

# Career Essentials: Assessments

# Teacher Preparation Guide For Use with the Career Essentials: Assessments

Discover, Develop and Validate Students' Knowledge and Skill

**Digital Production Printing** 

### **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. Dragand-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 tradeor 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 Digital Production Printing 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 Digital Production Printing Assessment covers six major technical competency areas (unit areas). In the online assessment, these six 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 Production Printing**

Competency	Percentage of Area Assessment
Technology	32%
Printed Products	17%
Workflows	25%
Operations	13%
Finance	12%
Math	1%

### **Student Tools:**

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

Have your students copy and paste this link <a href="http://www.careeressentials.org/assessments/demo-our-assessments/">http://www.careeressentials.org/assessments/demo-our-assessments/</a> 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 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: Assessments system does not penalize students for guessing and they may guess correctly!

### **Student Tools:**

# **Digital Production Printing Blueprint and Competency Area Knowledge Checksheets**

The next section provides the assessment blueprint and detailed topics within each competency area covered within the Digital Production Printing 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 Production Printing 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 Production Printing Blueprint**

The PrintED/SkillsUSA Digital Production Printing competencies encompass the knowledge and skill sets a student should master to exhibit proficiency in digital production printing. The PrintED/SkillsUSA Digital Production Printing Career Essentials Assessment. test questions align with the PrintED/SkillsUSA Digital Production Printing competencies.

Note: To fully prepare for the Digital Production Printing SkillsUSA Championships contest, refer to the current year's SkillsUSA Championships Technical Standards CD-ROM, or purchase and download the relevant Contest Singles, which are both available in the Educational Resources Catalog at: http://www.skillsusa.org/store/.

### **Standards and Competencies**

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

### **Technology**



- □ Describe the imaging process of production toner based (electrophotography)
  - a. Electrostatic Charging
  - b. Laser or LED imaging
  - c. Toner attraction
  - d. Transfer
  - e. Fusing
- ∞ Contrast the environmental impact of operating digital versus offset equipment
- ∞ Discuss the purpose of a Raster Image Processor (RIP)
- ∞ Illustrate a flowchart of steps on how a RIP prepares a file for printing
- ∞ Identify features and functions of a RIP
- $\infty$  Describe the sheet fed paper transport of a digital press
- ∞ Contrast friction feed versus vacuum feed
- ∞ Describe roll fed paper transport of a digital press
- ∞ Compare sheet fed versus roll fed paper transport systems
- ∞ Describe duplexing of a sheet
- ∞ Identify common finishing capabilities built into digital printer
- $\infty$  Describe the imaging process of offset
- ∞ Identify common finishing capabilities built into digital printer
- ∞ Define monochrome digital printing
- ∞ Define highlight digital printing
- ∞ Define full color digital printing
- ∞ Cite examples of print applications by monochrome, highlight and full color presses
- □ Discuss the use of pantone colors in digital printing
- ∞ Explain how the simulation of Pantone colors are produced by CMYK on a digital press
- ∞ Discuss special colors and coatings used in digital printing
- $\,\,^{\odot}\,\,$  Describe the characteristics of paper that are used for digital printing versus offset
- ∞ List common weights of paper used in digital printing
- ∞ List common sizes of paper that are used in digital printing
- ∞ Explain the importance of grain direction
- Describe maximum "imaging area" versus maximum substrate size
- ∞ Describe the importance of paper conditioning prior to running the digital press
- ∞ Recognize the types of paper that are unsuitable for digital printing





- Compare the print characteristics of digital, offset and ink jet imaging technologies
  - a. What are the types of suitable substrates used in each technology
  - b. How solids reproduction compare
  - c. How screen tints compare
  - d. How halftone resolution compares
- ∞ Identify types of specialty paper that are used with digital printing
- ∞ Review range of printing speeds of digital printers
- ∞ Discuss Logical Pages per Minute
- ∞ List five vendors of digital production printing equipment
- $\infty$  Assess the quality differences of toner or inkjet ink versus offset ink.
- ∞ Estimate the acquisition costs and running costs of digital, offset and ink jet equipment
- ∞ List manpower skill requirements of operating a Digital versus offset press
- □ Describe the imaging process of inkjet

