**KNIFE MATERIALS**

There are many different types and brands of knives available. Below are brief descriptions of the different materials used in knives to help you determine which is best for you.

* **Stainless Steel:** The budget option, made with stainless steel that is resistant to rust and stains
* **High Carbon Steel:** Iron with added carbon, which makes for a stronger blade that keeps an edge much longer than a simple stainless steel blade.
* **High Carbon Stainless Steel:** Has high carbon content for hardness (same as high carbon steel) but added chromium for shine.
* **Ceramic:** made of zirconium oxide.

**KNIFE CONSTRUCTION**

A knife consists of:

1. The blade

2. The tang (the part that goes into the handle. High-end knives have a full tang)

3. The bolster/ finger guard

4. The handle

5. The spine

6. The cutting edge

7. The heel

8. The tip

9. The butt



**THE VEGETABLE TOOL KIT**

There are many different types of knives and tools to address the many jobs in the kitchen. A few of the most essential knives and tools are described below.

**Chef’s Knife**

A Chef's Knife is usually 6" to 12" in length and is the knife that most cooks will use the vast majority of the time. The chef's knife can be used for meat as well as fruits and vegetables, and for tasks from slicing to chopping. A 6" knife is fine for smaller jobs, but if you are chopping a large quantity of food or cutting larger items, then a 8" (or larger) chef's knife is better for the job.

OR

**Santoku Knife**

Santoku Knives, which are used as chef’s knives, are usually 6" to 8"in length. The blade is generally thinner than a chef’s knife blade and the taper is different as well. A Santoku knife does not have a bolster and is not as heavy as a traditional chef’s knife. The Santoku is used for all the same tasks as a traditional chef’s knife, and the choice between the two depends on personal preference.

**Paring** **Knife**

Paring Knives are generally 2" to 5" in length and arc designed for doing smaller jobs. The blade generally has a smaller profile, which is great for separating citrus segments or melon slices. The slimmer profile of the paring knife blade helps keep food from sticking to the blade. The paring knife's main uses include peeling and cutting small fruits and vegetables.

**Serrated Slicing Knife**

Serrated Slicing Knives are typically 6" to 10" in length and are excellent for cutting bread and tomatoes.

**Vegetable Peeler and Brush**

The “Y” vegetable peeler is a favorite among chefs for its ergonomic design that accommodates both and right- and left-handed users.

For hard to clean root vegetables, you may wish to use a stiff brush or the scrubby side of a sponge to clean them rather than peel it (remember the peel contains lots of nutrients!).

**USING THE KNIFE**

For chef's knives and Santoku type knives, grip the handle with three fingers, resting the index finger on one side and holding the thumb on the opposite side of the blade. This adds stability and helps keep the blade from twisting from side to side.

For smaller knives grip the handle with all fingers. Always handle the knife with respect, as it is sharp and be aware of protecting the guiding hand, which is the hand not holding the knife. The guiding hand guides the object being cut, prevents slippage, and helps control the cut size. The fingertips of the guiding hand should hold the object with the thumb held back from the fingertips. The fingertips should also be tucked under slightly, with the knife blade resting against the knuckles of the "guiding hand", preventing fingers from being cut.

**Basic Culinary Cuts**

All of the cuts listed below are standard culinary cuts throughout the world. Learning how to correctly master these cuts will help improve your cooking and the final presentation of your food. Cooking vegetables that are cut uniformly will result in food that is cooked evenly. One reason for cutting vegetables in different sizes is that they vary in cooking time. A large dice takes longer to cook than a small dice, so consider this when you are preparing a recipe.

**Coarse Chopping**

This method is usually used for such items as onions, celery, carrots, etc. in a stock, which will not be part of the finished presentation. They are normally strained out of the dish and discarded before service. The method for coarse shopping is as follows:

1. Trim the root and stem ends and peel the vegetables if necessary.
2. Slice or chop the vegetables at nearly regular intervals until the cuts are relatively uniform. This need not be a perfectly neat cut, but all pieces should be roughly the same size.

