

## WDD 131

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# Image File Formats

## Overview



You have worked with many different image formats and some of those image types are better suited for the web. The work of responsive image design is to support smaller page weights and to deliver content based upon screen size. This activity explores SVG (Scalar Vector Graphic) and the WebP image format which offers better compression to support faster page loads.

"WebP is a modern image format that provides superior lossless and lossy compression for images on the web. Using WebP, webmasters and web developers can create smaller, richer images that make the web faster." - [developers.google.com](https://developers.google.com/webp/)

The SVG format is a vector image format that is used for two-dimensional graphics with support for interactivity and animation. "As such, it's a text-based, open Web standard for describing images that can be rendered cleanly at any size and are designed specifically to work well with other web standards including CSS, DOM, JavaScript, and SMIL. SVG is, essentially, to graphics what HTML is to text." - [MDN](https://mdn.com/svg)

## Prepare

- Review common image formats: [Image File Types](#) - by WebFlow (2:22 mins, [Image File Types Transcript](#))
- Reference:  [WebP image format](#) - [developers.google.com](https://developers.google.com/webp/)

Some terms that you may not be familiar with include:

- **Lossless Compression** - File compression that maintains the original data using sophisticated, redundancy, replacement algorithms.

- **Lossy Compression** - File compression that uses approximations and partial data to represent the original media source.
- **Transparency** - The image property representing the amount or level of transmission of background color through the image.

- Reference:  [Image file type and format guide](#) - MDN

Note the summary of the **SVG** and **WebP** file formats presented in the table.

"The older formats like PNG, JPEG, GIF have poor performance compared to newer formats like WebP and AVIF, but enjoy broader "historical" browser support. The newer image formats are seeing increasing popularity as browsers without support become increasingly irrelevant (meaning have virtually zero market share)." - MDN

## Activity Instructions

1. In your browser, navigate to this free photo sharing site (Pexels) image: [Landscape](#) (~3900 X 2633 pixels in original dimension size).
2. Click on the **Free Download** button in the upper right of the screen.
  - ✓ Download the default, original sized image to your local machine.
  - ✓ Rename the file to "**landscape.jpg**".

► How big, in terms of memory size, is the file?

3. In your browser, navigate to the free, JPG to WebP, online file converter application at [cloudconvert.com](#).
4. In the application, select the landscape.jpg image file that you just downloaded.
5. Save the file with the .webp extension.

► How big, in terms of memory size, is this WebP file?

► What other actions could we take to reduce the image file size even further to something below 75KB?

6. Apply the optimization techniques given in the prior step to the landscape.webp file using an image editing program of your choice. The resulting image should not be more than 87Kb.

Video Demonstration:  [Converting a large jpg file into a webp file format](#) [ 3:09 minutes ]

## Optional Resources

- [Image Optimization](#): Review general principles on using web images.

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