

Pathway Community of Practice Continuum

September 2021



Pathway Community of Practice Continuum

What is the Pathway Community of Practice Continuum?

There are two Community of Practice Continuums; each designed to address specific system level needs. The Community of Practice Continuums describe the focal areas for building increased collaboration: practice sharing, networking, collective problem-solving, and coherence. These documents are divided into sections that address not only collaboration practices but the culture and supports needed to sustain the work. The Pathway Community of Practice Continuum focuses on the instructional design and revision cycle and the work engaged in during common planning time. It is designed to work in conjunction with other ConnectED resources such as the Behaviors of Learning and Teaching, the Pathway Framework, and the College and Career Readiness Framework.

Who should use this resource?

Teacher teams working together in college and career readiness pathways, in partnership with other staff and industry and community partners, can use this resource to create a Community of Practice dedicated to the goal of graduating all students ready for success in college, career, and community.

How will we use the Pathway Community of Practice Continuum?

Pathway teachers can use the “Continuum” to self-assess their current status as a learning-focused Community of Practice, to set specific goals, to reflect on their progress and results, and to identify support and infrastructure needs. This tool describes both the practices for creating a collaborative culture of continuous improvement and the steps for taking high-quality, collaborative, action that is impactful and supportive. For additional support, ConnectED provides professional development to help communities and districts implement the practices outlined in this document.

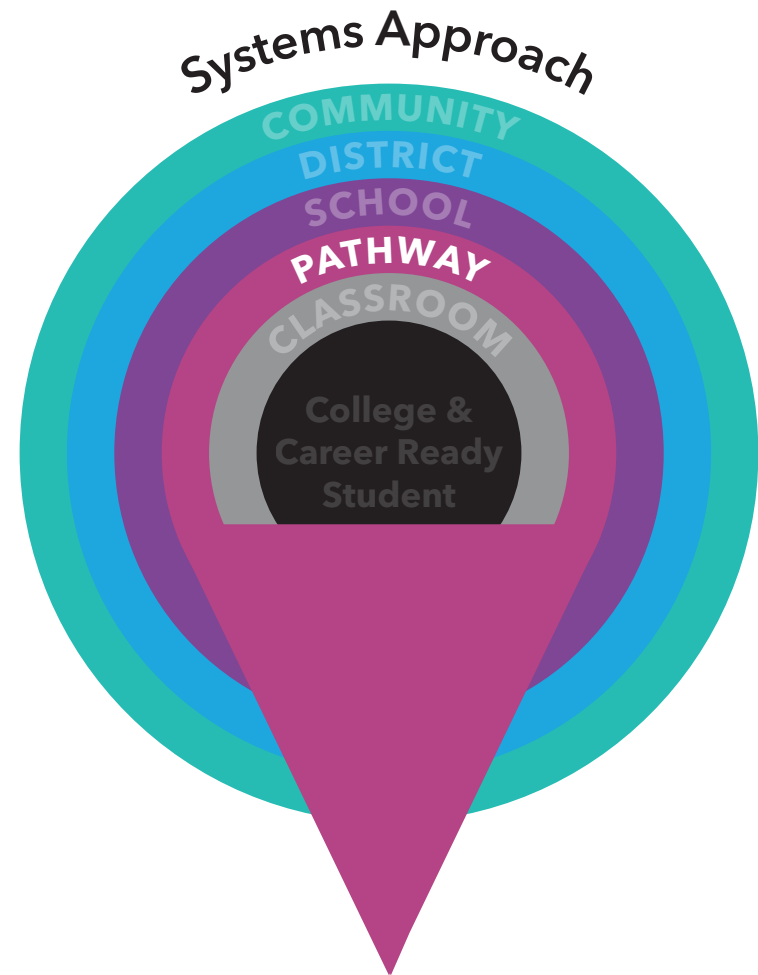
System-Wide Support

Linked Learning is an approach to college and career readiness education that transforms the traditional high school experience by bringing together rigorous academics, a demanding technical education, and real-world experience to help ALL students gain an advantage in high school, post-secondary education, and careers.

ConnectED helps communities develop college and career readiness pathways by recognizing the interdependence inherent in districts and aligning and supporting all levels of the system, from the student and classroom, to the pathway and school, to the district and community.

ConnectED and partner organizations have created a set of tools and resources for each level of the system to help school districts and communities plan, implement, and sustain high-quality pathways. This includes a digital platform, ConnectED Studios, at www.ConnectedStudios.org

This is a teacher and Pathway team resource.



Overview

Where does the term “Community of Practice” come from?

The term was coined by two researchers, Etienne Wenger and Jean Lave, who were studying apprenticeship as a learning model. While people usually think of apprenticeship as the relationship between a student and an expert, Wenger and Lave found that learning takes place through a complex web of social relationships and that in this community everyone is learning, not just the novices. These communities exist everywhere, even when no formal apprenticeship system exists.