### **Printed Products**



- $\infty$  Compare the speed of completing a long run project with digital or offset printing
- ∞ Assess in-line finishing advantages of digital printing
- ∞ Develop possible customer objection and responses to using digital print
- ∞ Identify common types of printed products produced with digital printing
- ∞ Define on Demand
- Evaluate the benefits of producing exact quantities when needed versus having to inventory printed materials
- ∞ Evaluate the benefits of using variable data printing
- Recognize the levels of complexity of variable data printing from name and address to cross-media communications
- ∞ Explain the reasons that a customer would use variable data printing
- ∞ List suppliers of Variable Data Software
- ∞ Define Cross-Media Communications
- ∞ Discuss the role of digital printing in a cross-media campaign
- Evaluate the benefits to a business of a cross-media campaign that includes digital print.
- Assess the cost and production time advantage of no platemaking with digital print
- ∞ Define Print on Demand
- ∞ Explain the reasons that a customer would use variable data printing
- $\infty$  Collect examples of cross-media communications that use digital print

### Workflows



- $\infty$  Recognize common quality defects of digital printing
- ∞ Determine the benefits of proper storage of files for reprints
- ∞ Determine the benefits of proper storage of files for reprints
- ∞ Define the Adobe Portable Document Format (PDF)
- ∞ Review the PDF settings of creating a file for digital print
- ∞ Discuss how bleeds are created when creating a project for digital printing
- ∞ Determine how a bound document is created for digital printing
- Review bitmap resolution requirements when creating a project for digital printing
- ∞ Review color management capabilities of a digital printer
- ∞ Contrast color management capabilities of digital printing versus offset
- ∞ Explain the use of a spectrophotometer





- ∞ Describe FTP (File Transport Protocol)
- ∞ List common features and functions of a Web to Print system
- ∞ Define preflighting of a file
- $\infty$  Record common file issues discovered during preflight
- ∞ Define imposition
- ∞ Compare imposition that is performed in prepress versus at digital printer
- ∞ Explain how proofs are used in a digital printing workflow
- ∞ Identify the steps to produce traditional proofs versus one made on a digital printer
- ∞ Evaluate the quality of a traditional proof versus one made on a digital printer
- ∞ Define print queue
- ∞ Determine how a print queue is created
- ∞ Explain how print queues can be optimized by a digital press operator
- ∞ Review print shop quality control Standard Operating Procedures (SOP)
- ∞ Discuss quality systems used in digital printing operation (ISO, Six Sigma, TQM)

### **Operations**



- ∞ Describe a job ticket
- ∞ Determine job specifications from a job ticket
- ∞ Program digital printer based on job specifications from a job ticket
- ∞ Discuss Job Definition Format (JDF)
- ∞ Review maintenance procedures for a digital press
- ∞ Review maintenance procedures for a digital press
- ∞ Compare maintenance procedures of digital printing versus offset
- ∞ Describe calibration procedures for a digital press
- ∞ Compare calibration procedures of digital printing versus offset
- ∞ List common work responsibilities of digital press operator
- ∞ Identify skill requirements of a digital press operator
- ∞ Determine sources of training received by digital press operator
- ∞ Define a production metric used in the printing industry
- ∞ Discuss capacity and production planning
- Review common production metrics that are used to gauge performance of digital printing operation
- ∞ Compare production metrics of digital printing and offset printing
- ∞ Determine ideal temperature and humidity of digital pressroom
- $\infty$  Cite common printing issues that occur when temperature and humidity are not ideal
- ∞ Design a physical layout of digital pressroom
- ∞ Identify skill requirements of a digital press operator





