Teacher Preparation Guide

For Use with the SkillsUSA Career Essentials: Assessments

Discover, Develop and Validate Students' Knowledge and Skill

DIGITAL FILE PREPARATION AND

DIGITAL FILE OUTPUT ASSESSMENT

Introduction to SkillsUSA Career Essentials: Assessments

SkillsUSA Career Essentials: Assessments can help both students and teachers discover students' occupational strengths. By implementing this Career Essentials: Assessment, 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: Assessment. The guide is not meant to be curriculum nor should it replace that which already exists. It provides specific information regarding the Career Essentials: Assessment 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: Assessment.

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?
SkillsUSA 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. Career Essentials: Assessments are designed to be user-friendly and intuitive for students.

Using this Career Essentials: Assessment
Every classroom is unique. You can use the Career Essentials: Assessment 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: Assessment 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: Assessment.

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: Assessment

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: Assessment 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: Assessment 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: Assessment 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: Assessment 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 Digital File Preparation and Digital File Output assessment content.

> **Please note: For all SkillsUSA 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

SkillsUSA Career Essentials: Assessments Digital File Preparation and Digital File Output Assessment covers seven major technical competency areas (unit areas). In the online assessment, these seven 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 Digital File Preparation and Digital File Output

Competency	Percentage of Area Assessment
Type	13%
Page Layout and Design	17%
Image Capture and Editing	9%
Illustration	7%
PDF	4%
Prepress	15%
Color Management	10%
File Systems and File Management	7%
Digital File Output	13%

Academic Core and Critical Skill Areas

Academic core and critical skill areas also exist in each assessment. The SkillsUSA national technical committee identified that the following academic skills are embedded in the Digital File Preparation and Digital File Output training program and assessment:

Math Skills
- Use fractions to solve practical problems
- Simplify numerical expressions
- Solve practical problems involving percents
- Solve single variable algebraic expressions

Language Arts Skills
- Provide information in conversations and in group discussions
- Provide information in oral presentations
- Demonstrate use of nonverbal communication skills: eye contact, posture and gestures using interviewing techniques to gain information
- Demonstrate knowledge of appropriate reference materials

Connections to National Standards

State-level academic curriculum specialists identified the following connections to national academic standards.

Math Standards
- Geometry
- Measurement
- Problem solving
- Communication
- Connections
- Representation

Source: NCTM Principles and Standards for School Mathematics. To view high school standards, visit: www.nctm.org/standards/content.aspx?id=16909.

Science Standards
- Understands the structure and properties of matter
- Understands the sources and properties of energy
- Understands forces and motion
- Understands the nature of scientific inquiry

Source: McREL compendium of national science standards. To view and search the compendium, visit: www2.mcrel.org/compendium/ .

Language Arts Standards
- Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace;

and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

- Students apply a wide range of strategies to comprehend, interpret, evaluate and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, and graphics).
- Students adjust their use of spoken, written and visual language (e.g., conventions, style, and vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks and video) to gather and synthesize information and to create and communicate knowledge.
- Students use spoken, written and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information).

Source: IRA/NCTE Standards for the English Language Arts. To view the standards, visit: www.readwritethink.org/standards/index.html.

Student Tools:
Access Directions for the Trade- or Technical-Specific Online 10-Item Demo Assessment
Have your students copy and paste this link *http://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.

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 *http://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.

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: Assessment system does not penalize students for guessing and they may guess correctly!

Student Tools:
Digital File Preparation and Digital File Output Blueprint and
Competency Area Knowledge Checksheets
The next section provides the assessment blueprint and detailed topics within each competency area covered within the Digital File Preparation and Digital File Output 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 Digital File Preparation and Digital File Output 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.

Digital File Preparation and Digital File Output Blueprint

The PrintED/SkillsUSA Digital File Preparation competencies encompass the knowledge and skill set a student should master to exhibit proficiency in digital file preparation. The PrintED/SkillsUSA Digital File Preparation Career Essentials Assessment test questions align with the PrintED/SkillsUSA Digital File Preparation competencies.

Note: To fully prepare for **Digital File Preparation and Digital File Output** SkillsUSA Championships contest, refer to the current year's *SkillsUSA Championships Technical Standards*, now included with your SkillsUSA professional membership. If you need help in accessing this benefit, contact the SkillsUSA membership staff 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.