A Community of Practice is more than just a way to manage collective work; members of a Community of Practice are practitioners dedicated to continuous improvement. Over time, they develop a shared repertoire of resources: experiences, stories, tools, and ways of addressing recurring problems – in short, a shared practice.

Communities of Practice fulfill some functions with respect to the creation, accumulation, and diffusion of knowledge in an organization:

- They are nodes for the exchange and interpretation of information. Because members have a shared understanding, they know what is relevant to communicate and how to present information in useful ways. As a consequence, a Community of Practice that spreads throughout an organization is an ideal channel for moving information, such as best practices, tips, or feedback, across organizational boundaries.
- They can retain knowledge in “living” ways, unlike a database or a manual. Even when they routinize certain tasks and processes, they can do so in a manner that responds to local circumstances and thus is useful to practitioners. Communities of practice preserve the tacit aspects of knowledge that formal systems cannot capture. For this reason, they are ideal for initiating newcomers into a practice.
- They can steward competencies to keep the organization at the cutting edge. Members of these groups discuss novel ideas, work together on problems, and keep up with developments inside and outside a firm. When a community commits to being on the forefront of a field, members distribute responsibility for keeping up with or pushing new developments.

*Communities of Practice: Learning as a Social System by Etienne Wenger
[Excerpt: Published in the “Systems Thinker,” June 1998]*

Pathway teachers form a team or “Community of Practice” (CoP) within which many key decisions are made. The decisions support the development and implementation of the **Pathway Design** plan and focus both on **Transforming Learning and Teaching** and **Continuous Improvement**. The CoP is typically, but not always, a grade-level interdisciplinary team.

Ultimately, the progress of every student toward measurable and consequential learning outcomes is the driving purpose for the Pathway Community of Practice. The pathway team regularly reviews several kinds of evidence, including: (1) performance-based measures of pathway-specific student learning outcomes; (2) information on students’ level of performance, available from student information systems; (3) individual student growth in performance, both on pathway specific learning outcomes and on transcript-based measures; (4) students’ success after high school in post-secondary education and employment, if available; and (5) trends over time in all these measures for the pathway students as a group. The team uses data on a monthly basis to inform and improve professional practice, and on an annual basis to revise the pathway improvement plan.

Pathway Design

During the pathway design process the CoP works together to translate district-and school-level student learning outcomes into pathway outcomes. The CoP uses backwards planning to map these outcomes into benchmarks describing what students must know and be able to do at each grade level of the pathway. This work helps CoP members decide how they will assess student progress in meeting the specified pathway student learning outcomes. They then develop the curriculum and instruction that will guide students in attaining these outcomes.

The initial work of the Community of Practice involves:

- Building a collaborative, results-oriented culture in which every team member shares leadership and is committed to preparing all students for college and career and to improving their individual and collective practice as educators.
- Creating assessments based on the learning outcomes aligned with the Program of Study, in part by working together to develop benchmarks and adopt common rubrics to judge the quality of student work.
- Developing a curriculum sequence and courses, including single- and multi-disciplinary integrated projects.

Transforming Learning and Teaching

Students are more engaged, motivated, and academically successful when pathway teams design standards-based, student-centered, and career themed lessons and projects.

The use of course-level performance maps to find cross-disciplinary connections aligned with the pathway and district graduate outcomes is a critical skill for collaborating teams. Individually and collectively pathway teachers consciously and consistently work to connect learning (both in and out of the school setting) with students’ interests in order to increase their motivation and the depth of their understanding.

Creating learning and teaching experiences that engage students involves teachers functioning as a Community of Practice that is:

- Aligning daily classroom instruction with the pathway experience using project-based learning and other instructional methodologies that promote inquiry, are student-centered, and align with the desired outcomes.
- Developing and strengthening instruction and assessment practices that engage and motivate all students.
- Looking regularly at student work to inform instruction.

Continuous Improvement

Excellence in pathway design and delivery depends upon the persistent pursuit of improvement. Data collection and review are an important part of this work and require preparation, time for analysis, and agreement on quality expectations.

Important to this process is an annual convening to examine available student and teacher data and to revisit the pathway vision, mission and student learning outcomes. Doing so can help provide long-term stability and commitment for the pathway as the composition of the school staff, student population, and interested community members change over time.

The process of continuous improvement involves:

- Establishing indicators to facilitate data-driven decisions and having a plan for regularly collecting and analyzing these data.
- Making ongoing review and reflection part of the practice.
- Planning for improvement, using a third-party led formal quality review process and/or self-assessment against the Pathway Framework Essential Elements, resulting in an Action Plan for improvement of the pathway.

