



**Career
Essentials:
Assessments**

Career Essentials: Assessments

Teacher Preparation Guide For Use with the Career Essentials: Assessments

*Discover, Develop and Validate Students'
Knowledge and Skill*

ENGINEERING TECHNOLOGY ASSESSMENT

Introduction to the Career Essentials: Assessments

The Career Essentials: Assessments can help both students and teachers discover students' occupational strengths. By implementing the Career Essentials: Assessments, students and teachers can collaboratively develop a life-long learning plan to validate and enhance students' skills and knowledge. Assessment data results are beneficial for students, teachers and administrators in validating student learning, and improving programs and their accountability.

This teacher preparation guide is a tool developed for instructors to help students capitalize on their unique strengths, which can improve individual student performance and provide a clear way forward for student success.

The Career Essentials: Assessments Teacher Preparation Guide provides an easy-to-follow road map to implement the Career Essentials: Assessments. The guide is not meant to be curriculum nor should it replace that which already exists. It provides specific information regarding the Career Essentials: Assessments so teachers can identify existing curriculum areas that may need additional emphasis.

The guide ultimately helps teachers provide students with learning opportunities. Its goal is for students to become comfortable and successful with the Career Essentials: Assessments.

Inside the guide, teachers will find:

- Major content areas of the assessment
- A blueprint of the assessment competency areas
- A checklist of the various competency areas within the assessment
- Access to a trade- or technical-specific online 10-question demo assessment
- Resources used for the assessment development
- Access to an employability skills based, online 10-question practice assessment to help students navigate the assessment system

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What are Career Essentials: Assessments?

Career Essentials: Assessments are online assessments that evaluate technical and employability skills and knowledge. They are the way ahead for the next generation of our American workforce, and they help candidates validate their technical skills and knowledge to potential employers. They also help local instructors demonstrate the value of their programs, while supporting local industries with a pool of potential employees that has been tested by a system they can trust.

Each assessment was developed by a panel of industry, high school and college/postsecondary subject matter experts (SMEs) using national technical standards. Career Essentials: Assessments were created by industry to ensure relevance to entry-level skills, meet Perkins IV accountability requirements and provide certificates to students who achieve industry-defined scores. They ensure your students are workforce ready.

Career Essentials: Assessments incorporate photographs, videos, animations and illustrations to ensure clarity for each technical question. Drag-and-drop and multiple-choice questions appeal to visual and kinesthetic learners and test content knowledge rather than test-taking abilities. Even simple multiple-choice questions are brought to life through pictures and animations.

Assessments are available in more than 40 trade, industrial and technical areas. A rigorous and educationally sound process captures critical competencies, standards and criteria as defined by industry.

Academic core and critical skill areas also exist in each assessment. State-level academic curriculum specialists identified connections to national academic standards.

Each one-hour assessment includes 50 questions. Under the supervision of a proctor, the integrity of each test is ensured by offering multiple unique versions of the assessment, which

For complete information regarding the Career Essentials: Assessments and to see all assessment areas, please visit the website at: www.careeressentials.org.

measure the same core and critical competencies. Even within the same version, questions and answers are displayed in varying orders to prevent test takers from copying others. The Career Essentials: Assessments are designed to be user-friendly and intuitive for students.

Using the Career Essentials: Assessments

Every classroom is unique. You can use the Career Essentials: Assessments in a way that best suits your program and students. The following directions are SkillsUSA's suggested and preferred method to implement the assessments so that your students gain the most from the results.

The most important step in the Career Essentials: Assessments process is to select the correct assessment for your students. You are key to the selection process. Without your involvement, the wrong assessment may be selected. Assessment titles do not provide enough information for proper selection. Review the various assessment categories that best correspond to your program.

Next, look at each of the assessment titles within the category and the corresponding blueprint. The blueprint will tell you which competencies and subjects are addressed in the assessment.

