SkillsUSA®

Career
Essentials:
Assessments

Print[ED]

Teacher Preparation Guide
For Use with the
Career Essentials: Assessments

Discover, Develop and Validate Students'
Knowledge and Skill

GRAPHIC DESIGN ASSESSMENT

Introduction to the Career Essentials: Assessments

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

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

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

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

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

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What are Career Essentials: Assessments?

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

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

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

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

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

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

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

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.   4

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

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

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

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

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

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

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

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

The Career Essentials: Assessments at a Glance

- **Select the correct assessment title. *Do not* have someone select the assessment for you, as there may be several titles that may relate to your program**

- **Review the assessment blueprint that best aligns with your existing curriculum**

- **Identify gaps in your curriculum, and use additional resources to enhance or align the curriculum**

- **Share the assessment blueprint with the students so everyone is aware of the expectation**

- **Have your students take the assessment at the beginning of their final program year as a pre-test**

- **Use pre-test data to identify learning gaps or strengths of individual students or the class**

- **Remediate the students using the data analysis from pre-test to enhance, emphasize and adjust learning objectives**

- **Have your students take the assessment a second time (as a post-test) at the end of the program year to determine learning gains/gaps**

- **Use post-test data to improve or adjust curriculum for your next program year**

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

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

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

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

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

Following the demo assessment, discuss the experience students had. What question(s) did they not understand? Did they have difficulty navigating the online system? This experience will help students be more comfortable and confident when taking the final assessment.

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

Workplace-Ready Skills
Through the Career Essentials: Assessments, you have the option for your students take an Employability Assessment. This assessments 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/assessments*

The Employability Assessment is *not* intended to familiarize students with the Graphic Design 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 Graphic Design Assessment covers several technical competency areas (unit areas). In the online assessment, these 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 Graphic Design

Competency	Percentage of Area Assessment
Understand general graphic communications industry terminology and concepts	5%
Principles and Elements of Design	20%
Type	13%
Page Layout	20%
Image Capture	11%
Digital Illustration	7%
Business Skills	7%
Portfolio	10%
Math and Measurment	7%

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 Graphic Design training program and assessment:

Math Skills
- Use fractions to solve practical problems.
- Use proportions and ratios to solve practical problems.
- Simplify numerical expressions.
- Solve practical problems involving percentages.
- Solve single variable algebraic expressions.
- Solve multiple variable algebraic expressions.
- Measure angles.
- Find surface area and perimeter of two-dimensional objects.
- Find volume and surface area of three-dimensional objects.
- Apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures.
- Construct three-dimensional models.
- Solve problems using proportions, formulas and functions.
- Take measurements with a ruler.

Science Skills
None identified.

Language Arts Skills
- Analyze mass media messages.
- Demonstrate comprehension of a variety of informational texts.
- Use print, electronic databases and online resources to access information in books and articles.
- Demonstrate narrative writing.
- Demonstrate expository writing.
- Demonstrate persuasive writing.
- Demonstrate informational writing.
- Edit writing for correct grammar, capitalization, punctuation, spelling, sentence structure and paragraphing.

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: http://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 nonprinted 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, 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 *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:
Graphic Design Blueprint and
Competency Area Knowledge Checksheets

The next section provides the assessment blueprint and detailed topics within each competency area covered within the Graphic Design 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 Graphic Design 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 Employ-ability Assessment to review navigational tools and to make students more comfort-able 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 assess-ment score report and a percentage of knowl-edge gained.

Graphic Design Blueprint

The PrintED/SkillsUSA Graphic Design competencies encompass the knowledge and skill set a student should master to exhibit proficiency in advertising & design. The PrintED/SkillsUSA Advertising & Design Skill Connect Assessment test questions align with the PrintED/SkillsUSA Graphic Design competencies.

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

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

Introduction

5%
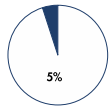
- Identify occupations that are related to graphic design
- Discuss the typical roles and responsibilities of graphic designers
- Interview an experienced graphic designer to determine a. Why they chose their profession b. Education and professional training required c. Types of communications used on the job, e.g. print, digital, large format, point of sale d. additional career information e. tools and software used

