

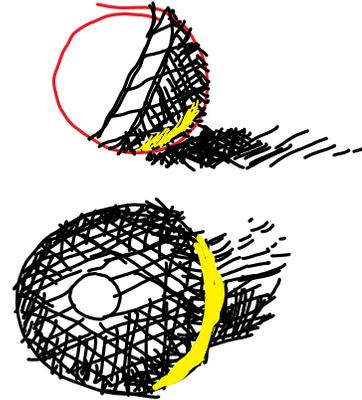
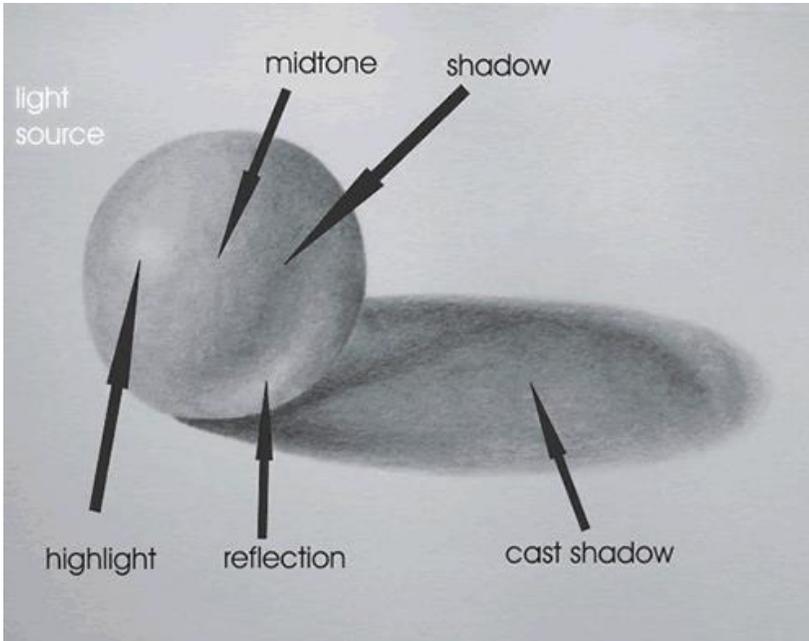
25 Golden Ratio then Chairs

Monday, April 08, 2019 3:19 PM

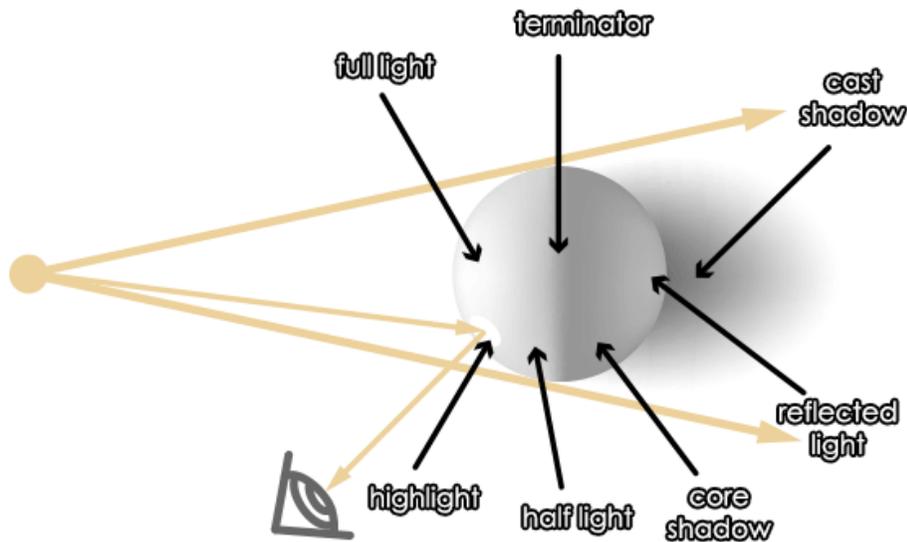
Today

- Sketching: shade and shadow
- Golden Ratio
- Chairs 1: The Eames lounge chair

Sketching



http://www.artinstructionblog.com/wp-content/themes/lifestyle_10/images/understandinglight.gif



<https://cms-assets.tutsplus.com/uploads/users/108/posts/19997/image/color-fundamentals-value-38.png>
<https://design.tutsplus.com/articles/improve-your-artwork-by-learning-to-see-light-and-shadow--cms-20282> Good tutorial about light and shadow.