When the pathway community of practice is fully able to focus on learning, teaching, and continuous improvement, the following outcomes are evident:

- The pathway operates as a collaborative, high-functioning team.
- The pathway regularly assesses student progress toward meeting student learning outcomes using performance assessments and common rubrics mapped to grade-level benchmarks. Teachers have created and/or adopted course curriculum and projects aligned with the rubrics to ensure success on the assessments.
- Pathway teachers engage, motivate, and challenge all students to develop effective learning behaviors as described in the Behaviors of Learning and Teaching Framework, by using research-based instructional practices. Through regular examination of student behavior, work, and assessment data, pathway teachers make adjustments to improve instruction.
- The pathway provides a system of interventions, accelerations, and enrichment that guarantees all pathway students meet or exceed the expected student learning outcomes and have a plan to graduate and to meet their goals after high school.

The pathway uses multiple forms of data to inform a continuous improvement cycle, create and monitor an action plan for improvement, and seek formal pathway certification and/or re-certification.

Whether engaged in Pathway Design, Transforming Learning and Teaching, or Continuous Improvement, the CoP can be broadened intermittently to include pathway teams across school sites and districts as larger numbers of people doing similar work strive to learn together about how best to refine practices and achieve greater outcomes.

Continuum Sections Summary

Section 1: Collaborative Culture and Practices

Focus on Student Learning and Use of Data

The pathway Community of Practice is organized into **collaborative teams** focused on improving **instruction, assessment, and curriculum** to support **all students** in reaching learning outcomes. During Team Time, they engage in data-informed inquiry linked to student progress toward pathway outcomes, which includes analyzing student work and other assessment data to identify patterns in learning. They **observe each other's** teaching, share lessons and resources, and give and receive feedback.

Share Beliefs, Commitment, and Common Practices

Pathway educators believe that **every student can achieve** pathway outcomes and hold themselves and each other **accountable** for every student's success. Pathway teams put these shared equity-based beliefs into practice by establishing **common pathway policies and procedures** that support individual and collective student success in areas such as opportunities to learn, homework, supplemental support, grading, and discipline.

Collaborate Effectively and Turn Words into Action

Pathway teams develop and use team norms, roles, and responsibilities, and they regularly **reflect** on how well they are doing. Teams use a **process and a set of protocols** to implement and monitor action items.

Section 2: Collaborative Instructional Design and Revision Cycle

STEP 1: Identify and Use Learning Outcomes

Academic and career and technical education (CTE) teachers work with colleagues on their pathway team, and with district and industry partners, **to create clear pathway, course, and project outcomes** aligned with State academic content and CTE standards. These outcomes guide their pathway's program of study and their assessment, curricular, and instructional planning.

STEP 2: Develop and Use Common Criteria & Rubrics

Academic and CTE teachers **collaborate with colleagues** on their team, and with district and industry partners when appropriate, **to select the outcomes-aligned criteria and language in common rubrics** that they will use to judge the quality of student products and performance.

STEP 3: Design Assessments

Academic and CTE teachers **collaborate with industry** and other partners to **design authentic performance assessment tasks** for projects and courses through which students will demonstrate their progress toward and defend their mastery of course, pathway, and district graduate outcomes, as measured on common rubrics.

STEP 4: Design Support Strategies

Academic and CTE teachers collaborate with industry and other partners to design integrated units of instruction that reflect the **five behaviors of learning and teaching** and through which students demonstrate proficiency on the performance assessment tasks as measured by the rubric.

STEP 5: Use Formative Assessment to Monitor Learning and Improve Practice

Pathway teachers design short-cycle formative assessments to be used during their units of instruction to (a) **identify students** who need additional time and support; (b) use patterns in student learning to discover **strengths and weaknesses in curriculum and individual teaching**; (c) **measure** individual and common progress toward pathway outcomes and key standards; and (d) provide feedback to students so they can revise and refine their work.

COMMUNITY OF PRACTICE

Instructional Design & Revision Cycle



Section 1: Collaborative Culture and Practices

Focus Our Team on Student Learning and Use of Data to Inform Our Inquiry

The pathway Community of Practice is organized into collaborative teams focused on improving instruction, assessment, and curriculum to support all students in reaching learning outcomes. During Team Time, they engage in data-informed inquiry linked to student progress toward pathway outcomes, which includes analyzing student work and other assessment data to identify patterns in learning. They observe each other’s teaching, share lessons and resources, and give and receive feedback.

