

digital *multimedia*

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Graphics and Colour
Video and Animation
Sound
Text and Typography
Hypermedia
Flash and DOM Scripting
Multimedia and Networks

Third
Edition

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Visual Design

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Visual Communication

Poor visual design is one of the main factors that lead to multimedia applications and Web sites being difficult to use.

Visual communication depends upon a range of psychological, cultural and physical factors which cannot easily be quantified or systematized.

Images and colours immediately convey impressions which cannot necessarily be adequately described in words.

Glenfingal

Location: west Scotland. See [map](#)

Population: 450

Bird species: 121

Local industries: [tourism](#), agriculture, fish farming

Glenfingal can be reached by a range of [transport](#) facilities and offers varied holiday [accommodation](#).

Glenfingal offers:

- a *peaceful*, remote location
- plentiful *wildlife*
- natural *beauty*
- long *summer evenings*
- frequent *sunsets*



Which of these pages would make you want to visit Glenfingal?

Visual communication may alter the meaning of what is being communicated by words, in a gross or subtle way.



Interaction of textual and visual communication

Semiotics is the study of systems of signs and the relationship between signifier and signified within them.

The signifier is a sign's form – for example, a word or a graphic symbol.

The signified is the specific meaning or concept which a sign refers to.

The relationship between the signifier and the signified is arbitrary and can only be understood within a particular system of signs.

Convention, context and users' experience determine whether a user will understand a sign correctly.

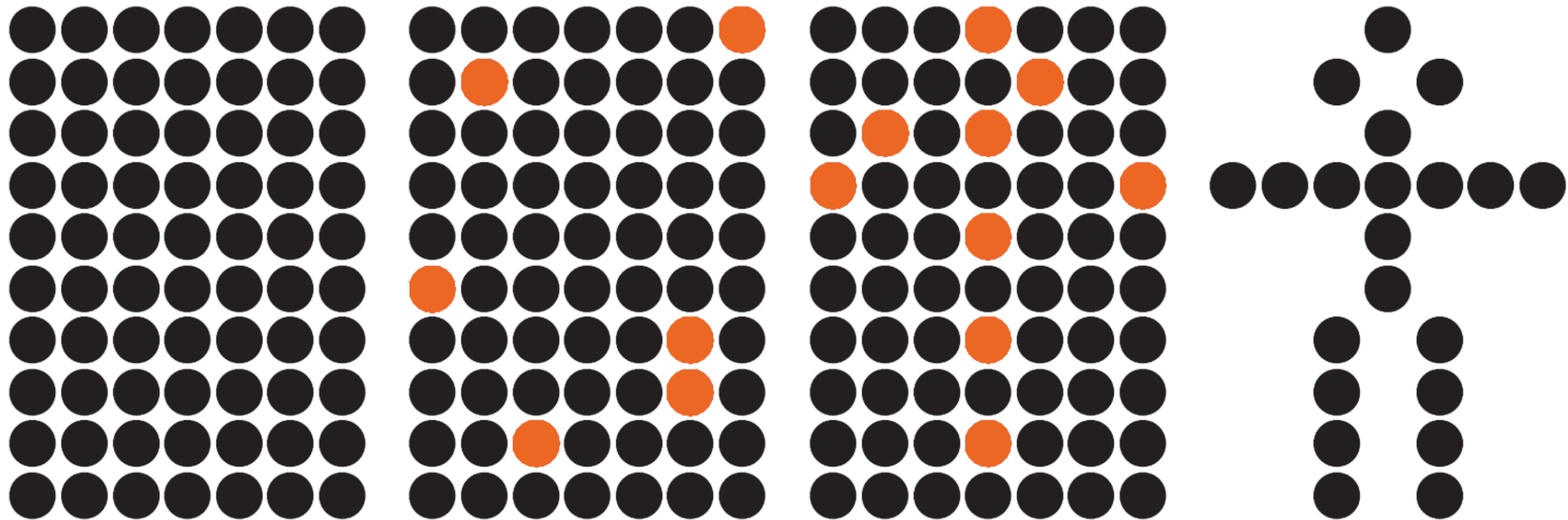
**Graphic symbols transcend language barriers,
so – within an established system of signs
– they can be understood more widely than
written text.**

Graphic symbols are capable of conveying complex meanings succinctly and there may sometimes be no sensible alternative to using them.

Gestalt Principles

Gestalt principles of visual perception are derived from the theories of gestalt psychology.

They are concerned with how the human brain tends to organize the visual information that reaches it through the eyes.



Gestalt principles of visual perception

Perception of patterns and structures may be determined by the grouping of objects in a visual field.

The gestalt principles of

proximity,

similarity,

symmetry,

figure/ground and

closure

determine our recognition of grouping.



