Each iteration of a work-based course looks different, because translating a work-based course from its design phase into action depends on how the course is incorporated in a company’s workday, as well as how the college instructor incorporates the workplace in the classroom. By its nature, work-based course delivery varies to meet production realities, technology, and job skill needs of a manufacturer. On-the-job learning can only cover competencies that are present in a given work setting, and so the same work-based course may have different competencies taught by supervisors or instructors each time it is delivered at a new company.
For example, one company may have a CNC router on its production line, while another employer partner would rely on a college lab for use of a similar machine. Depending on their skills and experience, and whether they are all employed by a single employer or come from different companies, cohorts also bring varying perspectives to the work-based course.

This variability can pose challenges, but it also presents an opportunity to deliver relevant course material to meet specific employer needs.

While aspects of the delivery are customized, work-based courses are expected to maintain the rigor required of all courses in an academic manufacturing program at a community college. Mapping work-based competencies to existing course objectives, developing assessment instruments for supervisors and faculty, and ensuring team delivery across the workplace and college are critical design elements that should be incorporated in every work-based course. Beyond core design elements, some qualities of work-based courses are harder to quantify but must be present in order for the program to be both useful and successful. Conditions should be established that maximize learning on the job, in the classroom, and in a way that connects the two learning environments.

CREATING LEARNING OPPORTUNITIES AT WORK

Manufacturers can support work-based course learning in strategic and effective ways that may increase retention and advancement. In designing the structure of the course within the company, employer representatives should consider how to position their workers to be exposed to as many teachable moments as possible through the execution of their job responsibilities. If workers are enrolled in work-based courses to deepen their knowledge in their existing jobs, their normal job duties may be sufficient to observe, practice, and master the competencies covered in the work-based course. Manufacturers hoping to upskill workers to advance to new roles or occupations, such as promoting machine operators to maintenance technicians, need to intentionally design new opportunities to engage in those competencies. This may include assigning students to mentors with greater knowledge of course competencies than their direct supervisors, or varying the day-to-day responsibilities of work-based students. For example, several manufacturers that have partnered with Owensboro Community and Technical College assign work-based course students to a new department or rotate them through departments during the program as a way to expose them to some of the course content they would not otherwise experience as part of their jobs.

Supervisors or other expert mentors must also be deliberate about recognizing and maximizing learning moments for the student. Company leadership can support this by rewarding supervisors for the success of their employees or by explicitly including this kind of mentorship within the job responsibilities of their supervisors and senior technicians. can connect experiences at work to course competencies by understanding and deploying a range of instructional strategies for hands-on and problem-based learning.

COORDINATING CLASSROOM AND WORKPLACE LEARNING

Instructional variation in the classroom will mirror the variation in the workplace. Faculty members should not only teach the competencies that cannot be taught during the workday, but also pull in as many scenarios from students’ work experiences as possible to demonstrate these competencies in play. Several rubrics and other course materials included in the Toolkit can help instructors incorporate these real experiences into the lessons. These resources use proven methods of problem-based learning, such as case study analysis, that have been demonstrated to be effective teaching models. These kinds of lessons can help students understand the connection and relevance of what they are learning at work in the context of what is taught in the classroom.
Instructional strategies at work and in the classroom more fully complement each other if each is recognized as a learning laboratory. Faculty members and supervisors or mentors are encouraged to communicate in order to identify emerging opportunities to tie the two components of the course together and make sure lessons are consistent and mutually reinforcing. One way to support this communication is for faculty members to check in regularly throughout the course with supervisors by email, phone, or in person about whether they have been able to identify the kinds of teaching opportunities most effective for adults during the workday. Those supervisors can also identify recent work activities and student challenges to faculty members to address in their lessons. If this kind of direct, ongoing communication is not feasible, students can bridge these two learning environments by bringing questions about classroom lessons to their supervisors and scenarios from work to college instructors for additional insights.

**WORK-BASED STUDENTS AT SCHOOL AND WORK**

Lewis Nall, a faculty member at OCTC, illustrates how these deliberate approaches to work-based learning on the job and in the classroom can all come together in a course:

The great thing about that student is, okay, he does that with me, and then I send him to a shop. He works eight hours, ten hours in that shop, he may work on ten cars that day. With me, it’s detailed, very specific to one component. That’s part of the learning. We’re developing that student. Once I get him out there in the shop, then he really gets to experience real-life experience cars. He may have a miss. He may have a hesitation. He’s going to deal with all the problems that that department would deal with, if it’s drivability or if it’s air conditioning or if it’s electrical. Then he comes back to me the next day and he’s a much more attentive student, because he realizes how broad his knowledge has to be and how much more he has to learn. So he’s getting experience. Then he comes in with me. I fine-tune him. I develop what he’s missing.