### **Finance**



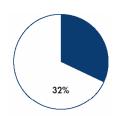
- ∞ Explain why digital printing is less expensive when low quantities are required
- ∞ Identify the costs of a digital press operation
- ∞ Identify the costs of a digital press operation
- ∞ Review the costs of several digital presses
- ∞ Review the costs of digital printing accessories
- ∞ Compare leasing versus a purchase of a digital press
- ∞ Review a leasing contract
- ∞ Discuss Cost per Copy
- ∞ Review a maintenance contract
- ∞ Define estimating a printed project
- Review estimating procedures of digital printing
- ∞ Develop a typical estimate for several different types of projects
- $\infty$  Identify computer aided estimating systems.
- ∞ Review estimating procedures of digital printing

### **Math and Measurement**



- ∞ Solve addition of whole number problems two and three digits
- $\infty$  Solve addition of whole number problems two and three digits
- ∞ Solve multiplication of whole numbers two and three digits

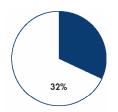
**SkillsUSA** is of the understanding that students who take the PrintED/SkillsUSA Digital Production Printing Career Essentials Assessment have been enrolled in a digital production printing training program with the following competencies embedded within the curriculum.



# **Competency Area 1: Technology**

# **Knowledge Check**

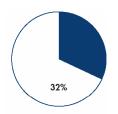
Ho	w well do you know how to:	Very Well	Somewhat Well	Not Well
1.	Describe the imaging process of production tonner based (electrophotography) a. Electrostatic Charging	а	а	-
	b. Laser or LED imaging			
	c. Toner attraction			
	d. Transfer		ū	ī
	e. Fusing			
2.	Contrast the environmental impact of operating			
	digital versus offset equipment?			
3.	Discuss the purpose of a Raster Image Processor (RIP)	? 🗆		
4.	Illustrate a flowchart of steps on how a RIP prepares			
	a file for printing?			
5.	Identify features and functions of a RIP?			
6.	Describe the sheet fed paper transport of a digital pres	ss?		
7.	Contrast friction feed versus vacuum feed?			
8.	Describe roll fed paper transport of a digital press?			
9.	Compare sheet fed versus roll fed paper transport	_	_	_
	systems?			
10.	Describe duplexing of a sheet?			
11.	Identify common finishing capabilities built into			
	digital printer?			
12.	Describe the imaging process of offset?			
13.	Identify common finishing capabilities built into	-	-	-
	digital printer?			



# **Competency Area 1: Technology**

# **Knowledge Check**

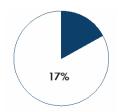
How well do you know how to: 14. Define monochrome digital printing?	Very Well □	Somewhat Well	Not Well
15. Define highlight digital printing?			
16. Define full color digital printing?			
17. Cite examples of print applications by monochrome, highlight and full color presses?			
18. Discuss the use of pantone colors in digital printing?			
19. Explain how the simulation of Pantone colors are produced by CMYK on a digital press?			
20. Discuss special colors and coatings used in digital printing?			
21. Describe the characteristics of paper that are used for digital printing versus offset?			
22. List common weights of paper used in digital printing	? 🗆		
23. Explain the importance of grain direction?			
24. Describe maximum "imaging area" versus maximum substrate size?			
25. Describe the importance of paper conditioning prior to running the digital press?			
26. Recognize the types of paper that are unsuitable for d printing?	igital		



# **Competency Area 1: Technology**

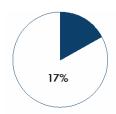
# **Knowledge Check**

How well do you know how to:  27. Compare the print characteristics of digital, offet and ink jet imaging technologies	Very Well	Somewhat Well	Not Well
<ul><li>a. What are the types of suitable substrates used in each technology?</li><li>b. How solids reproduction compares?</li><li>c. How halftone resolution compares?</li></ul>			
28. Identify types of specialty paper that are used with digital printing?			
29. Review range of printing speeds of digital printers?			
30. Discuss Logical Pages per Minute?			
31. List five vendors of digital production printing equipment?			
32. Assess the quality differences of toner or inkjet versus offset ink?			
33. Estimate the acquisition costs and running costs of digi offset and ink jet equipment?	tal,		
34. List manpower skill requirements of operating a Digital versus offset press?			
35. Describe the imaging process of inkjet?			



