

Learning, Teaching and Leading Framework

# Community of Practice Continuum

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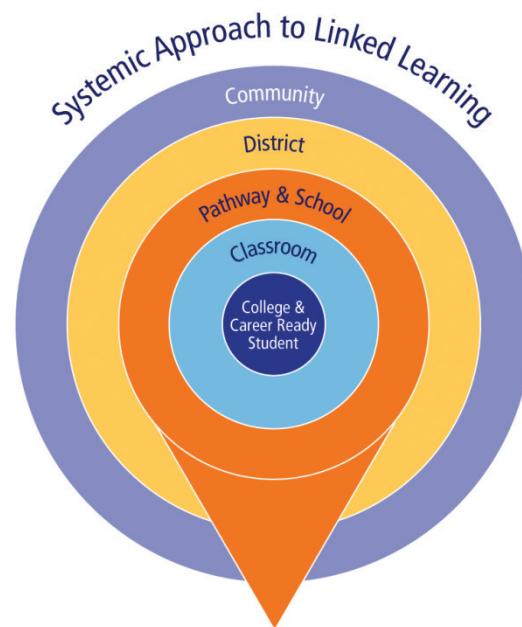
[www.ConnectEdCalifornia.org](http://www.ConnectEdCalifornia.org)



## Systemic Approach to Linked Learning

### What is Linked Learning?

Linked Learning is an approach to education that transforms the traditional high school experience by bringing together strong academics, a demanding technical education, and real-world experience to help students gain an advantage in high school, postsecondary education and careers. Students can choose among industry-themed pathways in fields such as: engineering, arts and media, business, and biomedicine and health.



### ConnectEd's Mission, Approach, and Tools

ConnectEd helps communities develop systems of Linked Learning pathways so that all students, regardless of background, graduate ready for college, career, and life.

ConnectEd's approach to Linked Learning is systemic; it aligns 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 developed a set of tools and resources to help school districts plan and implement a system of Linked Learning pathways in their secondary schools. This includes a digital platform and network, ConnectEd Studios, at [www.ConnectedStudios.org](http://www.ConnectedStudios.org)

This continuum is a resource for pathway teacher teams, their industry and community partners, support providers, and site administrators.

For more information about ConnectEd's library, visit:  
[www.ConnectEdCalifornia.org/publications](http://www.ConnectEdCalifornia.org/publications)

## Community of Practice Continuum

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

The term was coined in 2006 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 a master, 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 managing an established pathway; members of a community of practice are practitioners dedicated to continuous improvement. Over time, they develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems—in short a shared practice. Teacher teams working together in Linked Learning pathways, in partnership with other staff and industry and community partners, can create a powerful, sustainable, evolving community of practice dedicated to the goal of graduating all students ready for success in college, career, and life.

### How should I use this tool?

Collaborative teams in Linked Learning pathways and their coaches can use the “**Community of Practice 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 needs. This tool describes both **practices** of creating a collaborative culture of continuous improvement, and the **steps** of creating high-quality outcomes and standards-aligned performance tasks and units of instruction. Coach section and step of this continuum is aligned with the Essential Elements of Linked Learning Pathway Quality. This tool is linked to an online toolkit at: [www.ConnectEdStudios.org](http://www.ConnectEdStudios.org).

### 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 have developed 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.

#### Community of Practice Culture and Practices



## 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 academic content and Common Core 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 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 performance.