For instance, I have an electrical student that is co-oping with [a company] here in Owensboro. When he runs into a problem he can’t figure out, the next time he comes to class he brings that to me, and then we concentrate on that problem. And it’s great for the whole class because then everybody’s learning.

From the student’s perspective, the learning is enriched when this kind of dialogue occurs. Corey Marchand describes his experience as a work-based course student at OCTC and employee at OMICO Plastics:

The classes that I’m taking right now, I’m taking a motor controls class and a fluid power class, and that’s basically what I’m doing here day in and day out, working with hydraulics and pneumatics and taking apart motors and putting them back together and just seeing how they work. So it’s cool to kind of learn about it at school and then come here and actually work with it.

This section provides instructional strategies, options for a work-based course student’s job-assigned work responsibilities and job, and rubrics to incorporate in classroom design to maximize the effectiveness of work-based course delivery.
5-1: INSTRUCTION STRATEGIES FOR THE WORKPLACE

Type of Tool: Instructional guide and framing recommendations

Summary: This is a preliminary guide for faculty members and employer supervisors implementing work-based courses. This tool is designed to sketch out instructional strategies, orient the employer supervisor to adult learning theory, and provide guidance on basic forms of workplace learning engagement.

Why: While we know that learning occurs on the job every day and in multiple contexts, making this learning explicit is the goal of a work-based course model. This tool is designed to help employer supervisors use instructional strategies to communicate ideas, scaffold learning, and present knowledge and experience in a way that shapes student development.

Who Should Use this Tool: College faculty and employer supervisors

Spotlight on OCTC: Donald Woolridge, human resources manager for Aleris Corporation, describes the close collaboration between employer supervisors and students:

If you were to go into our plant and see one of our employees working hand-in-hand with their supervisor, you would see a very hands-on support role. The employee does it and repeats the action to the supervisor, and the supervisor encourages the employee, and then they move through all the steps of the process. This system is done repeatedly until the employee is able to do it on his or her own.”
Characteristics of adult learners

- Self-Concept: Adults need to be responsible for their decisions on education.
- Need to Know: Adults need to know the reason for learning something.
- Foundation: Experience and trial and error provide the basis for learning activities.
- Readiness: Adults are most interested in what is relevant to their lives.
- Orientation: Adult learning is problem- or context-centered.
- Motivation: Adults respond better to internal versus external motivators and understand the need for learning.

Instructional strategies for the workplace

In a work-based course model, instructional duties are split between college faculty and employer supervisors on the job. For employer supervisors in particular, instructional strategies should include a consideration of the context and physical environment as well as student professional development and growth. Facilitating learning at work will require many employer supervisors to take on new roles and adapt new strategies for communication, as students’ roles change and their knowledge of the workplace evolves.

Knowles’s andragogy principles

Andragogy, or the theory and practice of teaching adults, is centered on four principles.

- Adults need to be involved in their own learning process.
- Adults need to learn experientially.
- Adults approach learning as problem solving.
- Adults learn best when the topic is of immediate value to work or life.

General framing considerations

1. As instruction will be spread across multiple settings, how will faculty and employer supervisors’ strategies differ?

2. How will instructional strategies differ from concept to application, and how will instruction be delivered for each phase of student development?

Community college faculty and staff understand that they need to adjust their teaching to meet the varying needs of their students, including the large part of their student body who are nontraditional learners and older adults returning to school. However, employers are often unaccustomed to thinking of their workers as learners, and they can benefit from some background in adult education as it pertains to workforce and human resource development.