Type

13%
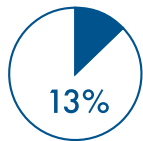
- Compare the physical characteristics of basic type classifications: a. Serif; b. Sans Serif
- Identify the physical characteristics of type classifications: a. Bold; b. Italic; c. Roman
- Identify the physical characteristics of typographic characters: a. Uppercase; b. Lowercase; c. Small Caps; d. Ligatures; e. Glyphs; f. Subscript; g. Superscript
- Identify typographic ems and ens and their associated dashes
- Explain the use of points and picas as measurement increments
- Identify the physical characteristics of type: a. X-Height; b. Mean-Line; c. Baseline; d. Ascender; e. Descender; f. Leading (spacing); g. Tracking; h. Kerning
- Compare display (headline) type by their point sizes and type styles
- Recognize text alignment: a. Flush Left; b. Flush Right; c. Center; d. Justify
- Compare the differences of typeface technologies
- Describe font substitution when outputting a printed page
- Assess the effectiveness of a communication piece using different applications of type

Page Layout and Design

17%
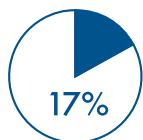
- Review Professional Page Layout software applications
- Review office/home-based software applications
- Demonstrate the use of computer menus, shortcut keys, and panels in an instructor specified page
- Create a multi-page document using: a. Number of pages; b. Facing pages; c. Page size and orientations; d. Columns; e. Margins; f. Bleeds; g. Slugs
- Utilize page layout software to place text from a word-processed file into a multi-page document
- Demonstrate the use of a digital dictionary and spell checker
- Demonstrate changing type attributes using: a. Font; b. Size; c. Style; d. Color
- Demonstrate changing type attributes using: a. Flush Left; b. Flush Right; c. Center; d. Justify; e. Justification (top, center, bottom justified)
- Describe widow and orphan formatting
- Explain the purpose of style sheets
- Identify masthead (header and footer)
- Explain the use of a graphic box in page layout software
- Explain the use of color tints
- Plan the steps of preflighting, proofing (hard and soft), packaging all files, and creating an output-appropriate PDF
- Discuss the use of variable data in a printing project

Image Capture and Editing

- Review professional Image Editing software applications: Adobe Photoshop
- Identify different type of graphics: a. Line art; b. Vector; c. Raster; d. Continuous tone
- Compare examples of various graphic file formats and their extensions: a. TIFF (Tagged Image File format); b. EPS (Encapsulated PostScript); c. BMP (Bitmap); d. PSD (Native Adobe Photoshop); e. JPG (Joint Photographic Experts Guild); f. AI (Native Adobe Illustrator)
- Explain dots per inch (Output device resolution)
- Explain lines per inch resolution (Halftone)
- Discuss minimum resolution requirement for different reproduction devices: a. Screen display; b. Digital Press; c. Offset Press; d. Wide Format Inkjet Press
- Identify potential quality issues of improper relationships of Pixels per Inch (PPI), Dots per Inch (DPI) and Lines per Inch (LPI) on final output quality
- Create correct depth and resolution files on line art and continuous tone images using a scanner
- Discuss the RGB (Red, Green, Blue) additive color model
- Discuss spot color model (Pantone)
- Describe image cloning
- Explain the use of Optical Character Recognition (OCR)
- Review capabilities of adjusting color balance (gray balance) in an image editing software program
- Create a vector using manipulated type
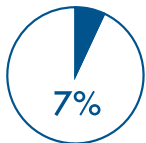
9%

Illustration

- Review the capabilities of professional illustration software applications: Adobe Illustrator
- Demonstrate the use of computer menus, shortcut keys, and panels in Illustration software
- Describe a vector graphic, bitmap image and vector graphic
- Create a single-color vector graphic
- Create a vector graphic to include tints, fills, strokes and color
- Convert a bitmap image to a vector

7%

PDF
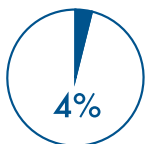
- Discuss the Adobe Portable Document Format (PDF)
- Determine the benefits of using a PDF format within the graphic communications industry
- Evaluate the methods to create PDF files
- Discuss PDF/x standards