Proximity



Similarity

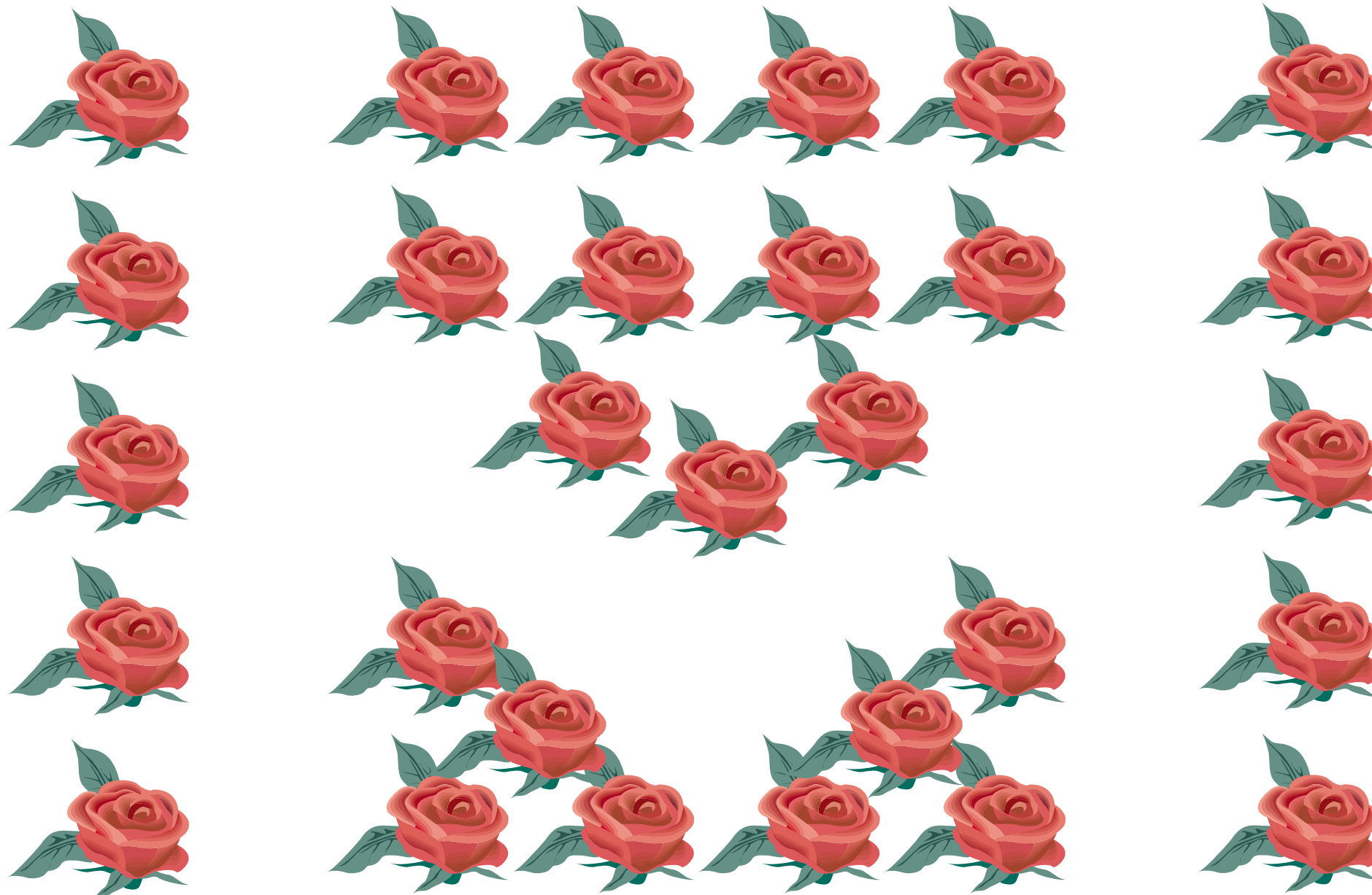


Figure-ground



Symmetry



Closure

Non-symbolic ordering based on the gestalt principles is the foundation of structure in visual design.

The precise appearance and arrangement of objects may lead to one principle dominating the others.

Ignoring gestalt principles frequently results in a confusing design.

Monday	Heavy Rain
Tuesday	<i>Heavy Rain</i>
Wednesday	HEAVY RAIN
Thursday	Heavy Rain
Friday	Heavy Rain
Saturday	<i>Heavy Rain</i>
Sunday	<i>Heavy Rain</i>

A confusing absence of similarity

The component parts of an interface or Web page should usually be organized according to gestalt principles.

Navbars on Web pages, and the conventional arrangement of controls on media players illustrate the application of gestalt principles to multimedia design.



Using gestalt principles in Web page design

Visual hierarchy describes the dominance of one or more elements in the visual field.

Like other hierarchies, it may have many levels.

Visual hierarchy may be achieved by applying gestalt principles “inversely”, in order to disrupt grouping and make one or more elements appear dominant.

