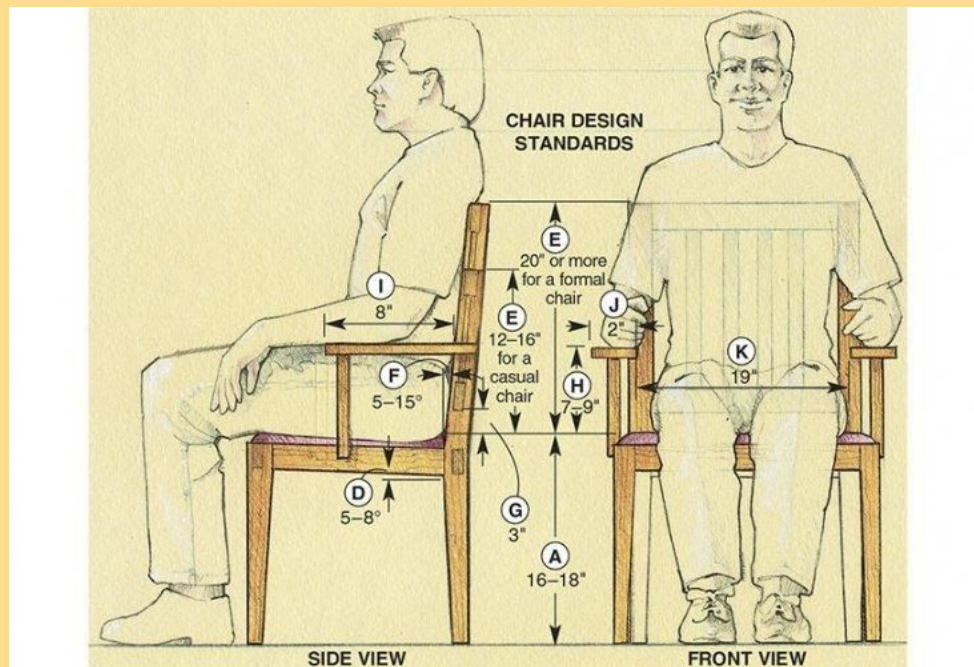


Furniture Drawing

Hello Students!

Most of you have begun to develop, draft and scale your chair designs. While this is great, in the meantime it can be beneficial to sharpen your creative skills and free-drawing abilities. By looking at everyday furniture at home and practicing drawing skills, you may come back to your chair design with new ideas and an inspired outlook.

Before free drawing, review some of the average measurements for comfortable seating:



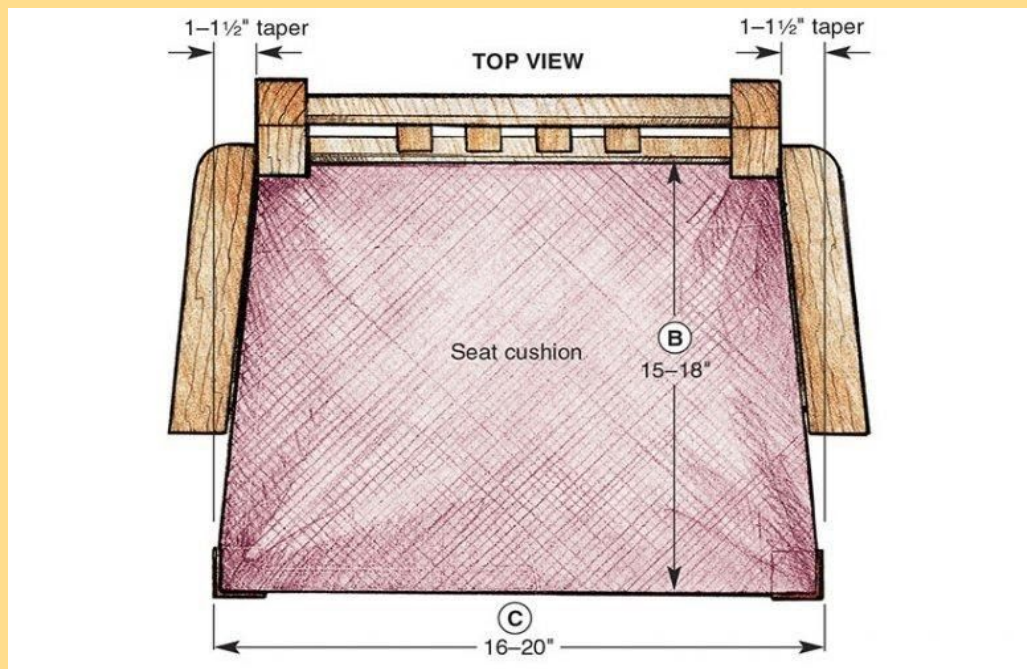
Much like you all have done already, this is being rendered by considering **front view** and **side view**. In adding a figure sitting in the chair, the measurements almost begin to make more sense.