4%

Prepress
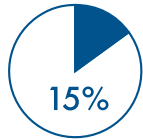
- Describe a job ticket
- Describe job specifications from a job ticket/docket
- Discuss the steps of preflighting a print file
- Identify common quality issues that are found during preflight process
- Discuss the use of trapping an image for print
- Describe software options for creating traps
- Identify imposition styles: a. Sheetwise; b. Work and Turn; c. Work and Tumble; d. Multiple Up; e. Perfecting
- Describe a folding dummy for print

15%

Color Management

- Discuss the role of color management in a print workflow
- Describe color management techniques used in different steps of a print workflow: a. Monitor; b. Proofer; c. Digital Press; d. Offset Press; e. Wide Format Inkjet Press
- Explain the use of an ICC profile in a print workflow
- Create International Color Consortium (ICC) profile
- Describe Undercolor Removal (UCR)
- Describe Gray Component Replacement (GCR)
- Define proofing; a. Hard; b. Soft

10%

File Systems and File Management
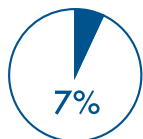
- Describe computer networking within a work environment
- Describe font management procedures on a computer workstation
- Discuss procedures for organizing and managing fonts on a workstation
- Discuss disaster recovery file backup options
- Describe file storage/transfer devices: a. CD-ROM; b. DVD; c. Flash Memory (USB); d. Tape; e. External Hard Drive; f. Networked backup drives; g. Offsite cloud backup
- Demonstrate the use of a file compression utility for file storage or transfer
- Describe metadata

7%

Digital File Output

13%
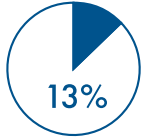
- Describe a Raster Image Processor (RIP)
- Describe the characteristics of plate material for offset printing: a. Paper; b. Plastic; c. Metal
- Describe the capabilities, specifications and functions of a platesetter
- Create a flowchart of workflow steps when outputting to offset press
- Explain how print queues can be optimized by a digital press operator
- Identify quality control marks: a. register marks; b. trim marks; c. fold lines; d. color bars; e. plate control
- Explain tone value increase (TVI) and its impact on printed materials
- Demonstrate outputting a file to a digital device
- Discuss quality control measurement devices: a. Densitometer; b. Colorimeter; c. Plate Readers; d. Spectrophotometer
- Discuss print shop quality process control Standard Operating Procedures (SOP)
- Review safety considerations when using computer-to-plate, digital production printer or digital press
- Read and interpret material safety data sheets (MSDS)
- Describe industry workflow automation guidelines: a. International Cooperation for Integration of Processes in Prepress, Press and Postpress (CIP4); b. Job Definition Format (JDF)

SkillsUSA is of the understanding that students who take the PrintED/SkillsUSA Digital File Preparation Career Essentials Assessment have been enrolled in a digital file preparation training program with the following competencies embedded within the curriculum.

Identified Academic Skills

Math Skills
- Use fractions to solve practical problems
- Simplify numerical expressions
- Solve practical problems involving percents
- Solve single variable algebraic expressions

Language Arts Skills
- Provide information in conversations and in group discussions
- Provide information in oral presentations
- Demonstrate use of nonverbal communication skills: eye contact, posture and gestures using interviewing techniques to gain information
- Demonstrate knowledge of appropriate reference materials

Connections to National Standards

State-level academic curriculum specialists identified the following connections to national academic standards.

Math Standards
- Geometry
- Measurement
- Problem solving
- Communication
- Connections
- Representation

Source: NCTM Principles and Standards for School Mathematics. To view high school standards, visit: *www.nctm.org/standards/content.aspx?id=16909*.

Science Standards
- Understands the structure and properties of matter
- Understands the sources and properties of energy
- Understands forces and motion
- Understands the nature of scientific inquiry

Source: McREL compendium of national science standards. To view and search the compendium, visit: *www.mcrel.org/standards-benchmarks/*.