**lions and tigers and
bears, oh my!**

lions and
tigers and
bears, oh my!

Expressing hierarchical emphasis through type size

Visual hierarchy is not necessarily determined by size.

Visual Design

Hierarchy

Visual Design

Hierarchy

Visual Design

Hierarchy

Visual Design

Hierarchy

Visual hierarchy is not necessarily determined by size



Visual hierarchy in an image

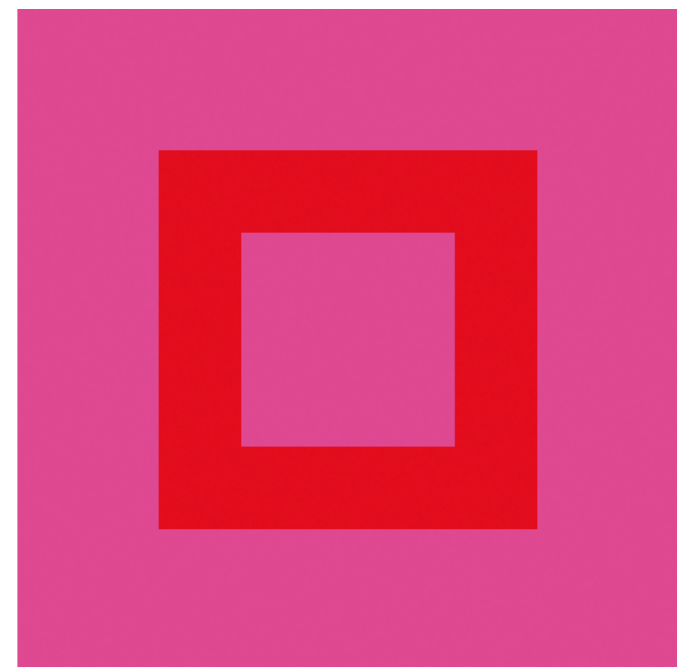
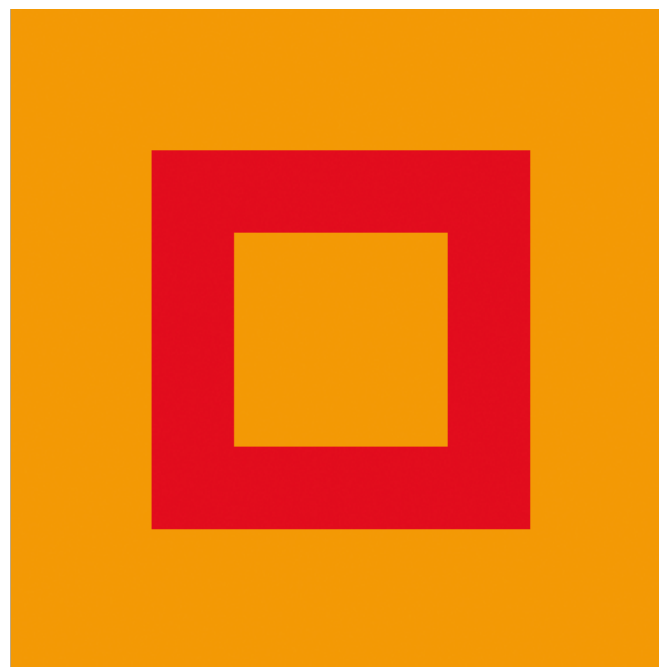
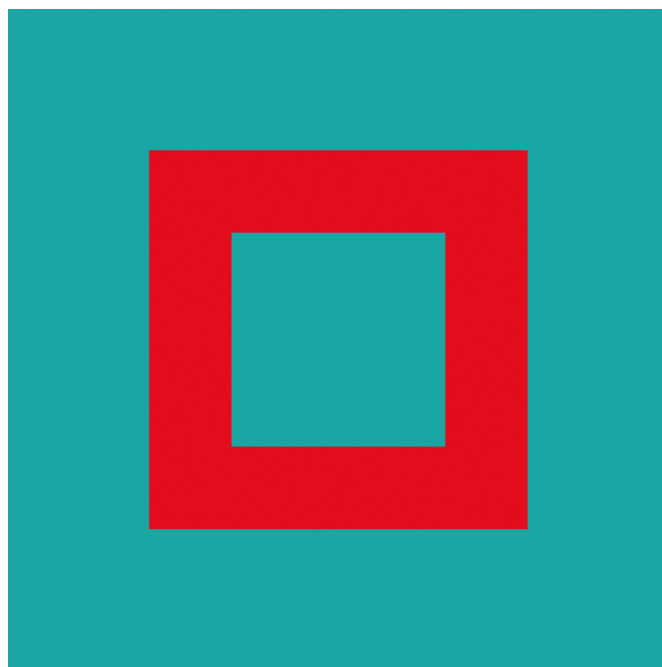
Colour and Tone

Colour plays many roles in visual design, affecting visual hierarchy, perception of structure, and even meaning.

