Collages and Photography

Project Overview

To produce quality images for print, web, and video, students need to understand essential graphic design principles and how digital images are created. Adobe Photoshop is an image-manipulation tool that can help students analyze, enhance, and edit images. In this project, students learn the basics of photography, image composition, and elements of visual design as they create a collage.

Students take photos and gather images from various sources, identifying elements of visual design that reflect good composition. They use Photoshop to retouch and manipulate these photos and images to build a collage. Through this process, they learn about copyright issues and document their learning by creating a final PDF in Adobe Acrobat.

Student product: Collage

Note: Portions of this project align to the Adobe Certified Associate objectives. Within the instruction steps and technical guides, the specific learning objectives for the exam(s) are referenced with the following format: [1.1]

Project Objectives

Project management skills

- Planning and creating a collage
- Organizing and managing images
- Managing files and using file-naming conventions

Design skills

- Understanding image composition
- Understanding color correction and effects
- Understanding file formats, resolution, and file size
- Understanding image source
- Understanding techniques used to create visual hierarchy

Research and communication skills

- Communicating information clearly, using correct terminology
- Understanding copyright issues and fair-use guidelines
- Analyzing and critiquing photographs

Technical Skills

General

- Using a digital camera
- Scanning images

Photoshop

- Understanding the Adobe Photoshop interface
- Importing and working with various file formats
- Working with layers
- Retouching photos by using selection tools
- Adjusting brightness and contrast
- Adjusting levels and colors
- Cropping, resizing, and straightening images
- Combining multiple images
- Transforming images
- Outputting for web
- Outputting for print
- Outputting for video

Acrobat Pro

- Understanding the Acrobat interface
- Creating PDFs

Project Activities

- *Activity:* Copyright and fair use
- *Activity:* Understanding digital photography and digital images
- *Activity:* Design principles
- *Activity:* Getting started with Adobe Photoshop
- *Activity:* Editing images and graphics
- *Activity:* Preparing images and graphics for web, print, and video
- *Activity:* Getting started with Adobe Acrobat
- *Activity:* Presenting design projects

Background preparation resources

Technical and content information

Keywords

ISTE NETS*S Standards for Students

Adobe Certified Associate objectives

Project Steps

1. Introduce students to the goals of the project:
   - Use digital cameras and learn the basics of photography.
   - Explore image composition and elements of visual design through photography.
   - Use photo manipulation to investigate the potential of color enhancement and retouching.
   - Incorporate a variety of image file types into a collage of images.

2. Explain that students will create and construct their collages in Photoshop. Have them select a theme for their collages.

   Note: To help students focus, you might select a theme for them. For example, you might have them build a collage in the model of artwork (surrealism, impressionism, etc.) or one that represents a day at school.

3. Explain that in addition to photographs, their collages can include images from magazines, newspapers, and videos.

   Note: You might want to make sure specific magazines or videos are available so students don't spend too much time looking for appropriate images.

4. *Activity:* Copyright and fair use   ACA Exam Objectives: 1.3, 1.2, 1.3, 1.4, 1.2, 1.2
   (Suggested time: 50 minutes)

   Use this activity to teach your students about copyright issues and fair use guidelines. Instruct them to use any necessary citation for their collage.

5. *Activity:* Understanding digital photography and   ACA Exam Objectives: 2.1, 2.2, 2.5, 2.6
   digital images
   (Suggested time: 50-150 minutes)

   Follow these steps to utilize this activity for this project:

   a. Use this activity to help your student understand image composition and key digital image terminology. Demonstrate how to use a digital camera, how to scan images, and how to use Camera RAW images and video stills.

   b. Once they complete the activity, instruct students to retake their photographs from the activity, or take new ones to for their collage according to the theme they selected, trying to improve on their initial efforts by applying their knowledge of image composition and elements of visual design.

6. *Activity:* Design principles

(Suggested time: 50–100 minutes)

ACA Exam Objectives: 2.3, 2.2, 2.3, 2.3, 2.2, 2.1, 2.3, 2.2, 2.3

Follow these steps to utilize this activity for this project:

a. This activity introduces the concept of using design principles and typography to evaluate and inform design. Utilize this activity to introduce topics such as color theory, layout, tone, and sustainable design.

b. It is recommended to prepare examples of specific design principles for this activity. Explain that students should apply design principles to their collages.

7. *Activity:* Getting started with Adobe Photoshop

(Suggested time: 50-100 minutes)

ACA Exam Objectives: 2.1, 2.4, 2.6, 3.1, 3.2, 3.3, 3.5, 4.2

Follow these steps to utilize this activity for this project:

a. To prepare your students to build their collage, use this activity to introduce them to the interface, terminology, basic panels, and guides and rulers in Photoshop.

b. Demonstrate how to create a new Photoshop document, how to do basic color management, and how to work with layers.

c. For this project, explain that students will begin with a blank document that is a certain size and resolution (usually 8.5 x 11 inches and 300 dpi). Later, they will add their edited and enhanced images as new layers in their collage document.