### 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.

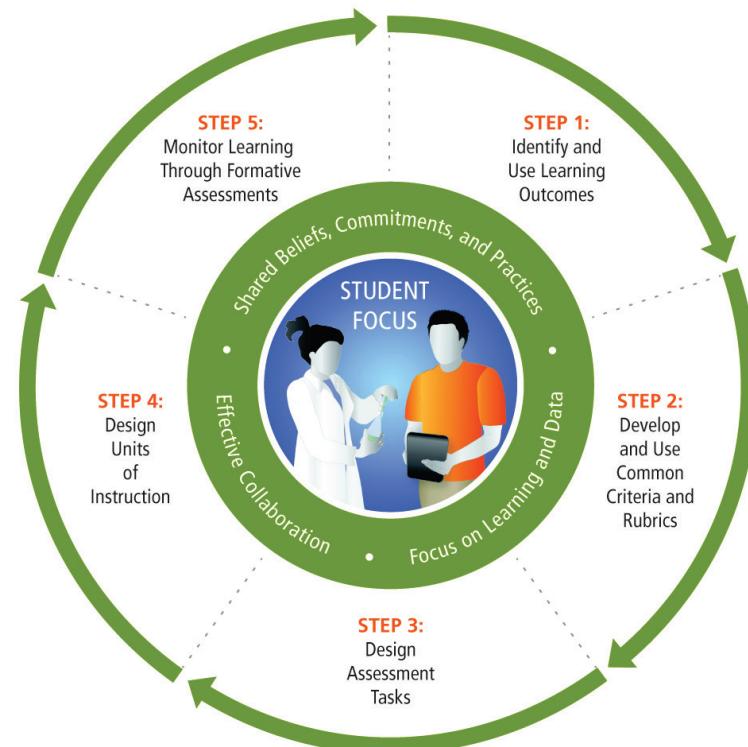
### STEP 4: Design Units of Instruction

Academic and CTE teachers collaborate with industry and other partners to design integrated units of instruction that reflect the **five Linked Learning 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 and Revision Cycle



<b>Focus Our Team on Student Learning and Use of Data to Inform Our Inquiry</b>					
<b>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.</b>					
(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Pathway team members...		Pathway team members...		Pathway team members...
	<ul style="list-style-type: none"> <li>hold team meetings that are primarily <b>task- and business-driven</b></li> </ul>		<ul style="list-style-type: none"> <li>hold meetings in which <b>at least 50%</b> of the content addresses <b>student learning</b>, instruction, assessment, and curriculum</li> </ul>		<ul style="list-style-type: none"> <li>hold meetings in which <b>at least 80%</b> of the content addresses <b>student learning</b>, instruction, assessment, and curriculum</li> </ul>
	<ul style="list-style-type: none"> <li>may <b>share anecdotes</b> about teaching practices and/or individual students during collaboration time</li> </ul>		<ul style="list-style-type: none"> <li><b>discuss and share</b> instructional methods, lessons, and assessments during collaborations but not always with a clear outcome or goal in mind</li> </ul>		<ul style="list-style-type: none"> <li>consistently use <b>common learning and teaching goals</b> to guide and align the focus and content of collaboration time</li> </ul>
	<ul style="list-style-type: none"> <li><b>occasionally</b> reference test data, grades, or rubrics</li> </ul>		<ul style="list-style-type: none"> <li><b>review</b> various forms of assessment, including students' test data, grades, and performance related to pathway projects</li> </ul>		<ul style="list-style-type: none"> <li><b>regularly schedule systematic analyses</b> of student progress, using protocols for analyzing student work and patterns in student assets and learning needs</li> </ul>
	<ul style="list-style-type: none"> <li><b>may review</b> student performance on culminating pathway projects</li> </ul>		<ul style="list-style-type: none"> <li><b>consider possible implications</b> of the data for future instruction but do not clarify adjustments to goals and strategies</li> </ul>		<ul style="list-style-type: none"> <li>identify implications for future instruction and <b>adjust team goals</b> for instruction, assessment, and/or curriculum</li> </ul>
	<ul style="list-style-type: none"> <li><b>individually</b> identify and share lessons with one another related to a project or topic</li> </ul>		<ul style="list-style-type: none"> <li>set aside time <b>monthly</b> to <b>share</b> curriculum, teaching successes, and challenges; the team may <b>occasionally look at some student</b> work but may not follow an inquiry-based protocol</li> </ul>		<ul style="list-style-type: none"> <li><b>consistently use</b> processes and protocols for observing one another's teaching and reviewing curriculum units, lesson plans, and student work and other artifacts</li> </ul>
	<ul style="list-style-type: none"> <li>provide collegial support but <b>rarely ask each other</b> probing questions about instructional practice and/or curricular content or lesson design</li> </ul>		<ul style="list-style-type: none"> <li><b>occasionally give and receive feedback</b> about each other's curriculum; trust is still building and team members may <b>hesitate to offer</b> critical feedback or ask probing questions</li> </ul>		<ul style="list-style-type: none"> <li><b>regularly</b> give and receive feedback about instructional practice; team members <b>trust, value, and invite</b> critical perspectives</li> </ul>