Community college faculty and staff understand that they need to adjust their teaching to meet the varying needs of their students, including the large part of their student body who are nontraditional learners and older adults returning to school. However, employers are often unaccustomed to thinking of their workers as learners, and they can benefit from some background in adult education as it pertains to workforce and human resource development.
## GROW'S STAGES OF LEARNING AUTONOMY

As employer supervisors begin to implement work-based courses, the roles of both supervisors and students change as learning takes place. The gradual increase of student learning should tailor how the employer supervisor guides or teaches new information.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Student Role</th>
<th>Supervisor/ Teacher Role</th>
<th>Common lesson types or formats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dependent</td>
<td>“the Expert”</td>
<td>Drill or lecture. These lessons tend to be directive in nature.</td>
</tr>
<tr>
<td>2</td>
<td>Interested</td>
<td>Motivator, Guide</td>
<td>Lecture and discussion. These activities tend to encourage student engagement and “buy-in.”</td>
</tr>
<tr>
<td>3</td>
<td>Involved</td>
<td>Facilitator</td>
<td>Discussion, collaborative work, or practice. These activities are generally centered on team-building or guided exploration.</td>
</tr>
<tr>
<td>4</td>
<td>Self-Directed</td>
<td>Consultant, Delegate, Supervisor</td>
<td>Individual or group projects or work tasks. These activities tend to be “capstone” experiences that require multiple skills.</td>
</tr>
</tbody>
</table>

EXPERIENTIAL LEARNING

Teaching in the classroom and in the workplace are similar but distinct activities, and for work-based courses the grounding in a concrete experience (“doing”) is a distinguishing feature. Effective approaches to teaching in the workplace include gradually increasing responsibility and hands-on learning as time and experience progress.

Visual adapted from:
**SAMPLE INSTRUCTIONAL STRATEGIES MATRIX**

This matrix demonstrates common instructional strategies that can be used as learning autonomy increases.

<table>
<thead>
<tr>
<th>Instructional strategy</th>
<th>Context</th>
<th>Instructor or Supervisor Roles</th>
<th>Student Level of Engagement</th>
<th>Level of Interaction</th>
<th>Experiential Learning Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>Classroom or online</td>
<td>Expert</td>
<td>Low, dependent</td>
<td>Low</td>
<td>None</td>
</tr>
<tr>
<td>Demonstration</td>
<td>Classroom or workplace</td>
<td>Expert</td>
<td>Low-medium, interested</td>
<td>Low-medium</td>
<td>Reflective observation</td>
</tr>
<tr>
<td>Questioning</td>
<td>Workplace or classroom</td>
<td>Motivator, mentor, guide</td>
<td>Medium, interested to involved</td>
<td>Medium</td>
<td>Abstract conceptualization</td>
</tr>
<tr>
<td>Problem-based scenario</td>
<td>Workplace or classroom</td>
<td>Facilitator, consultant</td>
<td>Medium-high, involved to self-directed</td>
<td>High</td>
<td>Active experimentation</td>
</tr>
<tr>
<td>Work assignment</td>
<td>Workplace</td>
<td>Supervisor</td>
<td>High, self-directed</td>
<td>High</td>
<td>Active experimentation to concrete experience</td>
</tr>
</tbody>
</table>

**Demonstration**

In the workplace, this strategy can manifest early on as a simple demonstration of a work activity with explicit explanation. An employer supervisor can use this opportunity to expose students to a work task while talking through the process and the reasoning behind its use. This strategy is suitable for the introduction of new information at the early stages of a work-based course, when the employer supervisor serves as an expert.

**Questioning**

As demonstrations increase in frequency on the job, and students are more aware of and exposed to various work procedures, Questioning can be introduced. Questioning is a strategy that promotes active learning by requiring students to answer a variety of questions about a task. Questions can be basic (What should I do first? What happens when I do this?) to more complex (Why do I do this? What happens if I don’t do this? How does this work?), and should be used to engage students throughout the work/lesson period. This strategy is helpful from the beginning to the very end of a work-based course, when students are interested and motivated and the employer supervisor acts as a guide or mentor.

**Reflection and making predictions**

Much like questioning, reflection and prediction exercises are an important way to promote active learning and deeper understanding of content. Prediction exercises should be used at the beginning of a new lesson, when students have more experience with content but are not yet ready to practice on the worksite floor. Strategies include posing questions (What will happen if this breaks? What materials could I use to fix this? When I do X, what do you think will happen to the production line?) to activate prior knowledge and promote active...
As a “capstone” experience for a course or module, a problem-based scenario can be employed in which the student is presented with a problem (a machine part needs repair, or a product is damaged) and is asked to troubleshoot and correct. This strategy is the most complex and the most difficult to implement for novice learners and should be used mainly at the end of a learning cycle. In this phase, minimal guidance is provided to the student, and the employer supervisor acts as a consultant.