13%
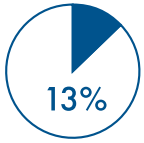
Competency Area 1: Type

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Compare the physical characteristics of basic type classifications			
a. Serif?	❑	❑	❑
b. Sans Serif	❑	❑	❑
2. Identify the physical characteristics of type classifications			
a. Bold?	❑	❑	❑
b. Italic?	❑	❑	❑
c. Roman?	❑	❑	❑
3. Identify the physical characteristics of typographic characters			
a. Uppercase?	❑	❑	❑
b. Lowercase?	❑	❑	❑
c. Small Caps?	❑	❑	❑
d. Ligatures?	❑	❑	❑
e. Glyphs?	❑	❑	❑
f. Subscript?	❑	❑	❑
g. Superscript?	❑	❑	❑
4. Identify typographic ems and ens and their associated dashes?	❑	❑	❑
5. Explain the use of points and picas as measurement increments?	❑	❑	❑
6. Identify the physical characteristics of type			
a. X-Height?	❑	❑	❑
b. Mean-Line?	❑	❑	❑
c. Baseline?	❑	❑	❑
d. Ascender?	❑	❑	❑
e. Descender?	❑	❑	❑
f. Leading (spacing)?	❑	❑	❑
g. Tracking?	❑	❑	❑
h. Kerning?	❑	❑	❑
7. Compare display (headline) type by their point sizes and type styles?	❑	❑	❑
8. Recognize text alignment			
a. Flush Left?	❑	❑	❑
b. Flush Right?	❑	❑	❑
c. Center?	❑	❑	❑
d. Justify?	❑	❑	❑
9. Compare the differences of typeface technologies?	❑	❑	❑
10. Describe font substitution when outputting a printed page?	❑	❑	❑
11. Assess the effectiveness of a communication piece using different applications of type?	❑	❑	❑

Areas I Need to Review:
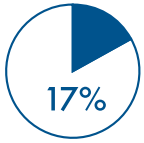
Competency Area 2: Page Layout and Design

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Review Professional Page Layout software applications?	❐	❐	❐
2. Review office/home-based software applications?	❐	❐	❐
3. Demonstrate the use of computer menus, shortcut keys, and panels in an instructor specified page?	❐	❐	❐
4. Create a multi-page document using:			
a. Number of pages?	❐	❐	❐
b. Facing pages?	❐	❐	❐
c. Page size and orientations?	❐	❐	❐
d. Columns?	❐	❐	❐
e. Margins?	❐	❐	❐
f. Bleeds?	❐	❐	❐
g. Slugs?	❐	❐	❐
5. Utilize page layout software to place text from a word-processed file into a multi-page document?	❐	❐	❐
6. Demonstrate the use of a digital dictionary and spell checker?	❐	❐	❐
7. Demonstrate changing type attributes using			
a. Font?	❐	❐	❐
b. Size?	❐	❐	❐
c. Style	❐	❐	❐
d. Color?	❐	❐	❐
8. Demonstrate changing type attributes using			
a. Flush Left?	❐	❐	❐
b. Flush Right?	❐	❐	❐
c. Center?	❐	❐	❐
d. Justify?	❐	❐	❐
e. Justification (top, center, bottom justified)?	❐	❐	❐
9. Describe widow and orphan formatting?	❐	❐	❐

	Very Well	Somewhat Well	Not Well
10. Explain the purpose of style sheets?	❐	❐	❐
11. Identify masthead (header and footer)?	❐	❐	❐
12. Explain the use of a graphic box in page layout software?	❐	❐	❐
13. Explain the use of color tints?	❐	❐	❐
14. Plan the steps of preflighting, proofing (hard and soft), packaging all files, and creating an output-appropriate PDF?	❐	❐	❐
15. Discuss the use of variable data in a printing project?	❐	❐	❐

Areas I Need to Review:

9%

Competency Area 3: Image Capture and Editing

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Review professional Image Editing software applications Adobe Photoshop?	❑	❑	❑
2. Identify different type of graphics			
a. Line art?	❑	❑	❑
b. Vector?	❑	❑	❑
c. Raster?	❑	❑	❑
d. Continuous tone?	❑	❑	❑
3. Compare examples of various graphic file formats and their extensions			
a. TIFF (Tagged Image File format)?	❑	❑	❑
b. EPS (Encapsulated PostScript)?	❑	❑	❑
c. BMP (Bitmap)?	❑	❑	❑
d. PSD (Native Adobe Photoshop)?	❑	❑	❑
e. JPG (Joint Photographic Experts Guild)?	❑	❑	❑
f. AI (Native Adobe Illustrator)?	❑	❑	❑
4. Explain dots per inch (Output device resolution)?	❑	❑	❑
5. Explain lines per inch resolution (Halftone)?	❑	❑	❑
6. Discuss minimum resolution requirement for different reproduction devices			
a. Screen display?	❑	❑	❑
b. Digital Press?	❑	❑	❑
c. Offset Press?	❑	❑	❑
d. Wide Format Inkjet Press?	❑	❑	❑
7. Identify potential quality issues of improper relationships of Pixels per Inch (PPI), Dots per Inch (DPI) and Lines per Inch (LPI) on final output quality?	❑	❑	❑
8. Create correct depth and resolution files on line art and continuous tone images using a scanner?	❑	❑	❑

	Very Well	Somewhat Well	Not Well
9. Discuss the RGB (Red, Green, Blue) additive color model?	❐	❐	❐
10. Discuss spot color model (Pantone)?	❐	❐	❐
11. Describe image cloning?	❐	❐	❐
12. Explain the use of Optical Character Recognition (OCR)?	❐	❐	❐
13. Review capabilities of adjusting color balance (gray balance) in an image editing software program?	❐	❐	❐
14. Create a vector using manipulated type?	❐	❐	❐

Areas I Need to Review:

7%
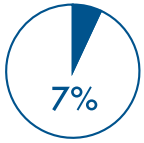
Competency Area 4: Illustration

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Review the capabilities of professional illustration software applications: Adobe Illustrator?	❐	❐	❐
2. Demonstrate the use of computer menus, shortcut keys, and panels in Illustration software?	❐	❐	❐
3. Describe a vector graphic, bitmap image and vector graphic?	❐	❐	❐
4. Create a single-color vector graphic?	❐	❐	❐
5. Create a vector graphic to include tints, fills, strokes and color?	❐	❐	❐
6. Convert a bitmap image to a vector?	❐	❐	❐

Areas I Need to Review:

4%
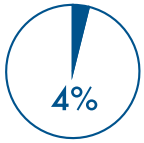
Competency Area 5: PDF

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Discuss the Adobe Portable Document Format (PDF)?	❐	❐	❐
2. Determine the benefits of using a PDF format within the graphic communications industry?	❐	❐	❐
3. Evaluate the methods to create PDF files?	❐	❐	❐
Discuss PDF/x standards?	❐	❐	❐

Areas I Need to Review:

15%
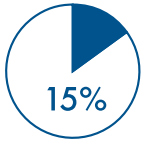
Competency Area 6: Prepress

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Describe a job ticket?	❏	❏	❏
2. Describe job specifications from a job ticket/docket?	❏	❏	❏
3. Discuss the steps of preflighting a print file?	❏	❏	❏
4. Identify common quality issues that are found during preflight process?	❏	❏	❏
5. Discuss the use of trapping an image for print?	❏	❏	❏
6. Describe software options for creating traps?	❏	❏	❏
7. Identify imposition styles			
a. Sheetwise?	❏	❏	❏
b. Work and Turn?	❏	❏	❏
c. Work and Tumble?	❏	❏	❏
d. Multiple Up?	❏	❏	❏
e. Perfecting?	❏	❏	❏
8. Describe a folding dummy for print?	❏	❏	❏

Areas I Need to Review:

10%

Competency Area 7: Color Management

Knowledge Check

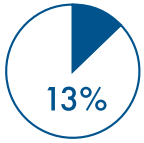| How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Discuss the role of color management in a print workflow?	❒	❒	❒
2. Describe color management techniques used in different steps of a print workflow			
a. Monitor?	❒	❒	❒
b. Proofer?	❒	❒	❒
c. Digital Press?	❒	❒	❒
d. Offset Press?	❒	❒	❒
e. Wide Format Inkjet Press?	❒	❒	❒
3. Explain the use of an ICC profile in a print workflow?	❒	❒	❒
4. Create International Color Consortium (ICC) profile?	❒	❒	❒
5. Describe Undercolor Removal (UCR)?	❒	❒	❒
6. Describe Gray Component Replacement (GCR)?	❒	❒	❒
7. Define proofing			
a. Hard?	❒	❒	❒
b. Soft?	❒	❒	❒