<b>Share Beliefs, Commitment, and Common Practices</b>					
<b>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.</b>					
(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Pathway team members...		Pathway team members...		Pathway team members...
	<ul style="list-style-type: none"> <li>generally <b>believe</b> that every student can achieve</li> </ul>		<ul style="list-style-type: none"> <li>generally believe that every student can achieve and are beginning to <b>discuss</b> how to hold themselves and each other accountable for student results</li> </ul>		<ul style="list-style-type: none"> <li>believe that all students can achieve pathway outcomes and <b>communicate publicly</b> how they and their colleagues are accountable for every student's success</li> </ul>
	<ul style="list-style-type: none"> <li>may <b>discuss</b> one another's homework, grading, and discipline policies, and the possibility of forging common agreements</li> </ul>		<ul style="list-style-type: none"> <li>have at least <b>two common agreements</b> regarding homework, grading/credit, or discipline</li> </ul>		<ul style="list-style-type: none"> <li>establish and consistently implement <b>common pathway policies and procedures</b> for student learning, behavior, and achievement</li> </ul>
	<ul style="list-style-type: none"> <li>may <b>discuss</b> issues of equity and access for students</li> </ul>		<ul style="list-style-type: none"> <li>discuss issues of equity and access for students and <b>take actions</b> to address barriers within the pathways</li> </ul>		<ul style="list-style-type: none"> <li><b>systematically analyze</b> equity challenges at every level, from the personal to the institutional and societal; <b>prioritize and take action</b> to remove barriers and improve individual student outcomes based upon needs</li> </ul>
	<ul style="list-style-type: none"> <li>may <b>discuss</b> the impact of a policy</li> </ul>		<ul style="list-style-type: none"> <li><b>reflect</b> on specific common pathway policies and procedures, typically in response to an issue or incident, and make adjustments as needed</li> </ul>		<ul style="list-style-type: none"> <li>have a <b>process</b> for regularly reflecting upon the outcome-related impact of each common pathway policy and procedure in order to refine and <b>improve</b> them</li> </ul>