**Problem-based scenario or troubleshooting**

Reflection and prediction should be used throughout the work-based course, when students are motivated and involved in the learning and the employer supervisor is a mentor or guide.

**Presentations or guided practice**

Guided practice strategies should be used once students are more experienced. Hands-on activities should include guided manipulation of materials and the practice of procedures and processes that more experienced workers perform on the job. This strategy requires more coaching and less direct instruction, with controlled scenarios on the work floor. Examples can include the manipulation or assembly of tools and materials for specified tasks. This strategy should be implemented from the middle to end of the work-based course, when students have had much exposure to work tasks, and are motivated and involved fully. In this strategy the employer supervisor is a consultant in the learning process.

**RESOURCES AND REFERENCES**

On entering the program, workers transfer from their current department to the maintenance department. This maximizes hands-on exposure to the competencies taught in the work-based courses. Senior Maintenance Technicians who supervise the workers also serve as their instructors, facilitating learning on the job and answering questions about theory raised by the students. At the conclusion of the two-year program, the worker becomes a full-status maintenance worker.

This choice to reassign workers in conjunction with the work-based courses works for the company for several reasons: The department worker can immediately begin to address some of the labor demand in the maintenance department, and the permanent reassignment means that the time a supervisor invests in a worker would have long-term payoff. The transfer also allows a student to be supervised by an expert within a team of peers in the work-based course content, distributing the burden of instruction, and further connecting job responsibilities to academic lessons.

Why: Work-based courses rely on the job responsibilities of the worker to provide opportunities to learn, practice, and master course competencies. If the activities in their current job or department do not align with the course's lessons, even more experienced supervisors will struggle to identify opportunities for work-based instruction. Assigning workers job responsibilities most aligned with the work-based course learning objectives not only maximizes the presence of relevant teachable moments in the workplace, but allows workers to contribute to their company right away using their newly acquired skills.

Who Should Use this Tool: Employers with faculty input

Spotlight on OCTC: Frustrated for years in trying to fill skilled-maintenance positions (including one position that remained unfilled for two years as job candidates struggled to pass the hands-on test), a manufacturing plant in Kentucky signed up for work-based courses. In parallel, the company created the Maintenance Development program, which promotes production technicians to the maintenance department through a two-year training program. Work-based courses are offered throughout the two years.
MAPPING THE COURSE TO COMPANY DEPARTMENTS

Name of course: ________________________________

Name and current department of worker: ________________________________

This tool can help you determine whether workers selected for your work-based courses are currently working in jobs and departments that best align with that training. If not, this tool can guide your decision about whether to rotate the participating workers across jobs within the company or assign them to another department for the duration of the work-based courses.

Your company is providing this training opportunity to address your existing skills gaps through courses that incorporate your production processes and equipment. If workers enrolled in the classes do not have job responsibilities that allow them to observe these skills in action and practice them, they will not have the opportunity to learn course content in a way that most benefits your company. If workers taking work-based courses are instead placed in the jobs and departments that require the knowledge taught through the work-based courses, these workers will immediately begin to fill a talent need and add value to the company.

To use this worksheet, you first have to know the departments of the selected workers and the content of the work-based courses. You can then compare the job responsibilities of those workers with the competencies tied to the courses to determine whether work-based courses are best suited to:

1) Improve the job performance of participating workers (reflected in Column A)

2) Prepare students to meet the skill needs of another department (Column B)

3) Provide foundational skills that could contribute to multiple departments across the company (Column C)
# DEPARTMENT OPTIONS

For each worker, select whether Column A, B, or C best corresponds to each program design consideration, and use that box to provide further detail about your expectations for how work-based courses and participants can interact with the current department, another department in the organization, or multiple departments.