Cross-walk the various blueprints with your classroom curriculum. The assessment blueprint will show what's emphasized and how competencies are weighed. Please remember the Career Essentials: Assessments are based on national industry standards, so the assessment may not perfectly align with the existing curriculum. Content may need to be added or emphasized to better prepare students for the Career Essentials: Assessments.

Once you have selected the assessment that best fits your program, administer that Career Essentials: Assessments at the beginning of your students' final program year. This could be considered a pre-test.

Assessment results are available as soon as your student completes the assessment. The report provides you with a gap analysis to identify your students' learning needs according to each competency area within the assessment. Dynamic reports compare your students' performance to the current state and national averages. Reports also enable you to track a student's progress on an individual basis. The assessment pre-testing results provide you with a benchmark for your students and identify student learning gaps. This data may help you adjust your own curriculum and identify areas that may need more or less emphasis. The data can be shared with students so everyone can focus on learning areas that need improvement during the school year.

Then, at the end of the school year or program semester, administer your specific Career Essentials: Assessments a second time as a post-test.

Use post-test data to improve or adjust curriculum once again for your next program year. This way, curriculum adjustments are made using the student testing data rather than arbitrarily making adjustments.

This pre- and post-test process is a "win-win" situation for the teacher and especially the student! To ensure a quality process, SkillsUSA is ready to help at any time.

Preparing Students for the Career Essentials: Assessments

Provide each student with a copy of their trade- or technical-specific Career Essentials: Assessments Blueprint. Do this at the beginning of your course. Review and discuss the blueprint with your class, providing insight on the assessment weighting and what is emphasized.

Have students discuss how they can assist each other to prepare for the assessment.

Place the Career Essentials: Assessments Blueprint on the classroom wall. The blueprint will help students focus on the appropriate course content areas that align with the assessment. It will also help everyone to be aware of the program's goals and expectations.

The Career Essentials: Assessments at a Glance

- **Select the correct assessment title. *Do not* have someone select the assessment for you, as there may be several titles that may relate to your program**
- **Review the assessment blueprint that best aligns with your existing curriculum**
- **Identify gaps in your curriculum, and use additional resources to enhance or align the curriculum**
- **Share the assessment blueprint with the students so everyone is aware of the expectation**
- **Have your students take the assessment at the beginning of their final program year as a pre-test**
- **Use pre-test data to identify learning gaps or strengths of individual students or the class**
- **Remediate the students using the data analysis from pre-test to enhance, emphasize and adjust learning objectives**
- **Have your students take the assessment a second time (as a post-test) at the end of the program year to determine learning gains/gaps**
- **Use post-test data to improve or adjust curriculum for your next program year**

Administer the Career Essentials: Assessments as a pre-test to identify student gaps. If possible, pre-test your students at the beginning of their final program year to identify learning gaps both individually and as a class. The data will provide an excellent “road map” to prepare students to take the assessment again (post-test) at the end of the program. Using the data, tailor the instruction to better prepare your students.

Use the Career Essentials: Assessments competency areas checksheets included in this guide to encourage class discussion and help students identify strengths and weaknesses.

Use the pre-test data to ascertain problematic learning areas. Have students identify discussion topics based on the various competency areas and their pre-test data results. Exercises, demonstrations and even questions can be developed by the students using their textbooks or other resources listed in this guide.

Assign homework that aligns to the assessment blueprint. Focus on a competency area within the assessment. Using the checksheets in this guide, have students develop questions and potential answers using the resources identified when developing the assessment. Use the questions for class discussion or “quiz bowl” activities.

Have students take the Career Essentials: Assessments trade- or technical-specific online 10-question demo assessment. This could be a homework assignment or done in class 30 days prior to taking the assessment the second time (as a post-test). This not only will provide students with specific sample questions and potential answers, but it will also allow students to experience the online system again and become more familiar with the types of questions they may encounter when taking the actual assessment.

Following the demo assessment, discuss the experience students had. What question(s) did

they not understand? Did they have difficulty navigating the online system? This experience will help students be more comfortable and confident when taking the final assessment.