<b>Collaborate Effectively and Turning Words into Action</b>					
<b>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.</b>					
(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Pathway team members...		Pathway team members...		Pathway team members...
	<ul style="list-style-type: none"> <li>meet at least <b>monthly</b> as a team</li> </ul>		<ul style="list-style-type: none"> <li>meet at least <b>every two weeks</b> as a team</li> </ul>		<ul style="list-style-type: none"> <li>meet <b>weekly</b> as a team</li> </ul>
	<ul style="list-style-type: none"> <li>meeting agendas, materials, and equipment are sometimes prepared in advance; meeting time is frequently on meeting management tasks</li> </ul>		<ul style="list-style-type: none"> <li>receive agendas in advance, come prepared to participate, and prepare meeting materials and equipment before each meeting</li> </ul>		<ul style="list-style-type: none"> <li>consistently and effectively prepare for meetings, including creating agendas, reminders, ensuring materials and resources are ready for meetings</li> </ul>
	<ul style="list-style-type: none"> <li>use and follow meeting agendas and processes to guide team meetings <b>less than 50%</b> of the time</li> </ul>		<ul style="list-style-type: none"> <li>use and follow norms, collaborative processes, and protocols in team meetings <b>at least 75%</b> of the time</li> </ul>		<ul style="list-style-type: none"> <li><b>consistently and effectively</b> use and follow norms, collaborative processes, and protocols in team meetings to build trust, learn, reflect, and continuously improve</li> </ul>
	<ul style="list-style-type: none"> <li>rely almost exclusively upon the team lead to take responsibility for successful team meetings</li> </ul>		<ul style="list-style-type: none"> <li>may share some responsibilities but rely heavily upon the team lead for successful team functioning</li> </ul>		<ul style="list-style-type: none"> <li>broadly distribute and share roles and responsibilities to support the successful functioning of the team</li> </ul>
	<ul style="list-style-type: none"> <li><b>identify</b> action items, but the actions may not have a clear owner and/or timeline</li> </ul>		<ul style="list-style-type: none"> <li>agree upon actions with a <b>clear owner and timeline</b> but may not have a process for monitoring and reporting on implementation</li> </ul>		<ul style="list-style-type: none"> <li>agree upon actions with a clear and appropriate owner, timeline, clear implementation plan, and <b>process to report on impact/result</b></li> </ul>
	<ul style="list-style-type: none"> <li>may not agree to take action on some issues, and those actions that are agreed upon frequently address specific incidents or symptoms</li> </ul>		<ul style="list-style-type: none"> <li>agree upon actions that sometimes address root causes and sometimes are a response to specific incidents or symptoms</li> </ul>		<ul style="list-style-type: none"> <li>agree upon actions that proactively address the <b>root causes</b> of issues identified during analysis</li> </ul>

STEP 1: Identify and Use Learning Outcomes					
<b>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, Common Core and CTE standards. These outcomes guide their pathway's program of study and their assessment, curricular, and instructional planning.</b>					
(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Pathway outcomes...		Pathway outcomes...		Pathway outcomes...
	<ul style="list-style-type: none"> <li>include knowledge and skills from more than one domain: academic, career, or 21st century</li> </ul>		<ul style="list-style-type: none"> <li>include academic, career, and 21st century knowledge and skills</li> </ul>		<ul style="list-style-type: none"> <li>integrate academic, career, and 21st century knowledge and skills within the context of the pathway theme</li> </ul>
	<ul style="list-style-type: none"> <li>align partially with either the school's or district's graduate outcomes</li> </ul>		<ul style="list-style-type: none"> <li>align with either the school's or district's graduate outcomes</li> </ul>		<ul style="list-style-type: none"> <li>align with both the school's and district's graduate outcomes</li> </ul>
	<ul style="list-style-type: none"> <li>partially reflect state academic or Common Core standards, CTE standards, or the performance level necessary for college and career readiness</li> </ul>		<ul style="list-style-type: none"> <li>partially reflect state academic, Common Core and CTE standards, or the measurable level of performance necessary for college and career readiness</li> </ul>		<ul style="list-style-type: none"> <li>fully reflect state academic or Common Core, and CTE standards, and the measurable level of performance necessary for college and career readiness</li> </ul>
	<ul style="list-style-type: none"> <li>are articulated only for the graduate (12th grade) level</li> </ul>		<ul style="list-style-type: none"> <li>are partially articulated across the grade levels, forming progress benchmarks</li> </ul>		<ul style="list-style-type: none"> <li>are fully articulated across the grade levels through progress benchmarks</li> </ul>
	<ul style="list-style-type: none"> <li>Implicitly reflect pathway's industry theme</li> </ul>		<ul style="list-style-type: none"> <li>partially reflect pathway's industry theme through specific language</li> </ul>		<ul style="list-style-type: none"> <li>clearly reflect the pathway's industry theme to an outside party or casual observer</li> </ul>
	<ul style="list-style-type: none"> <li>implicitly inform the program of study, curriculum, instruction, and assessment</li> </ul>		<ul style="list-style-type: none"> <li>partially guide the design of the pathway's program of study, instruction, and assessments</li> </ul>		<ul style="list-style-type: none"> <li>fully drive the pathway's program of study, instruction, and assessments</li> </ul>
	<ul style="list-style-type: none"> <li>course and project outcomes are largely independent of pathway outcomes</li> </ul>		<ul style="list-style-type: none"> <li>50% of pathway teachers use curriculum mapping to organize and drive curriculum and assessment through unpacked and aligned course and project outcomes and standards</li> </ul>		<ul style="list-style-type: none"> <li>100% of pathway teachers use performance mapping to organize and drive curriculum and assessment in single classes and across the pathway</li> </ul>
	<ul style="list-style-type: none"> <li>teachers and administrators can generally refer to pathway outcomes</li> </ul>		<ul style="list-style-type: none"> <li>teachers and administrators can describe the pathways and explain generally how outcomes are supported within the program of study, curriculum, and assessments</li> </ul>		<ul style="list-style-type: none"> <li>teachers and administrators can describe how a specific skill or standard connects to pathway outcomes</li> </ul>
	<ul style="list-style-type: none"> <li>students and industry partners can generally refer to pathway outcomes</li> </ul>		<ul style="list-style-type: none"> <li>when asked, students can generally describe how their work addresses a pathway outcome</li> </ul>		<ul style="list-style-type: none"> <li>students can articulate where they are moving toward achieving outcome mastery</li> </ul>

