Is the Font Easy to Read?
Anatomy and Legibility

Text is meant to be read—and if it feels difficult to read, people won't want to. Readability (how easily text can be read) depends on how type is used on the screen. One factor of readability, and a great place to start, is choosing a legible font.

But What Makes a Font Legible?
When we read, we don't see individual letters. We see (and read) the shapes of the words. These shapes are primarily created by two elements: the strokes of the letters, and the spaces in and around the letters. If we lose either of these elements, legibility is compromised.

Did you ever try to read a poor photocopy of a photocopy of a photocopy? Experience tells us type becomes harder to read with each generation of copying.

Why? Sometimes, multiple-generation photocopies make the text lighter. Thinner strokes start to disappear, leaving only parts of letters and compromising the word shapes. Other times, multiple-generation photocopies make the strokes in the text thicker. The spaces in and around the letters start to disappear. Either way, when strokes or spaces get lost, the legibility of the font changes—and reading becomes more difficult.

Web typographers need to pay particular attention to the strokes and spaces in a font because of screen resolution. Macintosh screens are 72 ppi (pixels per inch), and Windows screens are 96 ppi. A font set at 12 px will appear approximately 1/6" tall on a Mac.

Helvetica is simpler and cleaner than Georgia. But Georgia is easier to read. Why?

Reading text type (12–16 px) is easier if the font has:
A generous x-height
Open apertures
Prominent ascenders and descenders
Slightly loose letter spacing
Discernible terminals

Recommended Reading
It’s About Legibility
by Allan Haley

Georgia & Verdana:
Typefaces designed for the screen (finally)
by Daniel Will-Harris

Text set in Helvetica 12/18 (12 px text with a 18 px line height) is readable. But text set in Georgia 12/18 is more readable. Even though it looks slightly smaller than the Helvetica, and is a more complex font. Why? Georgia, designed by typographer Matthew Carter, was designed for the screen. It has a healthy x-height without sacrificing the ascenders and descend-ers. It has open apertures, discernible terminals and slightly looser letter spacing.
How to Choose a Font

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Comparing Georgia and Helvetica

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- **Descenders** [1] are the strokes of the letters that extend below the baseline. The baseline [2] is an invisible line the letters appear to sit on.
- **Serifs** [4] are little horizontal strokes, usually coming off the top and/or bottom of a stem [5] which is a vertical stroke in a letter. Georgia is a serif font (it has serifs), while Helvetica is a sans serif font (without serifs).
- **Ascenders** [6] are the strokes of the letters that extend above the meanline. The meanline [7] is an invisible line at the top of the lowercase “x”. The meanline marks the font’s x-height [8], which is the height of the lowercase letters between the baseline and the meanline.

Georgia has larger ascenders than Helvetica [9]. The generous ascenders make Georgia more legible (notice how the f and t in Helvetica look almost alike). In order to compensate for the larger ascenders, Georgia’s x-height is smaller. Unfortunately, this makes the text look smaller (even when set at the same size), but the larger ascenders are worth the sacrifice.

Overall, the letters in Georgia have more visual space around them. This space increases readability, because it helps keep letters in the text from blending together.
**Comparing Georgia and Times New Roman, Verdana and Arial**

Times New Roman is a visually smaller font than Georgia. In this example, I’ve set Georgia at 63px and Times New Roman at 68px. Their x-heights appear equal at these sizes, allowing us to see the differences more clearly.

Times New Roman has a narrower bowl (round shapes in the lowercase letters) \([1]\) than Georgia. A narrower bowl often results in smaller counterforms (the spaces within a letterform) \([2]\). Smaller counterforms in text on the screen tend to get lost.

Times New Roman also has thicker thick strokes and thinner thin strokes than Georgia. The thin strokes have a tendency to get lost on the screen when the font is used for text. This, combined with the narrower bowl, makes the text look more like a series of vertical strokes. The reader needs to work harder to read the word shapes in Times New Roman.

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**Why these four fonts?**

Georgia, Times New Roman, Verdana, and Arial are all web-safe fonts (extremely likely to be on most systems, across platforms).

Georgia and Verdana are superior fonts for legibility of text on the web. They were designed for the screen, and are easy to read. I use Georgia and Verdana in examples and lessons throughout this book—but this does not mean they are the only acceptable fonts.

**With the css @font-face element, fonts available to web typographers has increased.** Thus, an objective of this chapter is to show you how to look at and think about the parts of letters—so you can identify other legible fonts for text on the web.

Arial is a visually smaller font than Verdana. In these examples, I’ve set Verdana at 59px and Arial at 62px. Their x-heights appear equal at these sizes, allowing us to see the differences more clearly.

Arial and Verdana both have generous bowls (neither is particularly narrow), but Verdana’s bowl is not as rounded. Verdana’s shoulders \([3]\) connect to the stems differently. Notice how the counterforms in Arial’s h and p are rounded while Verdana’s counterforms have a corner (extra space!). Verdana also has more space between the letters \([4]\).

Verdana’s a, c, and e all have a larger aperture, giving the letters even more visual space. All of these (space!) design decisions keep Verdana more legible at text sizes.