

# For Use with the SkillsUSA Career Essentials: Assessment

Discover, Develop and Validate Students' Knowledge and Skill

SCREEN PRINTING ASSESSMENT

### **Introduction to SkillsUSA Career Essentials: Assessment**

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: Assessment 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

### **Table of Contents**

| What are Career Essentials: Assessments?  | 4 |
|---|---|
| Using this Career Essentials: Assessment  | 4 |
| Preparing Students for the Career Essentials: Assessment                                    | 5 |
| Workplace-Ready Skills6   | 6 |
| Assessment Competency Areas   | 7 |
| Academic Core and Critical Skill Areas  | 7 |
| Connections to National Standards   | 7 |
| Student Tools: Access Directions for the Trade- or Technical Specific Online 10-Item Demo 8 | 8 |
| Student Tools: Test-Taking Reminders 8  | 8 |
| Student Testing Tips  | 8 |
| Student Tools: Screen Printing Blueprint and Competency Area Knowledge Checksheets9         | 9 |
| Summary and Quick Glance Testing Reminders9   | 9 |
| Screen Printing Blueprint   | 0 |
| Knowledge Checksheets   | 4 |
| Helpful Tips and Reminders for Students   | 1 |
| Sample Assessment Questions   | 2 |
| Resources   | 0 |

### 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. 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. 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: Assessment 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: Assessment 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 tradeor technical-specific Career Essentials: Assessment 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: Assessment 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: Assessment, 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: Assessment website for more information:

www.careeressentials.org/assessments

The Employability Assessment is *not* intended to familiarize students with the screen printing 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 Screen Printing 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 Screen Printing**

| Competency                     | Percentage of Area<br>Assessment |
|--------------------------------|----------------------------------|
| Technology                     | 12%                              |
| Design and Prepress            | 19%                              |
| Frame and Mesh Preparation     | 7%                               |
| Stencil and Screen Preparation | 13%                              |
| Print Production               | 32%                              |
| Cleanup Process                | 11%                              |
| Math and Measurement           | 6%                               |

### **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 screen printing training program and assessment:

None identified

### **Connections to National Standards**

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

### **Math Standards**

- Numbers and operations
- Algebra

- Geometry
- Measurement
- Data analysis and probability
- 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**

None identified.

Source: McREL compendium of national science standards. To view and search the compendium, visit: <a href="https://www2.mcrel.org/compendium/">www2.mcrel.org/compendium/</a>.

### **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 apply knowledge of language structure, language conventions (e.g., spelling

- and punctuation), media techniques, figurative language and genre to create, critique and discuss print and nonprint texts.
- Students conduct research on issues and interests by generating ideas and questions and by posing problems. They gather, evaluate and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, and people) to communicate their discoveries in ways that suit their purpose and audience.
- 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 participate as knowledgeable, reflective, creative and critical members of a variety of literacy communities.
- 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 www.careeressentials.org/assessments/demo-our-assessments/ into their browser. The sample programmatic questions will give you and your students an idea of the types of questions on the assessment and how the questions are generally written.

### **Student Tools:**

### **Test-Taking Reminders**

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

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

### **Student Testing Tips**

The most important tip for your students is to be prepared mentally and physically for the testing session. Make sure to tell them to get plenty of rest and eat healthy. Suggest they wear comfortable and appropriate clothing to the testing session. If they are able to bring items to the testing session, such as a non-programmable calculator, make sure they have the items ready the night before. Have students check our website at <a href="https://www.careeressentials.org/wp-content/uploads/2017/07/Permitted-Testing-Tools-Aids.pdf">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 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:**

### Screen Printing Blueprint and Competency Area Knowledge Checksheets

The next section provides the assessment blueprint and detailed topics within each competency area covered within the screen 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 screen printing assessment.

## **Summary and Quick Glance Testing Reminders**

The Career Essentials: Assessment 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: Assessment 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.





### **Screen Printing Blueprint**

The PrintED/SkillsUSA Screen Printing Technology competencies encompass the knowledge and skill set a student should master to exhibit proficiency in screen printing technology. The PrintED/SkillsUSA Screen Printing Technology Career Essentials Assessment test questions align with the PrintED/SkillsUSA Screen Printing Technology competencies.

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

Note: To fully prepare for Screen Printing 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.