If you find that you have designed a chair in your mind that you really love, applying these dimensions could help bring your chair to life and make it possible to truly build! Utilize **ergonomics**. | Remember: " = inch ' = feet

Here is a helpful step-by-step guide on dimensions when constructing a chair:

The Seat

- For the occupant's feet to rest flat on the floor with a knee angle of 90–100°, locate the seat 16–18" above the floor. If the chair will have a cushion, account for its compressed thickness in the seat height by subtracting half the cushion's thickness.
- To allow clearance between the seat's front edge and the occupant's legs, make the seat 15–18" deep.
- Aim for a seat width of 16–20". Depending on the chair's style and your preference, you can taper the seat 2–3" from front to back (1–1½" per side). A wider front provides more leg room while a narrower back allows a little more elbow room.
- For added comfort, particularly when the chair will not have a cushion, slope the seat 5–8° from front to back. This also helps keep the occupant from sliding forward. For an office or desk chair, though, it's best to forget the slope as a flat seat facilitates leaning forward.



The Back

- To give lower-back support without interfering with the shoulders, plan for a back height of 12–16" above the seat for a casual chair and 20" (typical) for a formal chair.
- Slant the back up to 5° for a formal chair and up to 15° for a casual chair. Keep in mind, though, that as the back angle increases, you need to up the seat angle (to maintain the seat-to-back angle between 90° and

100°) to prevent forward sliding and lower the seat height to keep the front edge of the seat from contacting the back of the legs.

- To give “rear” clearance for hind parts, leave 3" of open space between the top of the seat and bottom of the lower backrest, or curve out the lower 4–8" of the backrest.

The Armrests

- For the armrests to support the forearms without elevating the shoulders, position them 7–9" above the seat. Be sure to check the table-apron height when determining the armrest height so the arms will slide under the apron.
- Make armrests a minimum of 8" long, 2" wide, and spaced approximately 19" apart.

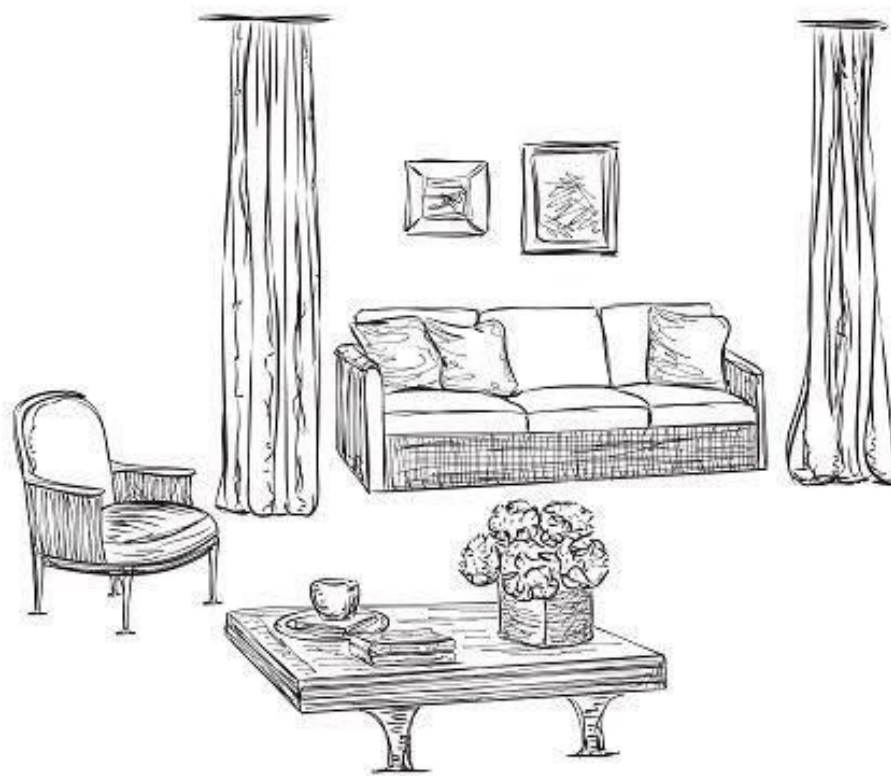
Lots of information to tackle, but you can rely on the images to help guide you!

Ergonomics (from the Greek word *ergon* meaning work, and *nomoi* meaning natural laws), is the science of refining the design of products to optimize them for human use. Human characteristics, such as height, weight, and proportions are considered, as well as information about human hearing, sight, temperature preferences, and so on. Ergonomics is sometimes known as engineering.

TASK

Artists often learn by seeing and **observing**. This includes searching for images in books, magazines or even online to copy and study from. However, it is important to recognize that there are objects and items in our everyday environment that can act as subjects for us to draw. Do this with furniture! Whether it is patio furniture, dining furniture or couches in your living room, freely draw all types of furniture around you!

- Use *whatever* material you have: pens, pencil, markers, Sharpies, etc.
- Also feel free to use whatever paper you have available. Sketchbooks are recommended!
- Keep it loose! Try not to erase too much. Being expressive is key in free drawing things that you are observing from life!
- View examples below from other artists.





