

Basic Knife Skills

Basic knife skills are an important component of any culinarian's repertoire - whether you plan to earn a living in the kitchen, or simply please yourself, your friends, and your family.

Learning to wield a knife correctly will speed up your prep time, and food products fashioned in uniform shapes and sizes will help guarantee even cooking throughout a dish. In addition, the mastery of certain classic knife cuts and methodology will vastly improve the look of your food, garnishes and plate presentations.

Equipment

You won't need any truly special equipment for this lesson. The bare minimum requirements are:

A sturdy cutting board

A (sharp!) chef's knife

A (sharp!) paring knife

A vegetable peeler

Hopefully, you also own a steel (a tool to hone your knife edge between sharpenings and intermittently during use).

Here's a list of what you might like to have on hand if you want to try all the techniques:

A bag of baking potatoes

A bunch of carrots

A few large, firm onions

A few handfuls of leafy herbs or vegetables (large-leaf basil or spinach would be ideal, but cabbage will suffice)

Knife Safety

The safe use of knives is imperative for obvious reasons. There are only a few rules to remember, but they are crucial:

1. A sharp knife is a safe knife. Using a dull knife is an invitation to disaster. If you try to force a dull knife through the surface of a food product, it's more likely to slip and cause an injury. Also: if you do happen to cut yourself, a sharp knife will result in an easier wound to attend to.
2. Never, ever grab a falling knife. The best way to avoid having to think about this rule is to make sure your knife is always completely on your work surface, without the handle sticking out into traffic areas. Inevitably, however, it will happen from time to time that you or someone else will bump a knife handle, resulting in a falling knife. We all have a natural instinct to grab for anything that's falling. You must overcome this inclination. Remember: a falling knife has no handle. Just get your hands and feet out of the way.
3. Use the right knife for the right job. Many knife injuries occur when laziness induces us to use the knife at hand rather than the correct knife for a job. Place your knife inventory where it is easily accessible so you won't be tempted to make this mistake.
4. Always cut away from - never towards - yourself. Sometimes this is a hard rule to follow. Again, don't be lazy! If the angle is wrong, turn the product around. Or turn your cutting board around. By the way - if your cutting board doesn't have rubber feet, you should place it atop a damp kitchen towel to make sure it doesn't move while you're cutting.
5. When you have a knife in hand, keep your eyes on the blade. I have to admit that every single time I have cut myself, I was

looking away from what I was doing. This rule stands whether you are cutting something or carrying a knife. The simple fact is: you're unlikely to cut yourself if you're watching the blade, especially the tip.

6. Carry a knife properly. If you're carrying a knife through the kitchen, especially a busy commercial kitchen, there are often people hurrying everywhere. You must get used to the idea that the only way to walk with a knife in hand is to carry it pointed straight down, with the blade turned towards your thigh. Keep your arm rigid. You don't want some busboy or family member going to the emergency room with a puncture wound from your knife.

7. Never, ever put a knife in a sink full of water. In addition to soaking probably being bad for your knife handle, putting a knife in a sink full of (likely soapy) water is just asking for trouble. Wash your sharp knives by hand (not in a dishwasher!) and put them away immediately.

8. Always cut on a cutting board. NEVER on Wooden Tables!!! Don't cut on metal, glass or marble. This will ultimately damage a knife's edge.

The Parts of a Knife

Knives are constructed in many different ways. The features of a classic chef's knife are identified in the two diagrams below.

In the very best knives, the tang will run the full length of the handle as pictured above. This lends balance and durability to the knife's construction. Another sign of quality is a bolster that is an integrated part of the blade, rather than a separate "collar".

Types of Knives

There are literally hundreds of knife designs. I'm going to identify just a few of the ones I use the most to perform classic knife cuts and common kitchen tasks.

If you're planning on spending a substantial amount of money on one good knife, spend it on your chef's knife. This is the implement you will use 90% of the time to shape product in the kitchen. I use my 10" chef's knife the most often, but you should take your time deciding what length of blade to purchase according to the size of your hands and your particular needs.