Principles and Elements of Design

20%

- Describe the basic principles of design a) Unity b) Contrast c) Proportions d) Balance e) Emphasis f) Rhythm.
- Discuss the basic principles of design from an instructor specified graphic design a) Unity b) Contrast c) Proportions d) Balance e) Emphasis f) Rhythm.
- Describe the basic elements of design a) Line b) Shape c) Direction d) Size e) Texture f) Value g) Color.
- Discuss the basic elements of design from an instructor specified graphic design example a) Line b) Shape c) Direction d) Size e) Texture f) Value g) Color.
- Discuss the basic elements of design of an instructor specified graphic design concept example a) Message b) Color c) Typography d) Images e) Layout.
- Explain the "Design Thinking" six-step process 1. Understand 2. Observe 3. Define 4. Ideate 5. Prototype and 6. Test.
- Use brainstorming techniques to develop ideas for a design concept based on a specified client need and target audience.
- Explain design rationale for the creative choice implemented during the design process e.g. thumbnails, roughs, mock-up, comprehensive layout (comp)
- Discuss the relationship between message, color, typography, images and layout.
- Describe primary, secondary, and tertiary colors including hue tint, value and shade
- Describe the effect of light and distance on color.
- Discuss additive (Red, Green, Blue) and subtractive (Cyan, Magenta, Yellow, Black) color.
- Discuss how a monitor and other visual technologies (printing, billboard, smartphone) affect color representations and perceptions.
- Explain spot color/Pantone Color System (PMS)
- Demonstrate color balance by adjusting intensity of color to render specific colors, the method often referred to as gray balance, neutral balance, or white balance.
- Describe color relationships a. Complementary b. Split-Complementary c. Double-Complementary d. Analogous, e. Monochromatic.
- Explain the concept of corporate branding
- Discuss a corporate style guide example

- Discuss how corporate branding affects consumer recognition and behavior
- Discuss a time based concept

Type

13%

- Identify the five classic typefaces, their classifications and uses to include: Garamond, Baskerville, Bodoni, Century, and Helvetica
- Define Points and Picas
- Identify a. x-height b. Meanline c. Baseline d. Ascenders e. Descenders f. Serifs g. Leading
- Discuss the roles of x-height, meanline, baseline, ascenders, Descenders, serifs and leading or spacing in measuring and designing with type
- Illustrate sample paragraph(s) using x-height, meanline, baseline, ascenders, descenders, serifs, leading
- Identify a. Caps b. Lowercase c. Uppercase d. Small Caps e. Ligatures
- Illustrate sample paragraph(s) using a. caps, b. lowercase, c. uppercase, d. small caps, e. Ligatures
- Identify a. Dingbats b Bullets c. Rules d. Glyphs e. Symbols
- Distinguish between display (headline) type and body (text) type by their point sizes, styles, and uses
- Identify type styles with a type or font family
- Identify letter a. Spacing b. Tracking c. Kerning d. Baseline shift e. Horizontal scale
- Identify a. Flush right – ragged right b. Flush right – ragged left c. Centered d. Justified e. Force Justified f. Windows g. Orphans

Page Layout

20%
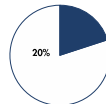
- Produce a print-ready Portable Document Format (PDF) using page layout software
- Discuss United States Postal Services (USPS) design requirements
- Create a design concept that can be used in various media a. web b. Digital distribution c. Print
- Identify within an instructor specified project examples of a. Text Blocks b. Graphics c. Frames d. Headings e. Drop caps f. Text wraps
- Design a document using specified text blocks, graphics, frames, heading, drop caps and text wraps
- Identify within an instructor specified project examples of a. Margins b. Formatting c. Gutters d. Register marks e. Trim marks f. Fold lines
- Describe trim size; bleed size; and safety area of a page
- Set page of text with specified margins, formatting, gutters and leading
- Prepare multi page layout incorporating specified register marks, trim marks and fold lines
- Proofread and edit an instructor supplied document using graphic design industry accepted methods. Make corrections /adjustments as specified by instructor
- Describe a. Grids b. Templates c. Master pages d. Paragraph style sheets e. Character style sheets
- Create a multi-page document using specified grids, templates, master pages, paragraph style sheets and character style sheets
- List the advantages/disadvantages of hard proofing versus soft proofing
- Define a native (source) file
- Preflight and package a native file
- Produce a print-ready Portable Document Format (PDF) using page layout software
- Review United States Postal Services (USPS) design requirements
- Collect examples of standard ad sizes (full=page, half-page, and quarter-page ads) form publications
- Demonstrate the use of appropriate page layout software for an instructor specified print or digital project

- Create a design concept that can be used in various media a. web b. Digital distribution c. Print

