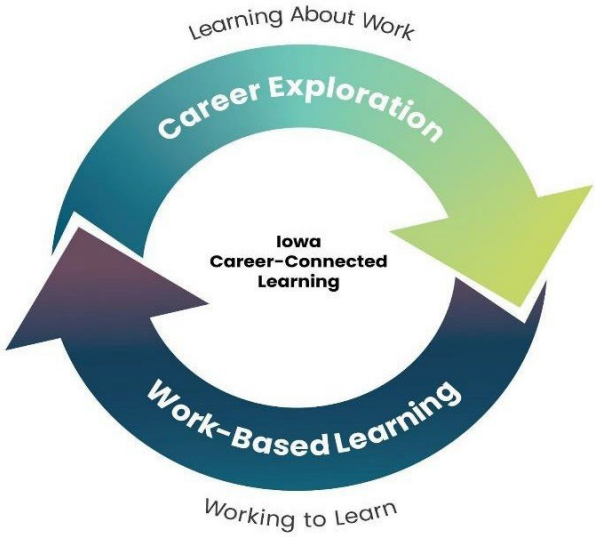
Sustained Project-Based Learning in Partnership with an Employer Toolkit

What is Sustained Project-Based Learning?



Sustained project-based learning projects are **work-based learning (WBL)** experiences that, in partnership with an employer, engage industry partners through meaningful projects completed by students. To be considered "sustained", these projects require industry partner interaction throughout the duration of the project, which shall include, but not be limited to:

- an initial partner needs assessment and consultation meeting,
- in-depth research into identified needs or issues,
- consistent engagement with partners for professional check-ins or updates,
- unveiling and review of a finished product recommendation or service portfolio, and
- corresponding project recap or required follow-up interactions to resolve issues or to assist with final implementation

A series of smaller projects will also be allowed, as long as they either build upon one another or involve the same business and industry representatives, thus reflecting a sustained relationship with consistent interactions and learning.

Sustained Project-Based Learning in Career and Technical Education (CTE) Classrooms

Career and Technical Education (CTE) programs are uniquely positioned to provide sustained project-based learning experiences because they are designed to prepare students for high-skill, high-wage and high-demand careers. Through employer partnerships, CTE students can apply technical knowledge and skills to authentic workplace challenges while developing employability skills that are essential for career success.

Sustained project-based learning allows students to move beyond simulated classroom activities and engage in meaningful work that reflects current industry practices, expectations and needs.

Through these experiences, students may:

- Apply technical skills to solve authentic industry challenges.
- Use industry-standard tools, equipment and processes.
- Collaborate with employers to develop products, services or solutions.
- Receive feedback from industry professionals throughout the project.
- Build technical and employability skills in workplace-relevant contexts.
- Explore career pathways and strengthen connections to postsecondary education, training and employment opportunities.

Sustained Project-Based Learning in Core Academic Classrooms

Sustained project-based learning is not limited to Career and Technical Education courses. Core academic classrooms provide powerful opportunities for students to engage in authentic work-based learning experiences while mastering academic standards.

When students use mathematics to solve a business problem, science to address an environmental challenge, English language arts to develop communications for a community organization, or social studies to analyze local issues, they are engaging in meaningful work-based learning. The goal is not to add more content to existing courses. The goal is to make existing learning more relevant by connecting academic standards to authentic workforce applications.

Sustained project-based learning provides opportunities for students in both core academic and CTE classrooms to apply learning in authentic, real-world settings. While core academic classrooms often emphasize the application of disciplinary knowledge and transferable skills, CTE classrooms provide opportunities for students to apply industry-specific technical skills alongside professional workplace practices. Both approaches create meaningful work-based learning experiences that prepare students for future success.

