Editing images and graphics

Activity Overview

In this activity, students learn to edit images and create and edit graphics from images in Photoshop and Illustrator.

Note: Portions of this activity 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]

Activity Objectives

Technical skills

Photoshop

- Understanding vector and bitmap graphics
- Retouching photos by using selection tools
- Sharpening photos
- Adjusting brightness and contrast
- Adjusting levels and colors
- Cropping, resizing, and straightening images
- Combining multiple images
- Transforming images
- Editing photographs
- Creating watermarks

Illustrator

- Creating vector artwork
- Using Image Trace to convert photos to vector artwork
- Comparing vector and bitmapped images
- Modifying and transforming graphics

Project Assets

- *Photoshop guide:* How to correct color [4.4]
- *Photoshop guide:* How to fix images [4.5]
- *Photoshop guide:* How to resize, rotate, and crop images [2.1, 3.1, 4.3]
- *Photoshop guide:* How to use selection tools [3.2, 4.1]
- *Photoshop guide:* How to combine images in Photoshop [4.1]
- *Photoshop guide:* How to add a watermark to images [3.2]
- *Photoshop guide:* How to generate different file formats [2.1, 3.3, 5.1]
- *Guide:* Bitmap and vector images [2.5, 2.6]
- *Illustrator guide:* How to create vector artwork [3.4]
- *Illustrator guide:* How to modify and transform graphics [4.6]

Background preparation resources

Technical and content information

ISTE NETS*S Standards for Students

Adobe Certified Associate objectives

Activity Steps

1. Explain that most images need to be edited. Using the "I do, we do, you do" method, discuss and demonstrate the following techniques to help students edit images in Photoshop:

   - Cropping and straightening: Use the Crop tool to remove unwanted elements of a photograph.
   - Resizing: Use the image and canvas size tools to adjust the size of the image.
   - Adjusting color: Use the tools in the adjustment panel to automatically correct color.
   - Retouching: Use the Clone Stamp to remove unwanted elements, use the Spot Healing Brush to touch up small areas, or use the Red Eye tool to remove red eye.
   - Sharpening: Use the Smart Sharpen and Shake Reduction filters to sharpen a photograph.
   - Resolution: Use Resolution Check to prepare the image for web output.
   - Experimenting: Experiment and keep track of your changes by using the History panel and remove unwanted steps with the Undo panel.
   - Combining images: Compositing images, using Photomerge to create panoramic images, and use Exposure Merge 32 bit HDR to combine images with multiple exposures. [4.1]
   - Transforming photos: Using transform tools to scale, rotate, or skew a selection. [4.3]
   - Watermark: Creating a watermark for protection.

   Photoshop guide: How to correct color [4.4]

   Photoshop guide: How to fix images [4.5]

   Photoshop guide: How to generate different file formats [2.1, 3.3, 5.1]

   Photoshop guide: How to resize, rotate, and crop images [2.1, 3.1, 4.3]

   Photoshop guide: How to use selection tools [3.2, 4.1]

   Photoshop guide: How to combine images in Photoshop [4.1]

   Photoshop guide: How to add a watermark to images [3.2]

   Note: As you demonstrate the editing tools, you may want to discuss the idea of nondestructive editing and emphasize to students the importance of using adjustment layers, filters, and other methods for making edits to their photos without changing the original images.

3. Explain that although Photoshop is an excellent program for manipulating images and can be used to create bitmap graphics, Adobe Illustrator is superior for creating vector-based graphics from images. Use the *Bitmap and vector images* guide [2.5, 2.6] and discuss the difference between vector and bitmap graphics.

4. Using the "I do, we do, you do" method demonstrate the following:

   - How to use the Image Trace tool for converting an image to vector artwork.
   - How to modify and transform graphics.

   Illustrator guide: How to create vector artwork [3.4, 4.4]

   Illustrator guide: How to modify and transform graphics [4.6]

5. Discuss exporting images and graphics depending on the final output (a web-optimized file type and size). Introduce file types available for graphics: GIF, JPEG, PNG, TIFF, EPS, and PDF. Discuss how the file types differ and when it is appropriate to use each type of file. [2.1, 4.5]

6. Time allowing, demonstrate round-trip editing, for example how to edit and scale images in Dreamweaver and how to edit Photoshop (using Photoshop Smart Objects) from within Dreamweaver. [5.4]

	0 – Does not meet expectations	3 – Meets expectations	5 – Exceeds expectations
Image manipulation and editing	Absent or incomplete.	Student correctly uses color correction, selection tools, and retouching tools to manipulate images and focus the composition on the subject. Alterations to the image support the original meaning of the image.	Student correctly and appropriately uses color correction, selection tools, and retouching tools to manipulate images and focus the composition on the subject. Alterations to the image support the original meaning of the image.
Graphics	Absent or incomplete.	Students create vector artwork. They correctly modify and transform graphics.	Students create vector artwork. They correctly modify and transform graphics that employ design principles.

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.
- For an overview of the interface and for more information on the technical aspects of *Adobe Illustrator*, see *Illustrator* Help.

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:

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

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

5.4 Modify images and image properties.

Adobe Certified Associate, Visual Communication objectives

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

2.6 Understanding 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.

4.1 Demonstrate knowledge of working with selections.

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, Graphic Design & Illustration objectives

2.5 Understand key terminology of graphics

3.4 Demonstrate an understanding of vector drawing concepts.

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

4.6 Demonstrate knowledge of how to modify and transform objects.

For more information

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