     a. Applied Academic Skills
     b. Critical Thinking Skills
  2. Effective Relationships
     a. Interpersonal Skills
     b. Personal Qualities
  3. Workplace Skills
     a. Resource Management
     b. Information Use
     c. Communication Skills
     d. Systems Thinking
     e. Technology Use

CTE Measure C Timeline and Process Guidance

Selecting a CTE Measure C Option

As stated in the DPAS II Guide for Teachers:

"*Growth Targets will be determined during the fall conference between the educator and administrator. The educator will be responsible for selecting (with administrator approval) from a menu of growth goals applicable to their job assignment. Using a Component Five Form/Online Tool, the educator will set growth targets. The educator and administrator (during the fall conference) will then develop "Satisfactory" and "Exceeds" targets based upon the identified area(s) of need for their class or cohort of students.*"

When selecting a Measure C option, CTE teachers and their school administration should consider the following questions:

1. Does the proposed measure address an area in which improvement is needed at the school system, school, and/or program of study level?
   a. What gaps exist in student performance between school system, school, and program of study data for specific Perkins targets? (please note specific school system, school, and program of study data is available in the EdInsight Dashboard via the DDOE Identity Management System)
   b. What specific data source is used to validate that the school system, school, or program of study needs to improve in the area(s) of measurement? Are there leading indicators that can be used to inform this data source?

   c. Does the proposed measure allow for ongoing data collection to measure instructional improvement over time? Are there leading indicators that can be used to inform formal data collection?
   d. At what date or interval should the proposed measure be assessed? At what date or interval are data populated for the proposed measure (specific to the data source)?
2. Will the proposed measure provide data that will lead to desired student outcomes?
   a. Does the selected measure align with the academic or technical standards or expectations of the enacted curriculum, instruction, and student practice for the course being taught or program of study?
   b. Are there instructional plans to support student growth related to this measure? Will plans need to be developed/adjusted?
3. At what interval can student growth related to this measure be appropriately assessed?
   a. Is there an existing classroom assessment that can be used? If so, will adjustments be required? For example, will the teacher need to develop a pre-assessment in order to determine baseline student performance? Or, will an existing assessment need to be modified for use as a Measure C option?
   b. Is there an existing rubric or scoring matrix that is aligned with the content and/or professional standards being measured? Does the tool allow for standardized scoring and generalization of scoring inferences?

Target Setting

Targets for Measure C growth goals should be determined by the educator and his/her school administration. Targets should be specific for the student audience and focus on both program improvement and educator effectiveness. When determining an appropriate target for a Measure C option, CTE teachers and their school administration should consider the following questions:

1. What level of growth have students historically shown for the proposed measure at the school system, school, or program of study level? Please note that student performance benchmarks can also be established using state data for similar programs of study.
   a. If aligned to a Perkins indicator, what level of growth is required for the school system to meet the Perkins target? How can the school help to improve the overall school system performance for the identified Perkins target? How can the teacher goal help to address performance for the identified Perkins target? (please note that specific targets are available for each school system in the EdInsight Dashboard via the DDOE Identity Management System)
   b. What additional baseline data or data source(s) are available to inform target development?
   c. Does the proposed target allow for ongoing data collection to measure improvement over time?
2. What (if any) student characteristics need to be taken into consideration when setting targets?
   a. What level of growth is reasonable for the given student audience?
   b. Will the measure apply to all students within a program/course or a subset of students? (i.e. non-traditional students, program concentrators, or program completers)

   c. Will targets be differentiated due to the identified student population or will different targets be established based on student baseline performances? (i.e. separate targets for student quartile performance)
3. At what interval can the target be assessed?
   a. Is there an existing classroom assessment that can be used? If so, will adjustments be required?
   b. Is there an existing rubric or scoring matrix that is aligned with the content and/or professional standards being measured? Does the tool allow for standardized scoring and generalization of scoring inferences?