Individuals' responses to colour may be emotive, or determined by fashion or culture.

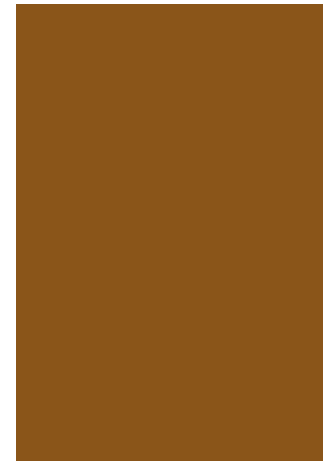
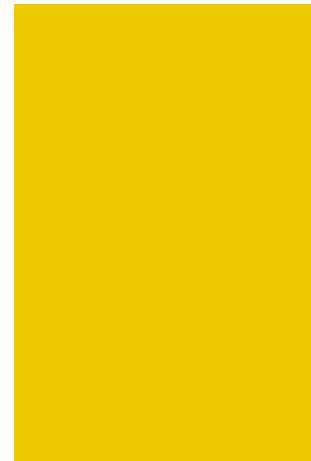
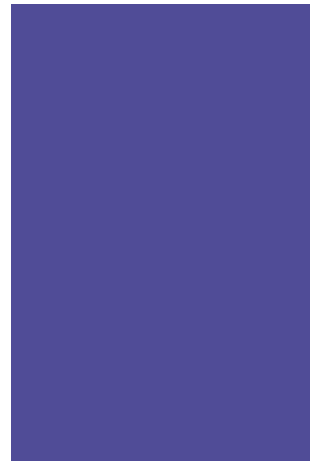
When colours are juxtaposed, their perceived appearance is modified.

Hue and brightness may appear to be modified when the same colour is placed against different backgrounds.



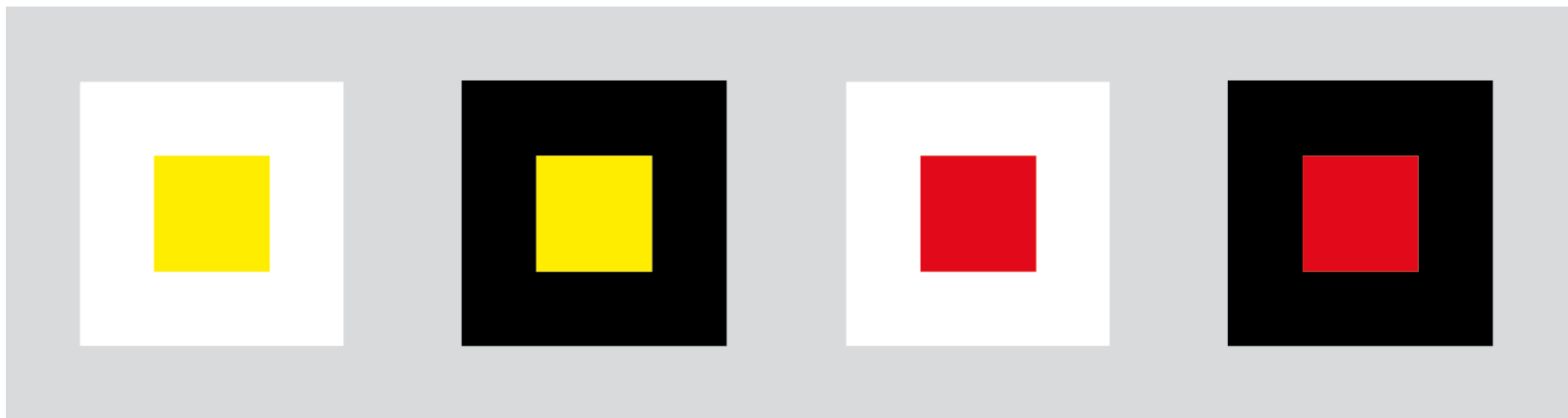
The effect of colour combinations on perception of colour

Large flat areas of a single colour look quite different from pixels of the same colour within an image.



Colours removed from their pictorial context

Colours may seem to advance or recede when placed on different-coloured backgrounds.