<b>STEP 2: Develop and Use Common Criteria and Rubrics</b>					
<b>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.</b>					
(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Teachers design/adapt rubrics...		Teachers design/adapt common rubrics...		Teachers design/adapt common rubrics...
	<ul style="list-style-type: none"> <li>that are <b>checklists</b> describing task completion</li> </ul>		<ul style="list-style-type: none"> <li>with <b>quantitative criteria</b> language and less attention given to task complexity and quality of student work</li> </ul>		<ul style="list-style-type: none"> <li>with <b>descriptive language</b> to address the task complexity and quality of student work as a means to show learning</li> </ul>
	<ul style="list-style-type: none"> <li>that are project-specific, typically in <b>isolation</b> from each other</li> </ul>		<ul style="list-style-type: none"> <li>that are <b>aligned</b> to pathway, school, or district outcomes</li> </ul>		<ul style="list-style-type: none"> <li>that are <b>aligned</b> to pathway, school, and district outcomes</li> </ul>
	<ul style="list-style-type: none"> <li>that are <b>independent</b> of pathway outcomes</li> </ul>		<ul style="list-style-type: none"> <li>that are <b>aligned</b> to pathway outcomes and <b>reflect key standards and graduation level competencies</b></li> </ul>		<ul style="list-style-type: none"> <li>that are <b>aligned</b> to pathway outcomes, reflect key standards and graduation level competencies, and <b>show developmental progression</b> appropriate for other grade levels</li> </ul>
	<ul style="list-style-type: none"> <li>that they write by themselves <b>in isolation</b></li> </ul>		<ul style="list-style-type: none"> <li>in <b>collaboration</b> with colleagues</li> </ul>		<ul style="list-style-type: none"> <li>in collaborative, outcomes-aligned teams with <b>input</b> from students and industry partners</li> </ul>
	<ul style="list-style-type: none"> <li>that <b>implicitly</b> acknowledge the skills and competencies needed by professionals</li> </ul>		<ul style="list-style-type: none"> <li>that use specific <b>language</b> to assess the skills and competencies most <b>relevant to the pathway's industry theme</b></li> </ul>		<ul style="list-style-type: none"> <li>that, are <b>validated</b> by industry partners as representing what it means to perform well for that criteria</li> </ul>
	<ul style="list-style-type: none"> <li>to score <b>class- or project-specific</b> student work</li> </ul>		<ul style="list-style-type: none"> <li>to score <b>either</b> a common performance task <b>or</b> a shared pathway performance criterion</li> </ul>		<ul style="list-style-type: none"> <li>to score a <b>variety of</b> common performance tasks with <b>shared</b> pathway performance criteria</li> </ul>
	<ul style="list-style-type: none"> <li>as a <b>summative assessment</b> of student learning</li> </ul>		<ul style="list-style-type: none"> <li>as a <b>formative</b> learning tool for students</li> </ul>		<ul style="list-style-type: none"> <li>that students use for <b>self-assessment</b> and to <b>assess anchors/exemplars</b> so they can internalize quality criteria and levels</li> </ul>