1 Emerging	2 Developing	3 Transforming
Pathway team members:		
<ul style="list-style-type: none"> Hold team meetings that are primarily task-and business-driven. 	<ul style="list-style-type: none"> Hold meetings in which at least 50% of the content addresses student learning, instruction, assessment, and curriculum. 	<ul style="list-style-type: none"> Hold meetings in which at least 80% of the content addresses student learning, instruction, assessment, and curriculum.
<ul style="list-style-type: none"> May share anecdotes about teaching practices and/or individual students during collaboration time. 	<ul style="list-style-type: none"> Discuss and share instructional methods, lessons, and assessments during collaborations but not always with a clear outcome or goal in mind. 	<ul style="list-style-type: none"> Consistently use common learning and teaching goals to guide and align the focus and content of collaboration time.
<ul style="list-style-type: none"> Occasionally reference test data, grades, or rubrics. 	<ul style="list-style-type: none"> Review various forms of assessment, including students’ test data, grades, and performance related to pathway projects. 	<ul style="list-style-type: none"> Regularly schedule systematic analyses of student progress, using protocols for analyzing student work and patterns in student assets and learning needs.
<ul style="list-style-type: none"> May review student performance on culminating pathway projects. 	<ul style="list-style-type: none"> Consider possible implications of the data for future instruction but do not clarify adjustments to goals and strategies. 	<ul style="list-style-type: none"> Identify implications for future instruction and adjust team goals for instruction, assessment, and/or curriculum.
<ul style="list-style-type: none"> Individually identify and share lessons with one another related to a project or topic. 	<ul style="list-style-type: none"> Set aside time monthly to share curriculum, teaching successes, and challenges; the team may occasionally look at some student work but may not follow an inquiry-based protocol. 	<ul style="list-style-type: none"> Consistently use processes and protocols for observing one another’s teaching and reviewing curriculum units, lesson plans, and student work and other artifacts.
<ul style="list-style-type: none"> Provide collegial support but rarely ask each other probing questions about instructional practice and/or curricular content or lesson design. 	<ul style="list-style-type: none"> Occasionally give and receive feedback about each other’s curriculum; trust is still building and team members may hesitate to offer critical feedback or ask probing questions. 	<ul style="list-style-type: none"> Regularly give and receive feedback about instructional practice; team members trust, value, and invite critical perspectives.

Share Beliefs, Commitment, and Common Practices

Pathway educators believe that every student can achieve pathway outcomes and hold themselves and each other accountable for every student's success. Pathway teams put those shared equity-based beliefs into practice by establishing common pathway policies and procedures that support individual and collective student success in areas such as opportunities to learn, homework, supplemental support, grading, and discipline.

1 Emerging	2 Developing	3 Transforming
Pathway team members:		
<ul style="list-style-type: none"> Generally believe that every student can achieve. 	<ul style="list-style-type: none"> Generally believe that every student can achieve and are beginning to discuss how to hold themselves and each other accountable for student results. 	<ul style="list-style-type: none"> Believe that all students can achieve pathway outcomes and communicate publicly how they and their colleagues are accountable for every student's success.
<ul style="list-style-type: none"> May discuss one another's homework, grading, and discipline policies, and the possibility of forging common agreements. 	<ul style="list-style-type: none"> Outline at least two common agreements regarding homework, grading/credit, or discipline. 	<ul style="list-style-type: none"> Establish and consistently implement common pathway policies and procedures for student learning, behavior, and achievement.
<ul style="list-style-type: none"> May discuss issues of equity and access for students. 	<ul style="list-style-type: none"> Discuss issues of equity and access for students and take actions to address barriers within the pathways. 	<ul style="list-style-type: none"> Systematically analyze equity challenges at every level, from the personal to the institutional and societal; prioritize and take action to remove barriers and improve individual student outcomes based upon needs.
<ul style="list-style-type: none"> May discuss the impact of a policy. 	<ul style="list-style-type: none"> Reflect on specific common pathway policies and procedures, typically in response to an issue or incident, and make adjustments as needed. 	<ul style="list-style-type: none"> Define a process for regularly reflecting upon the outcome-related impact of each common pathway policy and procedure to refine and improve them.

Collaborate Effectively and Turn Words into Action

Pathway teams have developed and use team norms, roles, and responsibilities, and they regularly reflect on how well they are doing. Teams use a process and set of protocols to implement and monitor action items.