### **Technology**

- Describe the screen printing process
- List the advantages of screen printing process versus offset lithography or digital printing: a. Size of image; b. Type of substrate; c. Ink density (Four Color Process vs. Spot PMS colors); d. Special inks; e. Cost of equipment
- Describe the components of a screen printing press: a. Frame; b. Mesh; c. Squeegee blade



- Compare the features and specifications of three different types of automated screen printing
- Describe the workflow steps of screen printing process (Single color/inline or rotary press): a. File creation; b. Film output; c. Screen creation; d. Mounting screen on press; e. Print production; f. Cleanup
- List common products produced by screen printing
- Assess the purpose and quality of each sample collected

### **Design and Prepress**

- Review features and capabilities of professional Page Layout software applications:
   Adobe Illustrator
- Demonstrate use of computer menus, shortcut keys and panels in illustration software
- Describe the different types of graphics used in screen printing: a. Line art; b.
   Continuous tone; c. Raster; d. Vector
- Define Lines per Inch Resolution (Printing Press)
- Explain the use of an EPS file
- Demonstrate the proper setup of a document using an instructor specified page size
- Describe the use of paths in an illustration software program
- Define trapping
- Define overprint
- Discuss the use of layers in an illustration software program
- Define registration
- Describe frame, stencil and mesh
- Determine job specifications from a job ticket/docket







### Frame and Mesh Preparation



- List different mesh counts and thread diameters and mesh type (Calendared, Steel, Fabric)
- List different frame types/construction
- Describe the use of a tension meter

### **Stencil and Screen Preparation**

- Specify the workflow steps used to make a screen
- Describe emulsion used to make a screen (capillary, liquid and film)
- Explain the use of emulsion when making a screen
- Describe requirements to prepare the screen for a stencil application
- Demonstrate the proper application of emulsion to the screen
- Demonstrate the proper steps of exposing the screen while maintaining screen to screen registration
- Demonstrate the proper steps of washing image area of a screen and allowing to dry
- Demonstrate the proper steps of washing image area of a screen and allowing to dry
- Specify the possible defects that will affect the quality of print

#### **Print Production**

- List the workflow steps used during printing
- Describe characteristics of squeegees used: a. Durometer; b. Shape; c. Width
- Demonstrate the proper choice of squeegee for a specific job
- List the types of ink used in screen printing
- Choose the proper choice of ink for a specific job
- Demonstrate confirmation of correct ink specifications from a job ticket
- Describe the alignment of screens for proper registration
- Define flood stroke
- Define print stroke
- Define off contact and peel
- Demonstrate the proper setting of off contact to control image quality
- Demonstrate the proper application of ink to screen
- Demonstrate the proper loading and alignment of substrate on press
- Demonstrate the proper adjustment of squeegee pressure for an instructor specified job
- Demonstrate proper operation of press
- Determine corrective actions required to maintain quality
- Describe drying systems: a. Flash; b. Conveyor
- Evaluate an instructor specified finished product





### Career Essentials: Assessments



### **Cleanup Process**

- Describe a Safety Data Sheet
- Explain the use of Safety Data Sheet
- Demonstrate the proper procedures when handling cleaning chemicals
- Demonstrate the proper removal, cleaning and storing of squeegee(s)
- Demonstrate the proper removal of remaining ink from screen
- Demonstrate the proper cleansing of screen equipment
- Demonstrate the proper storage or disposal of ink as specified by local regulations
- Demonstrate the proper preparation of screen for reuse or reclamation
- List possible defects in a screen
- Demonstrate the proper chemical or mechanical adjustments to screen for reuse
- Demonstrate the proper storage of screen

### **Math and Measurement**

Solve addition of fraction problems



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

### **Connections to National Standards**

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

### **Math Standards**

- · Numbers and operations
- Algebra
- Geometry
- Measurement
- · Data analysis and probability
- 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**

None identified.

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

### **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 apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language and genre to create, critique and discuss print and nonprint texts.
- Students conduct research on issues and interests by generating ideas and questions and by posing problems. They gather, evaluate and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, and people) to communicate their discoveries in ways that suit their purpose and audience.
- 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 participate as knowledgeable, reflective, creative and critical members of a variety of literacy communities.
- 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.