STEP 3: Design Assessment Tasks					
<b>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.</b>					
(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Performance assessment tasks...		Performance assessment tasks...		Performance assessment tasks...
	<ul style="list-style-type: none"> <li>may derive from interdisciplinary projects, but <b>lack alignment</b> to pathway outcomes or performance criteria</li> </ul>		<ul style="list-style-type: none"> <li>may derive from a project designed by an interdisciplinary teacher team for application in multiple subject areas, <b>with some partial alignment to pathway outcomes or performance criteria</b></li> </ul>		<ul style="list-style-type: none"> <li>may derive from a project designed by the interdisciplinary teacher teams with industry partners for application in multiple subject areas, with <b>explicit mapping between embedded performance tasks and pathway outcomes or performance criteria</b></li> </ul>
	<ul style="list-style-type: none"> <li>are aligned to <b>project-specific rubrics</b></li> </ul>		<ul style="list-style-type: none"> <li>are aligned to <b>pathway outcomes and common rubrics</b></li> </ul>		<ul style="list-style-type: none"> <li>are intentionally aligned to pathway outcomes and common rubrics, keeping in mind <b>past patterns of student learning</b></li> </ul>
	<ul style="list-style-type: none"> <li><b>exist independently</b> of culminating assessment or a pathway-wide performance assessment system</li> </ul>		<ul style="list-style-type: none"> <li>are <b>aligned in part</b> to a culminating assessment at the course level or grade level, or to a pathway-wide performance assessment system</li> </ul>		<ul style="list-style-type: none"> <li>lead to a <b>culminating assessment</b> at the course level or grade level <b>clearly aligned</b> to pathway outcomes, and the pathway's performance assessment system</li> </ul>
	<ul style="list-style-type: none"> <li>are designed so that students can <b>complete a performance task once</b> and have their grade recorded</li> </ul>		<ul style="list-style-type: none"> <li>are designed so that students receive feedback about a task and have at least one opportunity to <b>revise and reflect</b> upon their work</li> </ul>		<ul style="list-style-type: none"> <li>allow students to have <b>multiple opportunities to revise and perform</b> the task and <b>reflect</b> on their progress toward achieving pathway outcomes</li> </ul>
	<ul style="list-style-type: none"> <li>are designed to have students <b>complete an assignment</b> within specific parameters in a given timeframe</li> </ul>		<ul style="list-style-type: none"> <li><b>address some, but not all,</b> of the following information: prior knowledge and materials needed, timeline, parameters, and models of performance or product students are to create</li> </ul>		<ul style="list-style-type: none"> <li>walk students through a <b>clear instructional sequence</b> that includes the prior knowledge and materials needed, timeline, and models of performance or product students are to create</li> </ul>
	<ul style="list-style-type: none"> <li>provide only an <b>academic context</b></li> </ul>		<ul style="list-style-type: none"> <li>provide a <b>somewhat realistic context</b></li> </ul>		<ul style="list-style-type: none"> <li>provide as <b>realistic a context</b> as possible</li> </ul>
	<ul style="list-style-type: none"> <li>offer a <b>single access point</b> for all students regardless of individual student learning needs</li> </ul>		<ul style="list-style-type: none"> <li>offer <b>some differentiated access</b> to the task, though aspects may be more difficult for some students to obtain</li> </ul>		<ul style="list-style-type: none"> <li>include a system of <b>scaffolded, rigorous</b> 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</li> </ul>
	<ul style="list-style-type: none"> <li>map to <b>standards or to graduate level pathway outcomes</b></li> </ul>		<ul style="list-style-type: none"> <li><b>map partially</b> to grade-level standards and appropriate, vertically articulated pathway outcomes and benchmarks</li> </ul>		<ul style="list-style-type: none"> <li><b>map directly</b> to grade-level standards and appropriate, vertically articulated pathway outcomes and benchmarks</li> </ul>
	<ul style="list-style-type: none"> <li>that culminate with the <b>class</b> or teacher as <b>audience</b></li> </ul>		<ul style="list-style-type: none"> <li>include an <b>internal audience</b> or consequence in the design of performance assessments</li> </ul>		<ul style="list-style-type: none"> <li>ensure quality by: <ul style="list-style-type: none"> <li>including a <b>broader audience or client</b> beyond the school</li> <li>requiring some form of <b>public exhibition</b></li> <li>requiring <b>critique</b> by teachers, as well as students and external industry partners, using a shared set of rigorous, quality indicators</li> </ul> </li> </ul>