Determining Measure C Ratings

Measure C Ratings must be determined within the timelines and processes set forth in the DPAS II Guide for Teachers. Specific language from the DPAS II Guide is provided below.

Measure C: Growth Targets shall be determined as follows:
Growth Targets will be determined during the fall conference between the educator and administrator. The educator will be responsible for selecting (with administrator approval) from a menu of growth goals applicable to their job assignment. Using a Component Five Form/Online Tool, the educator will set growth targets. The educator and administrator (during the fall conference) will then develop "Satisfactory" and "Exceeds" targets based upon the identified area(s) of need for their class or cohort of students.

Educator and Administrator Templates for Creating Measure C Growth Goals

The following resources may be used by the educator and his/her administrator to develop Measure C Growth Goals:

1. Career & Technical Education (CTE) Measure C Template with Checklist; and
2. Career & Technical Education (CTE) Measure C Administrator Checklist.

These documents outline the guiding principles and provide a framework to develop Career and Technical Education (CTE) Measure C Growth Goals, however these resources may be modified as needed by the educator or administrator.

Career & Technical Education (CTE) Measure C Template with Checklist

Teacher Name: _____ Content Area and Course(s): _____

Grade Level(s): _____ Academic Year: _____

Instructions:
Please reference the associated "Guiding Principles and Framework for DPAS II CTE Measure C Growth Goals" document when completing this checklist. Educators may use this document to develop the Measure C growth goal and populate each component in the provided space. Administrators may use this document by documenting successful completion of criterion in the box provided and associated comments in the space provided. Please note this work has been modified from the Ohio Department of Education Student Learning Objective Framework and Checklist, 2015.

Measure C Option
What middle or high school MEASURE C GROWTH GOAL option was selected?

Aligns with school and school system focus ***Reviewer Comments:*** Aligns with school and school system Perkins performance data ***Reviewer Comments:***

Baseline and Trend Data
What information is being used to inform the creation of the MEASURE C GROWTH GOAL and establish the amount of growth that should take place?

Identifies sources of information about students (e.g., test scores from prior years, results of pre-assessments) ***Reviewer Comments:*** Draws upon trend data, if available ***Reviewer Comments:*** Summarizes the teacher's analysis of the baseline data by identifying student strengths and weaknesses ***Reviewer Comments:***

Student Population

Which students will be included in this MEASURE C GROWTH GOAL? Include course, grade level, and number of students.

Identifies the class or subgroup of students covered by the MEASURE C GROWTH GOAL ***Reviewer Comments:***
Describes the student population and considers any contextual factors that may impact student growth ***Reviewer Comments:***
If subgroups are excluded, explains which students, why they are excluded and if they are covered in another MEASURE C GROWTH GOAL ***Reviewer Comments:***

Interval of Instruction

What is the duration of the course that the MEASURE C GROWTH GOAL will cover? Include beginning and end dates.

Matches the length of the course (e.g., quarter, semester, year) ***Reviewer Comments:***

Standards and Content

To what related standards is the MEASURE C GROWTH GOAL aligned?

Specifies how the MEASURE C GROWTH GOAL will address applicable standards from the highest ranking of the following: (1) Ohio's Learning Standards or (2) national standards put forth by education organizations ***Reviewer Comments:***
Represents the big ideas or domains of the content taught during the interval of instruction ***Reviewer Comments:***
Identifies core knowledge and skills students are expected to attain as required by the applicable standards (if the MEASURE C GROWTH GOAL is targeted) ***Reviewer Comments:***

Assessment(s)

What assessment(s) will be used to measure student growth for this MEASURE C GROWTH GOAL?

Identifies assessments that have been reviewed by content experts to effectively measure course content and reliably measure student learning as intended ***Reviewer Comments:***
Selects measures with sufficient "stretch" so that all students may demonstrate learning, or identifies supplemental assessments to cover all ability levels in the course ***Reviewer Comments:***
Provides a plan for combining assessments if multiple summative assessments are used ***Reviewer Comments:***
Follows the guidelines for appropriate assessments ***Reviewer Comments:***

Growth Target(s)

Considering all available data and content requirements, what growth target(s) can students be expected to reach?