Image Capture

- Describe types of graphics a. Raster (bitmap) b. Vector c Line art
- Compare examples of various graphic file formats and their extensions a. Tiff (Tagged Image File Format) b. EPS (Encapsulated PostScript) c. BMP (Bitmap) d. PSD (Native Adobe PhotoShop) e. PNF (Portable Network Graphic) f. INDD (Native InDesign file) g. JPG (Joint Photographic Experts Guild) h. AI (Native Adobe Illustrator)
- Capture instructor specified digital images using a scanner and/or digital camera
- Demonstrate using an image editing software program a. Scaling b. Resolution c. Tone control d. Cropping e. Color correction
- Describe the minimum resolution requirements for different reproduction devices a. Screen Display b. Digital Press c. Offset Press d. Wide Format Inkjet Press
- Scale a raster image using the proper settings in order to maintain the appropriate resolution for print or digital media
- Evaluate a high and low resolution page on an instructor specified printed page
- Select and download a digital image from a stock photography website or other media that has appropriate resolution for the intended output.
- Demonstrate the use of Optical Character Recognition (OCR) software to make text editable
- Discuss Digital asset management
- Describe file naming conventions
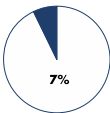
11%

Digital Illustration

- Examine, using a magnifying glass, the differences between printed raster and vector graphics
- Discuss the uses of a. Rotated b. Circled c. Extended d. Tints and Fills
- Use an appropriate graphics program to manipulate type (rotated, circled, extended, tints and fills)
- Trace a raster drawing/photograph using a vector illustration program.
- Create or edit images in a raster based program using layers
- Create a spot color illustrations or logo using pantone Matching System (PMS) or other color matching system
- Demonstrate how to view in a graphics software program or print separations of a logo created with spot colors

7%

Business Skills

- Collect needed information and complete necessary steps to complete a project from design to delivery by active interacting with a client or instructor to include: a. Project initiation (Determine client needs) b. Research (explore information provided a the initial client meeting) c. Strategy (analyze the research gathered and decide on design and functionality criteria) d. Development (mind mapping, storyboarding, free writing, layout creation) e. Presentation (review with client; make changes) e. Production/launch (implement finished piece across all deliverables) g. Completion (turn over completed project to client)
- Explain time-based, fixed fee and value based pricing of a graphic design project
- Create a written quote for a design project
- Produce an invoice for an advertising design project, identifying terms of payment
- Identify potential high-risk client who might constitute a higher financial risk for nonpayment of an invoice (new businesses, political campaigns, family/friends
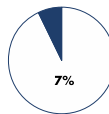- Formulate a course s of action when faced with an issue of non-payment of invoices

7%

- Determine the positives/negatives of accepting/declining prospective high risk clients who may have trouble paying for work provided

Portfolio

- Create a digital portfolio to showcase your work

10%

Math and Measurement

- Demonstrate the measurement of type in points and picas
- Converts points and pica measurements to inches
- Solve various problems that required dividing a given dimension in half
- Solve percent to decimal conversion problems
- Solve basic linear measurement problems
- Solve addition of decimal problems – two and three digits
- Solve for the cost of an estimated job

7%

SkillsUSA is of the understanding that students who take the PrintED/SkillsUSA Graphic Design Skill Connect Assessment have been enrolled in a graphic design training program with the following competencies embedded within the curriculum.

Identified Academic Skills

Math Skills
- Use fractions to solve practical problems.
- Use proportions and ratios to solve practical problems.
- Simplify numerical expressions.
- Solve practical problems involving percentages.
- Solve single variable algebraic expressions.
- Solve multiple variable algebraic expressions.
- Measure angles.
- Find surface area and perimeter of two-dimensional objects.
- Find volume and surface area of three-dimensional objects.
- Apply transformations (rotate or turn, reflect or flip, translate or slide, and dilate or scale) to geometric figures.
- Construct three-dimensional models.
- Solve problems using proportions, formulas and functions.
- Take measurements with a ruler.

Science Skills
None identified.

Language Arts Skills
- Analyze mass media messages.
- Demonstrate comprehension of a variety of informational texts.
- Use print, electronic databases and online resources to access information in books and articles.
- Demonstrate narrative writing.

- Demonstrate expository writing.
- Demonstrate persuasive writing.
- Demonstrate informational writing.
- Edit writing for correct grammar, capitalization, punctuation, spelling, sentence structure and paragraphing.