## 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 Linked Learning Behaviors of Learning and Teaching and through which students demonstrate proficiency on the performance assessment tasks as measured by the rubric.

(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Individual teachers...		Pathway teams...		Pathway teams...
	<ul style="list-style-type: none"> <li>design and implement <b>single discipline</b> project-based lessons and units, even if topically or thematically aligned with other subjects (i.e., not integrated projects)</li> </ul>		<ul style="list-style-type: none"> <li>use <b>curriculum mapping</b> to collaboratively <b>align</b> and integrate themes and essential questions <b>with other academic disciplines or industry partners</b></li> </ul>		<ul style="list-style-type: none"> <li>use <b>performance mapping</b> to collaboratively <b>align</b> and integrate themes, essential questions, multiple content areas, and learning <b>beyond the classroom</b> (e.g., work-based learning) into the core of the multi-disciplinary project</li> </ul>
	<ul style="list-style-type: none"> <li>use elements of the Linked Learning and Teaching Framework in the design of projects to create units of instruction that are <b>independent</b> of pathway outcomes</li> </ul>		<ul style="list-style-type: none"> <li><b>partially align</b> units of instruction to pathway outcomes</li> </ul>		<ul style="list-style-type: none"> <li><b>align units of instruction to the pathway outcomes</b></li> </ul>
	<ul style="list-style-type: none"> <li><b>assess student work upon culmination</b> of student learning</li> </ul>		<ul style="list-style-type: none"> <li>develop <b>formative assessments</b> while teaching the unit to monitor student learning</li> </ul>		<ul style="list-style-type: none"> <li><b>develop formative assessments in advance</b> to be used at specific points throughout the unit to monitor learning</li> </ul>
	<ul style="list-style-type: none"> <li>design units in which project content may not directly address performance assessment expectations <b>with discipline-specific projects</b></li> </ul>		<ul style="list-style-type: none"> <li>link the design of project-based units of instruction to meet the expectations of the <b>performance assessments</b></li> </ul>		<ul style="list-style-type: none"> <li>design the units so that students <b>get practice and have support in meeting the demands</b> of the performance task</li> </ul>
	<ul style="list-style-type: none"> <li><b>do not provide models</b> of proficient student work for the project or assessment</li> </ul>		<ul style="list-style-type: none"> <li>provide <b>some modeling</b> of proficiency or performance on products for students</li> </ul>		<ul style="list-style-type: none"> <li>ensure units <b>provide exemplars/anchors</b> to inform students and teachers about what is considered “good” performance</li> </ul>
	<ul style="list-style-type: none"> <li>use <b>their own instructional strategies</b> to support student mastery of course outcomes</li> </ul>		<ul style="list-style-type: none"> <li>begin to discuss units and <b>project teams</b> try <b>shared instructional strategies</b></li> </ul>		<ul style="list-style-type: none"> <li>collaborate and agree to use shared instructional strategies <b>throughout the entire pathway</b> and collect data on the implementation and impact of strategies</li> </ul>