Developing a Sustained Project-Based Learning Project

Start with an Idea

- **Identify potential employer partners:** Research local employers whose work aligns with your curriculum's learning objectives. Use your own professional network, contact the Education Program Consultant for Work-Based Learning and Industry Recognized Credentials, reach out to Iowa Workforce Development, speak with other contacts at local school districts or talk to your RPP coordinator to find a business partner with a genuine interest in collaborating.
- **Consider employers and community organizations that can help students apply academic concepts in authentic settings:** For example, mathematics may connect to finance, engineering, construction or data analytics; science may connect to healthcare, agriculture, energy or manufacturing; English language arts may connect to marketing, communications or media; and social studies may connect to government, public service or economic development.
- **Establish clear goals:** Hold a meeting with your chosen employer partner to define the project's goals. Discuss expectations for student involvement, the employer's desired outcomes and the specific skills students will gain.
- **Create an agreement:** Solidify the employer partnership with a clear, written agreement. This document should outline the roles and responsibilities for both the school and the employer, detailing the project scope, timelines, communication protocols and any other issues.

Design the Project

- **Develop an authentic problem:** Work with your industry partner to create a "driving question" based on a real, current and unsolved real-world problem. It should be complex, multifaceted and not easily answered. Consider challenges that require students to apply academic knowledge and skills in authentic contexts, such as data analysis, scientific investigation, research, communication, design thinking or problem-solving.
- **Connect the project to curriculum:** Ensure the project's learning objectives are clearly linked to your academic curriculum. This ensures students meet learning objectives while engaging in practical, real-world work.
- **Scaffold student learning:** Identify the knowledge and skills students need to complete the project and organize the necessary resources. This may involve tutorials, workshops, guided research, etc. to ensure students have the foundation to succeed.
- **Plan for authentic application:** Determine how students will apply their learning to create a product, service, recommendation, analysis or solution for an authentic audience. This ensures project deliverables reflect both the academic expectations of the course and the needs of the employer or community partner.

Implementing a Sustained Project-Based Learning Project

Launch the Project

- **Introduce the project:** Have the employer partner kick off the project by presenting the driving question to the class. This makes the project feel more authentic and relevant to students. Introduce the academic standards, learning targets and key concepts that students will apply throughout the project.
- **Provide guidance:** As students begin their work, act as a facilitator, guiding the inquiry process and helping students manage their progress.
- **Establish success criteria:** Share project rubrics, evaluation criteria and opportunities for employer feedback. This ensures students understand how both academic learning outcomes and workplace-ready skills will be assessed.

Integrate Employer Involvement

- **Establish regular check-ins:** Maintain regular contact with students and employer mentors to monitor progress. Employer feedback is crucial for keeping students on track and ensuring the project remains relevant.
- **Provide expertise:** Arrange for the employer partner to offer expert consultations or in-class support. Learning a skill directly from a professional in the field offers an authentic learning experience.
- **Schedule a progress evaluation:** Around the midpoint, organize a progress evaluation session where students can present their initial solutions to the employer partner. This provides an opportunity for invaluable feedback before the final product is developed.
- **Facilitate meaningful industry engagement:** Encourage students to engage in professional conversations, seek clarification, request feedback and respond appropriately to industry recommendations. This ensures employer involvement extends beyond the project launch and final presentation to create a sustained and meaningful partnership.

Support Student Process

- **Encourage self-direction:** Give students autonomy and choice in how they approach the problem, which provides the opportunity for the development of problem-solving skills.
- **Build collaboration skills:** Structure groups to require teamwork and interdependence. Consider using strategies like assigning rotating team roles to help students build communication and conflict-resolution skills.
- **Develop employability skills:** Provide intentional opportunities for students to practice communication, professionalism, critical thinking, adaptability and problem-solving. This helps reinforce workplace expectations such as meeting deadlines, managing responsibilities and producing high-quality work.
- **Foster reflection and continuous improvement:** Encourage students to regularly reflect on their progress, challenges and learning throughout the project. This helps students connect their project experiences to future academic, personal and career goals.

Evaluating a Sustained Project-Based Learning Project

Sharing the Completed Project

- **Present to the employer partner:** At the completion of the project, have students present their final product or solution to they employer partner and/or other community members. This provides a real-world audience beyond just the classroom.
- **Celebrate achievements:** Recognize the students' hard work and the value their solutions bring to the employer partner.

- **Demonstrate career connections:** Encourage students to reflect on the careers, industries and workplace roles connected to the project. This helps students identify how the knowledge and skills developed during the project may apply to future education, training and career opportunities. It also reinforces the connection between academic learning and career readiness.