Note that the Santoku knife has a "dimpled" blade, which allows food product to separate from the blade with ease, rather than sticking to it, as damp product is sometimes inclined to do.

Knife Grips and Fulcrum Placement

The proper way to hold a chef's knife is to grasp the blade firmly between the pad of your thumb and the knuckle of your index finger just in front of the bolster, curling your remaining fingers around the bottom of the handle. If you hold your knife correctly, you will eventually develop a nice callous at the base of your index finger, near the palm. Resist the temptation to extend your index finger along the spine of your knife, because that method results in a lack of control of the angle you are working with.

There are two different methods to choose from when cutting product with your chef's knife.

One is to use your wrist as the fulcrum of the stroke, moving the tip up and down in an arc:

Wrist-fulcrum method

The other method is to keep the tip of your knife on the cutting surface, moving the rear of your knife up and down. This is the method I prefer, since it allows for a smoother range of movement and more control:

Tip-fulcrum method

No matter which method you adopt, it's crucial to be aware of the position of your "guide" hand. Always keep your thumb tucked behind the gently curled fingers of your guide hand.

Think TIGER CLAW!

This will prevent countless injuries, and also facilitate the use of your knuckles to guide the edge of your knife to its proper position for the next cut:

Proper position for guide hand

Some Classic Knife Cuts

I'm using potatoes to demonstrate the majority of the knife cuts in this section, since they're relatively inexpensive and easy to practice with. However, you'll probably figure out that some of the daintier cuts would actually be impractical to fashion a potato into, since only a few minutes of cooking would reduce them to mush. As you grow more proficient, you'll probably find yourself using denser vegetables, such as carrots or turnips, for tiny cuts such as fine julienne and brunoise. If you practice a lot, be prepared ahead of time with your favorite mashed potato or potato soup recipe to utilize the results of your labor (and your trimmings). A large dice is a cube measuring $\frac{3}{4}$ " on a side. First, cut one side of the potato off to provide a flat, stable surface for the next cut:

Cutting a flat surface for stability

It's important to be aware of the angle of your knife blade in relation to the cutting surface – this should be a completely perpendicular, 90-degree angle. The best way to ensure the proper angle is to cut with your head directly over the cutting surface and product. So it's best to use a high table or counter to cut on – otherwise you are in for an aching back after as little as a few minutes.

Now, set the potato on the newly created flat side, and begin cutting "planks" $\frac{3}{4}$ " wide:

Cutting the "planks"

Next, lay the planks over and cut them into "logs":

Cutting "logs" for large dice

Finally, trim one end of the log and cut as many $\frac{3}{4}$ " large dice as you can. As you become more proficient, you will be able to cut several stacked planks into logs at a time, and several logs side-by-side at once into dice.

Dicing logs

Large dice

This same method (flatten a side, cut planks, cut logs) will work for most of the potato cuts in this section. For instance, a medium dice is a simply a perfect $\frac{1}{2}$ " cube. Same method, smaller cubes.

A paysanne is a decorative cut that's related to the medium dice, but sliced into $\frac{1}{8}$ " thick squares ($\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{1}{8}$ "). Paysanne are most often used as a garnish:

Cutting paysanne

A classic batonnet is a stick-shaped cut (resembling a french-fry) that measures $\frac{3}{4}$ " x $\frac{1}{4}$ " x 2-to-2 $\frac{1}{2}$ " inches. Cut $\frac{3}{4}$ " square logs as outlined earlier and trim to the correct length. One easy way to tell if your batonnet are of classic dimensions is to compare them to the rivets on a standard chef's knife:

Standard chef's knives often have $\frac{3}{4}$ " rivets – a perfect reference for batonnet cuts

The opposite edge of successive rivets on a standard chef's knife makes a good reference for batonnet length

A small dice is simply a $\frac{1}{4}$ " cube, made from the beginnings of batonnet:

Cutting small dice from $\frac{1}{4}$ " square logs

The dimensions of a true julienne are $\frac{1}{8}$ " x $\frac{1}{8}$ " x 2-2 $\frac{1}{2}$ ". A julienne of potato is sometimes referred to as an alumette. I find that when the cuts get this small and smaller, for some reason it is easier to trim planks to the correct length before cutting logs:

$\frac{1}{8}$ " planks, ready to be cut into julienne

Once again, your knife handle provides a handy reference for the length of a classic julienne – and the tang of your knife provides a reference for the correct width:

Julienne can be fashioned into classic brunoise by simply dicing julienne logs into $\frac{1}{8}$ " cubes. You won't be using brunoise of potato very often, though; brunoise is more likely to be made of carrot or pepper, and used as a garnish:

Dicing julienne logs into brunoise

Fine julienne is the same length as julienne, but the width and depth are $\frac{1}{16}$ " x $\frac{1}{16}$ ":

Fine julienne

$\frac{1}{16}$ " cubes are known as fine brunoise:

Cutting fine julienne into Fine Brunoise

A mince is a tiny, but less fussy cut of vegetable, with no specific dimensions except that it should be quite small, usually in order to promote quick infusion of flavor to a dish. To accomplish a quick mince, cut your product into manageably small slices or segments, then rock the edge of the knife back and forth over the cutting surface while pressing down on the spine of the knife with the palm of your guide hand. Arch your palm to keep fingertips out of the way of the blade:

Mincing a shallot

Minced shallot

Tips for Cutting Certain Fruits and Vegetables

Now we'll move on to less strictly classic techniques and address the easy ways to break down certain fruits and vegetables.

Dicing an Onion

The first hurdle I had to overcome in learning to dice an onion was to learn an efficient method of peeling it. Attempting to peel a whole onion can be an exercise in frustration. First, make a flat surface to set the onion on by slicing off a small portion of the stem end:

Now, balancing the onion on the flat surface just created, cut it in half through the root end.

Do not trim the root end off either half of the onion.

Next, peel the skin from each half of the onion, using a paring knife:

Peeling the skin from half an onion

Once your onion is peeled, place it cut-side down, and make vertical cuts of the desired thickness from root to stem end. Do not cut all the way through the root end.

Making the vertical slices

Now, make horizontal slices, once again being careful not to cut through the root end. You may need to hold the sides of the onion together with the fingers of your guide hand, so be cautious – it's easy to nick yourself during this step:

Making the horizontal cuts

Finally, slice down across the cut grid to produce your dice:

Completing the dice

The diced onion

Chiffonade

A chiffonade is a fine slice or shred of leafy vegetables or herbs. To chiffonade, simply stack a few leaves, roll them into a cigar shape, and slice. Remember to remove any tough, woody stems that you want to exclude from your preparation:

BASIC KITCHEN CONVERSIONS & EQUIVALENTS

DRY MEASUREMENTS CONVERSION CHART

3 TEASPOONS = 1 TABLESPOON = 1/16 CUP

6 TEASPOONS = 2 TABLESPOONS = 1/8 CUP

12 TEASPOONS = 4 TABLESPOONS = 1/4 CUP

24 TEASPOONS = 8 TABLESPOONS = 1/2 CUP

36 TEASPOONS = 12 TABLESPOONS = 3/4 CUP

48 TEASPOONS = 16 TABLESPOONS = 1 CUP

LIQUID MEASUREMENTS CONVERSION CHART

8 FLUID OUNCES = 1 CUP = 1/2 PINT = 1/4 QUART

16 FLUID OUNCES = 2 CUPS = 1 PINT = 1/2 QUART

32 FLUID OUNCES = 4 CUPS = 2 PINTS = 1 QUART = 1/4 GALLON

128 FLUID OUNCES = 16 CUPS = 8 PINTS = 4 QUARTS = 1 GALLON

1 OZ = 28 GRAMS

1 POUND = 454 GRAMS

1 CUP = 8 FLUID OUNCES

1 CUP = 16 TABLESPOONS

1 CUP = 48 TEASPOONS

1 CUP = 1/2 PINT

1 CUP = 1/4 QUART

1 CUP = 1/16 GALLON

Terminology

acid: Ingredients with high acid content (pH 0 to 4.0), such as vinegar and citrus juice, do not support the growth of bacteria. Acidic ingredients are typically sour-tasting.