## 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.

(0)	Emerging (1)	(2)	Developing (3)	(4)	Sustaining (5)
	Teachers monitor learning...		Teachers monitor learning...		Teachers monitor learning...
	<ul style="list-style-type: none"> <li>• <b>sporadically</b> during the task or lessons</li> </ul>		<ul style="list-style-type: none"> <li>• <b>before the end of a task</b> through formative assessments</li> </ul>		<ul style="list-style-type: none"> <li>• by using formative assessments to <b>note progress</b> toward achieving the outcomes and to <b>plan</b> the next action to <b>address student learning needs</b></li> </ul>
	<ul style="list-style-type: none"> <li>• <b>at the end</b> of a task or a set of lessons through quizzes or tests</li> </ul>		<ul style="list-style-type: none"> <li>• by collecting data that <b>measure daily instruction and provide information about</b> student progress toward the culminating outcome</li> </ul>		<ul style="list-style-type: none"> <li>• by collecting data from formative assessments and by <b>involving students in self-assessments</b> to understand their progress toward achieving the outcomes and their learning needs and to plan their next action</li> </ul>
	<ul style="list-style-type: none"> <li>• and view the data it yields <b>as an indicator only of student learning</b></li> </ul>		<ul style="list-style-type: none"> <li>• <b>to note their strengths and weaknesses</b> in the curriculum and in their teaching</li> </ul>		<ul style="list-style-type: none"> <li>• and use the <b>results of formative assessments to improve</b> the curriculum and their teaching</li> </ul>
					<ul style="list-style-type: none"> <li>• in order to <b>revise their units of instruction by incorporating feedback from all of the stakeholders</b> (students, industry partners, pathway co-teachers)</li> </ul>

## GLOSSARY

Term	Definition
<b>Backwards Planning</b>	The teacher starts with outcomes for students and then plans the curriculum to lead toward those outcomes.
<b>Curriculum Mapping</b>	The process of determining and representing performance criteria within a course and pathway scope and sequence.
<b>Formative Assessment</b>	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.
<b>Integrated Curriculum</b>	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.
<b>Integrated Multidisciplinary Project</b>	A high-quality <b>integrated project</b> 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.
<b>Learning Outcome</b>	The academic knowledge, behaviors, and skills that students (or others) 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.
<b>Pathway Team</b>	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
<b>Pathway Leadership Team</b>	Designated/recognized teachers, school site leaders, counselors, other staff, and partners who regularly meet and have responsibility for the overall management and improvement of the pathway

<b>Performance Assessment</b>	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.
<b>Performance Task</b>	A multi-step instructional activity design to explicitly measure student performance, typically measured by a rubric.
<b>Portfolio</b>	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.
<b>Portfolio Assessment</b>	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.
<b>Rubric</b>	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: <ul style="list-style-type: none"> <li>• <b>Performance Levels:</b> Levels define the scale for scoring performance and/or product quality.</li> <li>• <b>Performance Criteria/Scoring Domain:</b> Criteria define the attributes of the performance and/or product being assessed on the rubric.</li> <li>• <b>Performance Descriptors:</b> Descriptors specifically define the attributes of the performance or product for each criterion, at each level of quality.</li> </ul>
<b>Rubrics (Common)</b>	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.
<b>Summative Assessment</b>	A culminating assessment providing information on students' mastery of content, knowledge, or skills. It is an "assessment OF learning."





**Learning, Teaching and Leading Framework**

*Community of Practice Continuum*

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