Discuss as a class or individually with students which question(s) were difficult. Facilitate a discussion to glean more information regarding why certain answers were wrong. Offer techniques students can use to better determine correct answers.

Workplace-Ready Skills

Through the Career Essentials: Assessments, you have the option for your students take an Employability Assessment. This assessment tests a student’s workplace-ready skills such as communication, teamwork, time management and more. It can be used for any student in any occupational area as a practice test or a separate assessment.

If you use the Employability Assessment as a practice test have students take it in class. Not only can the Employability Assessment help students become familiar with the navigational tools of the assessment system, but it can also measure and make your students aware of another important skill set. It may also help them become comfortable in the testing environment.

See the Career Essentials: Assessments website for more information: www.careeressentials.org.

The Employability Assessment is *not* intended to familiarize students with the Engineering Technology assessment content.

Please note: For all Career Essentials: Assessments to be valid, instructors cannot be present in the room where their students will be taking the test. A proctor is required. Proctors can be other instructors, a school administrator or school counselor.

Assessment Competency Areas

Career Essentials: Assessments Engineering Technology Assessment covers eight major technical competency areas (unit areas). In the online assessment, these eight competencies are tested with 50 interactive, multiple-choice items. Each competency area has a different number of items. The chart lists the major technical competency areas and the percentage of the assessment in each one.

Technical Competency Areas for Engineering Technology

Competency	Percentage of Area Assessment
Integrate knowledge of basic engineering principles into technical writing and presentations following the guidelines the contest technical committee has established	14%
Transform existing systems into conceptual models	14%
Showcase knowledge of project planning	12%
Developing/Identifying opportunities	12%
Write a problem statement	12%
Design and deliver a presentation that discusses the problems and processes of the local institution	12%
Design and develop a presentation that is the result of findings from the on-site problem and process	12%
Deliver the presentation in a professional manner, meeting the standards outlined by the technical committee	12%

Student Tools:

Access Directions for the Trade- or Technical-Specific Online 10-Item Demo Assessment

Have your students copy and paste this link www.careeressentials.org/assessments/demo-our-assessments/ into their browser. The sample programmatic questions will give you and your students an idea of the types of questions on the assessment and how the questions are generally written.

Student Tools:

Test-Taking Reminders

Encourage your students to have good study habits. Below are basic reminders to better prepare students for life-long learning and workplace success. You may want to have this discussion at the beginning of the year to encourage students to incorporate these strategies.

- Develop a regular study schedule
- Identify a specific location to study
- Always take notes while studying in class or on your own
- Take short breaks during your study session
- Perform “mini-testing” to make sure you understand and comprehend the program concepts
- Join small study groups to help focus on the program content
- If you need special assistance in testing, tell your teacher or counselor so they can make accommodations.

Student Testing Tips

The most important tip for your students is to be prepared mentally and physically for the testing session. Make sure to tell them to get plenty of rest and eat healthy. Suggest they wear comfortable and appropriate clothing to the testing session. If they are able to bring items to the testing session, such as a non-programmable calculator, make sure they have the items ready the night before. Have students check our website at www.careeressentials.org/wp-content/uploads/2017/07/Permitted-Testing-Tools-Aids.pdf for permitted tools or job aids that can be used during testing. The more organized they

are before the testing period, the more relaxed they will be during the actual testing session.

Encourage your students to be relaxed and positive. If they begin to panic during the testing, suggest they take some deep breaths to relax and think positive thoughts.

Do not rush through the questions. Instruct your students to read the question and potential answers thoroughly. Tell them to make sure they know exactly what the question is asking before answering. Let them know that if they are unsure, they can mark the question and return to it. Other questions may have clues to the correct answer.

Use process of elimination. If your students are not sure of the correct answer, tell them to study the potential answers and eliminate the ones that they know are not correct.

If all else fails, tell students to *guess*. After they have exhausted all options, tell them to take their best guess at the correct answer. If they have studied the content area, they may intuitively know the correct answer. The Career Essentials: Assessments system does not penalize students for guessing and they may guess correctly!