All students in the class have a growth target in at least one MEASURE C GROWTH GOAL ***Reviewer Comments:***
Uses baseline or pretest data to determine appropriate growth ***Reviewer Comments:***
Sets developmentally appropriate targets ***Reviewer Comments:***
Creates tiered targets when appropriate so that all students may demonstrate growth ***Reviewer Comments:***
Sets ambitious yet attainable targets ***Reviewer Comments:***

Rationale for Growth Target(s)

What is your rationale for setting the above target(s) for student growth within the interval of instruction?

Demonstrates teacher knowledge of students and content ***Reviewer Comments:*** Explains why target is appropriate for the population ***Reviewer Comments:*** Addresses observed student needs ***Reviewer Comments:*** Uses data to identify student needs and determine appropriate growth targets ***Reviewer Comments:*** Explains how targets align with broader school and district goals ***Reviewer Comments:*** Sets rigorous expectations for students and teacher(s) ***Reviewer Comments:***

Career & Technical Education (CTE) Measure C Administrator Checklist

Teacher Name: _____ Content Area and Course(s): _____

Grade Level(s): _____ Academic Year: _____

Instructions:

Please reference the associated "Guiding Principles and Framework for DPAS II CTE Measure C Growth Goals" document when completing this checklist. Administrators may use this document to evaluate an educators Measure C growth goal. Please note this work has been modified from the Ohio Department of Education Student Learning Objective Administrator Checklist, 2015.

Baseline and Trend Data	Student Population	Interval of Instruction	Standards and Content	Assessments	Growth Targets	Rationale for Growth Target
What information is being used to inform the creation of the Measure C Growth Goal?	Which students will be included in this Measure C Growth Goal?	What is the duration of the course/activity used for the Measure C Growth Goal?	To what standards is the Measure C Growth Goal aligned?	What assessment(s) will be used to measure student growth for this Measure C Growth Goal?	Considering all available data and content requirements, what growth target(s) can students be expected to reach?	What is the rationale for setting student growth target(s) within the interval of instruction?
Identifies source of information about students Draws upon trend data, if available Summarizes the educator's analysis of the baseline data by identifying student strengths and weaknesses	Identifies the class/subgroup of students Describes the student population and considers any contextual factors that may impact student growth	Matches the length of the course (e.g., quarter, semester, year) Interval is appropriate for the content area and the anticipated goal	Specifies how the goal will address applicable standards Represents the big ideas or domains of the content taught Identifies core knowledge and skills students are expected to attain	Identifies assessments that have been reviewed by content experts Provides a plan for combining assessments if multiple assessments are being used Follows the guidelines for appropriate assessments	All students in the class have a growth target Uses baseline data to determine appropriate growth and developmentally appropriate targets Creates tiered targets when appropriate so that all students may demonstrate growth	Demonstrates teacher knowledge of students and content Explains why target is appropriate for the population Explains how targets align with broader school and district goals

Guidance and Support for Middle School CTE Measure C Development

Measure C options for middle school CTE teachers reflect technical knowledge and academic attainment. Options for middle school CTE teachers are listed below and the selected measure must align to student learning goals in courses taught by the teacher being evaluated.

Middle School CTE Option 1:	Career-focused research paper or presentation with documented artifacts;
Middle School CTE Option 2:	Written pre- and post-assessment related to career pathway technical knowledge;
Middle School CTE Option 3:	Performance-based pre- and post-assessment related to career pathway technical skill(s); or
Middle School CTE Option 4:	Project-based learning product (with supporting artifacts) that addresses career and technical knowledge, skill, or employability practices related to the career pathway.