Shade can refer to any dark area in which sunlight or other bright light is blocked. *Shadow* refers to the dark shape that appears on a surface when an object blocks sunlight or other light.

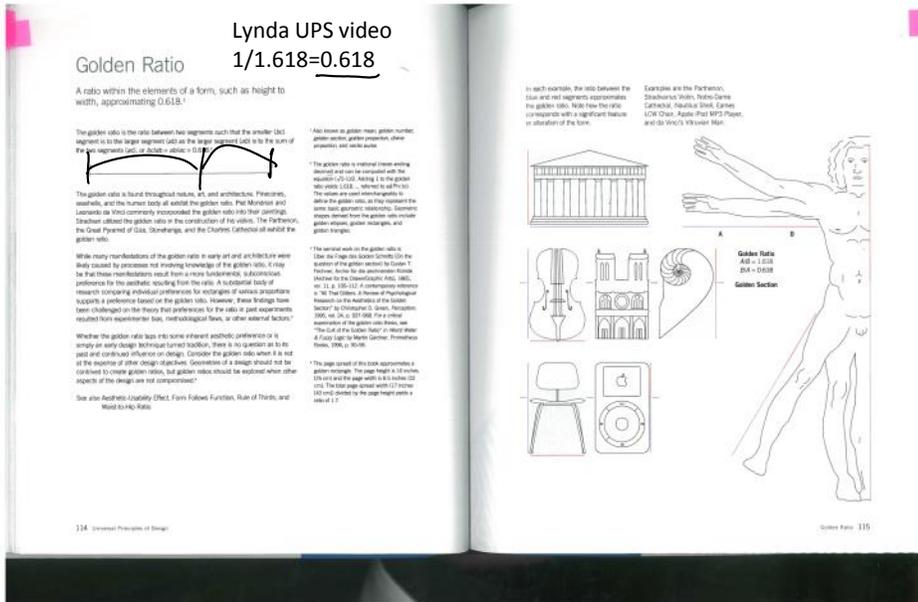
<http://learnersdictionary.com/qa/The-Difference-Between-Shade-and-Shadow->

So you can rest in the shade, or you can shade an object, but you see shadows on the ground.

Geometric Aesthetics: Last one
Golden Ratio

John Edmark - Stanford prof
Rueben Margolin - outdoor sculptures
Ted talk

<https://www.youtube.com/watch?v=B5p2A5mazEs>
Spiral sculptures by John Edmark <http://www.johnedmark.com/>
Trained in computer science and then product design at Stanford.



For a= longer part, and b = shorter part of a line, Golden ratio = $a/b = a + b = 1.618$

$$\frac{1}{1.618} = 0.618$$

Related to Fibonacci series:

They are intimately connected with the **golden ratio**; for example, the **closest rational approximations** to the ratio are 2/1, 3/2, 5/3, 8/5,