# Competency Area 2: Printed Products Knowledge Check

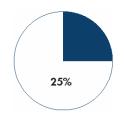
#### How well do you know how to: Very Well Somewhat Well Not Well 1. Compare the speed of completing a long run project with digital or offset printing? 2. Assess in-line finishing advantages of digital printing? 3. Develop possible customer objection and responses to using digital print? 4. Identify common types of printed products produced with digital printing? 5. Define on Demand? 6. Evaluate the benefits of producing exact quantities when needed versus having to inventory printed materials? 7. Evaluate the benefits of using variable data printing? 8. Recognize the levels of complexity of variable data printing from name and address to cross-media communications? 9. Explain the reasons that a customer would use variable data printing? 10. List suppliers of Variable Data Software? 11. Define Cross-Media Communications? 12. Discuss the role of digital printing in a cross-media campaign?



### **Competency Area 2: Printed Products**

# **Knowledge Check**

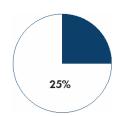
How well do you know how to:	Very Well	Somewhat Well	Not Well
13. Evaluate the benefits to a business of a cross-media campaign that includes digital print?			
14. Assess the cost and production time advantage			
of no platemaking with digital print?			
15. Define Print on Demand?			
16. Explain the reasons that a customer would use variable data printing?			
17. Collect examples of cross-media communications that use digital print?		0	



# **Competency Area 3: Workflows**

# **Knowledge Check**

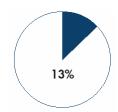
	ow well do you know how to:	Very Well	Somewhat Well	Not Wel
1.	Recognize common quality defects of digital printing?			
2.	Determine the benefits of proper storage of files for reprints?	П		
3.	List print shop file Standard Operating Procedures (SOP)?			
4.	Define the Adobe Portable Document Format (PDF)?			
5.	Review the PDF settings of creating a file for digital print?			
6.	Discuss how bleeds are created when creating a project for digital printing?	О		
7.	Determine how a bound document is created for digital printing?			
8.	Review bitmap resolution requirements when creating a project for digital printing?	g 		
9.	Review color management capabilities of a digital printer?			
10	. Contrast color management capabilities of digital printing versus offset?			
11	. Explain the use of a spectrophotometer?			
12	Evaluate color output of digital and offset printing?			
13	. Identify common methods of transporting a file from customer to print shop?			
14	. Describe FTP (File Transport Protocol)?			



### **Competency Area 3: Workflows**

### **Knowledge Check**

How well do you know how to: 15. Describe a Web to Print system?	Very Well  ☐	Somewhat Well  ☐	Not Well □
16. List common features and functions of a Web to Print system?			
17. Define preflighting of a file?			
18. Record common file issues discovered during preflight	t? 🗆		
19. Define imposition?			
20. Compare imposition that is performed in prepress versus at digital printer?			
21. Explain how proofs are used in a digital printing workflow?			
22. Identify the steps to produce traditional proofs versus one made on a digital printer?			
23. Evaluate the quality of a traditional proof versus one made on a digital printer?			
24. Define print queue?			
25. Determine how a print queue is created?			
26. Explain how print queues can be optimized by a digitative press operator?	al 🗆		0
27. Review print shop quality control Standard Operating Procedures (SOP)?			
28. Discuss quality systems used in digital printing operation (ISO, Six Sigma, TQM)?			



# **Competency Area 4: Operations**

# **Knowledge Check**

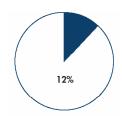
	ow well do you know how to: Describe a job ticket?	Very Well □	Somewhat Well	Not Wel
2.	Determine job specifications from a job ticket?			
3.	Program digital printer based on job specifications from a job ticket?			
4.	Discuss Job Definition Format (JDF)?			
5.	Review maintenance procedures for a digital press?			
	Compare maintenance procedures of digital printing			
7.	versus offset?			
8.	List common work responsibilities of digital press operator?			
9.	Identify skill requirements of a digital press operator?			
10	Determine sources of training received by digital press operator?			
11	Define a production metric used in the printing industry?			
12	. Discuss capacity and production planning?			
13	Review common production metrics that are used to gauge performance of digital printing operation?			
14	. Compare production metrics of digital printing and offset printing?			