<table>
<thead>
<tr>
<th>Course alignment</th>
<th>COLUMN A: Current department</th>
<th>COLUMN B: Other department</th>
<th>COLUMN C: Multiple departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary department with responsibilities that intersect with course competencies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Department to which worker will be assigned upon course completion</td>
<td></td>
<td></td>
<td>Possibilities:</td>
</tr>
<tr>
<td>Primary supervisor with expertise that intersects with course competencies</td>
<td>Current supervisor</td>
<td>Other supervisor:</td>
<td>Multiple supervisors:</td>
</tr>
</tbody>
</table>

Table continues on next page.
<table>
<thead>
<tr>
<th>Constraints</th>
<th>COLUMN A: Current department</th>
<th>COLUMN B: Other department</th>
<th>COLUMN C: Multiple departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continued responsibilities of the workers in their current jobs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific skills that must be attained before gaining hands-on responsibilities (e.g., permission to operate a specific machine)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor-management agreements are in place that would make temporary assignments to other departments difficult</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>COLUMN A: Current department</th>
<th>COLUMN B: Other department</th>
<th>COLUMN C: Multiple departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job openings currently posted</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Company has a general or core department with assignments across other departments</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Company has an apprenticeship or other on-the-job training that reassigns or rotates workers across departments</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
LOOKING BEYOND DEPARTMENTS

Consider giving instructional responsibilities to several supervisors or senior staff. This maximizes the number of resources that a worker has to connect job activities to academic theory, while also reducing the burden on any single staff member. Overlapping roles also allow the employer to observe the worker in various roles and permanently assign them to the supervisor or department where they can add the most value.

USING YOUR RESULTS

Where did most of your responses fit? Use this information to guide your thoughts on the most appropriate job and job responsibilities for a worker while they are enrolled in work-based courses and upon their completion. If most of the program design considerations matched up with:

- **COLUMN A**, the workers may already be working in the most relevant department. The work-based course may help frontline staff take on more responsibilities in their current roles. Or, even if the worker may ultimately change departments, the benefits of greater exposure to course content on the job don’t seem to outweigh the challenges with a temporary move during the course.

- **COLUMN B**, the work-based course content closely maps onto another department, and it might benefit both the worker and the company to permanently transfer the worker to the new department at the start of the course. Such a move maximizes the connection between the academic learning and the new job demands, and the benefits of the skilled worker accrue to the company as soon as the trainee learns something new—not months later upon program completion.

- **COLUMN C**, the work-based course could lead to a variety of career pathways in the company. If employers are seeking to increase the breadth of a worker’s expertise through these courses, remaining in a single department may limit the extent to which job responsibilities can reinforce learning in the course. Rotating students through departments or temporarily assigning them to an appropriate department can maximize the value of the class and have the long-term benefit to the company of workers who deeply understand the company’s production process.
Spotlight on OCTC: OCTC faculty who have worked with a variety of employers have found that the rubrics they issue to supervisors have provided the necessary information for course evaluation in a format accessible to supervisors with limited time and instructional background:

"I make it simple. It's a very simple sheet. It's very easily laid out for them. It states the task, and then they can grade that student one, two, three, four, five. Very simple, very easy. It doesn't [have to be done] every day. It's something that they can look at once a week, every other week, depending on the setting and the student. So we need to make it very user-friendly."

– Lewis Nall, Program Coordinator for the Automotive and Diesel Program at OCTC

**Tool 5-3: Using Rubrics and Implementing Problem-Based Learning Activities**

**Type of Tool:** Worksheets and planning tools

**Summary:** Rubrics and other work or performance-oriented materials can help facilitate learning and provide transparency for the learning process. Rubrics are designed to assist instructors in both the classroom and the workplace in gathering information on student performance, and they are used not only to evaluate particular skills, but also to illuminate degrees of proficiency and indicate areas for growth. This section is a compilation of rubric worksheets, planning tools, and templates designed to assist faculty and supervisors in implementing quality learning and assessment.

**Why:** Rubrics should be collected, assembled in portfolios, and used as reference material for student performance. These portfolios can be shared with or augmented by the employer supervisor. The collected rubrics can provide valuable insight of a student's progress, provide general information on strengths and areas for development, and act as a road map for further instruction.

In the manufacturing sector, rubrics should be modeled after work or job checklists, and should borrow heavily from production materials. In many instances, workplace documents can be adapted for classroom use and vice versa. The design of rubrics and other assessment measures was covered in more detail in Section Three of the Toolkit. Here, we will cover how to use them in conjunction with other work-situated learning materials and scenarios.

**Who Should Use this Tool:** College faculty and employer supervisors
### SAMPLE RUBRICS AND ASSESSMENT TEMPLATES

This is a basic rubric for assessing skills in an individual unit or segment or course. The college instructor and employer should agree on the list of skills and competencies to be assessed. The supervisor will rate the work-based student’s demonstrated mastery on the job on a scale of 1 to 3. The supervisor should sign and date each rating, then give the assessment to the college instructor.