Areas I Need to Review:

7%
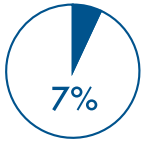
Competency Area 8: File Systems and File Management

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Describe computer networking within a work environment?	❐	❐	❐
2. Describe font management procedures on a computer workstation?	❐	❐	❐
3. Discuss procedures for organizing and managing fonts on a workstation?	❐	❐	❐
4. Discuss disaster recovery file backup options?	❐	❐	❐
5. Describe file storage/transfer devices			
a. CD-ROM?	❐	❐	❐
b. DVD??	❐	❐	❐
c. Flash Memory (USB)?	❐	❐	❐
d. Tape?	❐	❐	❐
e. External Hard Drive?	❐	❐	❐
f. Networked backup drives?	❐	❐	❐
g. Offsite cloud backup?	❐	❐	❐
6. Demonstrate the use of a file compression utility for file storage or transfer?	❐	❐	❐
7. Describe metadata?	❐	❐	❐

Areas I Need to Review:

Competency Area 9: Digital File Output

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Describe a Raster Image Processor (RIP)?	❒	❒	❒
2. Describe the characteristics of plate material for offset printing			
a. Paper?	❒	❒	❒
b. Plastic?	❒	❒	❒
c. Metal?	❒	❒	❒
3. Describe the capabilities, specifications and functions of a platesetter?	❒	❒	❒
4. Create a flowchart of workflow steps when outputting to offset press?	❒	❒	❒
5. Explain how print queues can be optimized by a digital press operator?	❒	❒	❒
6. Identify quality control marks			
a. register marks?	❒	❒	❒
b. trim marks?	❒	❒	❒
c. fold lines?	❒	❒	❒
d. color bars?	❒	❒	❒
e. plate control?	❒	❒	❒
7. Explain tone value increase (TVI) and its impact on printed materials?	❒	❒	❒
8. Demonstrate outputting a file to a digital device?	❒	❒	❒
9. Discuss quality control measurement devices			
a. Densitometer?	❒	❒	❒
b. Colorimeter?	❒	❒	❒
c. Plate Readers?	❒	❒	❒
d. Spectrophotometer?	❒	❒	❒
10. Discuss print shop quality process control Standard Operating Procedures (SOP)?	❒	❒	❒

Knowledge Check

	Very Well	Somewhat Well	Not Well
11. Review safety considerations when using computer-to-plate, digital production printer or digital press?	❐	❐	❐
12. Read and interpret material safety data sheets (MSDS)?	❐	❐	❐
13. Describe industry workflow automation guidelines a. International Cooperation for Integration of Processes in Prepress, Press and Postpress (CIP4)?	❐	❐	❐
b. Job Definition Format (JDF)?	❐	❐	❐

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. 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: Assessment does not penalize you for guessing, and you may guess correctly!

Questions for Digital File Preparation and Output Teacher Prep

Question 1

Which option correctly identifies the formatting applied to the text shown in red?

Choose one answer
A. Ligature
B. Superscript*
C. Subscript
D. Lowercase

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > A Type. > A3 Identify the physical characteristics of typographic characters a. Uppercase b. Lowercase c. Small Caps d. Ligatures e. Glyphs f. Subscript g. Superscript