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

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Language Arts Standards
- Students read a wide range of print and nonprinted 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, 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: Introduction to Graphic Design

Knowledge Check

How well do you know how to:

		Very Well	Somewhat Well	Not Well
1.	Identify occupations that are related to graphic design.	❐	❐	❐
2.	Discuss the typical roles and responsibilities of graphic designers.	❐	❐	❐
3.	Interview an experienced graphic designer to determine:	❐	❐	❐

    a.   Why they chose their profession
    b.   Education and Professional training required.
    c.   Types of communications used on the job;
           e.g. print, digital, large format, point of sale.
    d.   Additional career information; e.g. tools and
           software used.

Areas I Need To Review:

Competency Area 2: Principles and Elements of Design

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well

1. Describe the basic principles of design:
    a.   Unity
    b.   Contrast
    c.   Proportions
    d.   Balance
    e.   Emphasis
    f.   Rhythm
	❑	❑	❑

2. Discuss the basic principles of design from an instructor specified graphic design:
    a.   Unity
    b.   Contrast
    c.   Proportions
    d.   Emphasis
    e.   Rhythm
	❑	❑	❑

3. Describe the basic element of design:
    a.   Line
    b.   Shape
    c.   Direction
    d.   Size
    e.   Texture
    f.   Value
    g.   Color
	❑	❑	❑

4. Discuss the basic elements of design from an instructor specified graphic design example:
    a.   Line
    b.   Shape
    c.   Direction
    d.   Size
    e.   Texture
    f.   Value
    g.   Color
	❑	❑	❑

Competency Area 2: Principles and Elements of Design
(continued)

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
5. Discuss the basic element of design from and instructor specified graphic design concept example: a. Message b. Color c. Typography d. Images e. Layout	❑	❑	❑
6. Explain the "Design Thinking" six-step process: 1. Understand 2. Observe 3. Define 4. Ideate 5. Prototype 6. Test	❑	❑	❑
7. Use brainstorming techniques to develop ideas for a design concept based on a specified client need and target audience.	❑	❑	❑
8. Explain design rationale for the creative choice implemented during the design process e.g. thumbnails, roughs, mock-up, comprehensive layout (comp).	❑	❑	❑
9. Discuss the relationship between message, color, typography, images and layout.	❑	❑	❑
10. Describe primary, secondary, and tertiary colors including hue, tint, value and shade.	❑	❑	❑
11. Describe the effect of light and distance on color.	❑	❑	❑
12. Discuss additive (Red, Green, Blue) and subtractive (Cyan, Magenta, Yellow, Black) color.	❑	❑	❑

Competency Area 2: Principles and Elements of Design
(continued)

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
13. Discuss how a monitor and other visual technologies (printing, billboard, smart phone) affect color representations and perceptions.	❐	❐	❐
14. Explain spot color/Pantone Color System (PMS).	❐	❐	❐
15. Demonstrate color balance by adjusting intensity of color to render specific colors, the method often referred to as gray bal ance, neutral balance, or white balance.	❐	❐	❐
16. Describe color relationships: a. Complementary b. Split-Complementary c. Double-Complementary d. Analogous e. Monochromatic	❐	❐	❐
17. Explain the concept of corporate branding.	❐	❐	❐
18. Discuss a corporate style guide example.	❐	❐	❐
19. Discuss how corporate branding affects consumer recognition and behavior.	❐	❐	❐
20. Discuss a time-based concept.	❐	❐	❐

Areas I Need To Review:

Competency Area 3:

Type

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Identify the five classic typefaces, their classifications and uses to include: a. Garamond b. Baskerville c. Bodoni d. Century e. Helvetica	❐	❐	❐
2. Define Points and Picas.	❐	❐	❐
3. Identify: a. X-height b. Meanline c. Baseline d. Ascenders e. Descenders f. Serifs g. Leading	❐	❐	❐
4. Discuss the roles of x-height, meanline, baseline, ascenders, descenders, serifs, and leading or spacing in measuring and designing with type.	❐	❐	❐
5. Illustrate sample paragraph(s) using x-height, meanline, baseline, ascenders, descenders, serifs, leading.	❐	❐	❐
6. Identify: a. Caps b. Lowercase c. Uppercase d. Small Caps	❐	❐	❐

Competency Area 3:

Type
(continued)
Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well

7. Illustrate sample paragraph(s) using:
  a. Caps
  b. Lowercase
  c. Uppercase
  d. Small caps
  e. Ligatures
	❐	❐	❐

8. Identify:
  a. Dingbats
  b. Bullets
  c. Rules
  d. Glyphs
  e. Symbols
	❐	❐	❐

9. Distinguish between display (headline) type and body (text) type by their pint sizes, styles, and uses.	❐	❐	❐
10. Identify type styles with a type of font family.	❐	❐	❐

11. Identify letter:
  a. Spacing
  b. Tracking
  c. Kerning
  d. Baseline shift
  e. Horizontal scale
	❐	❐	❐

12. Identify:
  a. Flush right – ragged right
  b. Flush right – ragged left
  c. Centered
  d. Justified
  e. Force Justified
  f. Windows
  g. Orphans
	❐	❐	❐

Areas I Need To Review:

Competency Area 4:
Page Layout

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Produce a print-ready Portable Document Format (PDF) using page layout software.	❑	❑	❑
2. Discuss United States Postal Services (USPS) design requirements.	❑	❑	❑
3. Create a design concept that can be used in various media: a. Web b. Digital distribution c. Print	❑	❑	❑
4. Identify within an instructor specified project examples of: a. Text Blocks b. Graphics c. Frames d. Headings e. Drop caps f. Text wraps	❑	❑	❑
5. Design a document using specified text blocks, graphics, frames, heading, drop caps and text wraps.	❑	❑	❑
6. Identify within an instructor specified project examples of: a. Margins b. Formatting c. Gutters d. Register marks e. Trim marks f. Fold lines	❑	❑	❑
7. Describe trim size, bleed size, and safety area of a page.	❑	❑	❑
8. Set page of text with specified margins, formatting, gutters and leading.	❑	❑	❑
9. Prepare multi page layout incorporating specified register marks, trim marks and fold lines.	❑	❑	❑

Competency Area 4:
Page Layout
(continued)
Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
10. Proofread and edit an instructor supplied document using graphic design industry accepted methods and make corrections/adjustments as specified by instructor.	❐	❐	❐
11. Describe: a. Grids b. Templates c. Master pages d. Paragraph style sheets e. Character style sheets	❐	❐	❐
12. Create a multi-page document using specified grids, templates, master pages, paragraph style sheets and character style sheets.	❐	❐	❐
13. List the advantages/disadvantages of hard proofing versus soft proofing.	❐	❐	❐
14. Define a native (source) file.	❐	❐	❐
15. Preflight and package a native file.	❐	❐	❐
16. Produce a print-ready Portable Document Format (PDF) using page layout software.	❐	❐	❐
17. Review United States Postal Services (USPS) design requirements.	❐	❐	❐
18. Collect examples of standard ad sizes (full-page, half-page, and quarter-page ads) from publications.	❐	❐	❐
19. Demonstrate the use of appropriate page layout software for an instructor specified print or digital project.	❐	❐	❐
20. Create a design concept that can be used in various media: a. Web b. Digital distribution c. Print	❐	❐	❐

Areas I Need To Review:

Competency Area 5:

Print

Knowledge Check

How well do you know how to:

		Very Well	Somewhat Well	Not Well
1.	Describe types of graphics: a. Raster (bitmap) b. Vector c. Line art	❐	❐	❐
2.	Compare examples of various graphic file formats and their extensions: a. Tiff (Tagged Image File Format) b. EPS (Encapsulated Post Script) c. BMP (Bitmap) d. PSD (Native Adobe Photo Shop) e. PNF (Portable Network Graphic) f. INDD (Native InDesign File) g. JPG (Joint Photographic Experts Guild) h. AI (Native Adobe Illustrator)	❐	❐	❐
3.	Capture instructor specified digital images using a scanner and/or digital camera.	❐	❐	❐
4,	Demonstrate using an image editing software program: a) Scaling b) Resolution c) Tone Control d) Cropping e) Color Correction	❐	❐	❐
5.	Describe the minimum resolution requirements for different reproduction devices: a. Screen Display b. Digital Press c. Offset press d. Wide Format Inkjet Press	❐	❐	❐

Competency Area 5:

Print
(continued)

Knowledge Check

		Very Well	Somewhat Well	Not Well
6.	Scale a raster image using the proper settings in order to maintain the appropriate resolution for print or digital media.	❏	❏	❏
7.	Evaluate a high and low-resolution page on an instructor specified printed page.	❏	❏	❏
8.	Select and download a digital image from a stock photography website or other media that has appropriate resolution for the intended output.	❏	❏	❏
9.	Demonstrate the use of Optical Character Recognition (OCR) software to make text editable.	❏	❏	❏
10.	Discuss Digital asset management.	❏	❏	❏
11.	Describe file naming conventions.	❏	❏	❏