i.e. you get close to the Golden Ratio when you divide

From https://en.wikipedia.org/wiki/Fibonacci_number

$$\frac{F_n}{F_{n-1}}$$

Where fibonacci is defined by

In mathematical terms, the recurrence relation

$$F_n = F_{n-1} + F_{n-2}$$

with seed values^{[1][2]}

$$F_1 = 1, F_2 = 1$$

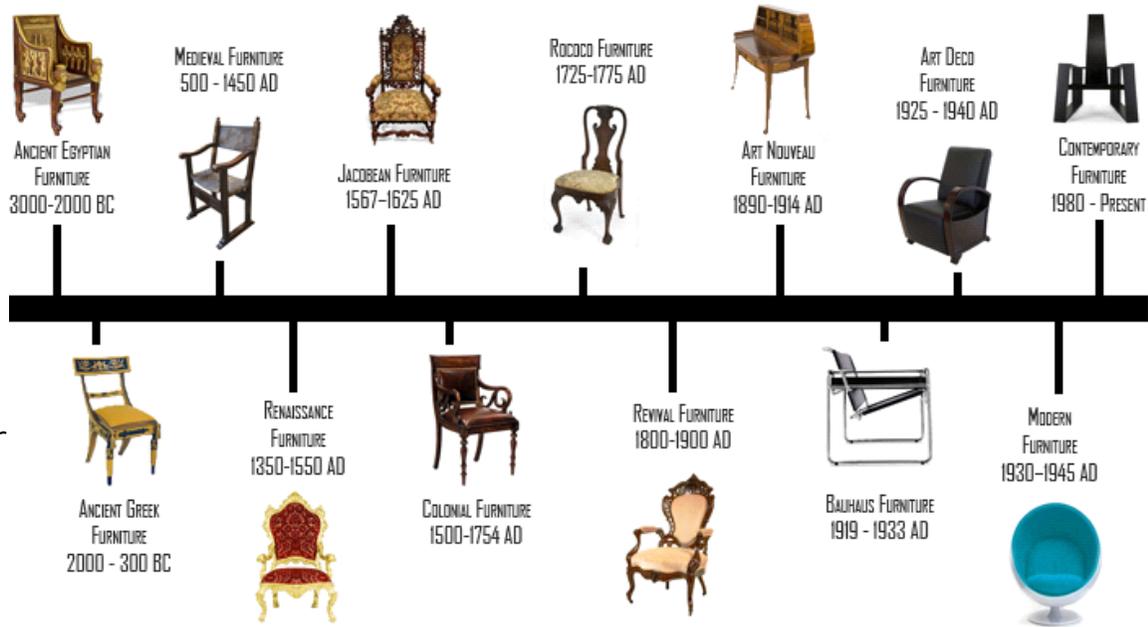
or^[5]

$$F_0 = 0, F_1 = 1.$$

Case Study: The Chair

Design Movements in Furniture

<http://www.onlinedesignteacher.com/2016/02/furniture-design-history.html> Has additional examples and closeups



What are the elements that define each one? Visual, materials, fabrication techniques, philosophy?

↙ <http://www.connectedlines.com/styleguide/index.htm> has details of pre-1920 styles. Chippendale etc. Not the same categories as above.

<http://www.furniturestyles.net/> Another timeline with examples. More text, not so many images.

- Prehistoric
- Ancient Egyptian
- Ancient Greek
- Medieval
- Renaissance
- Jacobean <http://www.furniturestyles.net/european/english/jacobean.html>
- Colonial
- Rococco
- Revival
- Arts and Crafts?
- Art Nouveau
- Bauhaus
- Art Deco
- Modern
- Contemporary

Modern Chairs

20th Century +

<http://www.design-museum.de/en/collection/100-masterpieces.html> Vitra Design Museum site. Basel, Germany.

Modern design is a bit personality driven. The Design Encyclopedia is nothing more than a list of designers and who they worked for/with.

Byars, Mel. *The Design Encyclopedia*. Laurence King Publishing, 2004.

OK, fine, so let's look at specific designers:

Charles and Ray Eames, husband and wife, members of Mid Century Modern/Organic design movement. Pioneered fiberglass and molded plywood seating. Many designs for huge furniture manufacturer Hermann Miller (Grand Rapids, MI). Eames Intro: <http://www.eamesoffice.com/eames-office/charles-and-ray/>

Organic: Incorporated user experience philosophy (the good host, providing comfort) with pioneering manufacturing process; formed plywood shells + upholstery

You have probably sat in this at an airport:



Eames Tandem Sling, by [Herman Miller](#). Still available new. Aluminum frame, vinyl fabric. 2 seater \$4200 up to 47 seats for \$24K. Refurbished with leather, \$6K on Etsy. I always try to sit in these at airports; they fit me.

<https://www.cooperhewitt.org/2017/01/10/title-to-comees108-sofa/>



ES 108 sofa

Eames Lounge Chair and Ottoman (Hermann Miller part numbers 670/671)

Design notes <http://www.eamesoffice.com/blog/eames-lounge-chair-is-cared-for/>

Build process videos:

[How We Make the Eames Lounge Chair: Six New Films About the Classic, n.d.](#)

<https://www.youtube.com/watch?v=IBLMoMhIAfM&feature=youtu.be> Eames introduce the lounge chair on national TV, the Today Show, in 1956. Long, and difficult for a feminist to watch.