Question 2

Which option correctly identifies the operation being performed in this image?
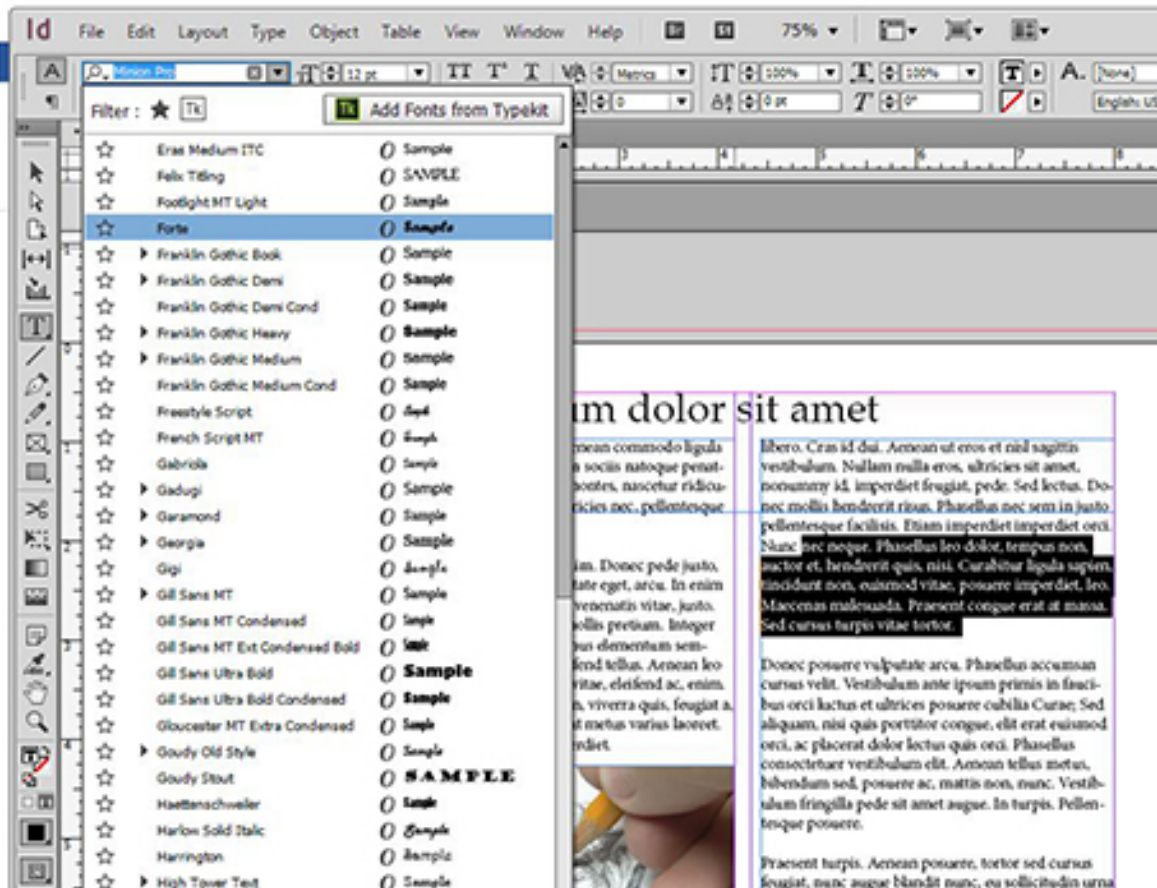
Choose one answer

A. Changing the number of columns to three
B. Changing the typeface of the selected text*
C. Changing the point size of the selected text
D. Changing the color of the selected text

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > B Page Layout and Design. > B 19 Demonstrate changing type attributes using a. Font b. Size c. Style d. Color

Question 3

How many different colors could potentially be contained in a 24-bit RGB photograph?

Choose one answer
A. 256
B. 16,777,216*
C. Infinite
D. 16

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > C Image Capture and Editing. >
C51 Describe color bit depth

Question 4

Which option correctly identifies the Adobe InDesign feature that enables text and graphic elements to automatically appear on multiple pages of a document?

Choose one answer
A. Multiple page
B. Structured page
C. Master page*
D. Column page

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > B Page Layout and Design. >
B26 Describe master pages

Question 5

Which option correctly identifies an image sharpening technique?

Choose one answer
A. Image cloning
B. Unsharp masking*
C. Stamp processing
D. Blur reduction

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > C Image Capture and Editing. >
C62 Describe Unsharp masking

Question 6

Which option correctly identifies the use of a "profile" in a color managed workflow?

Choose one answer
A. Describes the maximum sheet size of a digital press
B. Characterizes each device's color gamut*
C. Describes the number of printing units on an offset press
D. Logs all color variations during an offset press run

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > G Color Management. > G100 Describe color management techniques used in different steps of a print workflow a. Monitor b. Proofer c. Digital Press d. Offset Press e. Wide Format Inkjet Press

Question 7

Which printing process is depicted by this flowchart?