Evaluate and Reflect on the Experience

- **Gather feedback:** Collect feedback from the employer on the quality of the students' work and the process. Also, have students self-assess their own performance and learning.
- **Conduct reflection sessions:** Dedicate time for students to reflect on what went well, what challenges they faced and what they would do differently. This helps reinforce the learning process.
- **Measure return on investment (ROI):** As a final step for the school and the employer, assess how the project met its initial goals. This helps evaluate the program's success and also helps identify areas for improvement in future collaborations.
- **Reflect on career connections:** Encourage students to consider the careers, industries and workplace roles they explored through the project. This will help students identify skills, interests and strengths discovered during the experience. It also encourages students to consider future coursework, credentials, work-based learning experiences or career opportunities related to the project.

Sustained Project-Based Learning Examples

Career and Technical Education (CTE) Classroom Examples

Agriculture: Sustainable Irrigation System Design Project

- **The Challenge:** A local greenhouse is experiencing high water costs and wants to implement a more sustainable irrigation system that conserves water while maintaining plant health.
- **Student Project:** Students will work in teams to research different types of sustainable irrigation systems, analyze the greenhouse's current water usage and identify areas for improvement. Students will design a new irrigation system layout and present their proposal to the greenhouse owner.
- **Employer Collaboration:** The local greenhouse owner provides details on the facility's current irrigation setup, budget constraints and specific plant seeds, while also serving as a point of contact for students as they develop their plans and consult on findings and provide feedback as needed.

Applied Sciences: Manufacturing Prototype Program

- **The Challenge:** The school board is looking to create new signage for the newly renovated athletic complex.
- **Student Project:** In consultation with the school board, students develop renderings, create mock ups and, upon approval, design the signage through CAD programming and then CNC plasma cutting to produce the signage.
- **Employer Collaboration:** The school board acts as the client and consults with the students on the types of signage needed, including reviewing and approving renderings and mock ups, and working with students to install signage upon completion.

Business: Marketing Campaign Development

- **The Challenge:** The small local business is looking to attract new customers but lacks a digital marketing strategy.
- **Student Project:** Students work in teams to research the local market and the business's target audience, analyze its current marketing efforts and develop a comprehensive social media marketing

plan. They create sample content, propose a social media posting schedule and identify key performance indicators to track success.
- **Employer Collaboration:** The business owner or staff member participates in a project kick-off meeting to present the challenge, acts as a point of contact for students and serves as a client for the final presentations. The business contact provides authentic, real-world feedback on the students' proposed strategies.

Human Services: Catering Project

- **The Challenge:** Develop a catering menu and business plan for a local, family-owned catering business that needs assistance with food sourcing and menu design.
- **Student Project:** Students will work together to create a budget for a specific type of event (e.g., wedding reception, retirement party) and then design a menu that is both cost-effective and appealing and present the complete plan to the employer for review.
- **Employer Collaboration:** A local caterer meets with the students to provide on-going feedback on menu design and food selection, while maintaining a realistic budget and adhering to food safety regulations.

Health Sciences: Healthcare Career Recruitment Project

- **The Challenge:** A local healthcare provider is experiencing workforce shortages and wants to increase awareness of healthcare career opportunities among young people.
- **Student Project:** Students work in teams to research healthcare careers, educational pathways and workforce needs. Students develop recruitment materials, career awareness resources or outreach campaigns designed to encourage interest in healthcare professions.
- **Employer Collaboration:** Healthcare professionals provide information about career pathways, workplace expectations and workforce challenges. Students present their final recruitment materials and recommendations to healthcare representatives for feedback.

Information Systems: Computer Science & Web Development

- **The Challenge:** A local community organization needs a website for their organization.
- **Student Project:** Students will work in teams to design and develop a functional website for the local community organization by meeting with team members from the organization to understand the needs of the website, write code for the website and test its functionality before presenting the final product.
- **Employer Collaboration:** The local community organization participates in a project kick-off meeting to present the challenge, acts as a point of contact for students and serves as a client for the final presentations.