# **Competency Area 4: Operations**

# **Knowledge Check**

How well do you know how to:	Very Well	Somewhat Well	Not Well
15. Determine ideal temperature and humidity of digital pressroom?			
16. Cite common printing issues that occur when temperature and humidity are not ideal?	0		
17. Design a physical layout of digital pressroom?			
18. Identify skill requirements of a digital press operator?			



### **Competency Area 5: Finance**

# **Knowledge Check**

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Explain why digital printing is less expendigular quantities are required?	sive when low		
2. Identify the costs of a digital press operation	tion?		
3. Review the costs of several digital presses	s? $\square$		
4. Review the costs of digital printing access	sories?		
5. Define leasing?			
6. Compare leasing versus a purchase of a c	ligital press?		
7. Review a leasing contract?			
8. Discuss Cost per Copy?			
9. List items covered under maintenance ter	ms?		
10. Review a maintenance contract?			
11. Define estimating a printed project?			
12. Review estimating procedures of digital p	orinting?		
13. Develop a typical estimate for several diff	ferent type? □		
14. Identify computer aided estimating system	ms?		
15. Review estimating procedures of digital p	orinting?		



# Competency Area 6: Math and Measurement Knowledge Check

	ow well do you know how to:	Very Well	Somewhat Well	Not Well
1.	Solve addition of whole number problems: two and three digits?			
2.	Solve multiplication of whole numbers: two and three digits?			

# Helpful Tips and Reminders for Students

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

Access the Web link http://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 <a href="http://www.careeressentials.org/wp-content/uploads/2017/07/Permitted-Testing-Tools-Aids.pdf">http://www.careeressentials.org/wp-content/uploads/2017/07/Permitted-Testing-Tools-Aids.pdf</a> 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: Assessments does not penalize you for guessing, and you may guess correctly!

# Sample Assessment Questions

### Question 1

Use the chart to determine the price for ten coil-bound booklets; each booklet contains 20 one-sided US. Letter pages, printed on 200 bond. Include additional charges of \$3.99 per booklet for coil binding

8	Price List for Pri .5 x 11, 20# bond	
Quantity	Price per Page	Finishing
1 - 50	\$0.42	Cover Bind \$3.29
51 - 100	\$0.37	Coil Bind \$3.99
101 - 500	\$0.32	Comb Bind \$3.99
501 – 1,000	\$0.27	Hole Punch \$0.25
1,001 - 2,000	\$0.23	Stapling \$0.25
2,001 - 5,000	\$0.21	Cover Stock \$0.50
5,001 - 10,000	\$0.10	Cutting \$0.10
		Folding \$0.03

### Choose one answer

A. \$39.60

B. \$79.20

C. \$103.90°

D. \$116.90

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > E Financial. > E139 Develop a typical estimate for several different types of projects

### Question 2

### Which built-in finishing capability is most likely to be found on a digital press?



### Choose one answer

- A. Impact numbering block
- B. Laser die cutting
- C. Embossing
- D. Saddle stitching\*

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > A Technology. > A19 Identify common finishing capabilities built into digital printer

### Question 3

Which statement best explains why digital presses require less set-up time than offset presses?





### Choose one answer

- A. Paper used by digital presses is less expensive
- B. No need to create and mount a printing plate\*
- C. Digital press operators are more skilled
- D. The inks used for digital printing are less expensive.

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > A Technology. > A8 Estimate the acquisition costs and running costs of digital, offset and ink jet equipment

### Question 4

Which phrase best describes the printing process used to output the postcards below?



### Choose one answer

- A. Converting
- B. Work-in-progress
- C. Imposition
- D. Variable Data Printing®

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > B Printed Products > 858 Define variable data printing

### Question 5

### Which option describes a print queue?



#### Choose one answer

- A. A color-accurate simulation of a printed job, as displayed on a computer monitor
- B. Multiple end-users who are waiting for their print job to be produced
- C. Printer function that resends all cancelled print jobs
- D. A user-manageable list of print-ready jobs held at the RIP\*

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > C Workflows. > C93 Define print queue

### Question 6

Which term correctly identifies the print quality defect shown on the image on the right?