## **Competency Area 1: Technology**

## **Knowledge Check**

|  | Very Well | Somewhat Well | Not Wel |
|--|-----------|---------------|---------|
| How well do you know how to:  1. Describe the screen printing process?   |           |               |         |
| <ul> <li>2. List the advantages of screen printing process versu offset lithography or digital printing <ul> <li>a. Size of image?</li> <li>b. Type of substrate?</li> <li>c. Ink density (Four Color Process vs. <ul> <li>Spot PMS colors)?</li> <li>d. Special inks?</li> <li>e. Cost of equipment?</li> </ul> </li> </ul></li></ul> | s         |               |         |
| <ul><li>3. Describe the components of a screen printing press a. Frame?</li><li>b. Mesh?</li><li>c. Squeegee blade?</li></ul>  |           |               |         |
| 4. Define direct-to-screen?  |           |               |         |
| 5. Compare the features and specifications of three different types of automated screen printing?  | fer-      |               |         |
| <ul> <li>6. Describe the workflow steps of screen printing processingly color/inline or rotary press)</li> <li>a. File creation?</li> <li>b. Film output?</li> <li>c. Screen creation?</li> <li>d. Mounting screen on press?</li> <li>e. Print production?</li> <li>f. Cleanup?</li> </ul>   | cess      |               |         |
| 7. List common products produced by screen printing?   | ·         |               |         |
| 8. Assess the purpose and quality of each sample collected?  |           |               |         |



## **Competency Area 2: Design and Prepress**

## **Knowledge Check**

|   |                               | Very Well | Somewhat Well | Not Well |
|---|-------------------------------|-----------|---------------|----------|
| How well do you know how  1. Review features and capa Page Layout software app tor?   | abilities of professional     |           |               |          |
| 2. Demonstrate use of compand panels in illustration  |                               |           |               |          |
| <ul><li>3. Describe the different type screen printing</li><li>a. Line art?</li><li>b. Continuous tone?</li><li>c. Raster?</li><li>d. Vector?</li></ul> | oes of graphics used in       |           |               |          |
| 4. Define Lines per Inch Re   | solution (Printing Press)?    |           |               |          |
| 5. Explain the use of an EPS  | S file?                       |           |               |          |
| 6. Demonstrate the proper an instructor specified pa  |                               |           |               |          |
| 7. Describe the use of paths program?   | s in an illustration software |           |               |          |
| 8. Define trapping?   |                               |           |               |          |
| 9. Define overprint?  |                               |           |               |          |
| 10. Discuss the use of layers program?  | in an illustration software   |           |               |          |
| 11. Define registration?  |                               |           |               |          |
| 12. Describe frame, stencil an  | nd mesh?                      |           |               |          |
| 13. Determine job specificatio  | ns from a job ticket/docket?  |           |               |          |
|   |                               |           |               |          |



## Competency Area 3: Frame and Mesh Preparation Knowledge Check

|   | Very Well | Somewhat Well | Not Well |
|---|-----------|---------------|----------|
| How well do you know how to:  | 1         |               |          |
| 1. List different mesh counts and thread diameters and mesh type (Calendared, Steel, Fabric)? |           |               |          |
| 2. List different frame types/construction?   |           |               |          |
| 3. Describe the use of a tension meter?   |           |               |          |
|   |           |               |          |



## Competency Area 4: Stencil and Screen Preparation Knowledge Check

|    |  | Very Well | Somewhat Well | Not Well |
|----|--|-----------|---------------|----------|
|    | ow well do you know how to:  Specify the workflow steps used to make a screen?                       |           |               |          |
| 2. | Describe emulsion used to make a screen (capillary, liquid and film)?                                |           |               |          |
| 3. | Explain the use of emulsion when making a screen?  |           |               |          |
| 4. | Describe requirements to prepare the screen for a stencil application?                               |           |               |          |
| 5. | Demonstrate the proper application of emulsion to the screen?  |           |               |          |
| 6. | Demonstrate the proper steps of exposing the screen while maintaining screen to screen registration? |           |               |          |
| 7. | Demonstrate the proper steps of washing image area of a screen and allowing to dry?                  | О         |               |          |
| 8. | Demonstrate the proper steps of washing image area of a screen and allowing to dry?                  | П         |               |          |
| 9. | Specify the possible defects that will affect the quality of print?                                  |           |               |          |
|    |  |           |               |          |