Core Academic Classroom Examples

English: Community Advocacy Campaign

- **The Challenge:** A local nonprofit organization wants to increase public understanding and support for an important community issue.
- **Student Project:** Students research the issue, analyze stakeholder perspectives and create persuasive communication materials designed to educate and engage the public. Deliverables may include editorials, speeches, awareness campaigns or advocacy materials.
- **Employer Collaboration:** Nonprofit leaders present the issue, provide resources and serve as project advisors throughout the process. Students present their final campaign materials and receive authentic feedback from organization staff.

Mathematics: Community Data Analysis Project

- **The Challenge:** A local economic development organization wants to better understand community trends related to population growth, housing, workforce availability and consumer demand.
- **Student Project:** Students work in teams to collect, organize and analyze demographic, economic and workforce data. Using statistical methods, students identify trends, create data visualizations and develop recommendations that could support community planning and decision-making.
- **Employer Collaboration:** Representatives from the economic development organization provide access to relevant data, explain the community challenge and serve as project advisors throughout the process. Students present their findings and recommendations to the organization for feedback and discussion.

Science: Water Quality Investigation Project

- **The Challenge:** A local conservation organization, watershed management authority or water utility is seeking solutions to improve water quality and increase public awareness of water conservation practices.
- **Student Project:** Students work in teams to collect and analyze water quality data, research factors affecting local waterways and develop recommendations to address identified concerns. Students present their findings through scientific reports, data visualizations and recommendations for improving water quality.
- **Employer Collaboration:** Representatives from the organization provide information about local water quality concerns, serve as project advisors throughout the process and offer feedback on student findings and recommendations. Students present their final solutions to organization representatives for review and discussion.

Social Studies: Economic Impact Analysis Project

- **The Challenge:** A local chamber of commerce wants to better understand the potential economic impact of a new business, community event or development project.
- **Student Project:** Students work in teams to research economic principles, analyze available data and evaluate potential impacts on employment, revenue, housing and community growth. Students develop a report and presentation summarizing their findings and recommendations.
- **Employer Collaboration:** Chamber of commerce representatives provide background information, explain the project goals and serve as a point of contact throughout the experience. Students present their analysis to community and business leaders for feedback and discussion.

Reporting Sustained Project-Based Learning

The Department will rely on multiple specific data points to accurately collect and report work-based learning experiences for students across the state. Data will be used to calculate the work-based learning sub-measure of the Postsecondary Readiness Accountability Measure for the Every Student Succeeds Act (ESSA) and School Performance Profiles (percentage of students participating in work-based learning while in high school). Data will also be used to determine the Perkins Secondary Career and Technical Education (CTE) 5S3 work-based learning indicator of performance (percentage of CTE concentrators graduating from high school having participated in work-based learning). A CTE concentrator is defined in Iowa as a secondary student who has earned credit for two (2.0) or more Carnegie Units within a state-approved CTE program (e.g., health science).

To ensure accurate work-based learning (WBL) data collection, analysis, and reporting, districts should prioritize the use of the **Embedded Work-Based Learning Indicator** in combination with **clear and descriptive course titles and keywords**. These two elements provide the most reliable way to identify the type and scope of WBL experiences offered to students. All data elements are submitted to the Department

through the Winter collection of the Student Reporting in Iowa (SRI) process during December–January of each academic year.

Primary Reporting Components

Embedded Work-Based Learning Indicator

- Introduced in the 2022–2023 academic year, the Embedded WBL Indicator helps districts clearly identify the type of work-based learning experience provided, including situations where WBL is not the primary focus of a course. This is especially important for courses outside of Career and Technical Education (CTE) that still offer meaningful WBL opportunities. Refer to Appendix B for additional details.
- To qualify for use of this indicator, all students enrolled in the course must participate in the identified WBL experience (i.e., 100% participation is required, not just a subset of students).

Course Title and Keywords

- With Iowa's expanding range of WBL opportunities, accurate course titles and the use of relevant keywords are essential for identifying and distinguishing the type of experience provided.
- Course titles and keywords support data validation and allow the Department to review submissions and provide targeted guidance to districts as needed.

