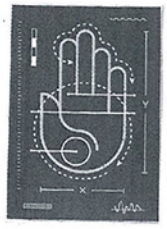
Human factors

Part one

1. How is anthropometric data collected and translated into a meaningful format that is useful for people such as designers and architects?

When anthropometric data is collected by designers, the data would focus more on particular populations (depending on what is going to be made). The data is collected from children and/or adults. When merging multiple data sets, for anthropometry make sure they share common features, for example units of measurements, the physical condition or age of the subjects measured, etc. You also need to pay attention to the terminology for specific measurements so the data is accurate. The data can be presented chronologically and geographically. Averages of the data evolve over time because of migration, changes in diet, mortality, and other reasons. Data collected in a place or region which is over 50 years old may not apply to a later population in a different location so it may not be beneficial.



2. Why are certain measurements collected to establish particular guiding ratios and where does this information come from?

Measurements of the hand are important because I will need to know the size of my utensil so that people can use the utensil. The measurements of these can be collected from books, websites and existing products.

3. How are guiding ratios established for one product that is to be used by diverse groups?

Guiding ratios of different products are established by the different sizes of width and length, the different hand sizes and this is used for different groups for the 5th percentile, the 50th percentile and the 95th percentile.

4. Why is it important to know the decision making behind the sampling, measuring and the basis on which the guiding ratio has been established?

It is important because if someone with the smallest hand can use the kitchen utensil then a person with the biggest hand will be able to use the kitchen utensil as well.

1

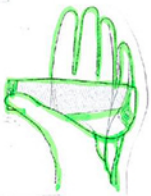
Part Two

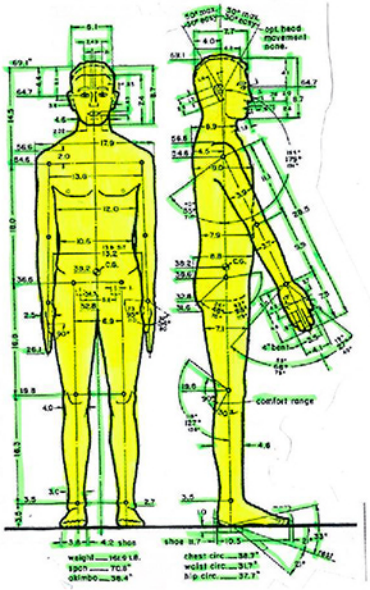
1. What are the two main grips when using hand tools and what is the difference? What grip is required for your kitchen utensil?

The two main grips when using hand tools are the 'power' grip and the 'precision' grip. Power grip is used to hold a hammer, for example, which uses relatively strong muscles in the forearm. Your whole hand wraps around the handle.

A precision grip (or a pinch grip) is used to hold a nail or a pencil, which uses smaller and weaker finger muscles. The item is held between your thumb and index finger. This grip should not be used for tools or actions that require force.

The grip that is required for my kitchen utensil would be the 'power' grip because it uses stronger hand movement in the forearms when using the utensil.





2. What are the three main things that cause discomfort when using hand tools? How could this affect this design of your utensil?

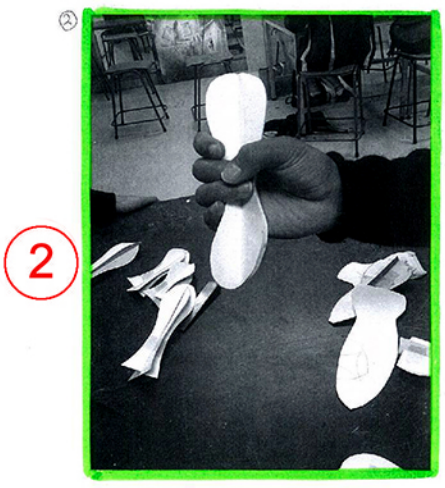
The wrong size i.e. too big or too small, doesn't have good grip, too thick or too thin. These three things can affect the design of the kitchen utensil because if it's not comfortable the use of this utensil wouldn't aid in anyway and it would be hard to work with. I know two things that make hands and wrists uncomfortable- repeated muscle use, which can lead to painful tendons, and excessive bleeding, which causes discomfort and restrict movement. The third factor that can cause discomfort and may lead to injury is the amount of effort or force needed to grip a handle or use a tool.

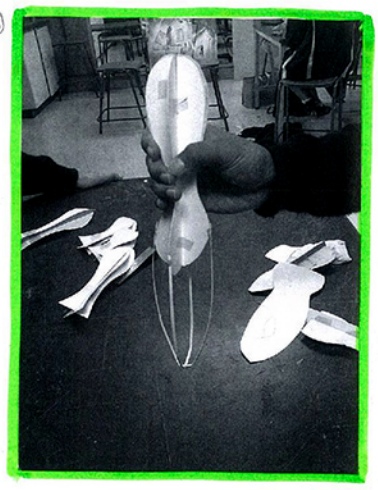
3. What are some important things that you will need to consider in the design of your kitchen utensil and how will this affect your particular utensil?

You will need to have the correct size and the correct measurements for the average person to be able to use it effectively. The design utensil needs to be comfortable to hold and use for people to use so they can use it properly.

4. Remember, anthropometry is about body measurements such as body size, shape, and strength. What measurements will you need to consider in the design of your kitchen utensil? Include a visual diagram and the different percentiles.

You will need hand measurements from the palm to the fingertips, the width of the hand, and you will also need the average hand measurements of people.





Photos

– lines of Plywood, create Pattern and movement.

lines of the plywood make the whisk look visually appealing.

- curved shape makes the whisk comfortable to use. Also can be linked to the characteristics of art noveau.

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The whisk being used in a bowl.