#### Choose one answer

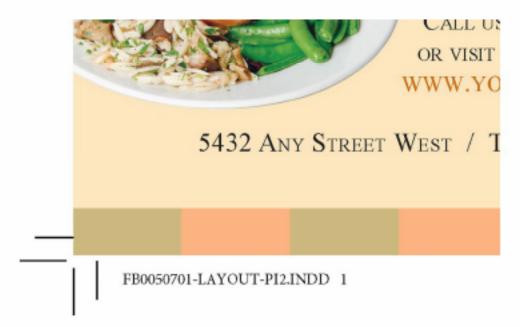
- A. Ghosting
- B. Mottle
- C. Banding
- D. Misregistration\*

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > C Workflows. > C100 Recognize common quality defects of digital printing

### Question 7

When setting up a digital press to run a job with bleeds, which of the following situations will cause the job to print incorrectly?



#### Choose one answer

- A. Paper and final trim size are same\*
- Paper size larger than final trim size of job
- C. Paper is heavy weight:
- D. Bleed is one-eighth inch

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > D Operations. > D107 Program digital printer based on job specifications from a job ticket

### Question 8

### The primary purpose of a job ticket is to:

RE FOR PRIN	QUI	EST NG SERVICES
Client Info:		
Name:		
Company:		
Shipping Address 1:		
Shipping Address 2:		
Phone (day):		
Phone (night):		
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Large Format Printing		_
		_
Heavy Weight Coated bee		П
Photo-Quality Paper	Mount on Four Core	
	Mount on Gator Board	
☐ Vingl Bonecr Material	Grommets for Banners	975
☐ Vingl Bonecr Material		
☐ Vingl Banner Material ☐ Translucent Back-Lit Met	print	
☐ Vingl Borner Material ☐ Translucent Back-Lit Mate Mappings	(Ault about other materials are	
	Dalk about other materials and   Return by Messenger	
	Data about other materials are   Roturn by Missouraper   Client Account	
□ Vinyl Banner Material □ Translucent Back-Lit Met Skipping: □ Held for Pick-Up	Dalk about other materials and   Return by Messenger	Lop
Virgi Banner Material   Translucent Back-Lit Met   Migging:   Held for Pick-Up   Fed Ex   Accesser   2nd Doy	Duk about other materials an   Return by Messenger   Client Account   Standard Oversight	
Vinel Barner Material   Translacent Back-Lit Mets   Material Back-Lit Mets   Metal for Pick-Lip   Fed Ea	Duk about other materials an   Return by Messenger   Client Account   Standard Overnight   Express Saver Old day	Lop
Translucent Back-Lit Meb Slipping   Blobt for Pick-Up   Ped Ex	Dali, about other materials an   Roturn by Messenger   Client Account   Standard Overnight   Express Sover Cled day	4

### Choose one answer

- A. Determine the price of a project
- B. List all materials and worldlow steps of a project\*
- C. Verify the customer's name and payment information
- D. Keep track of employee overtime

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > D Operations. > 0:105 Describe a job ticket

### Question 9

A ream of paper contains 500 sheets. You've been asked to produce 100 copies of a booklet, where each booklet will consume 50 sheets from the ream. How many reams will you need?



#### Choose one answer

- A. 10"
- B. 2D
- C. 100
- D. 500

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > F math and Measurement. > F142. Solve multiplication of whole numbers — two and three digits

### Question 10

For digital presses, what is a likely cause of excessive maintenance?

### Choose one answer

- A. Large build-up of paper dust\*
- B. Using paper that is past its expiration date
- C. Pressroom air-conditioning turned down too low
- D. Running large amounts of color papers

### Mapped skill standards

Digital Production Printing - Skill Connect Assessment Blueprint > D Operations. > D109 Review maintenance procedures for a digital press

### 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.

### **Digital Production Printing Resources:**

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