Grid

All graphic design work benefits from the use of an underlying grid, which clarifies content by making its presentation more systematic. A grid divides a 2D plane into smaller fields, which may or may not be the same size, but which remain consistent across multiple planes in sequential work such as books, websites, and presentations. Your design elements—typography, photography, illustrations, etc. — are fitted to one or more fields of the grid divisions. Typically information about your content—such as running chapter or section heads in books, or navigation, headers, and footers in websites — remains consistently placed on the grid across multiple pages, while images, diagrams, and columns of text may change according to the needs of the information.

Grid principles may seem counterintuitive to first-time users. It can be difficult to see that a structural division of space affords a great range of expression—but it does. A grid defines all the possible layouts of the elements and imparts consistency, yet the number of grid divisions is unlimited, and placement of elements on the grid can vary. That said, type and image should "lock" on the page in a well-constructed grid, rather than floating away from each other. Regulating space, grids enable us to engage intelligently and creatively with rhythm and balance, scale, hierarchy, and placement while defending us from arbitrariness.

Grid systems are comprised of vertical columns separated by gutters as well as horizontal rows. Groups of columns and rows together are called zones. Common column counts are 3, 6, and 12. There is no standard number of rows, but 3 is a good default.

Setting Up a Grid
Construct a custom grid for each project, aligning it with content and concept. For example, a book about tree houses would call for a tall grid.

Here is a typical series of steps for constructing a grid:

1. Determine the preexisting constraints of the project that impact the grid, including: medium, page/screen size, and fixed dimensions (ex. ad spaces are often fixed).
2. Determine your margins (the white space at the top, bottom, left, and right of the page).
3. Estimate the body text pt size and leading, for example, 9–11 pts for a book.
4. Establish the column widths for the body text and determine the total number of columns on the page. If your project is image-centric, establish the image space first, then consider the type.
5. Refine and settle on the body text size and leading.
6. Make the gutters (the space between columns) either the same as your leading value or 1 to 1.5 picas. Gutters must be wide enough to keep the reader's eye from jumping across the gutter to the adjacent column.
7. Set the number of rows depending on how varied your design elements are; typically, the more varied, the more rows.
8. Determine zones for types of design elements, for example, some for body text, others for images, others for infographics.

Print vs. Screen
The dimensions of print are always fixed, while those of screens are variable. Responsive web design thus requires us to use proportional or relative units. The details of responsive web design are outside the scope of this document, however you might want to understand the basic mechanics of converting a fixed, pixel-based design into a flexible, relative design for a variety of

screen sizes. We convert pixel measurements to percentage- (or em-) based values with the following formula: *target / context = result*. For example, if you were trying to convert the width of a 150-pixel column in a page context of 960 pixels you would divide *150 / 960* to get *0.15625*. The result is then translated into a percentage value by moving the decimal over two places to the right. Your column width is 15.625% of its context. To learn more, see Ethan Marcotte's *Responsive Web Design* (http://alistapart.com/article/responsive-web-design).

Resources

Kimberly Elam, *Grid Systems: Principles of Organizing Type (*New York: Princeton Architectural Press, 2004).

Josef Müller-Brockmann, *Grid Systems in Graphic Design: A Visual Communication Manual for Graphic Designers, Typographers, and Three Dimensional Designers* (6th edition; Zurich: Verlag Niggli AG, 2008).

Timothy Samara, *Making and Breaking the Grid: A Graphic Design Layout Workshop* (Beverly, MA: Rockport, 2002).

Koi Vinh, *Ordering Disorder: Grid Principles for Web Design* (San Francisco: New Riders, 2010).

The Grid System http://www.thegridsystem.org.