Middle School CTE Option Descriptions

Please Note: Example assessment types and topics are provided for guidance purposes only. Each teacher should select a Measure C option that best aligns with the specific academic, technical, and employability skill expectations for the career pathway.

Middle School CTE Option 1:
Career-focused research paper or presentation

Middle school students learn about the world of work and explore career options. Students then use this information to set goals and develop an education and career readiness plan. Middle school students also investigate topics and content within a career pathway, learn how those topics are impacting the career area, and communicate solutions to problems.

Student growth is demonstrated through the investigation of a career pathway topic and/or communication of findings related to future employment. The research paper or presentation assesses student growth in personal career planning and/or in understanding various aspect of the career area. Student growth should address academic and technical content or employability skills. Student should conduct research, collect and document artifacts, and produce a final product that details the investigation. Student information should be collected, scored, and used as evidence of student growth over time. These measures are typically assessed using a teacher and/or school system developed rubric that is common to the pre- and post-activity.

Example student research topics include, but are not limited to:

1. Investigate, analyze, and explain career options within a career cluster. Define related educational and skill requirements for employment across a variety of career options. Plan a specific career goal and begin to actively obtain that goal; and
2. Investigate, analyze, and explain a topic affecting the career cluster or pathway (i.e. policy, economic condition, technological advancement). Document impact on the local/regional/state economy, customers/clients, and develop a response to minimize negative effects and/or maximize positive effects.

Sample Rubric Links

- Delaware writing rubrics: http://www.doe.k12.de.us/Page/508
- NCTE Career with infographic rubric: http://www.readwritethink.org/files/resources/lesson-docs/careerrubric.pdf
- NCTE Oral presentation rubric: http://www.readwritethink.org/files/resources/lesson_images/lesson416/OralRubric.pdf

Middle School CTE Option 2:
Written pre- and post-assessment related to
career pathway technical knowledge

Middle school students learn career specific vocabulary, mathematical practices, and technical skills and concepts. The written classroom pre- and post-assessment measures student growth for understanding and application of career specific vocabulary and concepts.

Student growth is demonstrated using baseline and final student performance on a written (or computer-based) assessment. Teacher or school system developed rubrics can also be used when the assessment includes short answer and/or extended response items.

Example written classroom pre-test and post-test assessment types include, but are not limited to:

1. Understand and apply career area vocabulary/terminology; and
2. Understand and apply career-related mathematical processes, practices, and/or applications.

Middle School CTE Option 3:
Performance-based pre- and post-assessment related to career pathway technical skill(s)

Middle school students learn to demonstrate career specific technical skills. The performance-based pre- and post-assessment measures student growth in their ability to perform technical tasks or complex processes.

Student growth is demonstrated using baseline and final student performances on a performance-based assessment. Teacher and/or school system developed rubrics should be used to evaluate student career pathway technical skills and/or employability skills.

Example student performance types and topics include, but are not limited to:

1. Demonstrate routine work functions/behaviors;
2. Demonstrate prerequisite skills needed to show technical attainment; and
3. Demonstrate employability or soft skills in a career related environment.

Sample Rubric Link

- Technical Skills Rubric: https://www.rcampus.com/rubricshowc.cfm?sp=yes&code=V5785X&

Middle School CTE Option 4:
Project-based learning product that addresses career and technical knowledge, skills, or employability practices related to the career pathway

Middle school students learn to apply technical knowledge and skills to address problems encountered within the career pathway. Project-based learning assesses students' ability to apply academic and technical knowledge and skills to authentic situations. The project-based learning product also assesses student growth in critical thinking skills, resource management, systems thinking, information use, and communication skills.

Student growth is demonstrated through the progression of activities and documentation of student work product. This can include, but is not limited to, documentation of successful project design, implementation, evaluation of projects, and a culminating report or portfolio. These measures are typically assessed using a teacher and/or school system developed rubric that is common to the pre- and post-activity.