dressing: A dressing is a sauce for salads that commonly contains oil and vinegar and that may or may not be emulsified.

emulsifier: An emulsifier is an ingredient that is used to stabilize an emulsion; it is an ingredient that enables two normally unmixable ingredients to mix.

emulsify: To emulsify is to combine two normally unmixable ingredients to create one solution.

flavouring: Flavouring involves the addition of ingredients used to provide a particular taste to food or drink.

oil: Oil refers to plant or animal fat used for cooking or in foods such as salad dressings. The viscous liquid coats ingredients and may add richness and flavour to dressings.

temporary emulsification: Temporary emulsification refers to an unstable mixture of two normally unmixable ingredients. For example, oil and acid can be combined, but they will separate again when left to rest.

season: To season is to enhance and amplify a food's flavour in order to maximize the pleasure of the palate.

Simple Vinaigrette

The usual ratio is 1 part vinegar to 3 parts oil, but I prefer 1 part vinegar to 2 parts oil. The important thing is to play around until you find your favorite ratio.

- 1 large spoon Red Wine Vinegar or other vinegar
- Any red wine vinegar will do, but if you can find unpasteurized red wine vinegar, it will have more flavor
- Sherry Wine Vinegar is also exceptionally good
- 2 large spoons Extra Virgin Olive Oil or other oil
- When you buy olive oil, check to see if there is a harvest date. Olive oil is good for you. You get the most nutritional value in the year after harvest

Put a little salt in a bowl

I recommend kosher salt, but any salt will do; you can also add pepper

Add 1 large spoon Red Wine Vinegar

Plus a little Dijon mustard

Stir it and let sit a few minutes

Optional, classic additions, to add to the vinegar, salt, mustard:

- Garlic: stronger flavor
- Either as a clove you let sit in vinegar for gentle flavor
 - You can also mince it or microplane it
- Or pounded to a paste in mortar/grated in a box grater for a
 - Shallot
 - Sliced thinly or minced; if your shallot is very large, use a quarter of half

The vinegar will soften the garlic and shallot flavor; you can use either alone/or both garlic and shallot together

I usually let this sit 5 or so minutes, while I prepare something else. It can also sit longer. When you are ready for the salad, add the olive oil

2 large spoons Extra Virgin Olive Oil, or 3 if you prefer

Use your whisk to mix and emulsify the ingredients

- If you are dressing something hearty, like carrots, lentils, beets, potatoes, etc. you want to add the dressing before you serve, so the flavors have time to meld.
- For lettuce, it is best to do it just before serving

Once you have the proportions, the variations are endless. You can mix and match the vinegars (a touch of apple cider, white wine vinegar, balsamic), add a little lemon, put a touch of soy sauce, etc.

And for the salads, the same is true

- I like baby greens for their taste and nutritional value, but variation is also important, so I alternate with romaine, radicchio, red leaf lettuce, etc.
- Favorite additions:
 - Tomatoes
 - Avocado
 - Cucumber
 - Thinly sliced Brussel sprouts

- Roasted sweet potatoes (cut sweet potatoes, put a little olive

oil and salt and roast at 400 for about 15-20 minutes)

- Mushrooms, thinly sliced
- Sliced apples
- Walnuts, almond slivers, pistachios dry roasted in a pan right

before adding to salad

- Croutons (homemade with good left-over bread)
- Herbs: Anything you have on hand/enjoy
- Any combination that pleases you