<table>
<thead>
<tr>
<th>Skills and Competencies</th>
<th>Rating</th>
<th>Date and initial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

Rating scale: 1=no evidence of proficiency, 2=emerging evidence of proficiency, 3= proficient/mastery
**WORK-BASED CASE STUDIES AND PROJECTS**

Work-based courses require a high degree of collaboration and communication between college faculty and employers, and this can provide numerous opportunities for learning activity development. Problem-based learning is an inquiry-based approach to instruction that is particularly applicable to the work-based course model. In this approach, faculty can use real-life examples or case studies from a student's workplace to examine course competencies and skills, build problem-solving ability, and provide opportunities for collaborative learning.

In a problem-based learning approach, a faculty member could use a scenario shared by an employer supervisor or student as a case study. A student could provide a narrative about a particular equipment failure, or describe a problem that has arisen on the job. Faculty can then structure an activity around this.

**BASIC PROBLEM-BASED LEARNING PROCESS**

A basic starting point for a problem-based learning process is outlined below. Begin this process by questioning and instructional goal setting. Once the outcome or instructional goal is clear, begin to set the stage for the students: Explain the scenario, outline terms and rules for collaboration, and present materials and assessment instruments.

- Identify what you want students to know or be able to do as a result of participating in the activity.
- Relay the problem. Use the case study material or scenario based in the student’s or supervisor’s company.
- Set the tone for student collaboration. To do this, describe how students should interact with one another, provide guidelines or rules for the activity, and set clear expectations for participation.
- Introduce background material, or any other additional resources necessary.
- Present rubrics and self-assessments that will demonstrate how you will evaluate the activity.
- Wrap up and have students present their solutions in groups. Reflect on the process.
BASIC PROBLEM-BASED LEARNING TEMPLATE

This template is designed to capture lesson planning notes and ideas in one place. Instructors should use this template to outline the goals, activities, and assessments for a problem-based scenario.

Because problem-based learning activities are so closely related to real-life workplace contexts, the information gathered by this template could be used to inform an employer supervisor’s understanding of the work-based students. Instructors could share this recorded information later as a starting point for discussion with employer supervisors about their workers’ progress in the course.

1. **Lesson Introduction**: Provide an overview of the scenario or case study.

2. **Outline Performance Objectives**: What must all students know and be able to do as a result of this learning experience?

<table>
<thead>
<tr>
<th>Lesson Goal</th>
<th>Identified Performance Objectives</th>
<th>Evidence of Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the overarching “point” of this lesson?</td>
<td>What should students be able to do after this lesson?</td>
<td>How will you know students are able to perform relevant tasks successfully after this lesson?</td>
</tr>
</tbody>
</table>

3. **Problem Statement and Questions**: Identify the problem statement for the project. Be sure you pose an authentic problem or significant question that engages students and requires core subject knowledge to solve or answer.
4. **Assessment Plan:** Outline the assessment instruments that will be used. If possible, use work-specific task lists or production documents. Outline the rubric you will use for other skills, including collaboration, critical thinking, and any others.

<table>
<thead>
<tr>
<th>Rubric(s): Check all that apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration</td>
</tr>
<tr>
<td>Written communication</td>
</tr>
<tr>
<td>Critical thinking</td>
</tr>
<tr>
<td>Work task lists</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reflection exercises: Check all that apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey</td>
</tr>
<tr>
<td>Peer assessment</td>
</tr>
<tr>
<td>Discussion</td>
</tr>
<tr>
<td>Self-assessment</td>
</tr>
<tr>
<td>Writing assignment</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

5. **Reflection:** Identify what reflection exercise you will conduct to review the success of the lesson.

When the lesson is complete, use this exercise to reflect on the lesson as a whole. Record what worked, how teams collaborated (or did not collaborate) and any other information about how the lesson went. Reflect on and record how this process could help students troubleshoot in the workplace, and, if possible, share notes with employer/supervisors.
WORK-BASED COURSES: BRINGING COLLEGE TO THE PRODUCTION LINE

This document is part of a toolkit that provides guidance to community college administrators and faculty who are interested in bringing a work-based course model to their college. Tools and resources walk through the major stages of program design and implementation. To access the complete toolkit, go to: http://www.jff.org/workbasedcourses

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