Areas I Need To Review:

Competency Area 6:

Digital Illustration

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Examine, using a magnifying glass, the differences between printed raster and vector graphics.	❒	❒	❒
2. Discuss the uses of: a. Rotated b. Circled c. Extended d. Tints e. Fills	❒	❒	❒
3. Use an appropriate graphics program to manipulate type (rotated, circled, extended, tints, and fills).	❒	❒	❒
4. Trace a raster drawing/photograph using a vector illustration program.	❒	❒	❒
5. Create or edit images in a raster based program using layers.	❒	❒	❒
6. Create a spot color illustration or logo using Pantone Matching System (PMS) or other color matching system.	❒	❒	❒
7. Demonstrate how to view in a graphics software program or print separations, a logo created with spot colors.	❒	❒	❒

Areas I Need To Review:

Competency Area 7:

Business Skills

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well

1. Collect needed information and complete necessary ❒ ❒ ❒
   steps to complete a project from design to delivery by
   actively interacting with a client or instructor to include:
   - a. Project initiation (Determine client needs)
   - b. Research (explore information provided the initial client meeting)
   - c. Strategy (analyze the research gathered and decide on design and functionality criteria)
   - d. Development (mind mapping, storyboarding, free writing, layout creation).
   - e. Presentation (review with client; make changes)
   - f. Production/launch (implement finished piece across all deliverables)
   - g. Completion (turn over completed project to client)

2. Explain time-based, fixed fee and value based pricing ❒ ❒ ❒
   of a graphic design project.

3. Create a written quote for a design project. ❒ ❒ ❒

4. Produce an invoice for an advertising design project, ❒ ❒ ❒
   identifying terms of payment.

5. Identify potential high-risk client who might constitute ❒ ❒ ❒
   a higher financial risk for non-payment invoice
   (new businesses, political campaigns, family/friends).

6. Formulate a course of action when faced with a issue ❒ ❒ ❒
   of non-payment of invoices.

7. Determine the positives/negatives of ❒ ❒ ❒
   accepting/declining prospective high risk clients who
   may have trouble paying for work provided.

Areas I Need To Review:

Competency Area 8:

Portfolio

Knowledge Check

How well do you know how to:	Very Well	Somewhat Well	Not Well
1. Create a digital portfolio to showcase your work.	❐	❐	❐

Areas I Need To Review:

Competency Area 9:

Math and Measurement

Knowledge Check

		Very Well	Somewhat Well	Not Well

How well do you know how to:

		Very Well	Somewhat Well	Not Well
1.	Demonstrate the measurement of type in points and picas.	❐	❐	❐
2.	Convert points and pica measurements to inches.	❐	❐	❐
3.	Solve various problems that require dividing a given dimension in half.	❐	❐	❐
4.	Solve percent to decimal conversion problems.	❐	❐	❐
5.	Solve basic linear measurement problems.	❐	❐	❐
6.	Solve addition of decimal problems – two and three digits.	❐	❐	❐
7.	Solve for the cost of an estimated job.	❐	❐	❐

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

Question 1

How does a designer achieve balance when using a symmetrical layout?

Choose one answer

A. Text or graphics are arranged unequally on either side of an imaginary axis
B. Visual elements are mirrored from side to side or from top to bottom
C. By the use of randomly distributed shapes, color gradations, or textures
D. By the off-center, irregular placement of an odd number of disparate elements

Correct Answer: B

Mapped skill standards
Graphic Design - Career Essentials: Assessment Blueprint > B Principles and Elements of Design.
> B4 Describe the basic principles of design a) Unity b) Contrast c) Proportions d) Balance
e) Emphasis f) Rhythm.

Question 2

Which of the four letters shown in red includes an ascender?

A➝Lorem ipsum dolor sit amed◀C
B➝consectetuer adipiscing ◀D

Choose one answer

A.
B.
C.
D.

Correct Answer: C

Mapped skill standards
Graphic Design - Career Essentials:Assessment Blueprint > C Type > C33 Illustrate sample paragraph(s) using x-height, meanline, baseline, ascenders, descenders, serifs, leading

Question 3

Which statement identifies a potential concern with online portfolios?