Student Tools:

Engineering Technology Blueprint and Competency Area Knowledge Checksheets

The next section provides the assessment blueprint and detailed topics within each competency area covered within the Engineering Technology assessment. Photocopy and share the following blueprints and checksheets with your students so they can better prepare for each of the competency areas within the Engineering Technology assessment.

Summary and Quick Glance Testing Reminders

The Career Essentials: Assessments process is designed for program and curriculum improvement. This is a continuous improvement process to better meet the educational needs of your students by strategically using data results.

Advanced planning and preparation is a key component in implementing this process. Below we have attempted to summarize the steps in the suggested Career Essentials: Assessments implementation pre- and post-test process.

- Identify the correct assessment for your program
- Share the selected assessment blueprint with your students, parents, advisory board members and others. Place the blueprint on the classroom wall
- Pre-test your students at the beginning of their final programmatic year
- Use the data results to identify “learning gaps”
- Share the pre-test data with the student(s)
- Tailor learning experiences to meet student needs and supplement current curriculum
- Develop homework assignments around the competency knowledge checksheets located in this guide
- Have students take the demo 10-question practice test 30 days prior to the post-test
- For students that need more time in the actual testing environment, use the Employability Assessment to review navigational tools and to make students more comfortable in the testing lab
- Finally, review the blueprint and knowledge checksheets in totality before taking the post-test to ensure students are aware of the expectation

Using the above steps, you and your students should see improvement in the post-test assessment score report and a percentage of knowledge gained.

Engineering Technology Blueprint

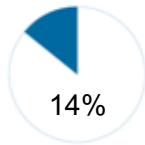
This Blueprint contains the subject matter content of this Career Essentials Assessment.

Note: To fully prepare for **Engineering Technology** SkillsUSA Championships contest, refer to the current year's SkillsUSA Championships Technical Standard, now included with your SkillsUSA Professional Membership. If you need help in accessing this benefit, contact the SkillsUSA Membership Office at 1-800-355-8422.

Standards and Competencies

Competencies are weighted throughout the assessment. The percent shown is the weight of the competency. There are 50 questions per assessment.

Integrate knowledge of basic engineering principles into technical writing and presentations following the guidelines the contest technical committee has established



- ∞ Apply engineering knowledge in the areas of force, work, rate, resistance, energy, power, force transformers, momentum, waves and vibrations, energy converters, transducers, radiation, optical systems

Transform existing systems into conceptual models



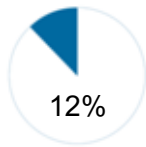
- ∞ Transform conceptual models into determinable models
- ∞ Use determinable models to obtain system specifications
- ∞ Select optimum specifications and create physical models
- ∞ Apply the results from physical models to create real target systems
- ∞ Critically review real target systems and personal performance
- ∞ Design effective and usable IT-based solutions and integrate them into the user environment
- ∞ Assist in the creation of an effective project plan
- ∞ Identify and evaluate current and emerging technologies and assess their applicability to address the users' needs

Showcase knowledge of project planning



- ∞ Apply brainstorming techniques
- ∞ Implement benchmarking
- ∞ Discuss continuous improvement
- ∞ Explain cause and effect relationships
- ∞ Apply knowledge of customer satisfaction
- ∞ Demonstrate how to collect data
- ∞ Apply decision making skills
- ∞ Define and describe a process
- ∞ Empower team members
- ∞ Recognize methods of idea generation
- ∞ Prioritize tasks
- ∞ Reach consensus amongst the team
- ∞ Display teamwork during the contest
- ∞ Have equal team participation
- ∞ Show positive group dynamics
- ∞ Define team roles