Example student project types include, but are not limited to:

1. Apply technical skills in a project that requires project management and/or quality assurance;
2. Plan a product or service to respond to market opportunities or a specific customer or client need; and
3. Create or evaluate a prevention and/or treatment plan.

Sample Rubric Links

- Buck Institute for Education (BIE) *requires free account set-up*: http://bie.org/object/document/6_12_creativity_innovation_rubric_ccss_aligned
- Delaware writing rubrics: http://www.doe.k12.de.us/Page/508
- Colombia North High School portfolio, presentation, and project rubrics: http://www.bcsc.k12.in.us/Page/2809

Guidance and Supports for High School CTE Measure C Options

Measure C options for high school CTE teachers were designed to reflect the increasing rigor in academic and technical knowledge and the ability for students to demonstrate technical skills attainment within a program of study. Teachers and administrators should select measures that will help the school and CTE program of study to meet school system Perkins targets. Options for high school CTE teachers are listed below.

High School CTE Option 1:	Written pre- and post-assessment related to students' academic and/or technical knowledge required for professional licensure, certification, or advanced coursework;
High School CTE Option 2:	Performance-based pre- and post-assessment related to students' academic and/or technical knowledge and skill required for professional licensure, certification, or advanced coursework;
High School CTE Option 3:	Project-based learning product with documented artifacts that reflects students' academic and/or technical skill required for professional licensure, certification, or advanced coursework;
High School CTE Option 4:	End-of-pathway portfolio/e-portfolio which reflects students' mastery of academic and technical skills required for professional licensure, certification, or advanced coursework; or
High School CTE Option 5:	Academic and technical support for diverse learners and student populations.

High School CTE Option Descriptions

Please Note: Example assessment types and topics are provided for guidance purposes only. Each teacher should select a Measure C option that best align with the specific academic, technical, and employability skill expectations for the career pathway.

High School CTE Option 1:
Written pre- and post-assessment related to students' academic and/or technical knowledge required for professional licensure, certification, or advanced coursework

In order to obtain industry-based certification or licensure in addition to the completion of advanced coursework prior to high school graduation, students must be prepared both academically and technically. This includes mathematics and English language arts as well as critical thinking skills, career-specific academic skills, and specialized technical skills and concepts. This Measure C option can be used to support school system improvement on the following Perkins core indicators of performance:

- 1S1: Academic Attainment in Reading/Language Arts where the student growth goal is aligned to Common Core Standards for Science and Technical Subjects;
- 1S2: Academic Attainment in Mathematics where the student growth goal is aligned to the Common Core Standards for Mathematical Practice; or
- 2S1: Technical Skill Attainment where the student growth goal is aligned to an industry recognized certificate or credential which holds value at the professional or postsecondary level (must be an approved credential within the CTE program application).

The written pre- and post-assessment measures student growth and their ability to understand and apply academic, career, and/or technical skills. The assessments should prepare students for dual enrollment coursework or coursework at the college level as well as industry-based certification or licensure exams.

Student growth is demonstrated using baseline and final student performance on a written (or computer-based) assessment. Teacher or school system developed rubrics can also be used when the assessment includes short answer and/or extended response items.

Example written classroom pre-test and post-test assessment types include, but are not limited to:

1. Understand and apply career-specific vocabulary/terminology and/or mathematical practices; and
2. Understand and apply career-specific knowledge, processes, or practices.

High School CTE Option 2:

Performance-based pre- and post-assessment related to students' academic and/or technical knowledge and skill required for professional licensure, certification, or advanced coursework

High school students learn career-specific skills and procedures needed to show technical skill attainment on industry-based certification or licensure exams in addition to the completion of advanced coursework. The performance-based classroom pre- and post-assessment measures student growth in in their ability to perform a specific set of skills and/or procedures included on an industry-based exam and/or in college level coursework. This Measure C option can be used to support school system improvement on the following Perkins core indicators of performance:

- 1S1: Academic Attainment in Reading/Language Arts where the student growth goal is aligned to Common Core Standards for Science and Technical Subjects;
- 1S2: Academic Attainment in Mathematics where the student growth goal is aligned to the Common Core Standards for Mathematical Practice; or
- 2S1: Technical Skill Attainment where the student growth goal is aligned to an industry recognized certificate or credential which holds value at the professional or postsecondary level (must be an approved credential within the CTE program application).

