

# References

## Usability

- Usability.gov
- Designing Web Usability by Jakob Nielsen
- Universal Principles of Design by Lidwell, Holden & Butler
- Wayfinding by Craig M. Berger
- Presentation Zen by Garr Reynolds

## Design

- Letting Go of the Words: Writing Content that Works by Janice (Ginny) Redish
- The Non-Designers Design Book by Robin Williams
- Show me the Numbers by Stephen Few
- Clear and to the Point by Stephen M. Kosslyn

<b>Reduce Noise by:</b>	<i>By Minimizing elements</i>	<i>Increasing Relevance</i>	<i>Using Consistency/ Repetition</i>	<i>Maintaining Alignment</i>
<i>Definition</i>	Simplicity. Unnecessary elements decrease a design's efficiency and increase the probability of unanticipated consequences.	Degree to which information is perceived as being important	Repeating elements such as fonts and spacing and logos throughout.	Elements in a design should be aligned with one or more other elements
<i>Why do you need it?</i>	Every unnecessary word, line, thickness of line, graphic, or symbol steals attention from your message. Goal is to minimize noise, so that your message gets through louder.	All information is not equally important.	Consistency lets people efficiently transfer knowledge to new contexts, learn quicker. Essential to create a unified web site or multi-page document.	To create a sense of unity a cohesion
<i>How do you use it?</i>	Ex. Don't need http://, call, email, duplicate words, replace text with symbols.	Provide no more information than you need to accomplish your goal. Make sure important information gets the attention it deserves by making it distinct.	Consistency in appearance, functionality , symbols,	Left aligned and right aligned text provide more powerful alignment clues than centered text.
<i>What can go wrong?</i>	Unneeded elements are noise. Noise prevents your signal (message) from being received.	Your reader decides what is relevant, not you.	Focus should be on the information, rather than the way it is presented so don't insert an inconsistency unless the change means something.	There are no performance difference between justified text blocks but make sure you don't do this.

Organize with:	Chunking	Proximity	Hierarchy	Primacy & Recency
Definition	A chunk is the amount of information a person can hold in short term memory, usually four.	Elements close together are perceived as a single group or chunk. People automatically group elements into units.	The simplest method of increasing knowledge of the structure of a system.	Recall of items in a list is greater if for the items listed first and last.
Why do you need it?	Chunking organizes data into groups. Chunking accommodates our short-term memory units by formatting information into smaller units. We can hold 7 elements in working memory but 3-5 in short term memory.	Grouping elements together implies a relationship.  Physical closeness implies a relationship.	Initial information is more likely to be remembered than later information.  Organize by magnitude. Critical information goes first.  Makes editing for length easier.	The first words in a list are stored in long-term memory more efficiently. The last words in a list are still in short term memory. So the first and last items in a list are more likely to be selected than items in the middle.
How do you use it?	Similar elements are perceived as a single group. Make groups with color, line, similarity, proximity.	Regions of the same color will be perceived as part of a group. Put labels next to their correspondent content.	Put most important information at the beginning (inverted pyramid) or at the beginning and end of lists.	Place important items at the top of the list. If a decision is needed after a list, you can increase the probability of an item being chosen by putting it last on the list.
What can go wrong?	use no more than two lines per bulleted entry  Present unrelated items using different color, sizes, and shapes.	Separateness implies lack of relationship. No floating. Must be clear and consistent	Does not lend itself to use of story or advanced organizers.	You can influence the form user's decisions intending to do so.

<b>emphasis:</b>	<i>Contrast</i>	<i>Distinctness</i>	<i>Change has meaning</i>	<i>Use symbols, images</i>
<i>Definition</i>	Think of contrast as a change to emphasize something.	Attention is drawn to large, perceptible differences. Two properties must differ by a large enough proportion or they will not be distinguished.	We expect changes in properties to carry information.	Iconography is the use of pictorial images to make concepts easier to find, recognize, learn, and remember. Think in symbols.
<i>Why do you need it?</i>	Highlights key points. Creates interest.	Our vision registers relative proportions, not absolute amounts.	Change means something (otherwise it is just a distraction)	Reduces performance load, conserves space, understandable across cultures, and adds interest. Aids identification, alternative to text, attracts attention, aids scanning
<i>How do you use it?</i>	If elements are not the same, make them very different. You cannot contrast 12 pt. type with 14 pt type (conflict)	Use bold, italics, change in color or size for emphasis or to group words together.	Use different fonts only for emphasis or to specify a change (in the class of information)  Example: Serif for headings, sans serif for body text.	Use common symbols. Use mimicry for similarities. Use example icons for complex representations. (Ex. Gun means weapon, sword doesn't)
<i>What can go wrong?</i>	Patterned background can reduce legibility.  Contrast must exceed 70 percent.  <u>Underlining</u> creates noise.	When you read <b>THIS</b> the word "this" is salient. WHEN YOU READ THIS, THE WORD "THIS" IS NOT SALIENT.  Don't be a wimp. Don't use all caps because we can't tell the letters apart. Underlining cuts off the bottoms of letters.	Change means something (otherwise it is just a distraction)  Change bullets only if the change means something.	Include a graphic only if helps to convey your point.  Use only the part of the graphic you need.  Use universal symbols if you are confident of the shared meaning. Avoid conflicts Ex. Red doesn't mean 'go'.

Knowledge Tools	Capacity	Appropriate Knowledge / Organizers	Compatibility	Story
Definition	We have a limited capacity to receive, process, and store new information.	We understand and remember if a message more easily if it connects to what we already know.	A message is easier to understand if its form is compatible to its meaning.	Emotional content is added to factual statements.
Why do you need it?	Helps you decide what information is important enough to include. What is relevant?	We related it to previously learned information. Introduce new ideas in the contest of a familiar one.	We infer content from form. Related: Mimicry	Creates interest, draws the reader in, and helps the reader visualize the content.
How do you use it?	Put easy items first. Use chunking	Start with the familiar and move to unfamiliar. A mental model ties new information to information learned earlier. Example: Description of the first car as a "horseless carriage".	Make sure you don't accidently create an incompatible message. Ex. A warning of a dangerous dog with a photo of a puppy.	Use I, we, Visualizing information, Q&A, case studies, examples
What can go wrong?	If too much information is presented, it will not be processed. There comes a point when adding information decreases comprehension.	Mental models can conflict Example: divorce petition form is an application?	If the message is incompatible with the meaning, conflict is created. Ex: Think of the word "red" written in green ink.	Stories can lengthen your document and longer documents can be more intimidating. Make sure the story is valuable enough to include