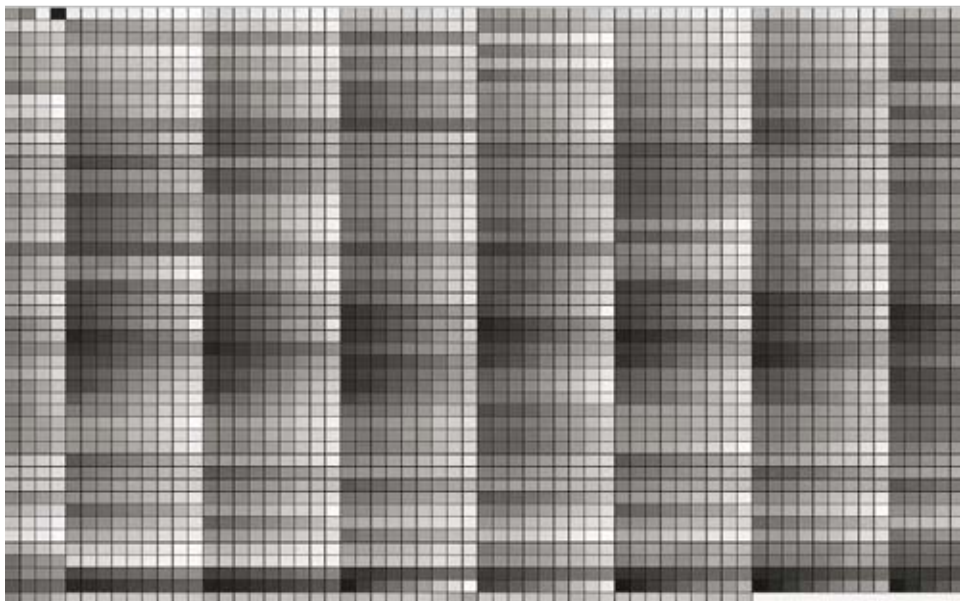
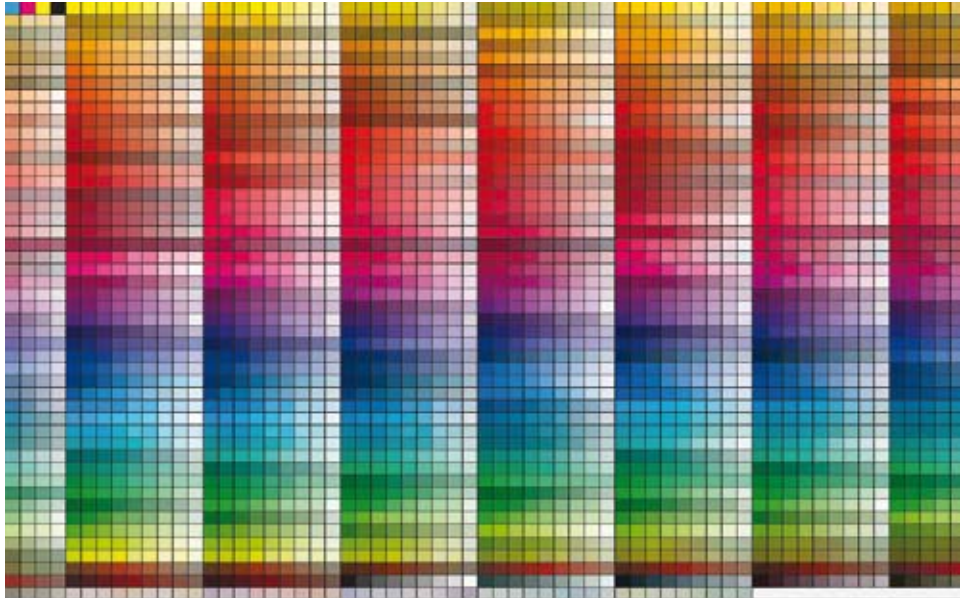


The effect of colour combinations on perception of size

Tonal contrast affects perception of the distinction between figure and ground.

Contrast therefore affects the legibility of text.

It can be difficult to judge the contrast between colours of different hues.



Colours and tones

As people age, less light enters the eye, so a smaller range of tonal values is perceived.

A significant number of people suffer from defective colour vision, most commonly an inability to distinguish between red and green.

The tonal contrast of coloured designs should be tested by converting to greyscale.

Colour should not be used as the sole means of conveying information.



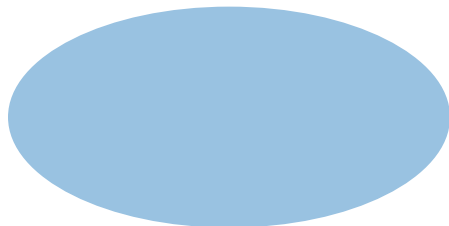
Different colours with similar tonal values (red–green confusability)

Layout Grids

Alignment can give an appearance of coherence and visual order to a Web page or multimedia interface.

It is sometimes necessary to misalign irregular objects slightly to make them look as if they are perfectly aligned.

Hanging punctuation is used to prevent punctuation marks at the ends of lines of text appearing misaligned.