Developing/identifying opportunities



- ∞ Identify and define the opportunity
- ∞ Identify the customer
- ∞ Identify the customer's needs
- ∞ State the problem or areas of improvement within the identified opportunity clearly and concisely
- ∞ Quantify the opportunity with data
- ∞ Show data gathered from research
- ∞ Identify opportunity for improvement
- ∞ Make decisions based on facts, not opinions
- ∞ Show how the team determined the cause(s) of the problem and gained an understanding of the variation that occurs in the process
- ∞ Diagram and perform a thorough assessment of the possible causes
- ∞ Develop various solutions
- ∞ Show alternative approaches or changes that would improve the situation
- ∞ Show the analysis used to select the most beneficial solution to implement
- ∞ Define milestones
- ∞ Recommend a plan to implement the solution(s)
- ∞ Use analytical decision making by making full use of flow charts, bar graphs, cause and effect diagrams, Pareto diagrams, etc.
- ∞ Describe a method to standardize or institutionalize the process

Write a problem statement



- ∞ Define the problem
- ∞ Define the customer
- ∞ Explain the customer expectations
- ∞ Describe the product or service
- ∞ Discuss how the product or service fulfills the customer's expectations
- ∞ List the needed data
- ∞ Reflect on how the process can be improved
 - Describe how the improved process will meet or exceed the customer's expectations

Design and deliver a presentation that discusses the problems and processes of the local institution

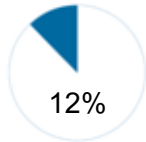


- ∞ Make the presentation clear and concise
- ∞ Use graphics effectively to clarify presentation topics
- ∞ Use time wisely while presenting

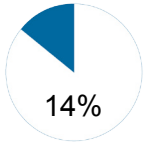
Design and develop a presentation that is the result of findings from the on-site problem and process



- ∞ Make the presentation clear and concise
- ∞ Use graphics effectively to clarify presentation topics
- ∞ Use time wisely while presenting

Deliver the presentation in a professional manner, meeting the standards outlined by the technical committee

- ∞ Explain the topic through the use of displays or practical operations
- ∞ Demonstrate an effective and pleasing delivery style
- ∞ Use verbal illustrations and examples effectively
- ∞ Make a formal and effective introduction to the presentation that clearly identifies the scope of the presentation
- ∞ Pronounce words in a clear and understandable manner
- ∞ Use a variety of verbal techniques including: modulation of voice, changing volume, varied inflection, modifying tempo and verbal enthusiasm
- ∞ Demonstrate poise and self-control while presenting
- ∞ Demonstrate good platform development and personal confidence
- ∞ Communicate the primary points of the speech in a compact and complete manner
- ∞ Tie organizational elements together with an effective ending
- ∞ Complete the speech within the time limits set by contest requirements
- ∞ Develop storyboards for the presentation outlining the process



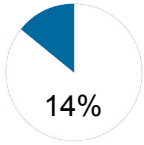
Review Dates:

Competency Area 1: Integrate knowledge of basic engineering principles into technical writing and presentations following the guidelines the contest technical committee has established

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Apply engineering knowledge in the areas of force, work, rate, resistance, energy, power, force transformers, momentum, waves and vibrations, energy converters, transducers, radiation, optical systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:

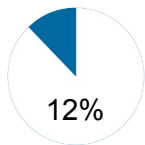


Competency Area 2: Transform existing systems into conceptual models

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Transform conceptual models into determinable models?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Use determinable models to obtain system specifications?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Select optimum specifications and create physical models?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Apply the results from physical models to create real target systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Critically review real target systems and personal performance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Design effective and usable IT-based solutions and integrate them into the user environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Assist in the creation of an effective project plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Identify and evaluate current and emerging technologies and assess their applicability to address the users' needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:



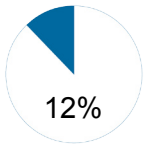
Review Dates:

Competency Area 3: Showcase knowledge of project planning

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Apply brainstorming techniques?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Implement benchmarking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Discuss continuous improvement?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Explain cause and effect relationships?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Apply knowledge of customer satisfaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Demonstrate how to collect data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Apply decision making skills?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Define and describe a process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Empower team members?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Recognize methods of idea generation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Prioritize tasks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Reach consensus amongst the team?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Display teamwork during the contest?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Have equal team participation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Show positive group dynamics?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Define team roles?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:



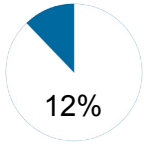
Review Dates:

Competency Area 4: Developing/Identifying opportunities

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Identify and define the opportunity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Identify the customer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Identify the customer's needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. State the problem or areas of improvement within the identified opportunity clearly and concisely?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Quantify the opportunity with data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Show data gathered from research?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Identify opportunity for improvement?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Make decisions based on facts, not opinions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Show how the team determined the cause(s) of the problem and gained an understanding of the variation that occurs in the process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Diagram and perform a thorough assessment of the possible causes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Develop various solutions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Show alternative approaches or changes that would improve the situation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Define milestones?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Recommend a plan to implement the solution(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Use analytical decision making by making full use of flow charts, bar graphs, cause and effect diagrams, Pareto diagrams, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Describe a method to standardize or institutionalize the process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:



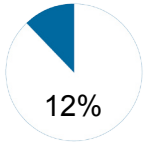
Review Dates:

Competency Area 5: Write a problem statement

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Define the problem?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Define the customer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Explain the customer expectations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Describe the product or service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Discuss how the product or service fulfills the customer's expectations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. List the needed data?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Reflect on how the process can be improved?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Describe how the improved process will meet or exceed the customer's expectations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:



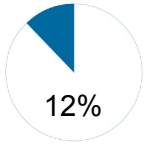
Review Dates:

Competency Area 6: Design and deliver a presentation that discusses the problems and processes of the local institution

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Make the presentation clear and concise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Use graphics effectively to clarify presentation topics?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Use time wisely while presenting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:



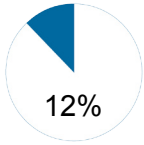
Review Dates:

Competency Area 7: Design and develop a presentation that is the result of findings from the on-site problem and process

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Make the presentation clear and concise?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Use graphics effectively to clarify presentation topics?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Use time wisely while presenting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:



Review Dates:

Competency Area 8: Deliver the presentation in a professional manner, meeting the standards outlined by the technical committee

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Explain the topic through the use of displays or practical operations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Demonstrate an effective and pleasing delivery style?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Use verbal illustrations and examples effectively?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Make a formal and effective introduction to the presentation that clearly identifies the scope of the presentation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Pronounce words in a clear and understandable manner?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Use a variety of verbal techniques including: modulation of voice, changing volume, varied inflection, modifying tempo and verbal enthusiasm?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Demonstrate poise and self-control while presenting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Demonstrate good platform development and personal confidence?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Communicate the primary points of the speech in a compact and complete manner?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Tie organizational elements together with an effective ending?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Complete the speech within the time limits set by the contest requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Develop storyboards for the presentation outlining the process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Areas I Need To Review:

Helpful Tips and Reminders for Students

Access Directions to the Trade- or Technical-Specific Online 10-question Demo Assessment

Access the Web link www.careeressentials.org/assessments/demo-our-assessments/ with your browser. The sample programmatic questions will help give you an idea of the types of questions on the assessment and how they are generally written.

Test-Taking Reminders

Implementing good study habits is essential for any test or class. Below are basic reminders to better prepare you for life-long learning and workplace success. Incorporate these strategies into your everyday habits.

- Develop a regular study schedule
- Identify a specific location to study
- Always take notes while studying in class or on your own
- Take short breaks during your study session
- Perform “mini-testing” to make sure you understand and comprehend the program concepts
- Join small study groups to help focus on the program content
- If you need special assistance in testing, tell your teacher or counselor so he or she can make accommodations

Student Testing Tips

The most important tip for you is to be prepared mentally and physically for the testing session. Make sure to get plenty of rest and eat healthy. Wear comfortable and appropriate clothing to the testing session. Find out if you can bring items to the testing session, such as a non-programmable calculator, and make sure you have the items ready the night before. Check the website at www.careeressentials.org/wp-content/uploads/2017/07/Permitted-Testing-Tools-Aids.pdf for permitted tools or job aids that can be used during testing. The more organized you are before the testing period, the more relaxed you will be during the actual testing session.