## **Competency Area 5: Print Production**

## **Knowledge Check**

|   | Very Well    | Somewhat Well | Not Well |
|---|--------------|---------------|----------|
| How well do you know how to:  1. List the workflow steps used during printing?  |              |               |          |
| <ul><li>Describe characteristics of squeegees used:</li><li>a. Durometer?</li><li>b. Shape?</li><li>c. Width?</li></ul> |              |               |          |
| 3. Demonstrate the proper choice of squeegee for a specific job   | o?           |               |          |
| 4. List the types of ink used in screen printing?   |              |               |          |
| 5. Choose the proper choice of ink for a specific job?  |              |               |          |
| 6. Demonstrate confirmation of correct ink specifications from job ticket?  | a $\Box$     |               |          |
| 7. Describe the alignment of screens for proper registration?   |              |               |          |
| 8. Define flood stroke?   |              |               |          |
| 9. Define print stroke?   |              |               |          |
| 10. Define off contact and peel?  |              |               |          |
| 11. Demonstrate the proper setting of off contact to control imaginality?   | ge 🗖         |               |          |
| 12. Demonstrate the proper application of ink to screen?  |              |               |          |
| 13. Demonstrate the proper loading and alignment of substrate of press?   | on $\square$ |               |          |
| 14. Demonstrate the proper adjustment of squeegee pressure for an instructor specified job?                             |              |               |          |
| 15. Demonstrate proper operation of press?  |              |               |          |
| 16. Determine corrective actions required to maintain quality?  |              |               |          |
| <ul><li>17. Describe drying systems</li><li>a. Flash?</li><li>b. Conveyor?</li></ul>                                    |              |               |          |
| 18. Evaluate an instructor specified finished product?  |              |               |          |



## **Competency Area 6: Cleanup Process**

## **Knowledge Check**

| Harry model do seem harry harry ha  | Very Well | Somewhat Well | Not Well |
|---|-----------|---------------|----------|
| How well do you know how to:  1. Describe a Safety Data Sheet?                          |           |               |          |
| 2. Explain the use of Safety Data Sheet?  |           |               |          |
| 3. Demonstrate the proper procedures when handling cleaning chemicals?                  | ng 🗖      |               |          |
| 4. Demonstrate the proper removal, cleaning and storing of squeegee(s)?                 | or-       |               |          |
| 5. Demonstrate the proper removal of remaining inleftom screen?                         |           |               |          |
| 6. Demonstrate the proper cleansing of screen equipment?                                | p-        |               |          |
| 7. Demonstrate the proper storage or disposal of inlass specified by local regulations? | k 🗇       |               |          |
| 8. Demonstrate the proper preparation of screen for reuse or reclamation?               |           |               |          |
| 9. List possible defects in a screen?   |           |               |          |
| 10. Demonstrate the proper chemical or mechanical adjustments to screen for reuse?      |           |               |          |
| 11. Demonstrate the proper storage of screen?   |           |               |          |
|   |           |               |          |



## Competency Area 6: Math and Measurement Knowledge Check

|   | Very Well | Somewhat Well | Not Well |
|---|-----------|---------------|----------|
| How well do you know how to:            |           |               |          |
| 1. Solve addition of fraction problems? |           |               |          |
|   |           |               |          |
| 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.

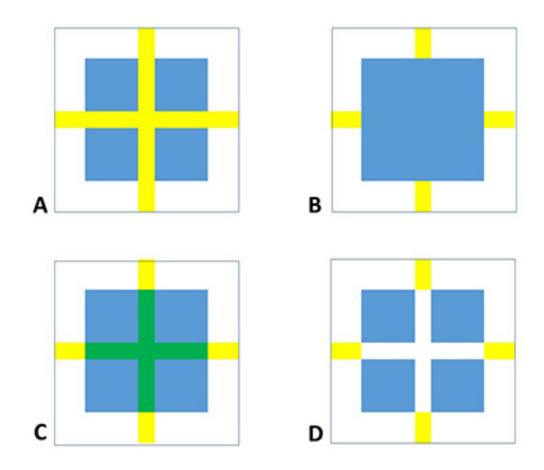
If all else fails — *guess*. After you have exhausted all options, take your best guess at the correct answer. If you have studied the content area, you may intuitively know the correct answer. The Career Essentials: Assessment does not penalize you for guessing, and you may guess correctly!

## Sample Assessment Questions

### **Questions for Screen Printing TEACHER PREP**

### Question 1

Identify the image that shows a yellow cross trapping to a blue box.



Choose one answer

- A. \*
- В.
- C.
- D.

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > B Design and Prepress. > B20 Define trapping

Which type of frame secures mesh in place without the use of adhesives?

Choose one answer

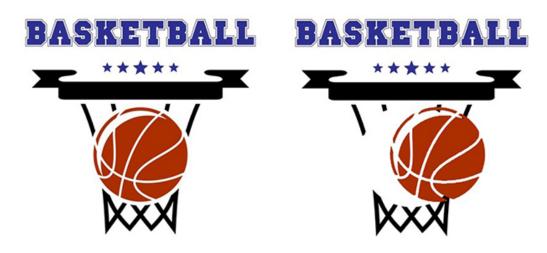
- A. Static
- B. Retensionable\*
- C. Flattening
- D. Distributed

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > C. Frame and Mesh Preparation. > C37 List different frame types/construction

### Question 3

Compared to the correct image on the left, which production problem is evident in the image on the right?