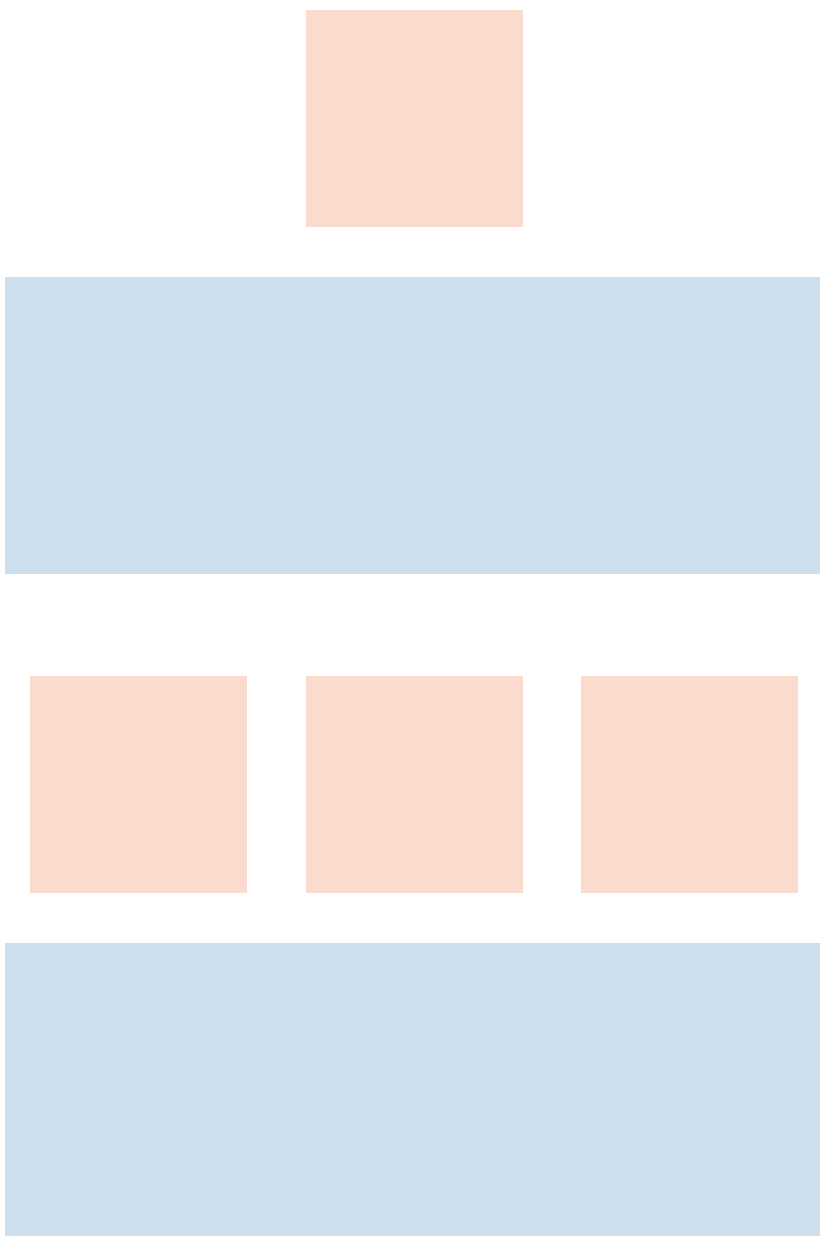
Aligned irregular shapes

Volummol esequis sectet lametum vulla faci
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Hanging punctuation