Be relaxed and positive. If you begin to panic during the testing, take some deep breaths to relax, and think positive thoughts.

Do not rush through the questions. Read the question and potential answers thoroughly. Make sure you know exactly what the question is asking before answering. If you are unsure, note the question and return to it. Other questions may have clues to the correct answer. Use process of elimination. If you are not sure of the correct answer, study the potential answers and eliminate the ones that you know are not correct.

If all else fails – *guess*. After you have exhausted all options, take your best guess at the correct answer. If you have studied the content area, you may intuitively know the correct answer. The Career Essentials: Assessments does not penalize you for guessing, and you may guess correctly!

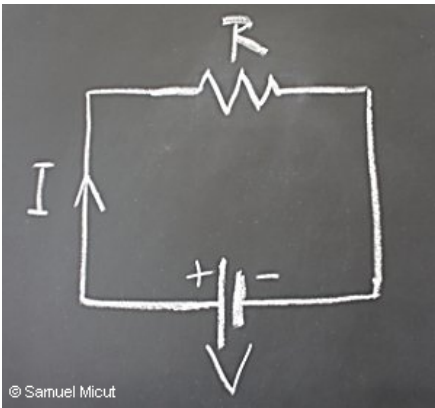
Sample Assessment Questions

Sample Questions

The following questions are examples of the types of questions you may see within the assessment test. The questions could be in the form of a video clip, drop and drag, sequential or a typical multiple choice.

Engineering Technology Test Questions

- 1) The resistance of an electrical circuit is measured in:



- A. Current.
- B. Ohms.
- C. Voltage.
- D. Watts.

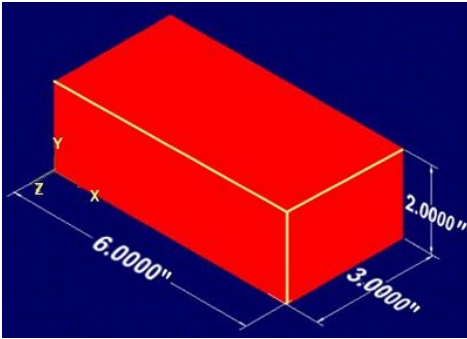
Answer: B

- 2) What is an improvement on an existing technological product, system or method?

- A. Experimentation
- B. Innovation
- C. Integration
- D. Specialization

Answer: B

3) What is the cubic volume of the shape shown?



- A. 30 cu. in.
- B. 32 cu. in.
- C. 36 cu. in.
- D. 40 cu. in.

Answer: C

4) The core process that is as fundamental to technology as inquiry is to science and reading is to language arts is called:

- A. Control.
- B. Design.
- C. Maintenance.
- D. Optimization.

Answer: B

- 5) Your supervisor has given you a project that needs to have 1600 parts manufactured in 36 hours. Each of the machines can produce 50 parts an hour. How many hours will you need to plan for?



- A. 18 hours
- B. 32 hours
- C. 44 hours
- D. 1800 hours

Answer: B

- 6) Which of the following statements about teamwork is FALSE?

- A. Teamwork can bring more talent, experience, knowledge and skills to a project.
- B. Teamwork requires less organization and coordination than working individually.
- C. Teamwork can be more satisfying and morale-boosting for people than working alone.
- D. Teamwork requires a different set of skills than working individually.

Answer: B

- 7) What do the letters OSHA stand for?

- A. Office of Secure Housing Authority
- B. Organized Safety and Healing Association
- C. Occupational Safety and Health Administration
- D. Original Steel and Health Act

Answer: C

Resources

Additional Resources

Below are resources that will be helpful in preparing for the Assessments which were created based on industry standards nationwide. Use the Career Essentials: Assessments Blueprint as a guideline for competencies tested. Use the resources below to find curriculum or additional study guides for industry standards.

Engineering Technology Resources:

www.careeressentials.org/assessments/assessment-resources/