Secondary Reporting Component

School Courses for the Exchange of Data (SCED) Codes

- SCED codes are part of a voluntary, nationally recognized system used to classify K–12 courses based on content using a standardized 5-digit structure. Additional elements may provide further descriptive detail.
- A limited number of Iowa-specific SCED codes have been developed to add distinction to certain WBL-related courses.
    - However, SCED codes alone are not the most reliable method for identifying WBL experiences, as the same code may apply across multiple types of WBL (e.g., Simulated WBL with Industry-Recognized Credentials (IRCs), Student Learner Programs, Internships, Qualified Professional Arrangements (QPAs), and Apprenticeships).

Reporting Reminder

Courses are identified and reported to the Department as work-based learning based on the **use of either** the **Embedded Work-Based Learning Indicator** or **applicable SCED codes.** Course titles and keywords alone are not used to designate a course as WBL in Department reporting; however, they remain an important supporting element for validation, review, and guidance.

Course/Content Area	Keyword(s) to Include in Course Title	Embedded Work-Based Learning Indicator	SCED Codes
Information Technology	"Projects" or "PBL"	11	10994
Communication and Audio/Visual Technology	"Projects" or "PBL"	11	11994
Business and Marketing	"Projects" or "PBL"	11	12994
Manufacturing	"Projects" or "PBL"	11	13994
Health Care Sciences	"Projects" or "PBL"	11	14994
Public, Protective and Government Services	"Projects" or "PBL"	11	15994

Hospitality and Tourism	“Projects” or “PBL”	11	16994
Architecture and Construction	“Projects” or “PBL”	11	17994
Agriculture, Food and Natural Resources	“Projects” or “PBL”	11	18994
Family & Consumer Sciences/Human Services	“Projects” or “PBL”	11	19994
Transportation, Distribution and Logistics	“Projects” or “PBL”	11	20994
Engineering and Technology	“Projects” or “PBL”	11	21994
Miscellaneous	“Projects” or “PBL”	11	22994
Word Languages	“Projects” or “PBL”	11	24994
Integrative Learning	“Projects” or “PBL”	11	25995

Reporting Individual-Level Student Sustained Project-Based Learning Experiences

A fourth measure is available for districts wanting to count students who have completed work-based learning experiences that are not connected to course SCED codes or any Embedded WBL Indicator codes referenced in this resource.

Individual Work-Based Learning Code

- Districts can manually flag individual student(s) who participated in a qualified work-based learning experience within their student information system (SIS). This field is specifically designed for students who completed non-credit WBL or WBL not connected to SCED codes or Embedded WBL Indicator codes referenced in this resource. Districts need to manually review and make appropriate changes to this data field to ensure accurate coding and reporting by the end of June each year.

In such cases, school districts can use the Individual Work-Based Learning Code that was added to the SRI system starting in the 2025-2026 academic year. The tables below appear in the SRI Data Dictionary available at https://educate.iowa.gov/pk-12/data/data-collections/student-reporting. The Individual Work-Based Learning Code is a four-digit code where the first two numbers represent the SCED Subject Area and the second two numbers represent the type of WBL experience. For example, a sustained project-based learning experience in information technology would be coded as “1011.”

Code Area (First Two Numbers)	Keyword(s) to Include in Course Title
01	English Language and Literature
02	Mathematics
03	Life and Physical Science
04	Social Sciences and History
05	Visual and Performing Arts
07	Religious Education and Theology
08	Physical Health and Safety Education
09	Military Service
10	Information Technology
11	Communication and Audio/Visual Technology
12	Business and Marketing
13	Manufacturing
14	Health Care Services

15	Public, Protective, and Government Services
16	Hospitality and Tourism
17	Architecture and Construction
18	Agriculture, Food, and Natural Resources
19	Human Services
20	Transportation, Distribution, and Logistics
21	Engineering and Technology
22	Miscellaneous
24	World Languages
25	Integrative Learning

WBL Code (Second Two Numbers)	WBL Experience
11	Industry Partnership Projects

Additional Resources and Support

Districts are encouraged to contact the Education Program Consultant for WBL and IRCs with any additional questions or to set up a consultation at any point during the year. A wide range of robust and insightful guides, toolkits and other resources are also available to assist stakeholders in this important work at https://educate.iowa.gov/higher-ed/cte/iowa-quality/career-connected-learning.