Student growth is demonstrated using baseline and final student performances on a performance-based assessment. Teachers and/or school systems may use industry specific rubrics or rubrics developed locally that are of comparable content and rigor to the rubric used during the industry-based exam or college-level performance assessment. For each student, the rubric utilized for baseline and final performances should be the same or map a progression of skill that is appropriate.

Example student performance types and topics include, but are not limited to:

- Using industry-standard materials and/or equipment to carry out routine work functions/practices.

High School CTE Option 3:

Project-based learning product related to students' academic and/or technical skill required for professional licensure, certification, or advanced coursework

High school students learn to apply technical knowledge and skills to solve authentic problems encountered within the career pathway and program of study. Project-based learning assesses a students' ability to apply academic and technical knowledge and skills to authentic situations. The project-based learning product also assesses student growth in critical thinking skills, resource management, systems thinking, information use, and communication skills. This Measure C option can be used to support school system improvement on the following Perkins core indicators of performance:

- 1S1: Academic Attainment in Reading/Language Arts where the student growth goal is aligned to Common Core Standards for Science and Technical Subjects;
- 1S2: Academic Attainment in Mathematics where the student growth goal is aligned to the Common Core Standards for Mathematical Practice; or
- 2S1: Technical Skill Attainment where the student growth goal is aligned to an industry recognized certificate or credential which holds value at the professional or postsecondary level (must be an approved credential within the CTE program application).

Student growth is demonstrated through multiple measurements showing the progression of activities and documentation of student work product. This can include, but is not limited to, documentation of successful project design, implementation, evaluation of projects, and a culminating report or portfolio. These measures are typically assessed using a teacher and/or school system developed rubric that is common to the pre- and post-activity. Baseline assessment data can be collected using components of a project-based learning rubric. Evaluation of the culminating product is used as the post measure.

Example student project types include, but are not limited to:

1. Apply technical skills in a project that requires project management, process control and quality assurance; includes documentation of planning, implementation, and reflection processes. Documentation should be in the same format as would typically be used in the career area;

2. Obtain, develop, maintain, and improve a product or service to respond to market opportunities or a specific customer or client need. Includes documentation of planning, implementation, and reflection processes. Documentation should be in the same format as would typically be used in the career; or
3. Use formal assessment practices to create and evaluate a prevention and/or treatment plan for a student, client, or patient. Includes documentation of planning, implementation, and reflection processes. Documentation should be in the same format as would typically be used in the career area.

Sample Rubric Links

- Delaware writing rubrics: http://www.doe.k12.de.us/Page/508
- Buck Institute for Education (BIE) *requires free account set-up*: http://bie.org/object/document/6_12_creativity_innovation_rubric_ccss_aligned

High School CTE Option 4:

End-of-pathway portfolio/e-portfolio which reflects students' mastery of academic and technical skills required for professional licensure, certification, or advanced coursework

High school students completing a CTE program of study are ready to enter the workforce and/or pursue postsecondary education opportunities. The culminating portfolio/e-portfolio assesses student postsecondary readiness and their ability to transition into employment and/or continuing education. This Measure C option can be used to support school system improvement on the following Perkins core indicators of performance:

- 4S1: Student Graduation Rate where the student growth goal is aligned to student completion of the CTE program of study and attainment of a high school diploma; with emphasis on a diverse student population that is reflective of the overall school population (e.g. gender, race/ethnicity, and special population status); or
- 5S1: Secondary Placement where the student growth goal is aligned to student transition beyond high school into competitive employment and/or continuing education.