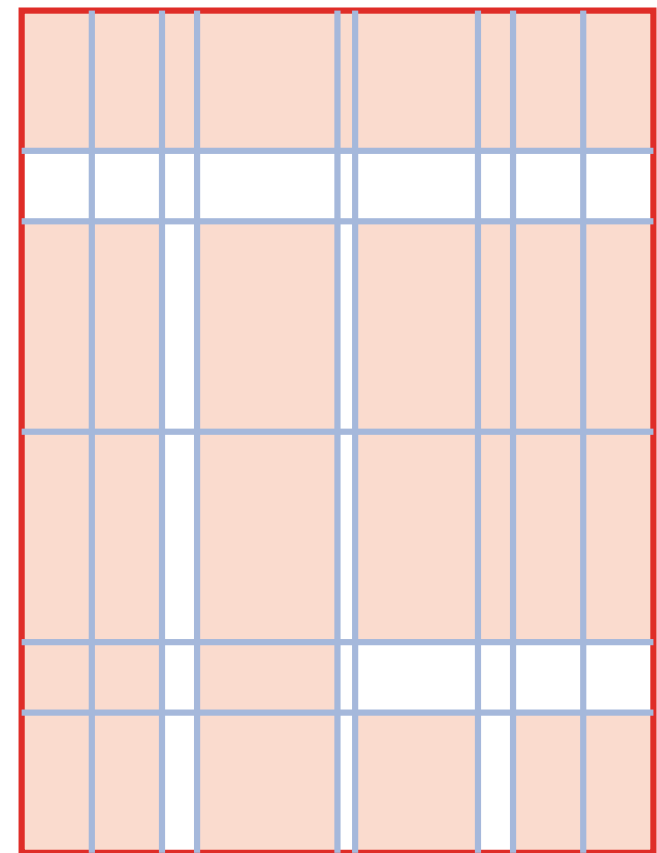
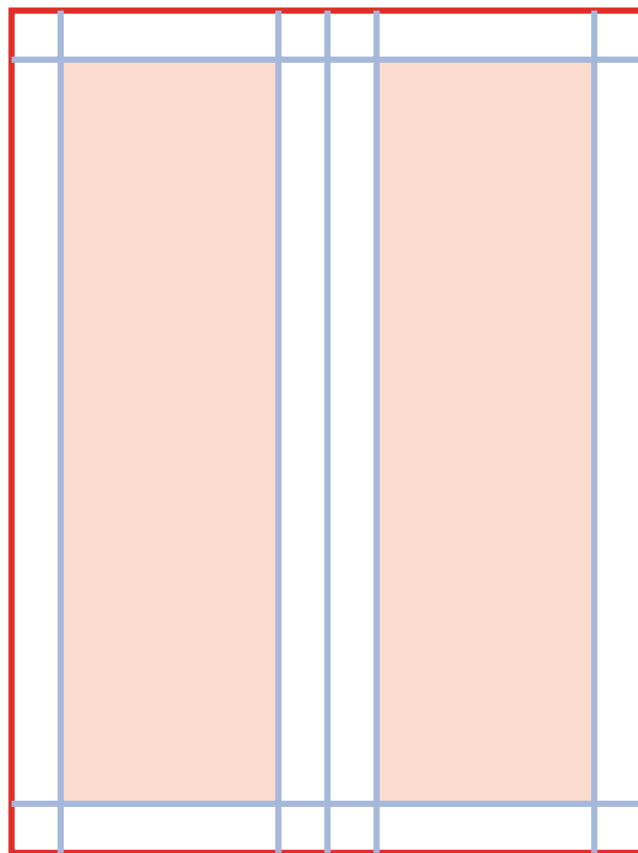
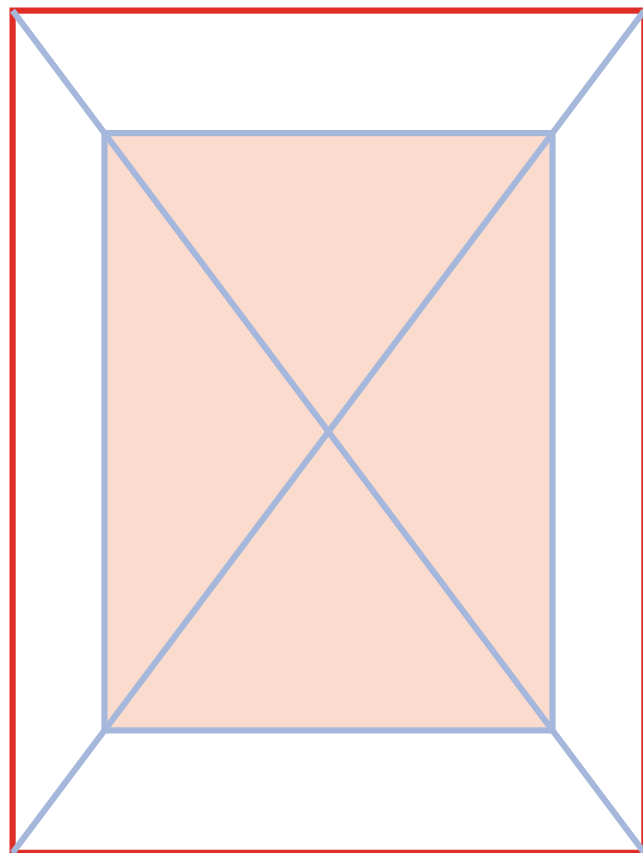
Centred layouts may be problematic – images and headings may look untidy unless one of the aligned elements is significantly narrower than the other.