1 Emerging	2 Developing	3 Transforming
Pathway team members:		
<ul style="list-style-type: none"> Meet at least monthly as a team. 	<ul style="list-style-type: none"> Meet at least every two weeks as a team. 	<ul style="list-style-type: none"> Meet weekly as a team.
<ul style="list-style-type: none"> Develop meeting agendas, materials, and equipment that are sometimes prepared in advance; meeting time is frequently spent on meeting management tasks. 	<ul style="list-style-type: none"> Receive agendas in advance, come prepared to participate, and prepare meeting materials and equipment before each meeting. 	<ul style="list-style-type: none"> Consistently and effectively prepare for meetings, including creating agendas, reminders, and ensuring materials and resources are ready for meetings.
<ul style="list-style-type: none"> Use and follow meeting agendas and processes to guide team meetings less than 50% of the time. 	<ul style="list-style-type: none"> Use and follow norms, collaborative processes, and protocols in team meetings at least 75% of the time. 	<ul style="list-style-type: none"> Consistently and effectively use and follow norms, collaborative processes, and protocols in team meetings to build trust, learn, reflect, and continuously improve.
<ul style="list-style-type: none"> Rely almost exclusively upon the team lead to take responsibility for successful team meetings. 	<ul style="list-style-type: none"> May share some responsibilities but rely heavily upon the team lead for successful team functioning. 	<ul style="list-style-type: none"> Broadly distribute and share roles and responsibilities to support the successful functioning of the team.
<ul style="list-style-type: none"> Identify action items that may not have a clear owner and/or timeline. 	<ul style="list-style-type: none"> Agree upon actions with a clear owner and timeline but may not have a process for monitoring and reporting on implementation. 	<ul style="list-style-type: none"> Agree upon actions with a clear and appropriate owner, timeline, clear implementation plan, and process to report on impact/result.
<ul style="list-style-type: none"> May not agree to take action on some issues, and those actions that are agreed upon frequently address specific incidents or symptoms. 	<ul style="list-style-type: none"> Agree upon actions that sometimes address root causes and sometimes are a response to specific incidents or symptoms. 	<ul style="list-style-type: none"> Agree upon actions that proactively address the root causes of issues identified during analysis.

Section 2: Collaborative Instructional Design and Revision Cycle

STEP 1: Identify and Use Learning Outcomes

Academic subject and Career and Technical Education (CTE) teachers work with colleagues on their pathway team, and with district and industry partners, to create clear pathway, course, and project outcomes aligned with academic content and CTE standards. These outcomes guide their pathway's program of study and their assessment, curricular, and instructional planning.

1 Emerging	2 Developing	3 Transforming
Pathway outcomes:		
<ul style="list-style-type: none"> ■ Include knowledge and skills from more than one domain: academic, career, or 21st century. 	<ul style="list-style-type: none"> ■ Include academic, career, and 21st century knowledge and skills. 	<ul style="list-style-type: none"> ■ Integrate academic, career, and 21st century knowledge and skills within the context of the pathway theme.
<ul style="list-style-type: none"> ■ Align partially with either the school or district's graduate outcomes. 	<ul style="list-style-type: none"> ■ Align with either the school or district's graduate outcomes. 	<ul style="list-style-type: none"> ■ Align with both the school and district's graduate outcomes.
<ul style="list-style-type: none"> ■ Partially reflect state academic or CTE standards, or the performance level necessary for college and career readiness. 	<ul style="list-style-type: none"> ■ Partially reflect state academic state academic and CTE standards, or the measurable level of performance necessary for college and career readiness. 	<ul style="list-style-type: none"> ■ Fully reflect state academic and CTE standards, and the measurable level of performance necessary for college and career readiness.
<ul style="list-style-type: none"> ■ Are articulated only for the graduate (12th grade) level. 	<ul style="list-style-type: none"> ■ Are partially articulated across the grade levels, forming progress benchmarks. 	<ul style="list-style-type: none"> ■ Are fully articulated across the grade levels through progress benchmarks.
<ul style="list-style-type: none"> ■ Implicitly reflect pathway's industry theme. 	<ul style="list-style-type: none"> ■ Partially reflect pathway's industry theme through specific language. 	<ul style="list-style-type: none"> ■ Clearly reflect the pathway's industry theme to an outside party or casual observer.
<ul style="list-style-type: none"> ■ Implicitly inform the program of study, curriculum, instruction, and assessment. 	<ul style="list-style-type: none"> ■ Partially guide the design of the program of study, instruction, and assessments. 	<ul style="list-style-type: none"> ■ Fully drive the pathway's program of study, instruction, and assessments.
<ul style="list-style-type: none"> ■ Course and project outcomes are largely independent of pathway outcomes. 	<ul style="list-style-type: none"> ■ 50% of pathway teachers use curriculum mapping to organize and drive curriculum and assessment through unpacked and aligned course and project outcomes and standards. 	<ul style="list-style-type: none"> ■ 100% of pathway teachers use performance mapping to organize and drive curriculum and assessment in single classes and across the pathway.
<ul style="list-style-type: none"> ■ Can generally be referred to by teachers and administrators. 	<ul style="list-style-type: none"> ■ Can be described by teachers and administrators who can generally explain how outcomes are supported within the program of study, curriculum, and assessments. 	<ul style="list-style-type: none"> ■ Can be described by teachers and administrators who can detail how a specific skill or standard connects to pathway outcomes.
<ul style="list-style-type: none"> ■ Can generally be referred by students. 	<ul style="list-style-type: none"> ■ Can generally be described by students who can share how their work addresses a pathway outcome. 	<ul style="list-style-type: none"> ■ Can be articulated by students who can share where they are moving toward achieving outcome mastery.