Choose one answer

A. Too many people will see the portfolio
B. Viewers can provide feedback about the portfolio
C. Viewers may share the URL with coworkers and supervisors
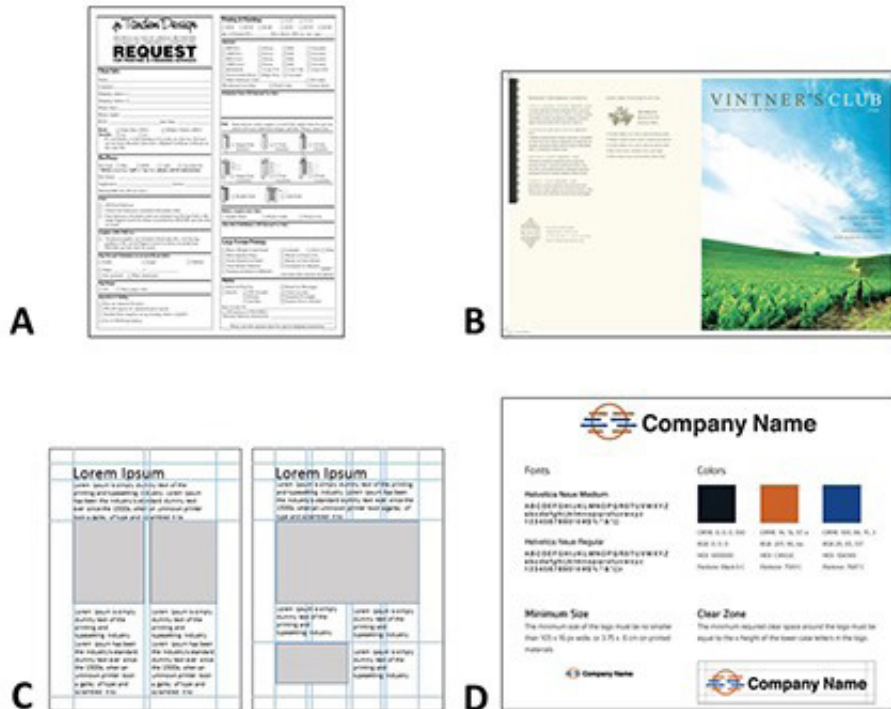D. Viewers could download and reuse your images without permission

Correct Answer: D

Mapped skill standards
Graphic Design - Career Essentials:Assessment Blueprint > H Portfolio. > H91 create a digital portfolio to showcase your work

Question 4

Which option shows an example of a Style Guide?

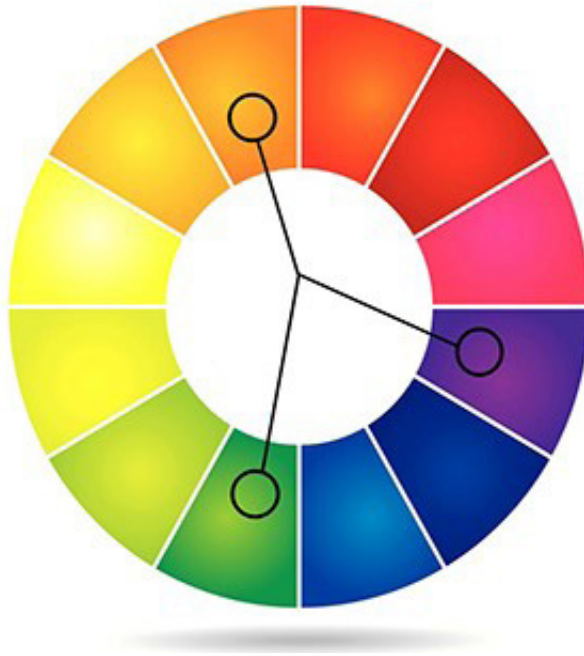Choose one answer

A.
B.
C.
D.

Correct Answer: D

Mapped skill standards
Graphic Design – Career Essentials:Assessment Blueprint > D Page Layout. > D53 Create a
multi-page document using specified grids, templates, master pages , paragraph style sheets
and character style sheets

Question 5

Which type of color relationship is shown?

Choose one answer

A. Double-Complementary
B. Split-complementary
C. Analogous
D. Monochromatic

Correct Answer: B

Mapped skill standards
Graphic Design – Career Essentials: Assessment Blueprint > B Principles and Elements of Design. > B20 Describe color relationships a. Complementary b. Split-Complementary c. Double-Complementary d. Analogous, e. Monochromatic.

