

Activity

Timing: 1 to 2 hours

Level: Ages 15 and up

Preparing images and graphics for web, print, and video

Activity Overview

Different mediums—print, web, and video—require different file formats. This activity teaches students how to generate appropriate image and graphic file formats for these mediums.

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

- Outputting for web
- Outputting for print
- Outputting for video
- Saving preset settings

Illustrator

- Outputting for web
- Outputting for print
- Outputting for video

Project Assets

- *Photoshop guide:* How to generate different file formats ^{2.1, 3.3, 5.1}
- *Illustrator guide:* How to export and save files ^{2.2, 3.7, 5.1}

Background preparation resources

[Technical and content information](#)

[ISTE NETS*S Standards for Students](#)

[Adobe Certified Associate objectives](#)

Activity Steps

- Discuss image optimization and the importance of file formats depending on the medium. Discussion topics might include:
 - The difference between printed and on-screen images (inches versus pixels, size variation, scaling versus resampling, and ink dots versus RGB values)
 - File formats (such as GIF, JPEG, TIFF, EPS, and PDF). Best file formats for:
 - Web (JPG, GIF, PNG, SVG, SVGZ)
 - Photos (PSD, TIFF, JPG, PDF, DICOM, Photoshop RAW, Large Document Format)
 - Commercial printing (TIFF, EPS, PDF, PSD, DCS)
 - Video (PSD, OpenEXR, Cineon, Targa, MPG, MPEG, MOV, WMV, AVI)
 - PowerPoint/Word (PNG, BMP)
 - Image and graphic resolution (such as pixels versus inches; ppi and dpi for printing, pixels for the web, and line screen frequency for commercial printing)
 - Appropriate color and format settings for web, print, and video (such as modes, models, depth, gamut, print preview, color mode, RGB, CMYK)
 - Preserving image quality when manipulating images
 - Broadcast standards for video (such as NTSC and HDTV) to help select the appropriate TV image preset
 - Avoiding thin lines (thinner than 2 pixels) because interlacing can create flicker when the image is displayed in video
 - Using the NTSC Colors filter when working with color for video use because saturated or bright colors can cause bleeding when displayed in video
- Distribute the technical guides and demonstrate how to prepare an image and graphic for web, print, and video and save the settings as presets^{3,4} for future use. Ask the students to use collection of images or graphics, or images and graphics from a project they currently working on, and output to web, print, and video and save their settings as presets.

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

Illustrator guide: How to export and save files [2.2, 3.7, 5.1](#)

Assessment:

	0 - Does not meet expectations	3 - Meets expectations	5 - Exceeds expectations
Project or image and graphic preparation	Absent or incomplete.	Students prepare a project or images and graphics for print, web and video.	Students successfully optimize and prepare a project or images and graphics for print, web and video, using the best file format. Students save their settings as presets.

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

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.

Adobe Certified Associate Exam Objectives

Adobe Certified Associate, Visual Communication objectives

- 2.1 Demonstrate knowledge of image resolution, image size, and image file format for web, video, and print.
- 3.3 Demonstrate knowledge of importing, exporting, organizing, and saving.
- 3.4 Demonstrate knowledge of producing and reusing images.
- 5.1 Demonstrate knowledge of preparing images for web, print, and video

Adobe Certified Associate, Graphic Design & Illustration objectives

- 2.2 Demonstrate knowledge of graphic resolution, graphic size, and graphic file format for web, video, and print.
- 3.7 Import, export, and save files.
- 5.1 Demonstrate knowledge of preparing graphics for web, print, and video

For more information

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



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