**Matchsticks (Julienne and Batonnet)**

These cuts are long, thin and rectangular. They can be cut by knife or machine. The knife method is as follows:

1. Start by cutting the vegetable into 2 or 2.5-inch lengths.
2. Slice off the round edge of the vegetable lengthwise so you have a flat surface to work with. (The trimmings can be used, as appropriate, for stocks, soups, purees, or any preparation where shape is not important.)
3. Next, place the cut side down and slice the vegetable into ¼-inch slabs.
4. Slice the slabs into ¼-inch matchsticks sections.

**Dice**

Dicing is a cutting technique that produces cube-shaped vegetables. Different preparations require different sizes of dice, from a fine dice (1/8-inch cube) to a large dice (1-inch cube). The smaller the cut, the more tender the vegetable becomes.

1. Trim and cut the vegetable into sticks anywhere from 1/8 to 1 inch wide.
2. Gather the matchsticks and cut through them crosswise at evenly spaced intervals to create a dice.

**Mincing**

This is an even, very fine cut that is especially appropriate for herbs and other strongly flavored ingredients such as garlic, ginger and shallots. Usually, the guiding hand is used to hold the item being cut just until a very coarse mince is achieved. As the fineness of the mince becomes greater, the guiding hand is often used to hold the tip of the knife's blade in position. The method is as follows:

1. Gather herbs or roughly chopped garlic or shallots in a pile on a cutting board and position the knife above the pile.
2. Keeping the tip of the blade against the cutting board, raise and lower the knife's heel firmly and rapidly, repeatedly chopping through the herbs or vegetables.
3. Continue chopping until the desired fineness is attained.

**Shredding (Chiffonade)**

The chiffonade cut is used for leafy vegetables and herbs. The result is a finely shredded product, often used as a garnish or bed. The method is as follows:

1. When cutting tight heads of greens, such as cabbage, core the head and cut it in half, if it is large, to make cutting easier. For greens with large, loose leaves, roll individual leaves into tight cylinders before cutting. For smaller leaves, stack several leaves on top of one another.
2. Use a chef's knife to make very fine, parallel cuts to produce fine shreds..

**Diagonal**

This cut is often used to make vegetables ready for stir-fries and other Asian-style dishes. Because it exposes a greater surface area of the vegetable, employing this cut shortens cooking time. The method is as follows:

1. Place the peeled or trimmed vegetable on the work surface.
2. Make a series of even parallel cuts on the bias.

**Peeling and Dicing an Onion**

Because onions grow in layers, they require a special technique, instead of the dicing method used on solid foods. The method is as follows:

1. Use a paring knife to remove the stem end. Peel off the skin and the underlying layer, if it contains brown spots. Trim the root end but leave it intact.
2. Halve the onion lengthwise through the root.
3. Make two or three horizontal cuts parallel to the work surface, from the onion's stem end toward the root end, but do not cut all the way through. The closer the cuts, the finer the dice.
4. Lay it cut-side down and make a series of evenly spaced, parallel, lengthwise cuts with the tip of a chef’s knife, again leaving the root end intact.
5. Make even, crosswise cuts with a chef’s knife, all the way through, from stem to root end.

**Peeling and Mashing Garlic and Shallots**

Mashed or minced shallots and garlic are required in many preparations; for example, as a component in salad dressings or stir fries, anywhere you don’t want visible chunks of garlic. The method is as follows:

1. To loosen the skin, crush the garlic clove or shallot bulb between the knife blade's flat side and the cutting board, using the heel of the hand.
2. Peel off the skin and remove the root end and any brown spots.
3. Mince the clove or bulb fairly fine, or coarsely chop, as for herbs.
4. Sprinkle the garlic or shallot with salt before mincing. This makes mashing easier by providing abrasion and absorbing excess juice and oil.
5. Hold the knife at an angle and use the cutting edge to mash the garlic or shallot against the cutting board. Repeat this step until the item is mashed to a paste.