8. *Activity:* Editing images and graphics

(Suggested time: 100-150 minutes)

ACA Exam Objectives: 5.4, 2.1, 2.6, 3.1, 3.2, 3.3, 4.1, 4.3, 4.4, 4.5. 5.1, 2.5, 3.4, 4.4, 4.6

Follow these steps to utilize this activity for this project:

a. Use this activity to teach your students how to edit images and create graphic elements using Photoshop by demonstrating how to adjust colors and crop, rotate, resize and transform images. The graphic portion of this activity, using Illustrator, will be covered in Project 2.

b. They need to prep their images to make sure the lighting and color is corrected using techniques learned above. Have them use batch-processing techniques to adjust multiple images.

c. Discuss the concept of visual hierarchy in document design to use as they move their images into the collage document and resize and manipulate them individually. Give students time to manipulate their images and construct their collages.

9. *Activity:* Preparing images and graphics for web, print, and video
    (Suggested time: 50-100 minutes)

    ACA Exam Objectives: 2.1, 3.3, 3.4, 5.1, 2.2, 3.7, 5.1

Follow these steps to utilize this activity for this project:

a. Use this activity to teach your students about the following:
    - Graphic optimization
    - The importance of file formats
    - How to prepare documents for web, print, and video output
    - How to save preset settings.

b. Explain to students that they need to prepare multiple versions of their collages for use in a printable PDF, as well as for use on the web and in videos.

c. Allow students time to prepare their collages for web, print, and video.

10. *Activity:* Getting started with Adobe Acrobat
    (Suggested time: 50 minutes)

Follow these steps to utilize this activity for this project:

a. Use this activity to introduce your students to PDFs and the Adobe Acrobat workspace by demonstrating how to create PDFs and how to combine PDF files.

b. Explain that students should write a 1–2 paragraph reflection identifying what they learned, the saved setting of their web and video-based collages, and what elements of visual design and image composition they employed in taking and selecting images and constructing their collages. Students should also include any copyright information and citations for their images. Students can use a word processor to write their reflection and then save the document as a PDF.

c. Students should combine the PDF version of their collage with the PDF version of their reflection to create one final PDF that contains both.

11. *Activity:* Presenting design projects
    (Suggested time: 50-100 minutes)

    ACA Exam Objectives: 2.6, 1.4, 2.6, 1.6, 1.4, 1.4

Follow these steps to utilize this activity for this project:

a. Use this activity to teach your students how to present their design projects to an audience.

b. Allow time for each student to present their work and include the following in their presentation:
    - Explain the design choices they made for selecting images and creating their collages.
    - Demonstrate one new technique they learned during this project.

Extension Activities

You can extend the project in the following ways:

- *Composition*: Engage students in deeply exploring composition elements by using Camera Raw files or video stills to manipulate the image and its metadata (such as zoom, hand, white balance, cropping, color samplers, Camera Raw workflow options, FilmStrip format, and non-square pixels).
- *Design principles*: Ask students to research design principles as they apply to photography, graphic design, and fine art. Have them distinguish the ways these principles are applied and represented in the different areas and then present their findings.
- *Photographers*: Ask students to research famous photographers and their work to understand the field of photography. Have them present their findings to the class.
- *Community links*: Ask professional photographers, graphic designers, and artists to discuss their work and career paths, giving students a real-world view of the areas they are studying.

Assessment

This is a high level view of what student should create during this project. Refer to the assessment rubrics in each activity for more detailed/specific assessment rubrics for each part of the project.

	0 – Does not meet expectations	**3 – Meets expectations**	**5 – Exceeds expectations**
Collage	Absent, incomplete, or unfocused.	Collage is creative and communicates a visual story. Collage includes at least three effective image-manipulation techniques (adjusting color, retouching, selecting, cropping, resizing, and so on) using Photoshop. Images used in the collage have adequate permissions and are cited correctly. Collage is copyrighted as original material.	Collage is creative, clear, compelling, and communicates a visual story. Collage includes three or more impressive image-manipulation techniques (adjusting color, retouching, selecting, cropping, resizing, and so on) using Photoshop. Images used in the collage have adequate permissions and are cited correctly. Collage is copyrighted as original material.
Reflection	Absent, incomplete, or unfocused.	Provides 1–2 written paragraphs reflecting on what the student learned and how they used image composition and elements of visual design in the collage. Document is in PDF format and combined with the collage PDF.	Provides 1–2 clear and precisely written paragraphs reflecting on what the student learned and how they used image composition and elements of visual design in the collage. Document is in PDF format and combined with the collage PDF.

Background preparation resources

- To view video tutorials aligned with the skills required to complete this project, visit Adobe TV: http://tv.adobe.com.
- For more teaching and learning resources on the topics in this project, search for resources from the community on the Adobe Education Exchange: http://edex.adobe.com/
- For an overview of the interface and for more information on the technical aspects of *Adobe Photoshop,* see *Photoshop* Help.