Question 6

Computer monitors take advantage of this color system:

Choose one answer

A. CMYK
B. Additive color
C. Process color
D. Subtractive color

Correct Answer: B

Mapped skill standards
Graphic Design - Career Essentials: Assessment Blueprint > B Principles and Elements of Design. > B17 Discuss how a monitor and other visual technologies (printing, billboard, smartphone) affect color representations and perceptions.

Question 7

Which term describes the text effect applied to the second and third lines in this example?

We're just enthusiastic about what we do – Steve Jobs
We're just enthusiastic about what we do –Steve Jobs
We're just enthusiastic about what we do – Steve Jobs

Choose one answer

A. Horizontal scaling
B. Baseline shift
C. Leading
D. Tracking

Correct Answer: D

Mapped skill standards
Graphic Design – Career Essentials:Assessment Blueprint > C Type > C40 Identify letter a. Spacing b. Tracking c. Kerning d. Baseline shift e. Horizontal scale

Question 8

Which term is used to describe the process of storing, organizing, and retrieving digital files?

Choose one answer

A. Digital Cloud Management
B. Copyright Rights Management
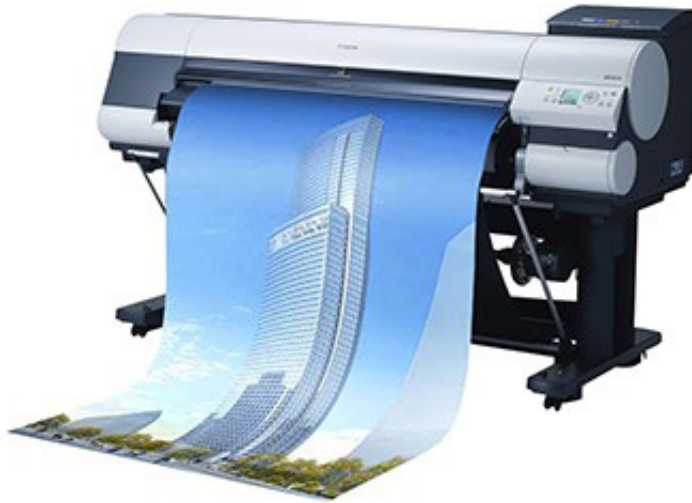C. Graphic Control Management
D. Digital Asset Management

Correct Answer: D

Mapped skill standards
Graphic Design – Career Essentials:Assessment Blueprint > E Image Capture. > E73 Discuss Digital asset management

Question 9

If a poster is 3 feet wide, what is its width in inches?

Choose one answer

A. 24 inches
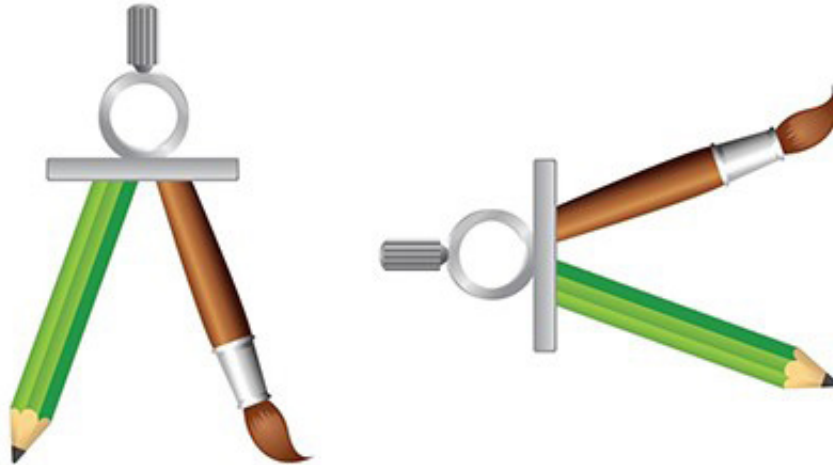B. 28 inches
C. 30 inches
D. 36 inches

Correct Answer: D

Mapped skill standards
Graphic Design – Career Essentials: Assessment Blueprint > I Math and Measurement. > I96 Solve
basic linear measurement problems

Question 10

In Adobe Illustrator, what is the name of the transformation function used to spin a graphic around a fixed point?

Choose one answer

A. Rotate
B. Circle
C. Extend
D. Fill

Correct Answer: A

Mapped skill standards
Graphic Design – Career Essentials: Assessment Blueprint > F Digital Illustration. > F76 Discuss the uses of a. Rotated b. Circled c. Extended d. Tints and Fills

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.

www.careeressentials.org/assessments/assessment-resources