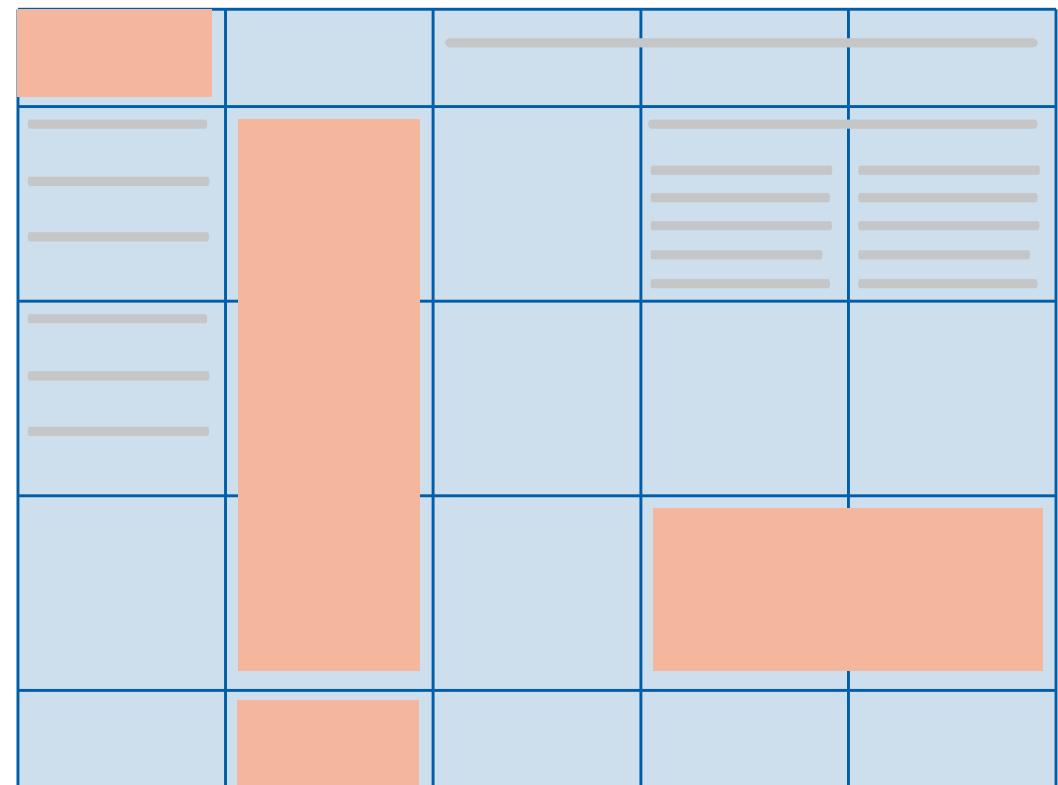
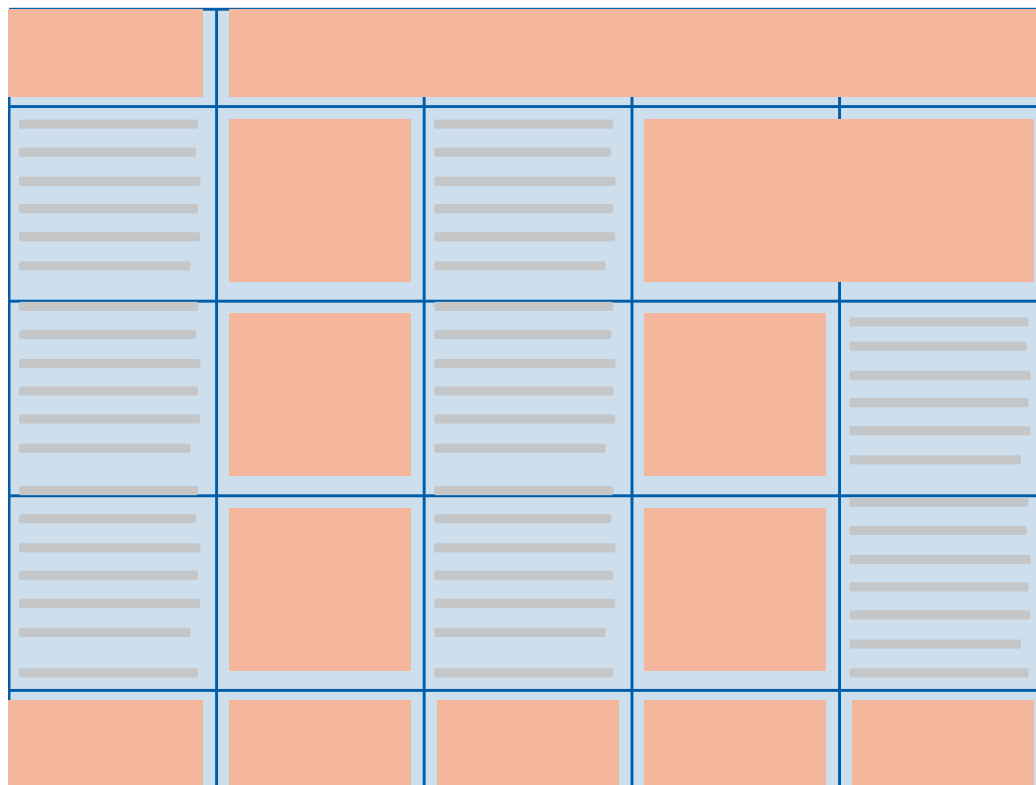
Centred alignment

A layout grid is a geometrical division of the page that can be used to structure the placement of text blocks and images.

The grid itself is simply an aid to layout and remains invisible.



Layout grids



Dense and sparse grid layouts

Modified grids may be used to accommodate the dynamic dimensions of Web pages while maintaining a framework for vertical and horizontal alignments.

Arbitrary grid layouts may be created in Flash.