STEP 2: Develop and Use Common Criteria and Rubrics

Academic and CTE teachers collaborate with colleagues on their team, and with district and industry partners when appropriate, to select the outcomes-aligned criteria and language in common rubrics that they will use to judge the quality of student products and performances.

1 Emerging	2 Developing	3 Transforming
Teachers design/adapt common rubrics that are:		
<ul style="list-style-type: none"> Checklists describing task completion. 	<ul style="list-style-type: none"> Developed using quantitative criteria language with less attention given to task complexity and quality of student work. 	<ul style="list-style-type: none"> Computed with descriptive language to address the task complexity and quality of student work as a means to show learning.
<ul style="list-style-type: none"> Project-specific, typically in isolation from each other. 	<ul style="list-style-type: none"> Aligned to pathway, school, or district outcomes 	<ul style="list-style-type: none"> Aligned to pathway, school, and district outcomes.
<ul style="list-style-type: none"> Independent of pathway outcomes. 	<ul style="list-style-type: none"> Aligned to pathway outcomes and reflect key standards and graduation level competencies. 	<ul style="list-style-type: none"> Aligned to pathway outcomes, reflect key standards and graduation level competencies, and show developmental progression appropriate for other grade levels.
<ul style="list-style-type: none"> Written by teachers in isolation. 	<ul style="list-style-type: none"> Constructed in collaboration with colleagues. 	<ul style="list-style-type: none"> Constructed with collaborative, outcomes-aligned teams with input from students and industry partners.
<ul style="list-style-type: none"> Implicitly acknowledge the skills and competencies needed by professionals. 	<ul style="list-style-type: none"> Use specific language to assess the skills and competencies most relevant to the pathway's industry theme. 	<ul style="list-style-type: none"> Validated by industry partners as representing what it means to perform well for that criteria.
<ul style="list-style-type: none"> Assess class- or project-specific student work. 	<ul style="list-style-type: none"> Assess either a common performance task or a shared pathway performance criterion. 	<ul style="list-style-type: none"> Assess a variety of common performance tasks with shared pathway performance criteria.
<ul style="list-style-type: none"> Summative assessment of student learning. 	<ul style="list-style-type: none"> Formative learning tool for students. 	<ul style="list-style-type: none"> Used by students for self-assessment and to assess anchors/exemplars so they can internalize quality criteria and levels.

STEP 3: Design Assessment Tasks

Academic and CTE teachers collaborate with industry and other partners to design authentic performance assessment tasks for projects and courses through which students will demonstrate their progress toward and defend their mastery of course, pathway, and district graduate outcomes as measured on common rubrics.

1 Emerging	2 Developing	3 Transforming
Performance assessment tasks:		
<ul style="list-style-type: none"> May derive from interdisciplinary projects, but lack alignment to pathway outcomes or performance criteria. 	<ul style="list-style-type: none"> May derive from a project designed by an interdisciplinary teacher team for application in multiple subject areas, with some partial alignment to pathway outcomes or performance criteria. 	<ul style="list-style-type: none"> May derive from a project designed by the interdisciplinary teacher teams with industry partners for application in multiple subject areas, with explicit mapping between embedded performance tasks and pathway outcomes or performance criteria.
<ul style="list-style-type: none"> Are aligned to project-specific rubrics. 	<ul style="list-style-type: none"> Are aligned to pathway outcomes and common rubrics. 	<ul style="list-style-type: none"> Are intentionally aligned to pathway outcomes and common rubrics, keeping in mind past patterns of student learning.
<ul style="list-style-type: none"> Exist independently of culminating assessment or a pathway-wide performance assessment system. 	<ul style="list-style-type: none"> Are aligned in part to a culminating assessment at the course level or grade level, or to a pathway-wide performance assessment system. 	<ul style="list-style-type: none"> Lead to a culminating assessment at the course or grade level clearly aligned to pathway outcomes, and the pathway's performance assessment system.
<ul style="list-style-type: none"> Are designed so that students can complete a performance task once and have their grade recorded. 	<ul style="list-style-type: none"> Are designed so that students receive feedback about a task and have at least one opportunity to revise and reflect upon their work. 	<ul style="list-style-type: none"> Allow students to have multiple opportunities to revise and perform the task and reflect on their progress toward achieving pathway outcomes.
<ul style="list-style-type: none"> Are designed to have students complete an assignment within specific parameters in a given timeframe. 	<ul style="list-style-type: none"> Address some, but not all, of the following information: prior knowledge and materials needed, timeline, parameters, and models of performance or product students are to create. 	<ul style="list-style-type: none"> Walk students through a clear instructional sequence that includes the prior knowledge and materials needed, timeline, and models of performance or product students are to create.
<ul style="list-style-type: none"> Provide only an academic context. 	<ul style="list-style-type: none"> Provide a somewhat realistic context. 	<ul style="list-style-type: none"> Provide as realistic a context as possible.
<ul style="list-style-type: none"> Offer a single access point for all students regardless of individual student learning needs. 	<ul style="list-style-type: none"> Offer some differentiated access to the task, though aspects may be more difficult for some students to obtain. 	<ul style="list-style-type: none"> Include a system of scaffolded, rigorous performance assessments culminating in a clear body of work that shows demonstration of mastery of all aspects of the pathway's grade-level benchmarks at the end of the year.
<ul style="list-style-type: none"> Map to standards or to graduate level pathway outcomes. 	<ul style="list-style-type: none"> Map partially to grade-level standards and appropriate, vertically articulated pathway outcomes and benchmarks . 	<ul style="list-style-type: none"> Map directly to grade-level standards and appropriate, vertically articulated pathway outcomes and benchmarks.
<ul style="list-style-type: none"> That culminate with the class or teacher as audience. 	<ul style="list-style-type: none"> Include an internal audience or consequence in the design of performance assessments. 	<ul style="list-style-type: none"> Ensure quality by: (1) including a broader audience or client beyond the school, (2) requiring some form of public exhibition, (3) requiring critique by teachers, students, and industry partners using quality indicators.