Choose one answer

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

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > D. Stencil and Screen Preparation. > D52

Demonstrate the proper steps of exposing the screen while maintaining screen to screen registration

When printing on vinyl, which type of ink will produce the best result?



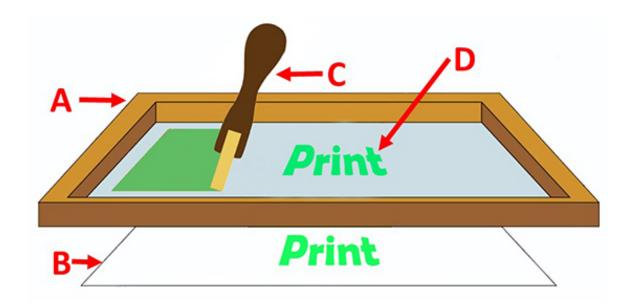
### Choose one answer

- A. UV Cure\*
- B. Aqueous
- C. Plastisol
- D. Water Based

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > A Technology. > A2 List the advantages of screen printing process versus offset lithography or digital printing: a. Size of image; b. Type of substrate; c. Ink density (Four Color Process vs. Spot PMS colors); d. Special inks e. Cost of equipment

Identify the squeegee in this image.



### Choose one answer

A.

В.

C. \*

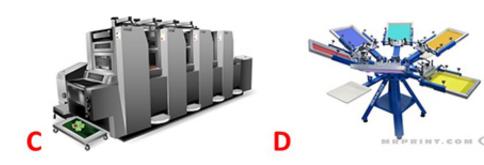
D.

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > A Technology. > A3 Describe the components of a screen printing press a. Frame b. Mesh c. Squeegee blade

Identify the image of an infrared flash dryer.





### Choose one answer

A.

В.

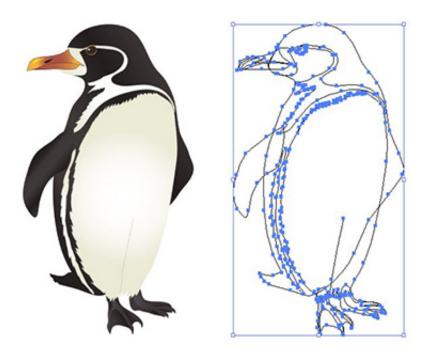
C. \*

D.

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > A Technology. > A1 Describe the screen printing process

Which option correctly identifies a graphic created from points, lines, arcs, and curves?



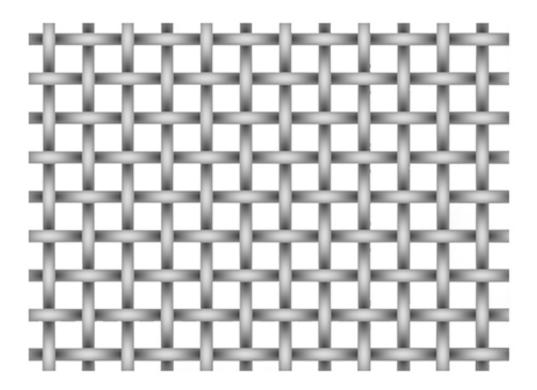
### Choose one answer

- A. Raster
- B. Vector\*
- C. Halftone
- D. Pixel

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > B Design and Prepress. > B12 Describe the different types of graphics used in screen printing a Line art b. Continuous tone c. Raster d. Vector

As screen tension is increased to an optimum level for printing, the mesh count will:



### Choose one answer

- A. Decrease\*
- B. Not change
- C. Increase
- D. Change in only one direction

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > C. Frame and Mesh Preparation. > C41 Determine how to properly tension mesh

You have been given the following information to print a T-shirt order: quantity of 100, size of artwork, ink colors, shirt color, and delivery date. Which option correctly identifies another key specification you will need to know before starting?

#### Choose one answer

- A. Name of customer who placed the order
- B. Manufacturer of shirt
- C. Projected cost per shirt
- D. Size(s) of shirts\*

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > E. Print Production. > E78 Demonstrate organization or packing of a finished product according to job ticket

### Question 10

Identify the image of an emulsion scoop coater.



### Choose one answer

- A.
- B. \*
- C.
- D.

### Mapped skill standards

Screen Printing - Skill Connect Assessment Blueprint > D. Stencil and Screen Preparation. > D50 Demonstrate the proper application of emulsion to the screen

## 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.

### **Screen Printing Resources**

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