Choose one answer
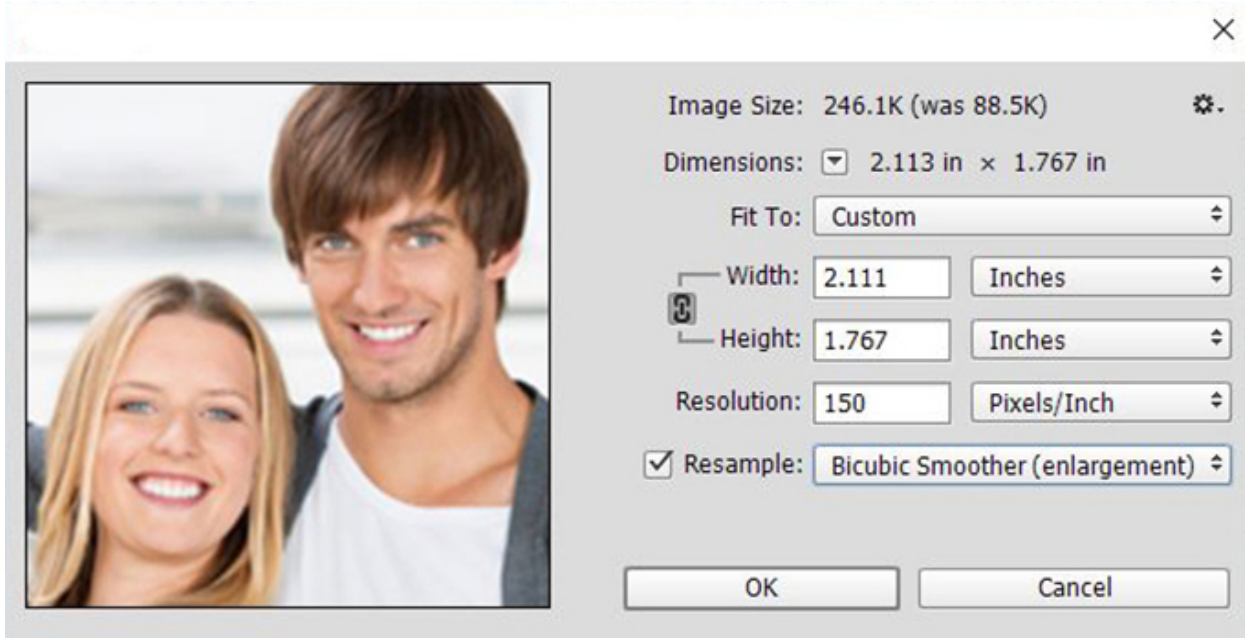A. Digital
B. Offset*
C. Ink jet
D. Toner

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > I Digital File Output. > I133 Create a flowchart of workflow steps when outputting to offset press

Question 8

Which option correctly identifies the use of this panel within Adobe Photoshop?

Choose one answer

A. Change the size of an image*

B. Adjust the contrast of an image

C. Crop an image

D. Perform color correction on an image

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > C Image Capture and Editing. > C43 Demonstrate use of computer menus, shortcut keys, and panels in image editing software

Question 9

Which option correctly identifies an imposition style that uses a single plate to print both the front and back of a multi-page document but changes the gripper edge for each press run?

Choose one answer

A. Sheetwise

B. Work & tumble*

C. Work & turn

D. Work & burn

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > F Prepress. > F95 Identify imposition styles a. Sheetwise b. Work and Turn c. Work and Tumble d. Multiple Up e. Perfecting

Question 10

If a banner is 319.2 inches long, what is its length in feet?

Choose one answer
A. 26.4 feet
B. 26.6 feet*
C. 28.2 feet
D. 28.8 feet

Mapped skill standards

Digital File Preparation and Output - Skill Connect Assessment Blueprint > J Math and Measurement. > J149 Solve basic linear measurement problems

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 SkillsUSA Career Essentials: Assessment Blueprint as a guideline for competencies tested. Use the resources below to find curriculum or additional study guides for industry standards.

Digital File Preparation and Digital File Output Resources

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