STEP 4: Design Units of Instruction

Academic and CTE teachers collaborate with industry and other partners to design integrated units of instruction that reflect the five Behaviors of Learning and Teaching and through which students demonstrate proficiency on the performance assessment tasks as measured by the rubric.

1 Emerging	2 Developing	3 Transforming
Individual teachers:	Pathway teams:	
<ul style="list-style-type: none"> Design and implement single discipline project-based lessons and units, even if topically or thematically aligned with other subjects (i.e., not integrated projects). 	<ul style="list-style-type: none"> Use curriculum mapping to collaboratively align and integrate themes and essential questions with other academic disciplines or industry partners. 	<ul style="list-style-type: none"> Use performance mapping to collaboratively align and integrate themes, essential questions, multiple content areas, and learning beyond the classroom (e.g., work-based learning) into the core of the multi-disciplinary project.
<ul style="list-style-type: none"> Use elements of the Learning and Teaching Framework in the design of projects to create units of instruction that are independent of pathway outcomes. 	<ul style="list-style-type: none"> Partially align units of instruction to pathway outcomes. 	<ul style="list-style-type: none"> Align units of instruction to the pathway outcomes.
<ul style="list-style-type: none"> Assess student work upon culmination of student learning. 	<ul style="list-style-type: none"> Develop formative assessments while teaching the unit to monitor students' learning. 	<ul style="list-style-type: none"> Develop formative assessments in advance to be used at specific points throughout the unit to monitor learning.
<ul style="list-style-type: none"> Design units in which project content may not directly address performance assessment expectations with discipline-specific projects. 	<ul style="list-style-type: none"> Link the design of project-based units of instruction to meet the expectations of the performance assessments. 	<ul style="list-style-type: none"> Design the units so that students get practice and have support in meeting the demands of the performance task.
<ul style="list-style-type: none"> Do not provide models of proficient student work for the project or assessment. 	<ul style="list-style-type: none"> Provide some modeling of proficiency or performance on products for students. 	<ul style="list-style-type: none"> Ensure units provide exemplars/anchors to inform students and teachers about what is considered "good" performance.
<ul style="list-style-type: none"> Use their own instructional strategies to support student mastery of course outcomes. 	<ul style="list-style-type: none"> Begin to discuss units and project teams try shared instructional strategies. 	<ul style="list-style-type: none"> Collaborate and agree to use shared instructional strategies throughout the entire pathway and collect data on the implementation and impact of strategies.

STEP 5: Design Formative Assessments to Monitor Learning and Improve Practice

Pathway teachers design short-cycle formative assessments that they use during their units of instruction to (a) identify students who need additional time and support; (b) identify patterns in student learning to discover strengths and weaknesses in curriculum and their individual teaching; (c) measure individual and common progress toward pathway outcomes and key standards; and (d) provide feedback to students so they can revise and refine their work.

