

Typography basics: Anatomy of letterforms

Understanding the fundamental principles and concepts of typography is the first step to being a successful typographer. The most basic component of typography is the letter, and each letter of the alphabet is distinguished by its unique shape, or letterform. This technical guide includes definitions for and illustrations of the individual parts that compose letterforms, as well as the boundaries by which letterforms are delineated.

Boundaries

baseline

The imaginary horizontal line upon which the majority of the characters in a typeface sit.



capline

The imaginary horizontal line resting upon the tops of the uppercase letters.



meanline

The imaginary horizontal line that designates the height of lowercase letters.



x-height

Traditionally, the height of the lowercase letter x. As a general rule, x-height is the height of the body of lowercase letters of a typeface, excluding the *ascenders* and *descenders*. Some lowercase letters may extend a little bit above or below the x-height as part of their design, even without ascenders and descenders. X-height can vary considerably among typefaces with the same point size, which is based on the width of certain uppercase letters.



Letterform parts

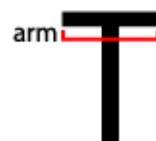
apex

The peak of an uppercase A.



arm

A horizontal portion of a letterform, one or both ends of which are unattached to the vertical portion(s).



ascender

The portion of a lowercase letterform (e.g., k, b, or d) that ascends above the *x-height* of the typeface. Contrast *descender*.



beak

Akin to a [spur](#), but slightly larger, the projection that extends from the end points of an uppercase L, T, or E.



bowl

A curved portion of the letterform that encloses a [counter](#). The exception in the lower curved part of a lowercase g (see [loop](#)).



bracket

The curve that connects the serif to the [stem](#) or [stroke](#). May also be referred to as a fillet.



counter

The negative space of a letterform. A counter may be either fully or partially enclosed.



crossbar

The horizontal part of a letterform that connects, for example, a [stem](#) to a [hairline](#).



cross stroke

The horizontal part of a letterform that intersects the vertical part.



descender

The portion of a lowercase letterform (e.g., y, p, or q) that descends below the [baseline](#) in a typeface. In some typefaces, the uppercase J and Q also descend below the baseline. Contrast [ascender](#).



ear

The small decorative projection from the upper right side a lowercase g.



eye

The enclosed portion of a lowercase e. Similar to a [counter](#).



hairline

The thinnest line of a typeface made of varying line weights.



leg

The lower, angled **stroke** of a k.



link

The part of a lowercase g that connects the **loop** to the **bowl**.



loop

The curved part of a lowercase g that encloses the lower **counter**. Similar to a **bowl**.



serif

Small decorative lines added to the end of a letterforms's **stem** and **stroke**. Serifs improve readability by leading the eye along a line of type.



spine

The main portion of the letter S—both lowercase and uppercase—that curves from left to right.



spur

The projection that extends from the end point of the curved portion of a letterform (e.g., from the top or bottom of an uppercase or lowercase S or C). A spur is smaller than a [serif](#).



stem

The main vertical or near vertical portion of a letterform.



stroke

The main diagonal portion of a letterform, though this term is often used to refer to any of the main portions—vertical, near vertical, or diagonal—of a letterform.



tail

The [stroke](#) or [loop](#) at the end of a letterform, such as the tail of an uppercase Q or the stroke on an uppercase R.



terminal

The end, or termination, of a [stem](#) or [stroke](#) with no [serif](#).