Keywords

- angle of view
- arrangement
- balance
- close-ups
- emphasis

- framing
- High dynamic range (HDR) imaging
- rule of thirds
- tone and sharpness
- visual hierarchy

ISTE NETS*S Standards for Students

This project is aligned to the ISTE NETS*S Technology Standards. Depending on the subject and content area the student selects you may research your own state content standards to see how this project aligns to your state requirements.

ISTE NETS*S: Curriculum and Content Area Standards – NETS for Students

1. Creativity and Innovation

   Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

   a. apply existing knowledge to generate new ideas, products, or processes.

   b. create original works as a means of personal or group expression.

   d. identify trends and forecast possibilities.

2. Communication and Collaboration

   Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

   b. communicate information and ideas effectively to multiple audiences using a variety of media and formats

3. Research and Information Retrieval

    Students apply digital tools to gather, evaluate, and use information. Students:

    a. plan strategies to guide inquiry.
    b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
    c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks

4. Critical Thinking and Problem Solving

    Students use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. Students:

    a. identify and define authentic problems and significant questions for investigation.
    b. plan and manage activities to develop a solution or complete a project.
    d. use multiple processes and diverse perspectives to explore alternative solutions

5. Digital Citizenship

    Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

    a. advocate and practice safe, legal, and responsible use of information and technology.
    b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
    c. demonstrate personal responsibility for lifelong learning.

6. Technology Operations and Concepts

    Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

    a. understand and use technology systems.
    b. select and use applications effectively and productively.
    d. transfer current knowledge to learning of new technologies.

Adobe Certified Associate Exam Objectives

Adobe Certified Associate, Web Authoring objectives

1.3 Demonstrate knowledge of standard copyright rules (related terms, obtaining permission, and citing copyrighted material).

2.3 Demonstrate knowledge of page layout design concepts and principles.

2.6 Communicate with others (such as peers and clients) about design and content plans.

5.4 Modify images and image properties.

Adobe Certified Associate, Visual Communication objectives

1.2 Demonstrate knowledge of standard copyright rules for images and image use.

1.4 Communicate with others (such as peers and clients) about design plans.

2.1 Demonstrate knowledge of image resolution, image size, and image file format for web, video, and print.

2.2 Demonstrate knowledge of design principles, elements, and image composition.

2.3 Demonstrate knowledge of typography.

2.4 Demonstrate knowledge of color correction using Photoshop.

2.5 Demonstrate knowledge of image generating devices, their resulting image types, and how to access resulting images in Photoshop.

2.6 Understand key terminology of digital images.

3.1 Identify elements of the Photoshop user interface and demonstrate knowledge of their functions.

3.2 Demonstrate knowledge of layers and masks.

3.3 Demonstrate knowledge of importing, exporting, organizing, and saving.

3.4 Demonstrate knowledge of producing and reusing images.

3.5 Demonstrate an understanding of and select the appropriate features and options required to implement a color management workflow.

4.1 Demonstrate knowledge of working with selections.

4.2 Use Photoshop guides and rulers.

4.3 Transform images.

4.4 Adjust or correct the tonal range, color, or distortions of an image.

4.5 Demonstrate knowledge of retouching and blending images.

5.1 Demonstrate knowledge of preparing images for web, print, and video.

Adobe Certified Associate, Video Communication objectives

1.3 Demonstrate knowledge of standard copyright rules (related terms, obtaining permission, and citing copyrighted material).

2.3 Demonstrate knowledge of visual techniques for enhancing video content.

2.6 Communicate with others (such as peers and clients) about design and content plans.

Adobe Certified Associate, Interactive Media Communication objectives

1.4 Demonstrate knowledge of standard copyright rules (related terms, obtaining permission, and citing copyrighted material).

1.6 Communicate with others (such as peers and clients) about design and content plans.

2.2 Demonstrate knowledge of design elements and principles.

Adobe Certified Associate, Graphic Design & Illustration objectives

1.2 Demonstrate knowledge of standard copyright rules for artwork, graphics and graphic use.

1.4 Communicate with others (such as peers and clients) about design plans.

2.1 Demonstrate knowledge of design principles, elements, and graphic composition.

2.2 Demonstrate knowledge of graphic resolution, graphic size, and graphic file format for web, video, and print.

2.3 Demonstrate knowledge of typography.

2.5 Understand key terminology of graphics.

3.4 Demonstrate an understanding of vector drawing concepts.

3.7 Import, export, and save files.

4.4 Demonstrate knowledge of how to use scanned or photographic images.

4.6 Demonstrate knowledge of how to modify and transform objects.

5.1 Demonstrate knowledge of preparing graphics for web, print and video.

Adobe Certified Associate, Print & Digital Media Publication objectives

1.2 Demonstrate knowledge of standard copyright rules for content use in page layouts.

1.4 Communicate with others (such as peers and clients) about design plans.

2.2 Demonstrate knowledge of design principles, elements and page layout composition.

2.3 Demonstrate knowledge of typography.

For more information

Find more teaching materials for using Adobe software in your classroom on the Adobe Education Exchange: http://edex.adobe.com/.