South Korean designer **Jinil Park** has created a range of (actual) furniture from intersecting wires that has the appearance of a two-dimensional sketch.



At first glance, these images may appear to be simple line drawings. Yet, they are 3-D chairs.

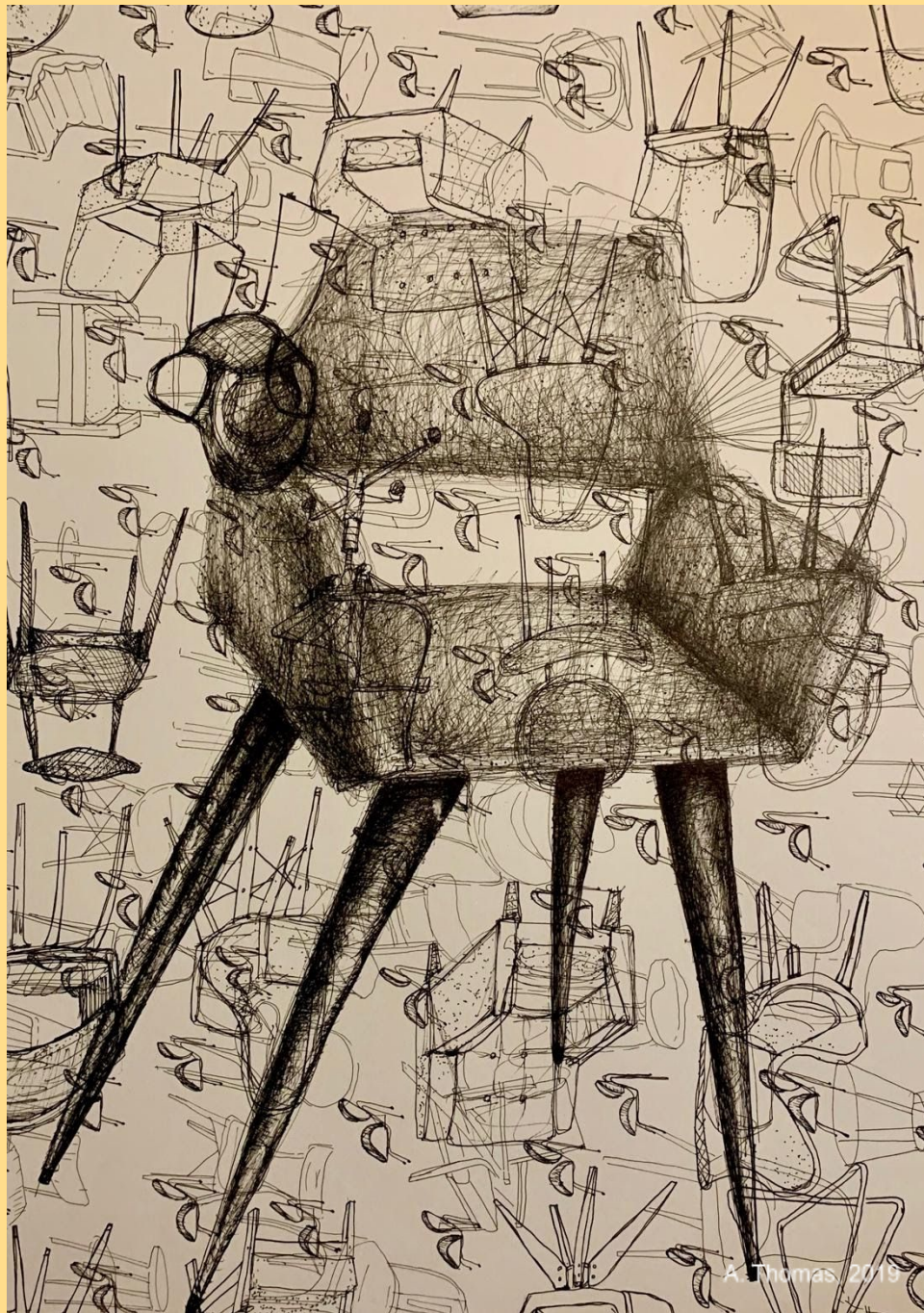
Made from steel wire, Park's Drawing Series comprises four pieces, including two chairs, two lamps and a table, **which give the impression of roughly drawn sketches.**

"The key point of my work is the moments where the line is distorted," said Jinil Park. **"They express the designer's feeling, status, and emotion."**



"From the **sketches of the furniture, originated from the line drawing**, I picked the ones that I like the most, and the ones that I can make the solid object out of it. And to achieve that solid object, I used different wires that have different thicknesses by hammering on different faces of the wires with irregular strength." – J. Park





In my personal piece, *Modern Overlap*, (2019), ink on paper, I used product images from Amazon.com to find several mid-century modern style chairs that observed, copied and drew freely. Overlapping them in layers, the chairs are drawn in mixed quality and level of finish, using mostly drawing pens.

- If you have access to interior design books/magazines or the internet, I highly recommend this approach!