1 Emerging	2 Developing	3 Transforming
Teachers monitor learning by:		
<ul style="list-style-type: none"> ■ Sporadically assessing students during the task or lessons. 	<ul style="list-style-type: none"> ■ Conducting formative assessment before the end of a task. 	<ul style="list-style-type: none"> ■ Using formative assessments to note progress toward achieving the outcomes and to plan the next action to address student learning needs.
<ul style="list-style-type: none"> ■ The end of a task or a set of lessons through quizzes or tests. 	<ul style="list-style-type: none"> ■ Collecting data that measure daily instruction and provide information about student progress toward the culminating outcome. 	<ul style="list-style-type: none"> ■ Collecting data from formative assessments and by involving students in self-assessments to understand their progress toward achieving the outcomes and their learning needs and to plan their next action.
<ul style="list-style-type: none"> ■ Viewing the data yielded as an indicator only of student learning. 	<ul style="list-style-type: none"> ■ Acknowledging their strengths and weaknesses in the curriculum and in their teaching. 	<ul style="list-style-type: none"> ■ Using results of formative assessments to improve the curriculum and their teaching.
<ul style="list-style-type: none"> ■ Collecting feedback from students. 	<ul style="list-style-type: none"> ■ Collecting feedback from all stakeholders. 	<ul style="list-style-type: none"> ■ Revising their units of instruction and incorporating feedback from all of the stakeholders (students, industry partners, pathway co-teachers.)

Glossary

Backwards Planning	The teacher starts with outcomes for students and then determines the benchmarks and plans the curriculum to lead toward those outcomes.
Curriculum Mapping	The process of determining and representing performance criteria within a course and pathway scope and sequence.
Formative Assessment	Assessment that provides feedback to the teacher and to students for the purpose of improving instruction and learning. Frequently referred to as “assessment FOR learning.” Formative assessment includes minute-by-minute monitoring of student learning, checking for understanding, diagnostic and progress monitoring assessments, pre-assessments, and student self-assessments.
Integrated Curriculum	A series of conscious and informed strategies used to connect the content of one or more academic and CTE courses so that what is learned in one discipline is combined with and reinforced in the other discipline over an extended period of time.
Integrated Multidisciplinary Project	A high-quality integrated project brings together multiple academic and technical disciplines to create deep and meaningful learning experiences for students. Integrated projects reflect differentiated, collaborative, and individualized curriculum, and in a Linked Learning context ask students to demonstrate the skills, knowledge, and behaviors authentic to an industry sector. When working on integrated, multidisciplinary projects, students are charged with finding viable solutions to real problems, or with achieving specific individual or group outcomes, through horizontally-aligned units of instruction. These instructional units often lead students through multiple steps, assignments, and subject-specific performance tasks, and ultimately culminate in a student product or performance.
Learning Outcome	The academic knowledge, behaviors, and skills that students are expected to learn and demonstrate. Learning outcomes can be created for a specific lesson, task, or project; for a course; or for a student’s career in a pathway or school.
Pathway Team	Teachers and affiliated support staff with students in common who regularly meet to plan and implement curriculum, instruction, and assessment as well as the pathway events and other activities.
Site Leadership Team	Designated teachers, school site leaders, counselors, other staff, and partners who regularly meet and have responsibility for the overall management and improvement of pathways.
Performance Assessment	A form of assessment that requires students to perform a task rather than select an answer from a ready-made list. This activity requires students to construct a response, create a product, provide a service, or perform a demonstration. The more it reflects a situation or process used by adults in the world beyond the classroom, the more authentic it is.
Performance Task	A multi-step instructional activity designed to explicitly measure student performance, typically measured by a rubric.

Portfolio	A systematic and organized collection of a student's work that exhibits direct evidence of a student's efforts, achievements, and progress toward learning outcomes over a period of time. The collection should involve the student in selecting its contents and should include information about the performance criteria, the rubric of criteria for judging merit, and evidence of student self-reflection or evaluation.
Portfolio Assessment	A portfolio becomes a portfolio assessment when (a) the assessment purpose is defined; (b) criteria or methods are made clear for determining what is put into the portfolio, by whom, and when; and (c) criteria for assessing either the collection or individual pieces of work are identified and used to make judgments about performance. Portfolios can be designed to assess student progress, effort, and/or achievement and encourage students to reflect on their learning.
Rubric	<p>Clearly defines for the student, teacher, and others a range of performance and/or product quality for specific criteria linked to student learning outcomes. Rubrics have performance criteria, levels, and descriptors:</p> <ul style="list-style-type: none"> ■ Performance Levels: Levels define the scale for scoring performance and/or product quality. ■ Performance Criteria/Scoring Domain: Criteria define the attributes of the performance and/or product being assessed on the rubric. ■ Performance Descriptors: Descriptors specifically define the attributes of the performance or product for each criterion at each level of quality.
Rubrics (Common)	Rubrics that are used by pathway teams, entire pathways, or entire districts are learning outcome-aligned and are used over time to measure a student's progress from a beginning/novice level toward an advanced/expert level in a skill area such as communication, collaboration, or creativity/innovation.
Summative Assessment	A culminating assessment providing information on students' mastery of content, knowledge, or skills. It is an "assessment OF learning."

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