Student growth is demonstrated through multiple measurements that depict student learning and readiness to transition beyond high school. Benchmark information and documentation of student growth should occur between two predetermined points in time throughout the school year or instruction interval. A progression of learning documents should be developed that is specific to the student's postsecondary interests. As a result, students will have a resource that can be used during employment and/or entrance into postsecondary education. Preliminary student products are assessed using a portfolio/e-portfolio rubric. Evaluation of the culminating product is used as the post measure.

These measures are typically assessed using a teacher and/or school system developed rubric that is common to the pre- and post-activity.

Components of the culminating portfolio/e-portfolio can include, but are not limited to:

1. Resume;
2. Cover letter;
3. Professional references/letters of recommendation from program of study employers/internships;
4. Statement of philosophy (written or video); and
5. Multiple sample work products such as:
   a. Written reports/career documents;
   b. Graphics related to completed projects;
   c. Presentation materials;
   d. Certification/licensure documents;
   e. Documentation of advanced coursework completion and performance;
   f. Photos/videos of work products/services;
   g. Artifacts of accomplishments and/or awards received;
   h. Thank you notes from clients/customers; and/or
   i. Other program of study artifacts/products.

Sample Rubric Links

- Texas Education Agency CTE electronic portfolio rubric: http://cte.sfasu.edu/wp-content/uploads/2012/01/Electronic.doc
- Norwalk Community College ePorfolio Rubric: http://www.ncc.commnet.edu/dept/distancelearning/pdf/RUBRIC_v2_ePortfolio.pdf
- Integrative Learning VALUE Rubric: AAC&U Integrative Learning VALUE Rubric for Eastern eportfolio 021011

High School CTE Option 5:
Academic and technical support for diverse learners and student populations.

High school CTE students engage in advanced coursework, earn industry recognized credentials, and have the opportunity to participate in meaningful work experiences. As a result, students are ready to enter the workforce and/or pursue postsecondary education opportunities. However, student enrollment, completion, and student achievement within a CTE program of study is not always reflective of the overall school or school system student population. This can include students who are of a non-traditional gender for a specific career area, student diversity by race/ethnicity, and students who have barriers to employment. Every effort should be made to ensure all students have access to a CTE

program of study, receive the appropriate supports to complete the CTE program of study, and demonstrate achievement at the highest possible level. This Measure C option can be used to support school system improvement on the following Perkins core indicators of performance:

- 3S1: Secondary School Completion where the student growth goal is aligned to student matriculation through the CTE program of study; with emphasis on a diverse student population that is reflective of the overall school population (e.g., gender, race/ethnicity, and special population status);
- 6S1: Nontraditional Participation where the student growth goal is aligned to student matriculation through the CTE program of study; with emphasis on underserved student populations for the career area (e.g. gender and race/ethnicity); or
- 6S2: Nontraditional Completion where the student growth goal is aligned to student access to the CTE program of study; with emphasis on underserved student populations for the career area (e.g. gender and race/ethnicity).

Student growth is demonstrated through teacher led projects or activities that align with the school system performance indicators for the above Perkins measures. Benchmark information and documentation of student growth should occur between two predetermined points in time throughout the school year or instruction interval. Enrollment, completion, and student achievement patterns by student subgroup may also be used as benchmark criteria. If enrollment, completion, or matriculation patterns are used as benchmark evidence the educator and administrator should work with the school counseling office to determine the best method to source data. In some instances, enrollment growth over time may be used as benchmark or evaluation criteria and/or enrollment across two or more academic years. Final evaluation criteria should not be limited to student enrollment patterns. Consideration should be provided to meet the needs of a diverse student population. This can include successful completion of a CTE course in addition to academic and technical supports that lead to the completion of the CTE program of study or increased student achievement across student populations. Please note student diversity can include gender, race/ethnicity, special education, English language learners, students who are low-income, and other considerations.